BOBROLYUBSKAYA, T. S.

USSR/Physics
Luminescence
Luminophors

Jun 49

"Problem of the Formation of Luminescence Centers in ZnS-Cu Luminophors," A. A. Cherepnev, T. S. Bobrolyubskaya, Phys Inst imeni P. N. Lebedev, Acad Sci USSR, 4 pp

"Dok Ak Nauk SSSR" Vol LXVI, No 4

Formation of luminescence centers in ZnS-Cu luminophors occurs in firing when crystal structure is also formed. Fusing agent is of great importance in this process. Typical ZnS-Cu luminophors are prepared with chloride fusing agents(chiefly NaCl, but also $BaCl_2$, $CaCl_2$, $MgCl_2$, KCl, and combinations). Experimented with other fusing agents, namely, boric acid, borax, sodium sulfate, double-substituted sodium phosphate, sodium flouride, and sodium silicate. Submitted by Acad S. I. Vavilov, 1 Apr 49.

PA 46/49T90

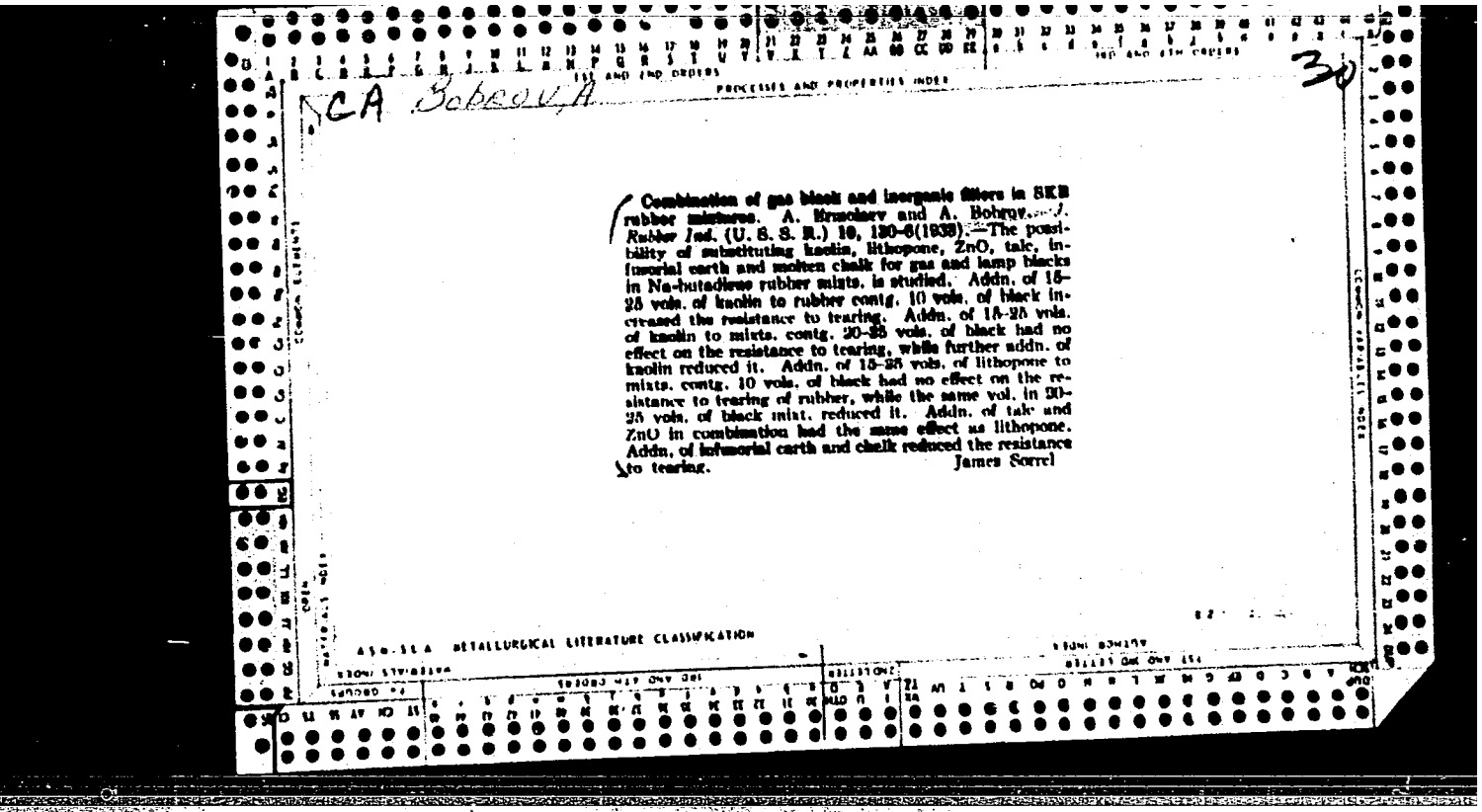
BOBROLYUBSKIY, O.K., kand. khim. nauk.

Seed treatment before sowing and crop spraying with trace element solutions. Zemledelie 7 no.2:65-69 F '59.
(MIRA 12:3)

1.Odesskiy sel'skokhozyaystvennyy institut.
(Seeds) (Trace elements)
(Spraying and dusting in agriculture)

OLEFIR, F.F., kand. tekhn. nauk; BOBROVITSKIY, Yu.F., inzh.; DUBRAVIN, V.F., inzh.

Automatic di[illegible] rolling mill. Mekh. i avt. proizv. 18 no.8:26-28 Ag '64. (MIRA 17:10)



CA Sobrev, A.

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PROCESSES AND PROPERTIES INDEX

Combination of gas black and inorganic fillers in SKB rubber mixtures. A. Kruschev and A. Bobrov. *J. Rubber Ind.* (U. S. S. R.) 10, 130-6(1933).—The possibility of substituting kaolin, lithopone, ZnO, talc, infusorial earth and molten chalk for gas and lamp blacks in Na-butadiene rubber mixts. is studied. Addn. of 15–25 vols. of kaolin to rubber contg. 10 vols. of black increased the resistance to tearing. Addn. of 15–25 vols. of kaolin to mixts. contg. 20–25 vols. of black had no effect on the resistance to tearing, while further addn. of kaolin reduced it. Addn. of 15–25 vols. of lithopone to mixts. contg. 10 vols. of black had no effect on the resistance to tearing of rubber, while the same vol. in 20–25 vols. of black mixt. reduced it. Addn. of talc and ZnO in combination had the same effect as lithopone. Addn. of infusorial earth and chalk reduced the resistance to tearing.

James Sorrel

A1a-11A METALLURGICAL LITERATURE CLASSIFICATION

BOBROV, A.; GAVRICHENKOV, D.

Tasks of the flour milling, groats and mixed feed industry in the sixth five-year plan. Muk.-elev.prom. 22 no.3:3-5 Mr '56. (MLRA 9:7)

1.Nachal'nik Glavnogo upravleniya mukomol'noy, krupyanoy i kombikormovoy promyshlennosti (for Bobrov).2.Dotsent Moskovskogo tekhnologicheskogo instituta pishchevoy promyshlennosti (for Gavrichenkov).
(Grain milling)

BOBROV, A., inzh.; FILONOVICH, B., inzh.

Heating frozen ground with electric needles. Na stroi. Ros. 3 no.10:13 O '62. (MIRA 16:6)

(Frozen ground)

BOBROV, A.

Possibilities of the development of flour milling and grain storage. Muk.-elev. prom. 29 no.5:3-4 My '63. (MIRA 16:7)

1. Nachal'nik Proizvodstvenno-tekhnicheskogo upravleniya Gosudarstvennogo komiteta zagotovok.
(Grain elevators) (Grain milling)

BOBROV, A.

Concerning backflow in core drilling. Razved. i okh. nedr 30 no.7: 51-52 Jl '64. (MIRA 17:12)

1. Kirgizskaya tematicheskaya partiya po tekhnike razvedki.

BOBROV, A. A.

Bee Culture-Equipment and Supplies

"Catching swarms." Pchelovodstvo, 29, No. 4, 1952.

9. Monthly List of Russian Accessions, Library of Congress, August 1958, Uncl.

BOBROV, A. A. and KOZHEVNIKOV, E. M. (Veterinary Surgeons, Voronezh Oblast' Bacteriological Laboratory)

"Influenza in young ducks"

Veterinariya, Vol. 38, no. 10, October 1961, pp. 48

BOBROV, A.A., inzhener.

