

ADSORPTION MECHANISM

1968

the adsorption mechanism and the effect of the entropy factor becomes significant

adsorption mechanism and the effect of the entropy factor becomes significant

Substrate: ...

Lord

ТРАПЕЗНИКОВ, А.А.; БОГОВА, К.В.

Mechanical properties of the adsorption layers of saponin at the interface of aqueous solution - toluene and aqueous solution - toluene rubber solution. Koll. zhur. 27 no.4: 614-618 (1965) (MIRA 18:12)

1. Institut Khimicheskoy khimii SSSR, Moskva. Submitted July 9, 1965.

AMFITERATROVA, T.A.; SHALOPALKINA, T.G.; TRAPEZNIKOV, A.A.

Effect of the addition of surface-active agents on the thixotropic properties of alkyl-polyamide resins. Koll. zhur. 27 no.4:489-493 J1-Ag '65. (MIRA 18:12)

1. Institut fizicheskoy khimii AN SSSR. Submitted July 22, 1963.

TRAPEZNIKOV, A.A.; CHUPEYEV, M.A.

Combined effect of polymeric (pentaphthalic resin) and low molecular surface-active agents on the properties of carbon black pastes in the process of dispersion. Koll. zhur. 27 no.6:891-898 N-D '65. (MIRA 18:12)

1. Institut fizicheskoy khimii AN SSSR, Moskva. Submitted July 31, 1964.

L 11719-66 EWT(m)/EWP(j)/T/ETC(m)-6 WW/RM

ACC NR: AP6004198

SOURCE CODE: UR/0069/66/028/001/0039/0045

AUTHORS: Zatsepina, T. I.; Trapeznikov, A. A.; Shcherbakova, R. N.

ORG: Institute for Physical Chemistry, AN SSSR Moscow (Institut fizicheskoy khimii AN SSSR)

TITLE: Rheological properties of low-molecular polymethylsiloxane polymer and of pastes derived from it

SOURCE: Kolloidnyy zhurnal, v. 28, no. 1, 1966, 39-45

TOPIC TAGS: silicon compound, siloxane, polymer, rubber, synthetic rubber, polymer rheology, rheologic property

ABSTRACT: The rheological properties of low-molecular weight (M = 37 000) polymethyl siloxane polymer and of white carbon-black (BS-280) pastes derived from it were studied. The experimental procedure was described by A. A. Trapeznikov, (Kolloidn. zh., 21, 108, 1959). The dependence of the tensile strength and viscosity of the polymer and pastes as a function of the white carbon-black filler concentration was determined. The experimental results are presented in graphs and tables (see Fig. 1). It was found that in the deformation velocity interval $\dot{\epsilon}$ of 0.17 - 170 sec⁻¹, the polymer behaved as a Newtonian liquid. Introduction of filler, up to 20 wt percent, leads to formation of suspensions, the properties of which are

UDC: 532.135:541.182

Card 1/2

L 14719-66

ACC NR: AP6004198

2

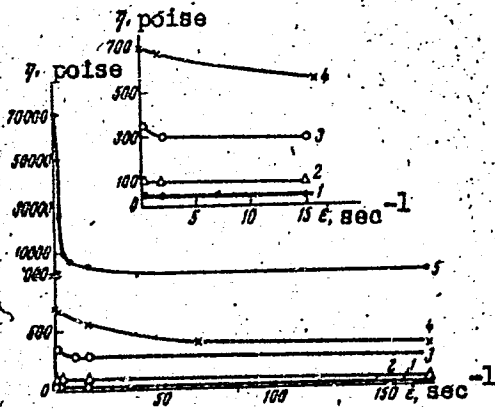


Fig. 1. Dependence of $\eta - \dot{\epsilon}$ for the polymer (1) paste with 5 (2), 10 (3), and 20 (5) parts of BS-280 per 100 parts of polymer SKTN (low-molecular weight rubber).

similar to those of the polymer. The addition of larger amounts of filler causes the formation of thixotropic pastes exhibiting viscosity anomalies and weak tensile properties. It is concluded from electron-microscopy studies that the filler particles attain a maximum size of 200Å and are randomly dispersed throughout the system. Thanks are given to Z. N. Shulyak (VNIISHP) for kindly supplying the samples of white carbon-black. Orig. art. has: 3 tables and 7 graphs.

SUB CODE: 11/ SUBM DATE: 02Oct64/ ORIG REF: 004/ OTH REF: 005

Card 2/2 FW

L 14720-66 EWT(m)/T DJ

ACC NR: AP6004199

(A)

SOURCE CODE: UR/0069/66/028/001/0146/0150

AUTHORS: Shchegolev, G. G.; Trapeznikov, A. A.; Astakhov, I. I.

