

GROMOVA, T.N.; SOLOV'YEV, A.D.

Laboratory equipment for experiments with artificial fog. Trudy
TSAO no.19:101-105 '58. (MIRA 12:2)
(Weather research) (Fog)

ACCESSION NR: AT4040005

S/2789/63/000/051/0003/0013

AUTHOR: Bodunova, L. I.; Zatssepina, L. P.; Solov'yev, A. D.

TITLE: Comparison of the effectiveness of dispersed solutions in a cloud chamber

SOURCE: Tsentral'naya aerologicheskaya observatoriya. Trudy*, no. 51, 1963, 3-13

TOPIC TAGS: meteorology, fog, aerosol, resorcinol, cloud chamber, cloud seeding, fog dispersal, acetone, alcohol

ABSTRACT: A comparison of the effectiveness of solutions of various substances in dispersing an aqueous aerosol was made in the cloud chamber of the Tsentral'naya aerologicheskaya observatoriya (Central Aerological Observatory). The authors formulated and checked a simple criterion which makes it possible to evaluate the effectiveness of soluble substances on the basis of tabulated data on the properties of these substances. The concentrations of the solutions were selected in such a way that equal volumes of these solutions contained identical quantities of particles of the dissolved substances. Sodium chloride was used as a control, since NaCl does not form hydrates and its solution conforms quite well to the Raoult law even at very high concentrations. Tables give the characteristics of the investigated substances and their solutions; the research method is described fully. The results revealed that the only physicochemical characteristic which

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exerted an influence on the effectiveness of these substances was volatility. Experiments on the effect of resorcinol showed that when the mean drop size is several tens of microns the influence of the volatility of the substance on the effectiveness becomes appreciable, provided the vapor pressure of the substance attains 10^{-4} mm Hg. Among the highly volatile substances used were acetone, ethyl, butyl and isoamyl alcohols, etc. None of these compounds were effective. This agrees with earlier research which revealed that alcohol and ammonia have virtually no effect on the sedimentation of an aqueous fog. Acetic acid, a slightly volatile substance, had a small effect. The formulated criterion indicates that the effectiveness of dispersed solutions on an aqueous aerosol is determined by the quantity of molecules (ions) of the dissolved substance per unit volume of the solution, on condition that the solution is quite dilute at the end of the process. The method described ensures identical dispersion of solutions with different physicochemical characteristics. It is shown that non-volatile substances, used in equivalent concentrations and with the same dispersion, have a virtually identical fog dispersal effect. The effect decreases with increasing volatility. "The authors express thanks to N. A. Sorokina, who participated in the experiments". Orig. art. has: 4 formulas, 5 figures and 3 tables.

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Cord

ACCESSION NR: AT4040005

ASSOCIATION: Tsentral'naya aerologicheskaya observatoriya (Central Aerological
Observatory)

SUBMITTED: 00

DATE ACQ: 25Jun64

ENCL: 00

SUB CODE: ES

NO REF SOV: 005

OTHER: 003

Card 3/3

SOLOV'YEV, A.D.

Fog dissipation in positive air temperatures. Trudy TSAO no.65:
9-29 '65. (MIRA 18:11)

L 12134-66 EWT(1)/FCC GW

ACC NR: AT5028263

SOURCE CODE: UR/2789/65/000/065/0030/0047

AUTHORS: Plaudo, N. O.; Solov'yev, A. D.

ORG: Central Aerological Observatory (Tsentral'naya aerologicheskaya observatoriya)

TITLE: On the use of particles with a large specific surface for cloud and fog modification

SOURCE: Tsentral'naya aerologicheskaya observatoriya. Trudy, no. 65, 1965. Iskusstvennyye vozdeystviya na oblaka i tumany (Artificial actions on clouds and fogs), 30-47

TOPIC TAGS: cloud seeding, atmospheric cloud, fog, Reynolds number, droplet atomization, atmospheric condensation, coagulation

ABSTRACT: Problems of using reagents for cloud and fog modification in the form of thin-walled bubbles and disks in order to obtain a greater specific surface are examined, and results of experiments in developing methods of bubble generation are presented. Formulas are given that allow comparison of the efficiencies of reagents in the form of drops and bubbles and disks:

$$\gamma_{K^0} = \frac{d\gamma}{dH} = \frac{3\pi L_v}{4r_0} \gamma_K$$

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$$\varphi_{b_0} = \frac{w E_b}{4 \delta}$$

$$\varphi_{d_0} = \frac{w F_d}{4 \delta}$$

where $\varphi_k, \varphi_b, \varphi_d$ are the relative increases in the initial volume of a drop, a bubble, and a disk, respectively, due to gravitational coagulation, w the water content of the cloud, E the capture coefficient of cloud droplets by the corresponding particles, δ the thickness of the film of the particle, r the drop radius, and η the efficiency of the reagent in the cloud. The relatively large transverse cross section and increased rate of condensation growth give bubbles and disks the advantage over drops, but these characteristics reduce their rate of precipitation and the capture coefficient of cloud droplets by these particles. The use of charged bubbles can be more effective because they can be given a greater specific charge than drops. The effectiveness of hygroscopic bubbles and drops is found to be similar in fog dissipation; the efficiency of disks is low in this case. The bubble dimensions can be varied within definite limits by changing the atomizer parameters, and the film thickness can be changed by changing the concentration of the foaming agent. The authors thank N. N. Novikova for performing the calculations. Orig. art. has: 18 formulas, 7 graphs, and 1 table.

SUB CODE: 04/ SUBM DATE: none/ SOV REF: 008/ OTH REF: 008

Card 2/2 HW

L 12104-66 EWT(1)/EWT(m)/FCC/T

DS/WW/GW

ACC NR: AT5028265

SOURCE CODE: UR/2789/65/000/065/0067/0082

AUTHORS: Bodunova, L. I.; Zatsepina, L. P.; Solov'yev, A. D.