Automatic water drain. Energetik 1 no.2:11-12 Jl '53. (MLRA 6:8)
(Condensers (Steam))

BOBROV, A. A.

Industrial railroad transportation; routes, car loading and unloading organization and rolling stock. Moskva, Gos. transp. zhel-dor. izd-vo, 1949. 419 p. (50-22187)

TF200.B6

BOBROV, Artur Abramovich; FEDORINA, Vera Ivanovna; MAKSIMOVICH, A.G., red.; EL'KINA, E.M., tekhn. red.

[Everything for the young mother] Vse dlia molodoi materi. Moskva, Gostorgizdat, 1963. 118 p. (MIRA 16:5)
(PRENATAL CARE) (INFANTS--CARE AND HYGIENE)

KOZHEVNIKOV, Ye.M., veterinarnyy vrach; BOBROV, A.A., veterinarnyy vrach

Influenza in ducklings. Veterinariia 38 no.10:48-50 O '61.
(MIRA 16:2)
1. Voronezhskaya oblastnaya veterinarno-bakteriologicheskaya laboratoriya.
(Voronezh Province—Ducks—Diseases and pests)
(Influenza)

BOBROV, A.A.; TSARENKO, A.P., redaktor; VERINA, G.P., tekhnicheskiy redaktor.

[Loading and unloading operations on private railroad lines] Pogruzochno-razgruzochnye raboty na zheleznodorozhnykh putiakh neobshchego pol'zovaniia. Moskva, Gos. transp. zhel.-dor. izd-vo, 1954. 285 p. (MLRA 7:10)
(Mine railroads) (Loading and unloading)

BOBROV, ALEKSEI ALEKSEIEVICH

BOBROV, Aleksey Alekseyevich; GORODNICHEV, N.G., redaktor; VORONIN, K.P., tekhnicheskiy redaktor

[Transportation and fuel management of electric power plants] Transportnoe i toplivnoe khoziaistvo elektricheskikh stantsii. Moskva, Gos.energ.izd-vo, 1957. 182 p. (MLRA 10:9)
(Electric power plants)

BOBROV, A.A.

BOBROV, A.A., inzh.

Over-all mechanization of the unloading and feeding of coal in electric power stations. Mekh.trud.rab.11 no.9:5-9 S '57.
(MIRA 10:11)
(Coal-handling machinery)

BOBROV, A.A., DVORETSKIY, A.I., ZELIKMAN, V.G., LOSHAK, B.O., red., SYROMYATNIKOV, I.A., SHUKHER, S.M.; BORUNOV, N.I., tekhn. red.

[Handbook for studying operating regulations for electric power stations and systems] Posobie dlia izucheniia pravil tekhnicheskoi ekspluatatsii elektricheskikh stantsii i setei v semi vypuskakh. Moskva, Gos. energ. izd-vo. Pt. 1. [Transportation and fuel management in electric power plants] Toplivno-transportnoe khoziaistvo elektrostantsii. 1958. 286 p. (MIRA 11:10)
(Electric power plants)

Bobrov, A. A.

AUTHOR: Bobrov, A.A., Engineer 118-58-3-4/21

TITLE: The Loading and Unloading Work at Peat Storages of Electric Power Plants (Pogruzochno-razgruzochnyye raboty na torfyanykh skladakh elektrostantsiy)

PERIODICAL: Mekhanizatsiya Trudoyemkikh i Tyazhelykh Rabot, 1958, # 3, pp 13-16 (USSR)

ABSTRACT: How to mechanize the loading and unloading of peat, particularly in winter when the peat is frozen, has always been a problem. New modernized railroad cars specially designed for the transportation of peat and equipped with pneumatic devices for the lifting of the lateral walls, as well as caterpillar grab cranes of the PK-2, PK-2M, PK-3 types for the loading of peat, are being used. For the unloading of peat, a machine designed by Kovalev and already introduced at the Bryanskaya i Shaturskaya GRES (Bryansk and Shatura GRES) is recommended. In 1956/57 a device for the defrosting of peat cars was constructed and partly tested at the TETs No 4.

There are 3 photographs.

AVAILABLE: Library of Congress

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BOBROV, A.A., inzh.

Transportation of peat on railroads. Torf. prom. 35 no. 4:14-17 '58. (MIRA 11:7)

1. Teploelektroproyekt.
(Peat--Transportation)

BOBROV, A.A., inzh.

Operation of a rotary car dumper for low-quality brown coal.
Energetik 8 no.6:7-9 Je '60. (MIRA 13:7)
(Loading and unlaoding)
(Coal handling machinery)

BOBROV, A.A., inzh.

Over-all mechanization of fuel unloading operations at electric power plants. Teploenergetika 8 no.1:8-11 Ja '61. (MIRA 14:4)

1. Teploelektroproyekt.
(Electric power plants--Equipment and supplies)
(Coal-handling machinery)

BOBROV, A.A., inzh.

Concerning the operation of systems supplying low-grade brown coals in electric power plants. Elek. sta. 32 no.1:15-18 Ja '61. (MIRA 16:7)

(Electric power plants) (Lignite)

BOBROV, A. A.

Ob otnositel'noy ustoychivosti summ polozhitel'nykh sluchaynykh velichin. DAN, 15 (1937), 239-240.
Conditions of applicability of the stronglaw of large numbers. Duke. Math. J., 12 (1945), 43-46.

SO: Mathematics in the USSR, 1917-1947
edited by Kurosh, A. G.
Markyshevich, A. I.
Rashevskiy, P. K.
Moscow-Leningrad, 1948

Bobrov, A. A. A simplified proof of a theorem of A. Kolmogorov on the strong law of large numbers. Uspehi Matem. Nauk (N.S.) 2, no. 3(19), 194–196 (Russian)

(Consider a sequence of sums $s_n = \xi_1 + \cdots + \xi_n$ of independent random variables with $E\xi_n = 0$, $E\xi_n^2 = b_n$ finite for every n, $B_n = b_1 + \cdots + b_n$, $P_{n,\epsilon}(\epsilon) = \Pr[\max_{1 \le k \le n} |s_k| / B_n \ge \epsilon]$. Kolmogoroff's proof of his classical theorem that $\sum_1^\infty b_n/B_n^2 < \infty$ entails $P(\epsilon) = \lim_{n \to \infty} P_{n,\epsilon}(\epsilon) = 0$ for every given $\epsilon > 0$ is simplified by the author as follows. (a) If ϵ_n is the event $|s_{n+p}| \ge \epsilon(n+\epsilon)$ for the first time when $i = k$, $B_{n+p}^2 \ge \epsilon^2 \sum_{k=1}^{p} P(\epsilon_k)(n+k)^2$, which gives

$$\sum_{k=1}^{\infty} B_{n+p}^2 (n+p)^{-4} - (n+p+1)^{-2}$$
$$\ge \epsilon^2 [P_{n,\epsilon}(\epsilon) - (n+m+1)^{-2} \sum_{k=1}^{m} P(\epsilon_k)(n+k)^2].$$

(b) Abel's transformation gives

$$\sum_{k=1}^{p} \frac{b_{n+k}}{(n+k)^2} = \frac{B_{n+p}}{(n+p+1)^2} - \frac{B_n}{(n+1)^2} + \sum_{k=1}^{p} B_{n+k} \left| \frac{1}{(n+k)^2} - \frac{1}{(n+k+1)^2} \right|.$$

... $n \to \infty$, (a) and (... gives ... $B_{n+p}/(n+p)^2 + 1$, ... $B_n/n^2 = 0$, $P(\epsilon) = 0$ ... M. Loève

Source: Mathematical Reviews, Vol. No.

BOBROV, A.A.

Strong law of large numbers for dependent values. Trudy Inst. mat.i mekh. AN Uz.SSR no.10 pt.1:19-25 '52. (MLRA 8:9)
(Probabilities)

Sobrov, A. A. Remark on distribution functions of regular growth. Vestnik Leningrad. Univ. 10 (1955), no. 11, 65–67. (Russian)

A distribution function $F(x)$ is said to be of regular growth as $x\to+\infty$ if

$$\lim_{x=\infty}\frac{1-F(cx)}{1-F(x)}=f(c)$$

exists for all $c>0$; here $f(c)$ may be $+\infty$. The author proves by elementary methods that always $f(c)=c^{\alpha}$, where $0\leqq\alpha\leqq+\infty$ and α depends on F. Similar results hold when $x\to-\infty$. *J. Wolfowitz* (Ithaca, N. Y.)

BOBROV A.A.

SOV/52-2-4-7/7

AUTHOR: None Given.

TITLE: A Summary of Papers Presented at the Sessions of the Scientific Research Seminar on the Theory of Probabilities. (Moscow, February - May, 1957). (Rezyume dokladov, sdelannykh na zasedaniyakh nauchno-issledovatel'skogo seminara po teorii veroyatnostey. (Moskva, Fevral' - May 1957 g.)

PERIODICAL: Teoriya Veroyatnostey i yeye Primeneniya, 1957, Vol.II, Nr.4, pp.478-488. (USSR)

ABSTRACT: Kolmogorov, A.N., On stochastic processes (General definitions of regularity and singularity. The amount of information per unit of time). Freyman, G.A. (Yelabuga), Local limit theorems for large deviations from the mean and their application to number theory. An expression is given for the number of solutions of the equation

$x_1^n + x_2^n + \ldots + x_k^n = N$ as $k \to \infty$ and $k < \gamma N$, where

Card 1/3 $0 < \gamma < 1$, and N is a positive integer.

A Summary of Papers Presented at the Sessions of the Scientific Research Seminar on the Theory of Probabilities.

Linnik, Yu.V. (Leningrad), Some remarks on least squares in connection with location theory. The contents of this report have been published in Vol.2, Nr.3 of this journal.

Bobrov, A.A. (Odessa), A method of arbitrary functions as a basis for limit distributions. A determining process is investigated which has random initial conditions. The state of a system which is of interest is determined by a quantity $s = F(\nu, \tau)$, depending on the random parameter ν and the parameter τ which characterises the system in some definite measure. The question arises of the conditions to be imposed on F as the parameter τ approaches a critical value τ_0 such that the law of the probability distribution of s approaches some distribution law which does not depend on the probability distribution of the random parameter ν which is supposed arbitrary but absolutely continuous. The conditions are (1) for any $\varepsilon > 0$, $\nu_1 < \nu_2$, $N > 0$ can be chosen such that

Card 2/3 times $[|F| \geq N]_{\nu_1}^{\nu_2} < \varepsilon$ for all τ sufficiently near to τ_0 ;

A Summary of Papers Presented at the Sessions of the Scientific Research Seminar on the Theory ofProbabilities.

(2) for any real t and $\nu_1 < \nu_2$ there exists a limiting mean value

$$\lim_{\tau \to \tau_0} \frac{1}{\nu_2 - \nu_1} \int_{\nu_1}^{\nu_2} e^{itF(\nu,\tau)} d\nu = f(t),$$

independent of the arbitrarily chosen interval (ν_1, ν_2). Chistyakov, V.P., Two local limit theorems for branching stochastic processes. The contents of this report have been published in Vol.2, Nr.3 of this journal. Chentsov, N.N., Some general methods in proving limit theorems for stochastic phenomena. The probability distribution in some set A of functions given over elements t of an arbitrary set T and taking values $x(t)$ in some topological space R is called a stochastic phenomenon. It

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B.-BROV, A.A.

16(1) SOV/2660

PHASE I BOOK EXPLOITATION

Vsesoyuznyy matematicheskiy s"yezd. 3rd, Moscow, 1956

Trudy. t. 4: Kratkoye soderzhaniye sektsionnykh dokladov. Doklady inostrannykh uchenykh (Transactions of the 3rd All-Union Mathematical Conference in Moscow. vol. 4: Summary of Sectional Reports. Foreign Scientists) Moscow, Izd-vo AN SSSR, 1959.
Reports of Foreign Scientists) Moscow, Izd-vo AN SSSR, 1959.
247 p. 2,200 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Matematicheskiy institut.

Tech. Ed.: G.N. Shevchanko; Editorial Board: A.A. Abramov, V.G. Boltyanskiy, A.M. Vasil'yev, B.V. Medvedev, A.D. Myshkis, S.M. Nikol'skiy (Resp. Ed.), A.G. Postnikov, Yu. V. Prokhorov, K.A. Rybnikov, P. L. Ul'yanov, V.A. Uspenskiy, N.G. Chetayev, G. Ye. Shilov, and A.I. Shirshov.

PURPOSE: This book is intended for mathematicians and physicists.

COVERAGE: The book is Volume IV of the Transactions of the Third All-Union Mathematical Conference, held in June and July 1956. The book is divided into two main parts. The first part contains summaries of the papers presented by Soviet scientists at the Conference that were not included in the first two volumes. The second part contains the text of reports submitted to the editor by non-Soviet scientists. In those cases when the non-Soviet scientist did not submit a copy of his paper to the editor, the title of the paper is cited and, if the paper was printed in a previous volume, reference is made to the appropriate topics in number theory, both Soviet and non-Soviet, cover various function theory, algebra, differential and integral equations, topology, mathematical analysis, probability theory, functional mechanics and physics, computational mathematics, and the problems of mechanics and the foundations of mathematics, and the history of mathematics.

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16(1)
AUTHOR: Bobrov,A.A.

06302
SOV/140-59-6-3/29

TITLE: On a Characteristic Mark of the Weak Convergence of a Sequence of Monotone Functions

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Matematika, 1959, Nr 6, pp 14-25 (USSR)

ABSTRACT: The author investigates the question what can be said about the weak convergence of a sequence $\{\varphi_n\}$ of monotone functions if it is known that for one given function f there holds the relation

(1') $$\lim_{n\to\infty}\int_a^x f\,d\varphi_n = \int_a^x f\,d\varphi .$$

The investigation of the problem leads to a series of characteristic marks of convergence of the form (1'), where for a simpler formulation the notion of the approximation point of a sequence is introduced: t_o is an approximation point if to every $\varepsilon>0$ there exists a $\delta>0$ so that to almost all $t\in(t_o-\delta,t_o)$ there exists an N_t so that $|\varphi_n(t)-\varphi_m(t)|<\varepsilon$ for all $n,m>N_t$. For monotone and uniformly bounded functions the convergence on a

On a Characteristic Mark of the Weak Convergence of a Sequence of Monotone Functions

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dense set is equivalent to the approximation in every point. As a special case the author considers distribution functions of random variables. There are 11 theorems and 1 lemma, e.g.: Theorem 6: In order that $\{\varphi_n\}$, where the φ_n are monotone, on $[a,b]$ converge weakly to a bounded function φ, it is necessary and sufficient that a) there exists a function f absolutely continuous on $[a,b]$ and there nowhere vanishing, for which almost everywhere on $[a,b]$, but especially in x=b it holds

$$(7) \qquad \lim_{n\to\infty} \int_a^x f\,d\varphi_n = \int_a^x f\,d\varphi;$$

b) the complete variations of the φ_n are uniformly bounded on $[a,b]$.
There are 4 references, 3 of which are Soviet, and 1 Hungarian.

ASSOCIATION: Odesskiy tekhnologicheskiy institut (Odessa Technological Institute)

SUBMITTED: January 26, 1959
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S/052/60/005/004/002/007
C 111/ C 333

AUTHORS: Arov, D. Z., Bobrov, A. A.

TITLE: The Extreme Members of Sample and Their Role in the Sum of the Independent Variables 16

PERIODICAL: Teoriya veroyatnostey i yeye primeneniye, 1960, Vol. 5, No. 4, pp. 415-435

TEXT: Let $x_1, x_2, \ldots, x_n$ be independent equally distributed random variables; $F(x)$ their distribution function; $\chi(x) = 1 - F(x)$ for $x > 0$ and $= F(x)$ for $x < 0$. Let

(1) $$\lim_{x \to +\infty} \frac{\chi(kx)}{\chi(x)} = \frac{1}{k^{\alpha}} \quad , 0 \leq \alpha \leq \infty \quad , k > 0 \text{ arbitrary}$$

(2) $$\lim_{x \to +\infty} \frac{\chi(-x)}{\chi(x)} = c, \quad 0 \leq c \leq +\infty \ .$$

If

(3) $$\xi_1^{(n)}, \ \xi_2^{(n)}, \ \ldots, \ \xi_n^{(n)}$$

are the same variables $x_1, x_2, \ldots, x_n$, written in the sequence of

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decreasing moduli: $|\xi_1^{(n)}| \geqq |\xi_2^{(n)}| \geqq \ldots \geqq |\xi_n^{(n)}|$, then $\xi_k^{(n)}$ is called for fixed $k \leqq n$ the extreme member of (3) and k its order number.