ORG: Central Aerological Observatory (Tsentral'naya aerologicheskaya observatoriya)

TITLE: Laboratory investigation of the interaction between particles of insoluble substances and an aqueous aerosol

SOURCE: Tsentral'naya aerologicheskaya observatoriya. Trudy, no. 65, 1965. Iskusstvennyye vozdeystviya na oblaka i tumany (Artificial actions on clouds and fogs), 67-82

TOPIC TAGS: cloud chamber, aerosol, chemisorption, aqueous solution, air pollution control

ABSTRACT: The mechanism of the interaction of powder particles with water droplets was investigated to provide information for studies of such processes as removal of particles from the atmosphere by rain drops or removal of dust from mine faces. Cement powder Ts-18 (containing up to 6% of calcium aluminate) was found most suitable for the work. Specific surface, selected as a parameter characterizing particle size of the powder, was measured in the apparatus PSKh-2, by sucking air through a slightly compressed sample of the powder. Specific surface of Ts-18 was 2700 cm²/g. Interaction of the powder with aerosol was studied by two methods: 1) by noting the changes in optical density of an aqueous aerosol when dispersing the powder in a cloud

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chamber; 2) by a microscopic or a microphotographic study of collision and fusion. The TsAO cloud chamber described by T. N. Gromova and A. D. Solov'yev (Laboratornaya ustanovka dlya issledovaniy s iskusstvennym tumanom. Trudy. TsAO, vyp. 19, 1958) was used. It was established that: 1) Absorption of the vapor by insoluble particles may occur by a process of chemisorption; 2) effect of powder particles upon the cloud, which results in decreased turbidity and moisture content, is a function of the wetting property of the particles; 3) there exist two types of interaction between the investigated particles: capture by coagulation, and contact capture (the latter is typical for hydrophobic particles). The characteristic properties of the interaction between insoluble powder particles and water droplets are discussed. The authors express their gratitude to T. N. Gromova and M. A. Khimach for help in GGO cloud chamber studies, to Kh. M. Leybovich and I. E. Gergert for consultations and preparation of samples of hydrophobic cement, and to N. A. Sorokina for participation in experimental work. Orig. art. has: 3 tables and 6 figures. 4/4

SUB CODE: 04 / SUBM DATE: none / SOV REF: 007 / OTH REF: 002

Card 2/2

SOLOV'Y N, A. D.,

"Problem of Moments for Integral Analytic Functions." (Dissertation for the Degree of Candidate of Physical and Mathematical Sciences) Moscow Order of Lenin State U imeni M. V. Lomonosov, Moscow, 1955

SO: M-1036, 28 Mar 56

YEVGRAFOV, Marat Andreyevich; SOLOV'YEV, A.D., redaktor; TIKHONOVA, E.P.,
redaktor; MURASHOVA, N.Ya., tekhnicheskii redaktor

[Asymptotic evaluations and entire functions] Asimptoticheskie
otsenki i tselye funktsii. Moskva, Gos.isd-vo tekhniko-teoret.
lit-ry, 1957. 158 p. (MLRA 10:?)
(Functions, Entire)

SOLOV'YEV, A.D.

AUTHOR
TITLE

BEVGRAFOV M.A., SOLOV'YEV A.D.

PA - 3123

PERIODICAL

On A General Basis-Criterion.

(Ob odnom obshchem kriterii bazisa -Russian)

Doklady Akademii Nauk SSSR, 1957, Vol 113, Nr 3, pp 493-496 (U.S.S.R.)

Received 6/1957

Reviewed 7/1957

ABSTRACT

The system of the regular functions within the domain G

$u_n(z) = z^n \varphi_n(z)$, $\varphi_n(0) = 1$, $n = 0, 1, 2, \dots$ is assumed to form a basis in the domain G if each function that is regular in G , in this domain is represented by the convergent series $f(z) = \sum_{n=0}^{\infty} a_n u_n(z)$. This representat-

ion, by the way, is unique. The present paper contains three theorems and their proofs:

Theorem 1: Be it that the system given above is assumed, where the functions $\varphi_n(z)$ within the circle $|z| < R$ are supposed to be regular and different from zero. The above system is written down in the form $u_n(z) = z^n e^{-\lambda_n(z)}$

where the functions $\lambda_n(z)$ in the circle $|z| < R$ are regular.

The author introduces the following denotations:

$$\lambda_n(z) - \lambda_{n-1}(z) = \Delta_n(z) = \sum_{k=1}^{\infty} \Delta_{nk} z^k, \quad \Delta_0(z) = \lambda_0(z)$$

$$\Delta_n^0(r) = \sum_{k=1}^{\infty} |\Delta_{nk}| r^k, \quad l_n(r) = \sum_{k=0}^{\infty} \Delta_k^0(r). \quad \text{If the functions } \lambda_n(z) \text{ satisfy the}$$

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conditions $\lim_{n \rightarrow \infty} (l_n(r)/n)$ in the case of any $r < R$, the system written down

On A General Basis-Criterion.

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above forms a basis in the circle $|z| < R$. Two corollaries are added to this theorem. Theorem 2: Be it that the system $u_n(z) = u^n(z) \psi_n(z)$, $\psi_n(0) = 1, n=0, 1, \dots$ is assumed where $u(z) = z + \dots$ in the simple continuous domain G is a regular and single-leaf function. The function $u(z)$ is represented by the function $u(\zeta)$ on a circle with the origin as center. In the domain G the function $\psi_n(z)$ are regular and in each closed amount $E \subset G$ only a finite number of these functions is assumed to have zeros. The authors here put

$$l_n(E) = \sum_{k=k_0}^n \max_{z \in E} \left| \ln \left[\frac{\psi_{k-1}(z)}{\psi_k(z)} \right] \right| \quad (E \subset G) \text{ is a closed amount and } k_0 = k_0(E) \text{ applies}$$

If at any $E \subset G$ $\lim_{n \rightarrow \infty} (l_n(E)/n) = 0$ applies, the system $u_n(z) = u^n(z) \psi_n(z)$, $\psi_n(0) =$

$1, n=0, 1, \dots$ forms a basis in the domain G .

Theorem 3: follows from the theorem 1 by the replacement of the conditions contained there in by others.

(No illustrations)

ASSOCIATION

PRESENTED BY KOLMOGOROV, Member of the Academy

SUBMITTED 12.10.1956

AVAILABLE Library of Congress

Card 2/2

20-5-12/67

AUTHOR
TITLE

SOLOV'YEV A. D.

The Determination of the Convergence Class of An Interpolation Series For Some Problems.