Theorem 1: If $\chi(x)$ satisfies the condition (1) with the exponent α, $0 \leqq \alpha \leqq \infty$, then the inverse function satisfies for every $k > 0$ the condition

$$(6) \qquad \lim_{x \to +0} \frac{\chi^{-1}(kx)}{\chi^{-1}(x)} = \frac{1}{k^{1/\alpha}} .$$

Theorem 2: Under the assumptions of theorem 1 it holds

$$(7) \qquad \lim_{x \to +\infty} \int_0^1 \left| \frac{\chi(ux)}{\chi(x)} - \frac{1}{u^{\alpha}} \right| du = 0 \text{ for } 0 \leqq \alpha < 1$$

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(8) $\lim_{x \to +\infty} \int_1^{\infty} \left| \frac{\chi(ux)}{\chi(x)} - \frac{1}{u^{\alpha}} \right| du = 0$ for $1 < \alpha < \infty$.

Theorem 3: For arbitrary fixed natural k and m, $k < m$ and arbitrary parameters α and c, $0 < \alpha < +\infty$, $0 \leq c \leq +\infty$ for $n \to \infty$ the density of the joint limit distribution of the normed extreme members $\frac{\xi_k^{(n)}}{a_n}$ and $\frac{\xi_m^{(n)}}{a_n}$, where $a_n = (1+c)^{1/\alpha} \chi^{-1}(\frac{1}{n})$, is given by

(17) $\varphi_{k,m}(y,x) = p^2 \varphi^+_{k,m}(y,x) + pq\varphi^+_{k,m}(y,-x) + pq\varphi^+_{k,m}(-y,x) + q^2\varphi^+_{k,m}(-y,-x)$

where the density of the limit distribution of $\frac{|\xi_k^{(n)}|}{a_n}$ and $\frac{|\xi_m^{(n)}|}{a_n}$ is determined by

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(16) $$\varphi^{+}_{k,m}(y,x) = \begin{cases} \frac{\alpha^2}{(k-1)!(m-k-1)!} \cdot \frac{(y^{\alpha}-x^{\alpha})^{m-k-1} e^{-x^{\alpha}}}{y^{\alpha(m-1)+1} x^{\alpha(m-k)+1}} & \text{for } 0<x<y \\ 0 & \text{elsewhere} \end{cases}.$$

Here it is $p = \frac{1}{1+C}$, $q = \frac{C}{1+C}$.

Theorem 4: Adopt the notations of theorem 3 and assume only (2). Then the density $\varphi^{*}_{k,m}(y,x)$ of the joint limit distribution of the variables $n\chi(\xi_k^{(n)})$ and $n\chi(\xi_m^{(n)})$ for arbitrary fixed k and m, $k<m$, and for $n \to \infty$ is given by

(23) $$\varphi^{*}_{k,m}(y,x) = \varphi^{*+}_{k,m}\left(\frac{y}{p}, \frac{x}{p}\right) + \varphi^{*+}_{k,m}\left(\frac{y}{p}, \frac{x}{q}\right) + \varphi^{*+}_{k,m}\left(\frac{y}{q}, \frac{x}{p}\right) + \varphi^{*+}_{k,m}\left(\frac{y}{q}, \frac{p}{q}\right),$$

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where

$$\varphi^{*+}_{k,m}(y,x) = \begin{cases} \dfrac{y^{k-1}(x-y)^{m-k-1}e^{-x}}{(k-1)!(m-k-1)!} & \text{for } 0 < y < x \\ 0 \text{ elsewhere} \end{cases} .$$

Let $\zeta_n = x_1 + x_2 + \ldots + x_n = \xi_1^{(n)} + \xi_2^{(n)} + \ldots + \xi_n^{(n)}$.

Theorem 5: Let

$$\zeta_n^{(k)} = \begin{cases} s_n - \sigma_k^{(n)} & \text{for } 0 < \alpha < 1 \\ s_n - na & \text{for } 1 < \alpha < 2 \end{cases} , \quad \sigma_k^{(n)} = \xi_1^{(n)} + \ldots + \xi_k^{(n)} ,$$

$$a = \int_{-\infty}^{\infty} x dF(x) , \quad a_n = \begin{cases} (1+o)^{1/\alpha} \chi^{-1}\left(\frac{1}{n}\right) & \text{for } 0 < \alpha < 1 \\ \chi^{-1}\left(\frac{1}{n}\right) & \text{for } 1 < \alpha < 2 \end{cases} .$$

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Under the assumptions of theorem 3 the joint limit distribution of $\frac{\zeta_n^{(k)}}{a_n}$ and $\frac{\xi_k^{(n)}}{a_n}$ possesses the characteristic function $f_k(t_1, t_2)$ which is defined by: for $0 < \alpha < 1$:

$$(25)\quad f_k(t_1,t_2) = \frac{1}{(k-1)!}\int_0^\infty u^{k-1}e^{-\zeta(t_1,u)}d_u\zeta(t_2, u), \text{ where}$$

$$\zeta(t,u) = u(pe^{itu^{-\frac{1}{\alpha}}} + qe^{-itu^{-\frac{1}{\alpha}}}) - it\int_0^{u^{-\frac{1}{\alpha}}}(pe^{itz}-qe^{-itz})\frac{dz}{z^\alpha}$$

and similarly for $1 < \alpha < 2$.

Theorem 6: Under the assumptions of theorem 3 it holds for $\alpha = 0$ and arbitrary fixed natural k and p;

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$$(38)\quad \lim_{n\to\infty} \underline{M}\left(\frac{s_n - \sigma_k^{(n)}}{\zeta_k^{(n)}}\right)^p = 0 .$$

Theorem 7: Under the assumptions of theorem 3 and $0 < \alpha < 1$, $k_n \to \infty$ and $\frac{k_n \ln n}{n} \to 0$ for $n \to \infty$, all x_i of the sequence $\{x_i\}$ are nonnegative, it holds

$$(42)\quad \lim_{n\to\infty} \underline{M}\left[\frac{s_n - \sigma_{k_n}^{(n)}}{k_n \zeta_{k_n}^{(n)}} - \frac{\alpha}{1-\alpha}\right]^2 = 0 .$$

Theorem 8: Under the assumptions of theorem 7 it holds for $1 < \alpha < 2$:

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C 111/ C 333

The Extreme Members of Sample and Their Role in the Sum of the Independent Variables

$$(46)\quad \lim_{n\to\infty} \underline{M}\left[\frac{\sigma k_n}{k_n \xi_{k_n}^{(n)}} - \frac{\alpha}{\alpha - 1}\right]^2 = 0$$

$$(47)\quad \lim_{n\to\infty} \underline{M}\left[\frac{S_n - n\alpha}{k_n \xi_{k_n}^{(n)}}\right]^2 = 0 \quad .$$

Numerous corollaries are given.

There are 4 references: 3 Soviet and 1 American.

SUBMITTED: November 10, 1958

Card 8/8

BOBROV, A.A., inzh.

New techniques of peat receiving devices at consumer enterprises.
Torf.prom. 37 no.7:9-11 '60. (MIRA 13:11)

1. Institut "Teploelektroproyekt."
(Peat) (Loading and unloading)

S/044/62/000/006/062/127
B168/B112

AUTHORS: Bobrov, A. A., Verbitskaya, I. N.

TITLE: One inequality for the correlation function of a random process steady in a wide sense and its application to the ergodic theorem

PERIODICAL: Referativnyy zhurnal. Matematika, no. 6, 1962, 6, abstract 6V29 (Nauchn. yezhegodnik, Odessk. un-t. Fiz.-matem. fak. i N.-i. in-t fiz., Odessa, no. 2, 1961, 79-82)

TEXT: Let us assume that $B(\tau)$ be the correlation function of a process $\xi(t)$ which is steady in a wide sense. The inequality

$$2\left(\int_0^T B(\tau)d\tau\right)^2 \leqslant \int_0^{2T} dt \int_0^t B(\tau)d\tau$$

is proved. With the aid of this inequality the well-known ergodic theorem is proved: If $\xi(t)$ is a process steady in a wide sense and $M\xi(t) = 0$, then, in order that the limit

Card 1/2

S/044/62/000/006/062/127
B168/B112

One inequality for the correlation...

$$\lim_{T\to\infty} \frac{1}{T} \int_0^T \xi(t)dt$$

(understood as the limit in the mean square) be equal to zero, it is necessary and sufficient that

$$\lim_{T\to\infty} \frac{1}{T} \int_0^T B(\tau)d\tau = 0.$$

An analogous statement is also proved for a process with discrete time.
[Abstracter's note: Complete translation.]