(Opredeleniye klassa skhedimesti interpol'yatsionnogo ryada dlya nekotorykh zadach -Russian)

PERIODICAL

Doklady Akademii Nauk SSSR, 1957, Vol 113, Nr 5, pp 991-994 (U.S.S.R.)
Received 6/1957
Reviewed 7/1957

ABSTRACT

Be it that the whole function $\Phi(z) = \sum_{n=0}^{\infty} (z^n/m_n)$ is assumed, and that the numbers m_n satisfy the following condition: $m_n \neq 0$ and $|m_{n+1}/m_n|$ monotonously tend towards infinity. The class $\{\Phi, \sigma\}$ is here described as the class of the whole functions $F(z) = \sum_{k=0}^{\infty} c_k z^k$, for which $\lim_{n \rightarrow \infty} \sqrt[n]{|c_n m_n|} < \sigma < \infty$ applies. For the func-

tions of this class $\lim_{r \rightarrow \infty} (m(r)/m^{\Phi}(\sigma r)) = 0$ applies, where $m(r) = \ln \max_{|z|=r} |F(z)|$ and $m^{\Phi}(r) = \ln \max_{|z|=r} |\Phi(z)|$ is true. The function $f^{\Phi}(\xi) = \sum_{n=0}^{\infty} c_n m_n / \xi^{n+1}$ is described here as Φ -associated with the func-

tion $F(z)$. For the whole functions of the class $\{\Phi, \sigma\}$ - all singularities of the Φ -associated functions are located within the circle $|\xi| < \sigma$.

The author then examines the sequence of the linear functionals

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$A_n = A_n[F] = (1/2\pi i) \int_{\sigma}^{\xi} \xi^n \Phi(\xi) f^{\Phi}(\xi) d\xi, n=0,1,2,\dots$, where $\varphi_n^{\Phi}(\xi) =$

The Determination of the Convergence Class of An 20-5-12/67
Interpolation Series For Some Problems.

$\sum_{k=0}^{\infty} (a_{nm}/m_{ntk}) \{^k(a_{no}-1)$ are regular at $|z| < R$. $F(z) \in [\Phi, R]$; applies; the contour C comprises all singularities of $\Phi(z)$ and is located on the circle $|z| < R$. Next, the formal identity $\Phi(z) = \sum_{n=0}^{\infty} p_n(z) \cdot \Phi_n(z)$ is written down. By comparison of the coefficients of the same powers of z , finite recurrence relations for $p_n(z)$ are obtained, from which the relations can be consistently and uniquely determined, and p_n is, with respect to the function $\Phi(z)$, a unique polynomial of the degree n . The class $[\Phi, \sigma]$ is, under certain conditions given here, the exact convergence class of the interpolation series $\sum_{n=0}^{\infty} A_n p_n(z) \cdot F(z)$. Some theorems are given.

In conclusion the following examples are examined: the problem by ABEL-GONCHAROV and the generalized problem by ABEL-GONCHAROV, and the problem of the moments by A.O.GEL'FOND.

(No illustrations)

ASSOCIATION Moscow State University
PRESENTED BY KOLMOGOROV A.N., Member of the Academy
SUBMITTED 12.10.1956
AVAILABLE Library of Congress
Card 2/2

20-114-6-4/54

AUTHORS: Yevgrafov, M. A., Solov'yev, A. D.

TITLE: A Class of Reversible Operators in a Ring of Analytical Functions (Ob odnom klasse obratimyykh operatorov v kol'tse analiticheskikh funktsiy)

PERIODICAL: Doklady Akademii Nauk SSSR, 1957, Vol. 114, Nr 6, pp. 1153-1154 (USSR)

ABSTRACT: $K_m(r_1, R_1)$ - K_m here designates a ring of analytical functions of the complex variables z_1, z_2, \dots, z_m , which are regular and unique in the case of $r_1 < |z_i| < R_1, i = 1, 2, \dots, m$. In this ring the topology is assumed by the concept of convergence as a uniform convergence in the case of $r_1(1 + \varepsilon) < |z_i| < R_1(1 - \varepsilon)$ for any values $\varepsilon > 0$. Like in the case of some previous papers by these authors the following can be shown: If K_m is only considered as a linear topological space, the following applies:
Theorem 1: A is a linear operator in K_m which is defined by the equations

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A Class of Reversible Operators in a Ring of Analytical Functions

$$Az_1^{n_1} \dots z_m^{n_m} = z_1^{n_1} \dots z_m^{n_m} \quad \varepsilon_{n_1 \dots n_m}(z_1 \dots z_m),$$

$$-\infty < n_1, \dots, n_m < \infty$$

In this case $\varepsilon_{n_1 \dots n_m}(z_1, \dots, z_m) \rightarrow 0$ at

$\max_i |n_i| \rightarrow \infty$ (in the sense of topology K_m) holds good.

The operator $E + \lambda A$ then has an inverse operator which is constant in K_m and which has no limit points for all λ (with the exception of a countable quantity of eigenvalues) within a finite part of the plane. In this connection the multiple quality of every eigenvalue is finite and with a suitable definition of the operator all of Fredholm's alternatives apply.

Theorem 2: gives an immaterial generalization of this result. If K_m is not considered a linear topological space but a topological ring, a considerably more marked result may be obtained. There are 3 references, 3 of which are Slavic.

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20-114-6-4/54

A Class of Reversible Operators in a Ring of Analytical Functions

ASSOCIATION: Department for Applied Mathematics of the Mathematical Institute imeni V. A. Steklov of the AS USSR
(Otdeleniye prikladnoy matematiki Matematicheskogo instituta im. V. A. Steklova Akademii nauk SSSR)

PRESENTED: January 18, 1957, by M. V. Keldysh, Member of the Academy

SUBMITTED: January 17, 1957

Card 3/3

SC. V'YEV, A.

Finding the boundary of a region of asymptotic stability for a
nonlinear system of differential equations. *Bul.SNO LGU*
no.1:3-11 '58. (MIRA 13:6)
(Differential equations)

GNEPFIKO, Boris Vladimirovich; BELIAYEV, Yuriy Konstantirovich;
SOLOV'YEV, Aleksandr Dmitriyevich; KILJIN'KO, V.G., red.

[Mathematical methods in reliability theory; fundamental characteristics of reliability and their statistical analysis] Matematicheskie metody v teorii nadezhnosti; osnovnye kharakteristiki nadezhnosti i ikh statisticheskiy analiz. Moskva, Nauka, 1965. 524 p. (MIRA 18:10)

L 16853-66 EWT(d)/EWT(1)/EWP(c)/EWP(v)/T/EWP(k)/EWP(l)/EWA(h)/ETC(m)-6

ACC NR: AM6004540

Monograph IJP(c) TG UR/

45
23
B41Gnedenko, Boris Vladimirovich; Belyayev, Yuriy Konstantinovich; Solov'yev, Aleksandr Dmitriyevich

Mathematical methods in the theory of ²⁵reliability; basic characteristics of reliability and their statistical analysis (Matematicheskiye metody v teorii nadezhnosti; osnovnyye kharakteristiki nadezhnosti i ikh statisticheskiy analiz) Moscow, Izd-vo "Nauka", 65. 0524 p. illus., biblio., index. Errata slip inserted. 27,000 copies printed.

Series note: Fiziko-matematicheskaya biblioteka inzhenera

TOPIC TAGS: mathematic method, statistic analysis, probability, reliability theory, quality control

PURPOSE AND COVERAGE: This book presents basic concepts of the mathematical methods in the theory of reliability and gives various plans for estimating characteristics of reliability from the results of tests. Also, methods for testing the hypothesis, the theory of reservation without reduction and with reduction, and methods of acceptance control are presented. The book contains supplementary tables. In the first chapter is an introduction to the theory of probability, mathematical statistics and Laplace transform. The book is recommended for mathematicians, engineers and students dealing with problems in the theory of probability. The section of the book concerning quality control of production is useful to those working in the field of technical control. 14

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UDC: 519.95

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ACC NR: AM6004540

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SUB CODE: 12/ SUBM DATE: 20Aug65/ ORIG REF: 068/ OTH REF: 052

Card 2/2 715

SOLOV'YEV, A.D., kandidat tekhnicheskikh nauk.

Changes of elevation in height and bench marks of precise leveling
in Saratov. Sbor.st.po geod. no.4:43-55 '53. (MIRA 9:6)
(Saratov--Bench marks) (Saratov--Altitudes--Measurement)

SOLOV'YEV, A.D., dotsent, kandidat tekhnicheskikh nauk.

Permissible divergence limit in vertical intervals of direct and
reverse traverses of municipal leveling of the first order
accomplished by "superimposition". Sber.st.po good. no.5:69-72
'53. (Leveling) (Traverses (Surveying)) (MIRA 9:7)

SOLOV'YEV, A.D., dotsent, kand.tekhn.nauk

Determining the settling of footings of the conveyer foundation
at the Saratov Technical Glass Plant by precision leveling. Izv.
vys. ucheb. zav.; geod. i aerof. no.5:13-28 '60. (MIRA 13:12)

1. Saratovskiy avtomobil'no-dorozhnyy institut.
(Saratov--Conveying machinery--Foundations) (Leveling)

SOLOV'YEV, A.D., dotsent

Using thirty-second theodolite-tachometers in levelling roads.
Avt. dor. 23 no. 12:30 D '60. (MIRA 13:12)
(Theodolites) (Roads--Surveying)

SOLOV'YEV, A.D., dotsent, kand.tekhn.nauk; KARPENKO, V.A., assistant

Results of adjusting the guide lines of the SWS-1000 conveyor at the Saratov Technical Glass Plant by the use of the M4-2 microlevels designed by the Moscow Institute for Engineers in Geodesy, Aerial Photography, and Cartography. Izv.vys.ucheb.zav.; geod.1 aerof. no.6:47-57 '61. (MIRA 15:3)

1. Saratovskiy politekhnicheskij institut.
(Saratov--Conveying machinery) (Leveling)

SIMONIN, Sergey Ivanovich; SHULEYKIN, A.S., dots., retsenzent;
SOLOV'YEV, A.D., dots., retsenzent; CHVANOV, V.G., red.;
SHAMAROVA, T.A., red. izd-va; SUNGUROV, V.V., tekhn. red.

[Topographical engineering drawing] Inzhenerno-topograficheskoe
cherchenie. n.p. Geodezizdat, 1962. 121 p. (MIRA 16:1)
(Mechanical drawing)

TEMELYEVICH, M.; SOLOV'YEV, A.D.

Automatic device for switching-on electric lights. V pom.
radiolub. no. 11:73-77 '61. (MIRA 15:6)
(Automatic control) (Electric lighting)

37331

S/024/62/000/002/007/012
E140/E135

13.2900

AUTHOR: Solov'yev, A.D. (Moscow)

TITLE: On determining the reserve parts for systems with multiple operation

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Otdeleniye tekhnicheskikh nauk. Energetika i avtomatika, no.2, 1962, 124-129

TEXT: The author considers a system of n identical devices, with m replacements in reserve. The problem is to determine m as a function of n and the system reliability parameters such that with a prescribed probability the number of defective devices at any one time does not exceed m . It is assumed that defective devices which have been replaced are repaired during a certain time, statistically defined. The cycle for any given device is thus: operation — waiting for repair — repair — waiting in reserve — operation — Passage from one state to another is random. The problem is solved as a Markov process. The solution is given by a condition:

$$\lambda_m p_m T = \alpha$$

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On determining the reserve parts ... S/O24/62/000/002/007/012
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where λ_m is given by:

$$\lambda_k = \begin{cases} n\lambda & \text{for } k \leq m \\ (n + m - k)\lambda & \text{for } k > m \end{cases} \quad (2)$$

and p_m by:

$$p_k = \frac{\lambda_0 \lambda_1 \dots \lambda_{k-1}}{\mu_1 \mu_2 \dots \mu_k} p_0 \quad (4)$$

T is the time during which normal operation of the system is to be obtained and $1 - \alpha$ is the reliability required, while $1/\lambda$ is the mean lifetime of the device, $1/\mu$ is the mean time for repair and p_0 is defined by the condition

$$\sum_{k=0}^{\infty} p_k = 1$$

SUBMITTED: November 21, 1961

Card 2/2

L 25099-65 EWI(d)/EWT(1)/EWP(o)/EWP(v)/T/EEC(b)-2/EWP(k)/EWP(h)/EWP(1)/EWA(h)
Pr-4/Po-4/Pq-4/Pl-4/Pg-4/Peb/Pl-4

ACCESSION NR: AT5002481

8/2720/64/002/000/0083/0121

AUTHOR: Solov'yev, A. D.

1/2
B-1

TITLE: Spare element provision without renewal

SOURCE: Kibernetika - na sluzhbu kommunizmu, v. 2, 1964. Teoriya nadezhnosti i teoriya massovogo obaluzhivaniya (Theory of reliability and theory of mass service), 83-121

TOPIC TAGS: reserve system reliability, renewal theory

ABSTRACT: This is a review article dealing with the increase of reliability of equipment by providing spare elements (defined as individual units or groups of units), which are instantaneously put into operation to replace a faulty element. A distinction is made between an unloaded spare element (under the same operating condition as the main element and whose reliability does not depend on the instant at which it is connected to replace the main element), an unloaded spare (normally not in operation and consequently should have zero failure probability at the instant when it is turned on), and a spare under lightened conditions (normally under less stringent conditions than the main element and therefore

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ACCESSION NR: AT5002481

with lower failure probability at the instant when it is put in operation). Exact and approximate formulas for the reliability of the spare group and for its average operating time are derived for all three types of spares. Particular attention is paid to the derivation of formulas that can be conveniently used for calculation. An attempt is made to include the entire class of problems in one probabilistic formulation. No consideration is given to the repairability of the faulty elements, and little attention is paid to optimization of the spare-part supply. The main purpose of the article is to describe sufficiently fully the cases that occur when spare elements are provided, to describe the mathematical methods that can be applied most simply to these cases, and to derive approximate formulas for the reliability characteristics in different cases. The subject headings are: Introduction. 1. Loaded spare element. 2. Failure scheme. 3. Unloaded spare element. 4. Lightly loaded spare element. 5. Account of reliability of the switching elements. 6. Certain principal problems in provision of spare elements for a system: 1) Number of required spare elements, 2) Sliding-scale spare provision. Orig. art. has: 8 figures and 67 formulas.