Card 2/2

Bobrov, A.A.

PHASE I BOOK EXPLOITATION SOV/6371

Vsesoyuznoye soveshchaniye po teorii veroyatnostey i matematicheskoy statistike. (6th, Vilnius, 1960.

Trudy VI Vsesoyuznogo soveshchaniya po teorii veroyatnostey i matematicheskoy statistike i kollokviuma po raspredeleniyam v beskonechnomernykh prostranstvakh (Transactions of the Sixth Conference on Probability Theory and Mathematical Statistics and of the Symposium on Distributions in Infinite-Dimensional Spaces held in Vilnius 5-10 September 1960) Vilnius, Gospolitizdat LitSSR, 1962. 493 p. 2500 copies printed.

Sponsoring Agency: Akademiya nauk Litovskoy SSR. Vil'nyusskiy gosudarstvennyy universitet imeni V. Kapsukasa. Matematicheskiy institut imeni V. A. Steklova, Akademiya nauk SSSR.

Editorial Board: N. N. Vorob'yev, B. V. Gnedenko, R. L. Dobrushin, Ye. B. Dynkin, A. N. Kolmogorov, I. P. Kubilyus, Yu. V. Linnik, Yu. V. Prokhorov, N. V. Smirnov, V. A. Statulyavichyus, and A. M. Yaglom. Ed.: D. Melinene; Tech. Ed.: O. Pakerite.

Card 1/13

PURPOSE: Dissemination of scientific information.

COVERAGE: Because of various editorial difficulties, not all papers presented at the Conference could be included. The 86 papers presented here are divided by subject matter into 6 sections (see Table of Contents). The editors thank the members of the Mathematical Section of the Institute of Physics and Mathematics of the Lithuanian Academy of Sciences and the Department of Probability Theory and Number Theory at Vil'nyus University, particularly A. K. Aleshkyavichene, A. A. Mitalauskas, B. A. Ryauba, and R. V. Uzhdavinis. References, cited in the text at the end of the individual reports, comprise 489 entries: 316 Soviet (a number of which are translations), 2 Hungarian, 1 Polish, 139 English, 20 French, 10 German, and 1 Italian.

TABLE OF CONTENTS:

LIMIT THEOREMS

LIMIT THEOREMS

Transactions of the 6th Conf. on Probability Theory and Mathematical Statistics and of the Symposium on Distributions in Infinite-Dimensional Spaces held in Vil'nyus, 5-10 Sep '60. Vil'nyus Gospolitizdat Lit SSR, 1962. 493 p. 2500 copies printed

Transactions of the 6th Conf. on Probability Theory and Mathematical Statistics and of the Symposium on Distributions in Infinite-Dimensional Spaces held in Vil'nyus, 5-10 Sep '60. Vil'nyus: Gospolitizdat Lit SSR, 1962. 493 p. 2500 copies printed

BOBROV, A.A., inzh.

Fuel supply, handling and storage in the 500,000 kw capacity "Maritsa-Vostok" heat and electric power plant of the Bulgarian People's Republic. Teploenergetika 9 no.10:84-87 O '62. (MIRA 15:9)

(Bulgaria--Electric power plants--Equipment and supplies)

BURMISTROV, P.I.; SAMOYLOVICH, S.D.; DEMICHEV, G.M.; KONONOV, V.A.; EVENCHIK, S.D.; BRODOVSKIY, N.R.; PAVLOV, S.M.; BOEROV, A.A.; BASKIN, A.I.; SHKOL'NIKOV, S.A.; VASIL'YEV, B.K.; DRANNIKOV, A.B.; RIKMAN, M.A.; BURAKOV, V.A.; VLADIMIROV, A.P.; NIKOLAYEVSKIY, G.M.; PETRUSHEV, I.M., red.; GERASIMOVA, Ye.S., tekhn. red.

[Mechanization of loading, unloading and storing operations in industrial enterprises] Mekhanizatsiia pogruzochno-razgruzochnykh i skladskikh rabot na promyshlennykh predpriiatiiakh. Moskva, Ekonomizdat, 1963. 276 p.
(MIRA 17:2)

BOBROV, A.D., inzh. (Khar'kov); VERESHCHAGIN-YANKO, O.A., inzh. (Kiyev)

Stand for insulating large-diameter pipes. Stroi. truboprov. 7 no.1:23 Ja '62. (MIRA 16:7)

(Pipe) (Protective coatings)

BOBROV, A.G.
6694

BOBROV, A.G. Ratsionalizatsiya Ispytaniy Prushin Razlichnykh Konstruktsiy (Opyt Laboratorii Kirovskogo Zavoda). L., 1954. 10 s.s Ill. 21 sm. (Vsesoyuz. O-vo Po Rasprostraneniyu Polit. I Nauch. Znaniy. Leningr. Dom Nauch.-Tekhn. Propagandy. Listok Novatora. No. 31 (270)). 3.800 Ekz. 25 K.-Avt. Ukazan v Kontse Teksta.—(54-15534zh) 621.888.0014

SO: Knizhnaya Letopis 'No. 6, 1955)

BOBROV, A.G.

BOBROV, A.G.; TYUMENEVA, S.T., inzh., red.; GVIRTS, V.L., tekhn.red.

[Device (tension gauge) for testing thin sheets] Prisposoblenie (tipa reversora) dlia ispytaniia tonkolistovykh materialov. Leningrad, 1955. 3 p. (Leningradskii dom nauchno-tekhnicheskoi propagandy. Informatsionno-tekhnicheskii listok, no.63(751))
(MIRA 10:12)

(Sheet metal--Testing) (Testing machinery)

Бобров А. Г.

PHASE I BOOK EXPLOITATION 534

Bobrov, A.G., Engineer

Pribor dlya ispytaniya metallov pri vysokikh temperaturakh (Device for Testing Metals at High Temperatures) Leningrad, 1955. 4 p. (Series: Leningradskiy dom nauchno-tekhnicheskoy propagandy. Informatsionno-tekhnicheskiy listok, no. 41/729/) 7,000 copies printed.

Sponsoring Agencies: Leningradskiy dom nauchno-tekhnciheskoy propagandy, and Vsesoyuznoye obshchestvo po rasprostraneniyu politicheskikh i nauchnykh znaniy.

Ed.: Tyumeneva, S.T., Engineer; Tech. Ed.: Freger, D.P.

PURPOSE: This pamphlet acquaints technical personnel with the design and construction of an apparatus for high-temperature testing of strength properties and plasticity of metal specimens.

COVERAGE: The apparatus consists of an electric furnace with suitable temperature-controlling apparatus (1200° to 1250° C), an extensometer, and a loading device. A description of

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Device for Testing Metals at High Temperatures 534

major equipment is included. There are 3 Soviet references.

TABLE OF CONTENTS:

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8-13-58

Card 2/2

BOBROV, A.G.

Instruments for testing flat and torsional springs of low rigidity. Zav.lab. 21 no.4:490 '55 (MLRA 8:6)

1. Kirovskiy mashinostroitel'nyy i metallurgicheskiy zavod.
(Testing-machines) (Springs(Mechanism))

BOBROV, A.G., inzhener.

A spring testing instrument. Vest.mash.35 no.10:70-71 O '55.
(Springs (Mechanism)--Testing)

BOBROV, A.G.

Device for testing small torsion springs. Zav.lab. 22 no.5:617 '56.
(MLRA 9:8)

1. Leningradskiy Kirovskiy zavod.
(Springs--Testing)

AUTHOR: Bobrov, A.G.

32-24-4-54/67

TITLE: A Device for Metal Testing in a Low Temperature Air Medium (Prisposobleniye dlya ispytaniya metallov v nizkotemperaturnoy vozdushnoy srede)

PERIODICAL: Zavodskaya Laboratoriya, 1958, Vol. 24, Nr 4, pp. 494-494 (USSR)

ABSTRACT: The system described serves the purpose of measuring the elongation of metals under the above mentioned conditions. It is shown by a drawing that a cylindrical body, which has a through-going opening in its center, is provided with a cooling chamber and a heat-insulating layer. The latter consists of cork, whereas a mixture of benzine and carbonic acid ice is filled into the chamber through a funnel. The sample to be investigated is placed into the central cavity and is fastened on both sides to the holders, which, in turn, are fastened to the test machine itself. The lateral wall of the cylinder has an opening through which a thermocouple element can be inserted until it reaches the sample by means of which the investigation temperature is measured. Before the elongation test the sample is kept at low temperatures for at

Card 1/2

A Device for Metal Testing in a Low Temperature Air Medium

32-24-4-54/67

least ten minutes. The device described gave fully satisfactory results, it is stable in operation, and the temperature of up to -78° is attained with sufficient rapidity. There is 1 figure.

ASSOCIATION: Kirovskiy mashinostroitel'nyy i metallurgicheskiy zavod (Kirov Plant for Machine Building and Metallurgy)

1. Metals--Mechanical properties 2. Metals--Testing equipment
3. Temperature--Control

Card 2/2

S/137/60/000/01/06/009

Translation from: Referativnyy zhurnal, Metallurgiya, 1960, No 1, pp 236-237, # 1565

AUTHOR: Bobrov, A.G.

TITLE: Mechanical Properties of Some Steels at Low Temperatures

PERIODICAL: Novosti mashinostroyeniya, 1959, No 5, pp 11 - 12

TEXT: The author investigated mechanical properties (σ_b, σ_s, δ, Ψ, and a_k) at +20°C and -75°C of "5", "35" and "45" grade steel in normalized state, and of 27СГ (27SG), 38ХСА (38KhSA) and 45ХНМФА (45KhNMFA) steel, subjected to oil quenching with subsequent tempering at the following temperatures: 250°C for 27SG steel (R_C 44 - 45); 620°C for 38KhSA steel (R_C 30 - 31) and 480°C for 45KhNMFA steel (R_C 43 - 45). It was established that at -75°C, σ_s increased for carbon steels by 20 - 23% and for alloyed steels by 5 - 9%; σ_b increased for carbon steels by 12 - 17% and for alloyed steels by 4%. The δ and Ψ values did not considerably change, whereby δ trends to

Card 1/2

Mechanical Properties of Some Steels at Low Temperatures

increase and ψ - to decrease. The a_k values dropped sharply (by a factor of $\sim$ 2.5) for all steels, with exception of 45KhNMFA steel; this is due to the presence of Mo in this steel.

T.F.

PHASE I BOOK EXPLOITATION SOV/5835

Bobrov, Anatoliy Grigor'yevich

Pribory i prisposobleniya dlya mekhanicheskikh ispytaniy (Instruments and Devices for Mechanical Testing) Moscow, Mashgiz, 1961. 79 p. 8000 copies printed.

Ed.: Ya. S. Gintsburg, Candidate of Technical Sciences; Ed. of Publishing House: A. I. Varkovetskaya; Tech. Ed.: M. M. Peterson; Managing Ed. for Literature on Machine-Building Technology (Leningrad Department, Mashgiz): Ye. P. Naumov, Engineer.

PURPOSE: This book is intended for engineers in plant laboratories, designers, and scientific workers in schools and research institutes.

COVERAGE: A number of instruments and devices developed and used in the Laboratory for Mechanical Testing at leningradskiy Kirovskiy zavod (Leningrad Kirov Plant) are described. Included are: devices for the execution of tests which could not be performed on standard Soviet testing machines; devices and attachments for tensile tests at low and high temperatures and for hardness testing by

Card [redacted]

various methods; devices for torsional and flexural tests, for testing various springs, and for determining the wear resistance of materials. No personalities are mentioned. There are 20 references, all Soviet.

TABLE OF CONTENTS:

BOBROV, A.G.

New wear-testing machine. Mashinostroitel' no.3:21 Mr '61.
(MIRA 14:3)
(Testing machines)

BOBROV, A.G.

Instrument for testing small flat springs. Zav.lab. 27 no.3:346-347 '61. (MIRA 14:3)

1. Kirovskiy zavod, g. Leningrad.
(Springs(Mechanism)—Testing)

L 16475-65 EWP(e)/EPA(s)-2/EWT(m)/EWP(w)/EPF(n)-2/EWA(d)/EWP(v)/EPA(w)-2/EWP(t)/EWP(k)/EWP(b) Pab-10/Pf-4/Pt-10/Pu-4 AEDC(a)/SSD/ASD(m)-3/AFWL/AFETR/AFTC(a)/AFTC(b) JD/EM/WH

ACCESSION NR AM4049794 BOOK EXPLOITATION S/

Gintsburg, YA. S.; Bobrov, A. G.

Apparatus for testing machine-building materials at high temperatures (Ustanovki dlya ispy*taniya mashinostroitel'ny*kh materialov pri vy*sokikh temperaturakh), Moscow, Izd-vo "Mashinostroyeniye", 1964, 194 p. illus., biblio. 3,500 copies printed.

TOPIC TAGS: test equipment, heat-resistant steel, ceramic, powder metallurgical material

PURPOSE AND COVERAGE: This book examines equipment for mechanical testing of specimens and parts from heat-resistant steels and alloys, powder metallurgical materials, ceramic and carbon machine-building materials at high temperatures and equipment for short-time and long-time testing of tensile strength and tests for thermal fatigue, and natural testing of turbine disks and rotors. The book is intended for engineers of plant laboratories and research institutes of the machine-building industry. It can be used by students of higher educational institutions.

TABLE OF CONTENTS [abridged]:

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L 16475-65
ACCESSION NR AM4049794

SUB CODE: MM SUBMITTED: 27May64 NR REF SOV: 097

OTHER: 129

Card 2/2

BATYAYKIN, V.G.; BOBROV, A.G.; GINTSBURG, Ya.S.

Uniform and concentrated deformations in hardened and tempered steel. Izv. vys. ucheb. zav.; chern. met. 7 no.7:153-158 '64
(MIRA 17:8)

1. Vsesoyuznyy zaochnyy lesotekhnicheskiy institut.

BOBROV, A. I.

"Long-range Radionavigational Systems," pp 25-63, The Works of the Conference on Aerial Radionavigation, Soviet Radio, Moscow, 1948.

AUTHOR: Bobrov, A.I. 32-24-6-41/44

TITLE: News in Brief (Korotkiye soobshcheniya)

PERIODICAL: Zavodskaya Laboratoriya, 1958, Vol 24, Nr 6, pp. 781-781 (USSR)

ABSTRACT: A. I. Bobrov of the Kirov Machine-Building and Metallurgical Factory (Kirovskiy mashinostroitel'nyy i metallurgicheskiy zavod) designed two apparatus for the testing of ring--samples. By the apparatus for the testing of samples of large diameters the load capacity and resistivity of materials of finished constructions, as well as pipe-rings of certain dimensions can be determined. A figure and a description of the reversing device are given from which it may, e. g., be seen that the load in the test is transferred by a roll to the pistons which slide in the upper bushing of the cylinder; in this way the destruction of the ring sample is brought about. The apparatus for testing ring samples of smaller diameter is of similar construction with the only difference that the head segment is considerably shorter. The characteristics obtained by these apparatus for ring samples do not fully agree with the data of the testing of

Card 1/2

normal samples, they do, however, characterize the quality of the tested material. There is 1 figure.

1. Piston rings--Testing equipment

BOBROV, A.I.; FINKEL', I.M.,

New techniques in dyeing and finishing colored calfskin velour. Leg. prom. 18 no.4:49-50 Ap '58. (MIRA 11:4)

1. Nachal'nik tsekha Rizhskogo kozhevennogo zavoda "Kommunar" (for Bobrov). 2. Nachal'nik otdela tekhnicheskogo kontrolya Rizhskogo kozhevennogo zavoda "Kommunar" (for Finkrl).
(Dyes and dyeing--Leather)

44000

S/054/62/000/004/016/017
B101/B186

15.2640

AUTHORS: Borisova, Z. U., Bobrov, A. I.

TITLE: Electrical conductivity of the glassy system arsenic - selenium - gallium

PERIODICAL: Leningrad. Universitet. Vestnik. Seriya fiziki i khimii, no. 4, 1962, 159-164

TEXT: The effect of gallium and indium on the conductivity of glassy $AsSe_x$ was studied. Only loose, porous melts were obtained in the system $AsSe_xIn_y$ with $y = 0.05$ and $y = 0.1$. The system $AsSe_xGa_y$ yielded glassy melts in the range $0 \leq y \leq 0.15$. Melts that did not become glassy by slow cooling were made glassy by quenching in air, but some samples ($y > 0.05$) included some amount of crystalline phase. Experiments with melts of the composition $AsSe_2Ga_{0.05}Me_{0.05}$, Me = Cu, Ag, Tl, showed no effect of these metals on the conductivity of $AsSe_xGa_y$. Introduction of gallium in glassy $AsSe_x$ increased the conductivity by 2-3 orders, the energy of conductivity not

Card 1/2

Electrical conductivity of the...

changing and being near the dissociation energy of the As-Se bond (1.7 ev). Introduction of gallium brings the modulus of conductivity close to the theoretical value ($\log \beta \sim 0$) due to stabilization of the through transfer of current carriers by formation of the tetrahedral structural units $\geqslant Se_{3/2}As^{+} - Se - Ga^{-} Se_{3/2} \leqslant$. This eliminates the blocking of current carriers in the complex structures of the excess selenium. There are 1 figure and 2 tables.