ASSOCIATION: None

Card 2/3

L 25099-65

ACCESSION NR: AT5002481

SUBMITTED: 00

ENCL: 00

SUB CODE: IE

NR REF SOV: 000

OTHER: 000

Card 3/3

L 25097-65 EWT(d)/EWT(1)/EWP(c)/EWP(v)/T/EEC(b)-2/EWP(k)/EWP(h)/EWP(1)/ENA(h)
Pm-4/Po-4/Pq-4/Pf-4/Pg-4/Peb/Pl-4

ACCESSION NR: AT5002486

S/2720/64/002/000/0189/0193

AUTHOR: Solov'yev, A. D.

TITLE: Reliability of a system with renewal

SOURCE: Kibernetiku - na sluzhbu kommunizmu, v. 2, 1964. Teoriya nadezhnosti i teoriya massovogo obsluzhivaniya (Theory of reliability and theory of mass service), 189-193

TOPIC TAGS: system reliability, renewal theory, failure probability, quality control

ABSTRACT: The problem is solved of finding the average down time of a system consisting of n identical units, all of which are initially in working condition and are placed in operation simultaneously. During the course of time some of the units fail and are to be repaired. It is assumed that the repair personnel is adequate, so that the repair time of one element is not affected by the state of the other elements. It is also assumed that repair restores the element to its initial condition. The operating time of each element is assumed to be a

Card 1/2

L 25097-65

0

ACCESSION NR: AT5002486

random quantity with specified distribution and specified mean value, in that the repair time is also a random quantity with specified distribution and mean value. Equations are derived for the distribution of the down time of the system, for the average down time, for the average operating time, and for the probability of faultless operation of the system. Orig. art. has: 2 figures and 9 formulas.

ASSOCIATION: None

SUBMITTED: 00

ENCL: 00

SUB CODE: IE

NR REF SOV: 001

OTHER: 001

Card 2/2

L-21980-65 EWT(1)/EEC(b)-2/EWA(h) Pm-4/Po-4/Pq-4/Pg-4/Pl-4/Peb
ACCESSION NR: AT5002488 S/2720/64/002/000/0213/0218

AUTHOR: Mirnyy, R. A.; Solov'yev, A. D.

B+1

TITLE: Estimating the reliability of a system from test results of its components

25

SOURCE: Kibernetiku - na sluzhbu kommunizmu, v. 2, 1964. Teoriya nadezhnosti i teoriya massovogo obsluzhivaniya (Theory of reliability and theory of mass service), 213-218

TOPIC TAGS: system reliability, system reliability estimate, system component testing, Poisson distribution law

ABSTRACT: An estimate of the reliability of a system composed of k units is sought on the basis of results obtained from testing these units. It is assumed that tests have been made on n_1 units of the first type, n_2 units of the second type and of n_k units of the k-th type and that number of failures for each type were v_1, v_2, \dots, v_k respectively. The lower bound of the reliability of the system is considered (the upper bound is equal to unity) only for the following important particular cases: a) $v_1 = v_2 = \dots = v_k = 0$, that is, in a

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ACCESSION NR: AT5002488



given time t there were no failures; b) $n_1 = n_2 = \dots = n_k = n$, that is, the number of units of each type is equal. The lower bound of the reliability of the system is obtained in both cases. In the first case, the lower bound indicates that the estimate of the reliability of the system coincides with the estimate of the reliability of that unit for which the test volume is the smallest. In the second case, it indicates that when estimating the reliability of a system it is necessary to refer all failures to one type of unit and to determine the reliability estimate for this particular type. Conditions under which the random variable

$$\xi = \sum_{i=1}^k \frac{v_i}{n_i}$$

can be approximately normalized are determined and the reliability estimate of a system with this property is obtained. Using the results obtained in particular cases, the problem of estimating the reliability of a system is generalized to the case in which the system is composed of m_1 units of one type, m_2 units of the second type and so on. Orig. art has: 10 formulas. [LK]

Card 2/3

L.21890-65

ACCESSION NR: AT5002488

ASSOCIATION: none

SUBMITTED: 00

ENCL: 00

SUB CODE: MA

NO REF SOV: 001

OTHER: 002

ATD PRESS: 3168

Card 3/3

L 19428-65 EWT(d)/EWP(v)/EWP(k)/EWP(h)/EWP(l) Pf-1 ASD(a)-5/AFMD(p)/
ESD(dp)

ACCESSION NR: AP4048830

S/0280/64/000/005/0119/0121

AUTHOR: Solov'yev, A. D. (Moscow)

TITLE: Asymptotic distribution of the life time of a duplicated element

SOURCE: AN SSSR. Izv. Tekhnicheskaya kibernetika, no. 5, 1964, 119-121

TOPIC TAGS: automation, control system life, life time distribution, duplicated element
reliability

14
ABSTRACT: A pair of identical elements, one of which is working and the other is held in reserve, is considered. When the working element fails, its restoration begins and the second element is instantaneously connected in its place. After restoration the element is put in reserve where it cannot fail. Performance of the pair continues until both elements fail. Assuming $F(t)$ to be the distribution of the life time of the element and $G(t)$ the distribution of its restoration time, and using a Laplace transform for the life time of the pair derived by B. V. Gnodonko (Izv. AN SSSR, Tekhnicheskaya Kibernetika, 1964, No. 4), the author shows that if τ is the random life time of the pair and if it is assumed that $F(t)$ is fixed and

$$\lambda_n = \int_0^{\infty} [1 - G_n(t)] dF(t) \rightarrow 0 \quad (1)$$

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ACCESSION NR: AP4048830

then, if there exists a finite average $T_0 = \int_0^{\infty} [1 - F(t)] dt,$

$$\lim_{n \rightarrow \infty} P\{\tau_n > t\} = 1 - e^{-t/T_0} \quad (2)$$

From equation (2) it follows that if the probability that the restoration time exceeds the element life time is small, the life time of the pair will be approximately distributed according to the exponential law

$$P\{\tau > t\} \approx e^{-\frac{\tau_0 t}{T_0}} \quad (3)$$

Orig. art. has: 20 formulas.