SUBMITTED: February 17, 1962

Card 2/2

BOBROV, Aleksey Ivanovich; PCHELKIN, Yu.V., red.; SMIRNOV, P.S., tekhn.red.

[Our country needs more mechanisms and automatic control equipment] Bol'she mekhanizmov, avtomatiki - strane. Leningrad, Lenizdat, 1959. 33 p. (MIRA 12:11)

1. Zamestitel' predsedatelya Leningradskogo sovnarkhoza (for Bobrov).
(Automation) (Machinery industry)

BOBROV, A. I.

PHASE I BOOK EXPLOITATION SOV/5245

Ministerstvo svyazi SSSR. Tekhnicheskoye upravleniye

Novyye razrabotki v oblasti radiosvyazi i radioveshchaniya; informatsionnyy sbornik (New Developments in the Field of Radio Communication and Radio Broadcasting; Informational Collection) Moscow, Svyaz'izdat, 1959. 80 p. 11,500 copies printed. (Series: Tekhnika svyazi)

Resp. Ed.: A. S. Vladimirov; Ed.: V. I. Bashur; Tech. Ed.: G. I. Shafer.

PURPOSE: This collection of articles is intended for technical personnel concerned with the development and operation of radio communication and radio broadcasting.

COVERAGE: The book contains, according to the Foreword, information on new developments realized at the Gosudarstvennyy nauchno-issledovatel'skiy institut Ministerstva svyazi SSSR (State Scientific Research Institute of the Ministry of Communication USSR). Radio communication and radio broadcasting apparatus are described. Several articles are concerned with the development of new checking and measuring instruments. No personalities are mentioned. There are no references.

VEYNOV, K.A.; BOBROV, A.I.

Important problem in the sulfite pulp production. Bum.prom. 35 no.11:15-17 N '60. (MIRA 13:11)

1. Moskovskiy filial Vsesoyuznogo nauchno-issledovatel'skogo instituta bumagi i tsellyulozy.

(Woodpulp)

BOBROV, A.I.; TURBANOVA, A.D.

Cooking spruce pulp with magnesium bisulfite at the increased temperature. Bum. prom. 36 no.10:4-5 O '61. (MIRA 15:1)

1. Moskovskiy filial Vsesoyuznogo nauchno-issledovatel'skogo instituta tsellyulozno-bumazhnoy promyshlennosti.
(Magnesium sulfite)
(Woodpulp)

BOBROV, A.I.; SIDOROV, S.K.; YAKUBOVICH, S.Z., red.; SHENDAREVA, L.V., tekhn. red.; PETRENKO, V.M., tekhn. red.

[Manufacture of cable paper] Proizvodstvo kabel'noi bumagi. Moskva, TSentr. in-t tekhn. informatsii i ekon. issl. po lesnoi, bumazhnoi i derevoobrabatyvaiushchei promyshl., 1962. 47 p. (MIRA 16:4)

(Paper)

BUSYGIN, K.K.; BOBROV, A.I.

Methods of calibrating anemometers. Trudy MakNII 15:68-80 '63.
(MIRA 17:11)

BOBROV, A.I.

Bisulfate cooking with magnesium-base acid. Bum.prom. 38 no.1:12-14 Ja '63. (MIRA 16:2)
(Woodpulp)

BOBROV, A.I.; KORCHEMKIN, F.I.

Chemically modified pulp. Bum. prom. [38] no.6:24-25 Je '63.
(MIRA 16:7)

1. Moskovskiy filial Vsesoyuznogo nauchno-issledovatel'skogo instituta tsellyulozno-bumazhnoy promyshlennosti.
(Woodpulp industry—Research)

BOBROV, A.I.; TURBANOVA, A.D.; POPOV, B.Ye.; CHEREPANOV, V.N.; KHORSHEV, V.M.

Acid sulfite pulping by the use of a magnesium base. Bum. prom. no. 2:5-8 F '64. (MIRA 17:3)

1. Moskovskiy filial Vsesoyuznogo nauchno-issledvoatel'skogo instituta tsellyulozno-bumazhnoy promyshlennosti (for Bobrov, Turbanova). 2. Visherskiy kombinat (for Popov, Cherepanov, Khorshev).

BOBROV, A.I.; YAKUBOVICH, S.Z., red.

[Production of sulfate pulp using a magnesium base; a survey] Proizvodstvo sul'fitnoi tselliulozy na magnievom osnovanii; obzor. Moskva, TSentr. nauchno-issl. in-t informatsii i tekhniko-ekon. issledovanii po lesnoi, tselliulozno-bumazhnoi, derevoobrabatyvaiushchei promyshl. i lesnomu khoz., 1964. 101 p. (MIRA 18:1)

L 06284-67 EWT(m)/EWP(e)/EWP(t)/ETI IJP(c) WH/JD/JG/GD

ACC NR: AT6027139 SOURCE CODE: UR/0000/65/000/000/0090/0096

34
33
B+1

AUTHOR: Borisova, Z. U.; Bobrov, A. I.

ORG: none

TITLE: Effect of indium and gallium on the electric conductivity and microhardness of vitreous arsenic selenide

SOURCE: AN SSSR. Otdeleniye obshchey i tekhnicheskoy khimii. Issledovaniya v oblasti khimii silikatov i okislov (Studies in the field of chemistry of silicates and oxides). Moscow, Izd-vo Nauka, 1965, 90-96

TOPIC TAGS: arsenic compound, selenide, gallium compound, indium compound

ABSTRACT: $AsSe_{1.5}In_x$ alloys were synthesized, and the introduction of minute amounts of indium or gallium (up to 1.17 at. %) into vitreous arsenic selenide was found to increase its conductivity by about two orders of magnitude, and to decrease the energy of electric conductivity by 0.2 eV. The conductivity of vitreous-crystalline $AsSe_{1.5}In_x$ also increases with rising indium content. As the gallium content increases, the conductivity of vitreous-crystalline $AsSe_{1.5}Ga_x$ diminishes. The different influence of indium and gallium on the conductivity of vitreous-crystalline alloys is apparently due to a difference in the electric properties of the indium and gallium selenide formed in the glass. The microhardness of vitreous and vitreous-crystalline alloys $AsSe_{1.5}In_x$ remains virtually unchanged with rising indium content, whereas in the

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L 06284-67
ACC NR: AT6027139

case of rising gallium content in $AsSe_{1.5}Ga_x$, it increases. In conclusion, authors express their deep gratitude to I. I. Kozhina for her x-ray measurements. Orig. art. has: 4 figures and 2 tables.

SUB CODE: 07/ SUBM DATE: 11Nov64/ ORIG REF: 018/ OTH REF: 007

Card 2/2

BOBROV, A.I.; BORISOVA, Z.U.; KOZHINA, I.I.

Effect of thallium on the electroconductivity and microhardness of vitreous and glass crystal $AsSe_{1,5}Tl_x$. Vest. LGU 20 no.10:86-90 '65. (MIRA 18:7)

L 60420-65 EWT(1)/EWP(e)/EWT(m)/EWP(i)/EWG(m)/T/EWP(t)/EEC(b)-2/EWP(b) Pq-4/
Pi-4 IJP(c) RDW/JD/GG/GS/JAJ/WH
ACCESSION NR: AT5017276 UR/0000/65/000/000/0208/0212

AUTHOR: Bobrov, A.I.; Borisova, Z.U.; Fursey, L.A.

TITLE: Electrical conductivity of readily crystallizable glasses of the composition AsSe sub x Tl sub y

SOURCE: Leningrad. Universitet. Khimiya tverdogo tela (Chemistry of solids). Leningrad, Izd-vo Leningr. univ., 1965, 208-212

TOPIC TAGS: glass conductivity, arsenic compound, selenium compound, thalium compound, glass crystallization

ABSTRACT: Five $AsSe_xTl_y$ compositions close to the crystallization limit were studied. From the electrical conductivity data, the energy of conductivity ϵ_σ and preexponential factor $\log \sigma_o^e$ were calculated graphically. Values of the modulus of conductivity

$$\frac{\sigma_o^e}{[v]}$$

and steric factor $\log \beta$ were also determined. The introduction of thallium into vitreous arsenic selenides increases their conductivity and decreases the energy of conductivity.