ASSOCIATION: None

SUBMITTED: 20Jul64

NO REF SOV: 001

ENCL: 00

OTHER: 000

SUB CODE: IE

Card 2/2

BARTENOV, Prokofiy Vasil'yevich, prof., doktor tekhn. nauk; PARYENOV, Viktor Prokhorovich, dots., kand. tekhn. nauk; PODKALINER, S.N., dots., kand. tekhn. nauk; LABAZIN, P.S., dots.; LYAKHITSKIY, V.Ye., prof., doktor tekhn. nauk, zaslushennyy deyatel' nauki i tekhniki, red.; SOLOV'YEV, A.E., inzh., red.; TYUMENOV, N.A., inzh., red.; NOVIKOV, A.A., glavnyy marshal aviatsii, red.; TEPLITSKIY, A.V., glavnyy inzh., red.; TSARENKO, A.P., red.; KHITROV, P.A., tekhn. red.

[Water, road, air, and industrial transportation] Vodnyi, avtodorozhnyi, vozdushnyi i promyshlennyi transport. Moskva, Gos. transp. zhel-dor. izd-vo, 1958. 303 p. (MIRA 11:10)

1. Leningradskoye otdeleniye instituta proyektirovaniya promyshlennogo transporta (for Teplitskiy).
(Transportation)

24 (2)

AUTHORS:

Koptsik, V. A., Minayeva, K. A., SOV/55-58-6-12/31
Voronkov, A. A., Solov'yev, A. F., Izrailenko, A. N.,
Popkova, Ye. G., Kozlova, G. I.

TITLE:

Investigation of New Piezoelectric Crystals on Small-dimensioned
Samples (Issledovaniye p'yezoelektricheskikh kristallov na
malykh obraztsakh)

PERIODICAL:

Vestnik Moskovskogo universiteta. Seriya matematiki,
mekhaniki, astronomii, fiziki, khimii, 1958, Nr 6,
pp 91-98 (USSR)

ABSTRACT:

In 1955 one of the authors succeeded in developing a simple
method of investigating crystalline dielectrics with respect
to their piezoelectricity (Ref 1) by the mechanical excitation
of piezoelectric oscillations at low frequency near crystal
resonance. The strength of the piezoelectric effect was
determined from the ratio to a quartz standard. Part of the
results of investigations carried out with 1200 crystalline
dielectrics are given by two tables (Table 1: 186 crystals
with smaller piezoelectric effect than quartz; table 2:
111 crystals with a greater effect). It was further found in
the course of the investigations that a fact of great

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4

Investigation of New Piezoelectric Crystals on Small- SOV/55-58-6-12/31
dimensioned Samples

importance for the theory of piezoelectrics is the rule governing the distribution of piezoelectric crystals according to space groups of symmetry which are favorable to the piezoelectric effect. This fact may be of use for the detection of new piezoelectrics among the dielectrics with known space symmetry. It was further found that the symmetry assumed in the case of many substances was too high. The authors thank A. V. Shubnikov for supervising work, and A. N. Kost, V. M. Belikov and a number of other comrades for placing the crystal samples at their disposal. There are 2 tables and 9 references, 8 of which are Soviet.

ASSOCIATION: Kafedra kristalofiziki (Chair for Crystal Physics)

SUBMITTED: June 11, 1958

Card 2/2

AUTHOR: Solov'yev, A.P.

SOV/42-13-6-22/33

TITLE: Generalization of a Theorem of Hausdorff (Obobshcheniye
odnoy teoremy Khaudorfa)

PERIODICAL: Uspekhi matematicheskikh nauk, 1958, Vol 13, Nr 6, pp 167-171 (USSR)

ABSTRACT: Let $M(u)$ ($-\infty < u < \infty$) be a continuous function convex to below.
Let $M(u)$ be even, $M(0) = 0$ and $\frac{M(u)}{u} \rightarrow \infty$ for $u \rightarrow \infty$. Let L_M
be the class of those measurable functions $f(t)$ for which

$$\int_a^b M(f(t)) < \infty. \text{ Let } 0 = x_0 < x_1 < \dots < x_m = 1 \text{ and } \Delta g(x_i) =$$

$$g(x_{i+1}) - g(x_i), \Delta x_i = x_{i+1} - x_i \quad (i=0, 1, \dots, m-1).$$

The following generalization of a theorem of Hausdorff is valid:

In order that the sequence $\{M_n\}_0^\infty$ admits the representation

$$\int_0^1 x^n f(x) dx = M_n, \quad n=0, 1, 2, \dots, \quad f(x) \in L_M$$

Card 1/2

Generalization of a Theorem of Hausdorff

SOV/42-13-6-22/33

it is necessary and sufficient that

$$\frac{1}{n+1} \sum_{k=0}^n M \left[(n-1) C_n^k \Delta^{n-k} \mu_k \right] \leq K, \quad n=0,1,2,\dots,$$

where K does not depend on n.

There are 4 references, 2 of which are Soviet, 1 Polish, and 1 French.

SUBMITTED: April 1, 1957

Card 2/2

SOLOV'YEV, A.F.

Favar's theorem. Dokl. na nauch. konf. I no.3:125-129 '62.

(MIRA 16:8)

(Polynomials)

SOLOV'YEV, Aleksandr Fedorovich; AGAFONOV, A.Ye., red.; EKEYS, I.G.,
tekh. red.

[Work training of grade 5-8 students; from the rural
school practice of Ul'yanovsk Province] Trudovoe vospi-
tanie uchashchikhsia V - VIII klassov; iz opyta raboty
sel'skikh shkol Ul'ianovskoi oblasti. Moskva, Uchpedgiz,
1963. 165 p. (MIRA 17:1)

ACC NR: AR6016597

SOURCE CODE: UR/0044/65/000/012/B020/B020

AUTHOR: Solov'yev, A. F.30
BTITLE: Weight of a moment sequence on a finite interval

SOURCE: Ref. zh. Matematika, Abs. 12B100

REF SOURCE: Dokl. na nauchn. konferentsiyakh. Yaroslavsk. gos. ped. in-t, v. 2, no. 3, 1964, 136-141

TOPIC TAGS: approximation, approximation convergence

ABSTRACT: Let $f(x) \in C[0, 1]$ and $0 \leq x_0^{(n)} < x_1^{(n)} < \dots < x_n^{(n)} \leq 1$ ($n = 0, 1, \dots$); consider the operator

$$H_n(f, x) = \sum_{k=0}^n f(x_k^{(n)}) h_k^{(n)}(x), \quad h_k^{(n)}(x) > 0, \quad x \in [0, 1].$$

taking a polynomial of degree $m \leq \varphi_0(n) \leq n$ (where $\varphi_0(n) \rightarrow \infty$ together with n) into a polynomial of degree $\leq m$, where $H_n(f, x) \rightarrow f(x)$ uniformly on $[0, 1]$. Suppose the function $g(x)$ increases on $[0, 1]$; consider the functional σ_n defined on the set of polynomials $p(x) = \sum_{k=0}^n a_k x^k$ by the formula

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UDC: 517.512.6

ACC NR: AR6016597

0

$$\sigma_n(\rho) = \sum_{k=0}^n a_k \mu_k, \quad \mu_n = \int_0^1 x^n dg(x), \quad (n=0, 1, \dots);$$

in this case the author finds a formula giving the size of the covering mass $dg(x)$ concentrated at the point $x = a$:

$$\tau(a) = \inf_{(k,n) \in \Gamma_a} \left\{ \frac{\sigma_n(h_k^{(n)})}{h_k^{(n)}(a)} \right\} = g(a+0) - g(a-0),$$

(the set Γ_a consists of numbers (k,n) for which $h_k^{(n)}(a) \neq 0$). The jump function $S(x)$ for the function $g(x)$ is

$$S(x) = \tau(0) + \sum_{0 < a < x} \tau(a) + \frac{1}{2} \tau(x).$$

In the particular case where

$$h_k^{(n)}(x) = C_n^k x^k (1-x)^{n-k},$$

the operator $H_n(f, x)$ yields the polynomials of S. N. Bernshteyn. Ya. Geronimus

[Translation of abstract]

SUB CODE: 12

Card 2/2 *amm*

SOLOVYOV, A. I., Prof.: Stomach, A. S., Decent

Stomach - Cancer

Complications following transthoracic resection of esophagus and stomach caused by insufficient suturing of the anastomosis. Khirurgia No. 1, 1953.

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

DESYATOV, M.M., kandidat meditsinskikh nauk (Moscow); SOLOV'YEV, A.G., professor,
nauchnyy rukovoditel'.

Wound of the right auricle. Klin.med. 31 no.7:75-76 J1 '53. (MLRA 6:9)

1. Khirurgicheskoye otdeleniye bol'nitsy in. S.P.Botkina.
(Heart--Wounds and injuries)

SOLOV'YEV, Aleksandr Grigor'yevich; CHERNOV, A.A., red.; AVDEYEVA,
V.A., tekhn. red.

[Secret of success; a story about the expert stockbreeders
of the "October 12" Collective Farm in Kostroma Province)
Sekret uspekha; rasskaz o masterakh zhitovnovodstva kolkhoza
"12 Oktiabr'" Kostromskoi oblasti. Moskva, Izd-vo "Sovet-
skiaia Rossia," 1961. 19 p. (MIRA 14:5)
(Kostroma Province--Stock and stockbreeding)

BOLOV'YEV, Anatoly Georgiyevich; RIKHLEN, A.A., lieutenant;
YUSHTIN, Ye.I., nauchn. red.; VLASKOVA, Z.V., red.

[Safety measures in hull shops] Tekhnika bezopasnosti
v korpusnykh tsokhakh. Leningrad, Sudostroenie, 1965.
109 p. (NIRA 18:2)

SOLOV'YEV, A.I., inzhener.

Strengthen control over the introduction of over-all mechanisation.
Avt.dor.17 no.2:22 S-O '54. (MIRA 8:4)
(Road machinery)

GERSHANOVIKH, G.L., inzhener.;SEGAL', M.S., inzhener.;SOLOV'YEV, A.I., inzhener.

Experience in wintertime operation of concrete pumps. Gidr. stroi. 26
no.2:20-26 F '57. (MIRA 10:4)

(Pumping machinery) (Hydroelectric power stations)

SOLOV'EV, A. I., Engineer

"Problems of Industrialization of the Construction of Stone Dwellings." Sub 16
Feb 51, Inst of Construction Engineering Academy of Architecture, USSR

Dissertations presented for science and engineering degrees in Moscow during 1951.

SO: Sum. No. 480, 9 May 55

XO) PAGES I BOX E/P/AN/2000 801/2000

Yoznaryy nannho-issledovaniy khly Institut Fiziko-Tekhnicheskikh i
Radiofizicheskikh Imeniy

Imeniyey yemaly: shchity (Measurement of Time; Collection of Articles)
Moscow, 1989-1991, 178 p. (Series: Izi; Trudy, 1977-1)
Broadsidely Issued: 2,000 copies printed.

Additional Sponsoring Agency: USSR. Kmitet standartov, ser. 1. Issledovaniya
Prilozheniya.

Redy. M. of this vol: A.I. Emestovskiy; Editorial Board: G.D. Burdun,
A.L. Bublik, V.I. Tomshov (Deputy Chairman), N.I. Dubovitskiy,
L.M. Ivan, A.I. Emestovskiy, V.F. Lobanov (Chairman), N.F.
Orlov, L.M. Priglasitskiy, I.O. Suvakov, E.A. Surovitskiy (Resp. Secre-ary),
V.F. Shchep, M. of Publishing House: E.M. Deryuzhina; Tech. M.:
E.A. Gendrovskiy.

FOREWORD: This book is intended for astronomers, geodesists, and other scientific
personnel interested in the precise determination of time.

CONTENTS: This is the first of a series of periodicals to be published by the

Measurement of Time (Cont.)

All-Union Scientific Research Institute of Physical-Technical and Radio-
Technical Measurements. The present volume is concerned with the measure-
ment of time and presents a survey of some of the current scientific research
work of the Unified Time Service during the years 1987-1991. References
accompany each article.

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Emestovskiy, A.I. and A.I. Shchep. Basic Determination of the Longitude
of the Astronomical Observations during 1987-1990
This article summarizes the program used in the precise determination of
the difference in longitude between Irkutsk. This work served to give the
Unified Time Service a precise longitude value and to establish a base
for determining personal equations of astronomers.