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ACCESSION NR: AT5017276

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Crystallization of the glass $AsSe_{2.5}Tl_{1.0}$ at 150 and 200C with annealing increases the density of the alloys, while the conductivity decreases by about one order of magnitude. The energy of conductivity increases from 1.14 to 1.38 eV. The steric factor log β does not change appreciably on crystallization, which starts at the surface and spreads throughout the volume. A complete crystallization of the glass $AsSe_{2.5}Tl_{1.0}$ was achieved, as indicated by the values of the conductivity and density, which were the same after annealing for 5 hr. at 150C and for 3 hr. at 200C, and did not change on further annealing. Orig. art. has: 2 figures and 4 tables.

ASSOCIATION: None

SUBMITTED: 02Mar65 ENCL: 00 SUB CODE: MT, EM

NO REF SOV: 008 OTHER: 001

Card 2/2 SOP

L 47050-66 EWT(1)/EWT(m)/EWP(e)/EWP(t)/ETI IJP(c) JD/AT/WH

ACC NR: AP6020953 (N) SOURCE CODE: UR/0054/66/000/002/0125/0129

AUTHOR: Kurglov, V. I.; Bobrov, A. I.

ORG: none

TITLE: Effect of gallium, indium, and thallium on the spectral distribution of the photoconductive effect of vitreous arsenic selenide

SOURCE: Leningrad. Universitet. Vestnik. Seriya fiziki i khimii, no. 2, 1966, 125-129

TOPIC TAGS: gallium, indium, thallium, arsenic compound, selenide, photoconductivity, internal photoeffect

ABSTRACT: Measurements of the spectral distribution of photoconductivity in vitreous As_2Se_3 samples doped with Ga, In, and Tl were carried out with direct current, compensation of dark current in a U1-2 instrument, and a UM-2 monochromator, at the exit of which the amount of quanta was kept constant for all the working wavelengths by adjusting the incandescence of the lamp. The introduction of Ga, In, and Tl was found to shift the red photoconductivity limit toward longer waves; this effect is most pronounced in the case of Tl. By penetrating into vitreous As_2Se_3 in much greater quantity than either Ga or In, Tl causes a substantial increase of the region of photosensitivity. Inertial photoconductivity is observed at the edge of the fundamental absorp-

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L 47050-66
ACC NR: AP6020953

tion band, and inertialess photoconductivity is observed within the absorption band. Orig. art. has: 4 figures and 1 table.

SUB CODE: 20/ SUBM DATE: 01Nov65/ ORIG REF: 010/ OTH REF: 001

Card 2/2 vlr

L 57005-65 EWP(e)/EWT(m)/EWP(w)/EWP(i)/EWG(m)/EWA(d)/T/EWP(t)/EWP(b) Pg-4
IJP(c) RDW/JD/WH

ACCESSION NR: AP5017100 UR/0054/65/000/002/0086/0090

AUTHOR: Bobrov, A. I.; Borisova, Z. U.; Kozhina, I. I.

TITLE: Effect of thallium on the electrical conductivity and microhardness of vitreous and crystalline $AsSe_{1.5}Tl_x$

SOURCE: Leningrad. Universitet. Vestnik. Seriya fiziki i khimii, no. 2, 1965, 86-90

TOPIC TAGS: arsenic selenide, electrical conductivity, crystalline phase, microhardness, vitreous arsenic selenide, vitrocrystalline arsenic selenide, thallium addition

ABSTRACTL The thermal treatment of easily crystallizing glasses of the $AsSe_xTl_y$ system is not accompanied by their volume crystallization. The process of their crystallization commences from the surface and gradually spreads throughout the volume. In this connection, the authors produced and investigated vitreous, vitrocrystalline, and crystalline states in the $AsSe_{1.5}Tl_x$ system by gradually increasing the thallium content of alloys of arsenic selenide ($AsSe_{1.5}Tl_{0.1}$,

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ACCESSION NR: AP5017100

$AsSe_{1.5}Tl_{0.5}$, and so on, until $AsSe_{1.5}Tl_{2.5}$). These alloys were obtained by the customary method of vacuum melting of elementary arsenic, thallium, and "rectifier-class" selenium and they were brought to vitreous state by either slow cooling from 700°C or by quenching in air from 500°C to 20°C in 5 min. The examination was performed by means of X-ray phase analysis and a metallographic microscope. As the Tl content increases ($AsSe_{1.5}Tl_{1.25}$, $AsSe_{1.5}Tl_{1.3}$), the crystalline phase of As_2Se_3 begins to appear in small quantities in the glasses, and as the Tl content is further increased, elementary arsenic or Tl_2Se get segregated in crystalline state. The microhardness of the vitreous alloys decreases with increasing Tl content, up to a point. The minimum microhardness is observed in $AsSe_{1.5}Tl_{1.5}$, which apparently contains commensurable amounts of crystalline and vitreous phases. Any further increase in the content of crystalline phase in the alloys leads to an increase in microhardness. The addition of 32 at.% Tl to vitreous arsenic selenide increases the conductivity of glasses by as much as six orders of magnitude. The electrical conductivity of the alloys was measured by the electrometric method, using graphite contacts. It was found that the addition of thallium to vitreous arsenic selenide leads to a proportional increase in the conductivity of the glas-

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ACCESSION NR: AP5017100

ses and an attendant decrease in the energy of electrical conductivity (which falls from 1.70 ev for $AsSe_{1.5}$ to 1.07 ev for $AsSe_{1.5}Tl_{1.2}$. As the thallium content increases to 50 at.% ($AsSe_{1.5}Tl_{1.5}$, $AsSe_{1.5}Tl_{2.5}$) the crystalline Tl_2Se occlusions apparently come into contact with each other and the conduction occurs along these occlusions. Orig. art. has: 3 figures, 2 tables.

ASSOCIATION: none

SUBMITTED: 11Sep64 ENCL: 00 SUB CODE: SS, MM

NO REF SOV: 006 OTHER: 002

Card 3/3

BoBrov, A.K.

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Akademiya nauk SSSR. Yakutskiy filial

Materialy po geologii poleznykh iskopayemykh Yakutii (Materials on the Geology of the Minerals of Yakutiya) Moscow, Izd-vo AN SSSR, 1959. 199 p. (Series: Its: Trudy. Seriya geologicheskaya. Sbornik, no. 4) Errata slip inserted. 1,500 copies printed.

Resp. Ed.: I. V. Cherskiy; Ed. of Publishing House: S. P. Shcholov; Tech. Ed.: F. S. Kashina.

PURPOSE: This collection of articles is intended for geologists, mineralogists, petrographers, and stratigraphers.

COVERAGE: This collection of articles discusses the geology of various East Siberian mineral complexes. Of particular interest are an article on Yakut diamonds (photographs show morphology and crystal structure) and one on alterations in rock complexes (albitization, biotization, etc.). References accompany each article.

AVAILABLE: Library of Congress

Card 3/3 MM/lsb 12-21-59

BABAYAN, G.D.; BARKHATOV, G.V.; BOBROV, A.K.; BONDARENKO, V.I.; VASIL'YEV, V.G.; KOBELYATSKIY, I.A.; NIKOLAYEVSKIY, A.A.; TIKHOMIROV, Yu.P.; CHEPIKOV, K.R.; CHERSKIY, N.V.; CHICHMAREV, V.G.; BEKMAN, Yu.K., vedushchiy red.; MUKHINA, E.A., tekhn.red.

[Geology, and oil and gas potentials of the Yakut A.S.S.R.] Geologicheskoe stroenie i neftegazonosnost' IAkutskoi ASSR. Pod red. V.G.Vasil'eva. Moskva, Gos.nauchno-tekhn.izd-vo neft. i gorno-toplivnoi lit-ry, 1960. 478 p. (MIRA 13:11)
(Yakutia--Petroleum geology)
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BOBROV, A.K.

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Structure of the Vilyuy syneclise and Verkhoyansk trough in the Jurassic superface. Geol. i geofiz. no.3:35-41 '61. (MIRA 14:5)

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(Yakutia—Geology, Structural)