Belger, P.B. The Work of the Time Service of the Soviet Union during
1987, 1989, and 1990

This article contains the results of the time services of the USSR
for the years cited based on the analysis of the monthly bulletins of
moments of time signals and moments of standard time.

APPEARANCE: Library of Congress (89 013,77)

Card 1/2

81/89
9-1-79

2

SOACV YH, 1111

	1978
71. BIOLOGICAL ACTIVITY OF SOME 1,3,5-TRIAZINOPHOSPHINE ACIDS AND THEIR COM- PARATIVE WITH 1,3,5-TRIAZINOPHOSPHINE ACID I. V. Bala, Kiev	127
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Collection of complete papers presented at the 1959 Kazan Conference on Chemistry of Organophosphorus Compounds.

SUDAKOV, S.G.; ALEKSANDROV, T.F.; BULANOV, A.I.; DURNEV, A.I.;
YELISEYEV, S.V.; ZAKATOV, P.S.; IZOTOV, A.A.; KARLOV, G.M.;
KUZ'MIN, B.S.; KUKUSHKIN, A.D.; KOLUPAYEV, A.P.; KOZLOVA, Ye.A.;
LARIN, B.A.; LARIN, D.A.; LARIN, B.A.; LITVINOV, B.A.; MAZAYEV,
A.V.; PELLINEN, L.P.; PETROV, A.I.; SOLOV'YEV, A.I.; TOMILIN, A.F.;
URALOV, S.S.; USPENSKIY, M.S.; FOMIN, M.P.; SHISHKIN, V.N.; SHCHEGLOV,
A.P.; SUDAKOV, S.G., otv. red.; KOMAIKOVA, L.M., red. izd-vz; SUNCUROV,
V.S., tekhn. red.

[Instruction concerning the building-up of a state geodetic network
in the U.S.S.R.] Instruktsia o postroenii gosudarstvennoi geodezi-
cheskoi seti Soiuza SSR; obiazatel'na dlia vseh vedomstv i uch-
rezhdenii, proizvodiaschikh gosudarstvennye geodezicheskie seti.
Moskva, Izd-vo geodez. lit-ry, 1961. 459 p. (MIRA 15:6)

1. Russia (1923- U.S.S.R.) Glavnoye upravleniye geodezii i karto-
grafii.

(Geodesy)

AUTHOR: Solov'yev, A. I., Docent, Candidate of
Technical Sciences

S/154/60/000/01/016/017
B007/B123

TITLE: Traversing With the Aid of Optical Range Finders as a Method for
Constructing the State Geodetic Net

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Geodeziya i aerofotos"yemka,
1960, Nr 1, pp 141-149 (USSR)

TEXT: The use of optical range finders for traversing simplifies the organization of field work essentially and makes it possible to carry out highly precise distance measurements within a short period in any terrain. Thus, the positive sides of traversing can be exploited, and in a number of cases the triangulation net can be substituted by a traverse net. In some cases it will be suitable to combine triangulation and traversing. It appears advisable to apply such a combination also to the development of continuous filling nets. For this case a scheme is shown in figure 1 and explained. In recent years optical range finders have been used for traversing in the USSR. The work performed in a certain region of the European part of the USSR is of special interest. These procedures are amply discussed here. This example proves that traversing with the aid of optical range finders ensures the necessary accuracy of nets of the third and fourth order. On the other hand, the precision of measurement of the various

Card 1/2

Traversing With the Aid of Optical Range Finders as a
Method for Constructing the State Geodetic Net

S/154/60/000/01/016/017
B007/B123



distances is not sufficient for nets of the second order. With the aid of the photoelectric device already worked out, the precision of measurement will be essentially increased when using the optical range finder SVV-1. By employing qualified observers the precision of measurement can also be increased. There are 2 figures and 5 tables.

Card 2/2

KOLIV, I.N.; KOLIV'YEV, A.I.

Investigating kinematics of galvanometric mechanisms by
dynamic methods. Prikladnaya mekhanika no.12:9-10 D'65. (MIRA 17:5)

SOLOV'EV, A. I.

SOLOV'EV, A. I. Geomorfologiya i ee razvitie v Moskovskom Gosudarstvennom universitete.
(Moscow. Universitet. Uchenye zapiski, 1940. no. 55, Iubileinaya
seriya, Geografiya. p. 111-124.)

DLC: Q60.M868

SO: LC, Soviet Geography, Part I, 1951, Uncl.

SOLOV'EV, A. I.

Kuril skie ostrova. [Kuril Islands]. Pod red. A. A. Grigor'eva. Moskva, Izd. Glavsevmorputi, 1945. 195 p. illus., fold. maps.

Bibliography: p. 191-195

Peculiarities of maritime and air navigation in the region of the islands (p.30).

Transportation and communication lines (p. 65).

CSt-H CLU

DLC: D8895.K9865 1945

SO: Soviet Transportation and Communication. A Bibliography, Library of Congress, Reference Department, Washington, 1952, Unclassified.

SOLOV'EV, A. I.

SOLOV'EV, A. I. A. A. Borzov kak uchenyi, pedagog i otshchestvennyi deiatel'. (Moscow. Universitet. Uchenye zapiski, 1946. no. 119. Geografiia, v. 2, p. 6-31). DLC: C60.M868

SO: LC, Soviet Geography, Part I, 1951, Uncl.

1. S. I. VITK, A. I.
2. USSR (60)
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PHASE I BOOK EXPLOITATION

SOV/1796

Moskovskoye obshchestvo ispytateley prirody. Geograficheskaya sektsiya.

Regional'noye karstovedeniye; trudy soveshchaniya po regional'nomu karstovedeniyu (Regional Study of Karst Phenomena; Papers of the Meeting on the Regional Study of Karst Phenomena) Moscow, 1958. 79 p. 600 copies printed.

Additional Sponsoring Agency: Moskovskoye obshchestvo ispytateley prirody. Redaktsionno-izdatel'skiy sovet.

Ed.: (Title page): N.A. Gvozdetskiy, Professor; Ed. (Inside book): G.N. Endel'man

PURPOSE: This book is intended for geologists, hydrologists, specialists in engineering geology, and speleologists.

COVERAGE: This collection of articles is based mainly on reports presented at a Conference on Regional Studies of Karst organized by the Geographical Section of the Moscow Society of Naturalists

Card 1/3

Regional Study (Cont.)

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which took place on April 16, 1958. The extensive karst phenomena within the USSR, and their possible influence on climate and hydrology, has merited extensive study by Soviet scientists. The influence of biochemical processes on the formation of karst is noted. Each article is accompanied by photographs, diagrams and bibliographic references.

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