ORG: Moscow Institute for Physical Chemistry, AN SSSR (Institut fizicheskoy khimii AN SSSR)

TITLE: The influence of organic compound additives¹¹ on the properties and micro-structure of lithium lubricating grease model

SOURCE: Kolloidnyy zhurnal, v. 28, no. 1, 1966, 146-150

TOPIC TAGS: lithium compound, organic lubricant, organometallic lubricant, lubricant additive, lubricant property

ABSTRACT: To extend the previously published work of A. A. Trapeznikov and G. G. Shchegolev (Kolloidn. zh., 24, 104, 1962), the effect of organic additives on the stability, synergetic properties, and microstructure of lithium lubricating grease was studied. Electron-microscope photographs of the greases are presented. The dependence of the structure strength limit (Pr) and compressibility (S) of the greases as a function of the concentration of the additives (fatty acid with 6 to 18 carbon atoms in the chain, lithium oleate, and nonylic alcohol) were studied. The experimental procedure followed is described by G. G. Shchegolev, A. M. Tolmachev, and A. A. Trapeznikov (Zavodsk. laboratoriya 25, 625, 1959). The experimental results are presented in graphs and tables (see Fig. 1).

Card 1/2

UDC: 541.182.025

ACC NR: AP6004199

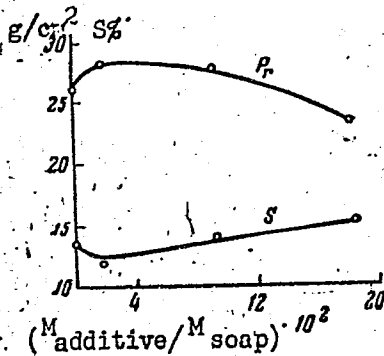


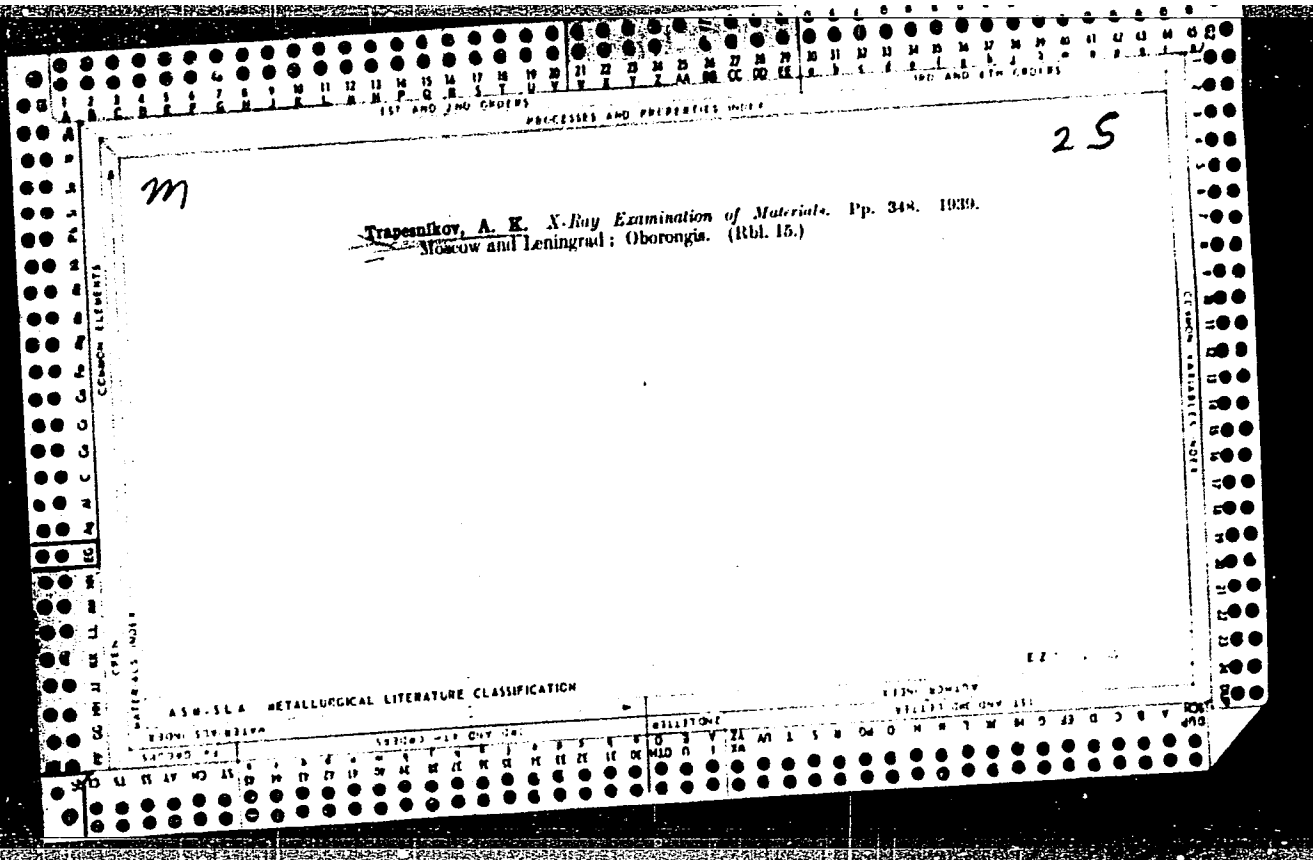
Fig. 1.

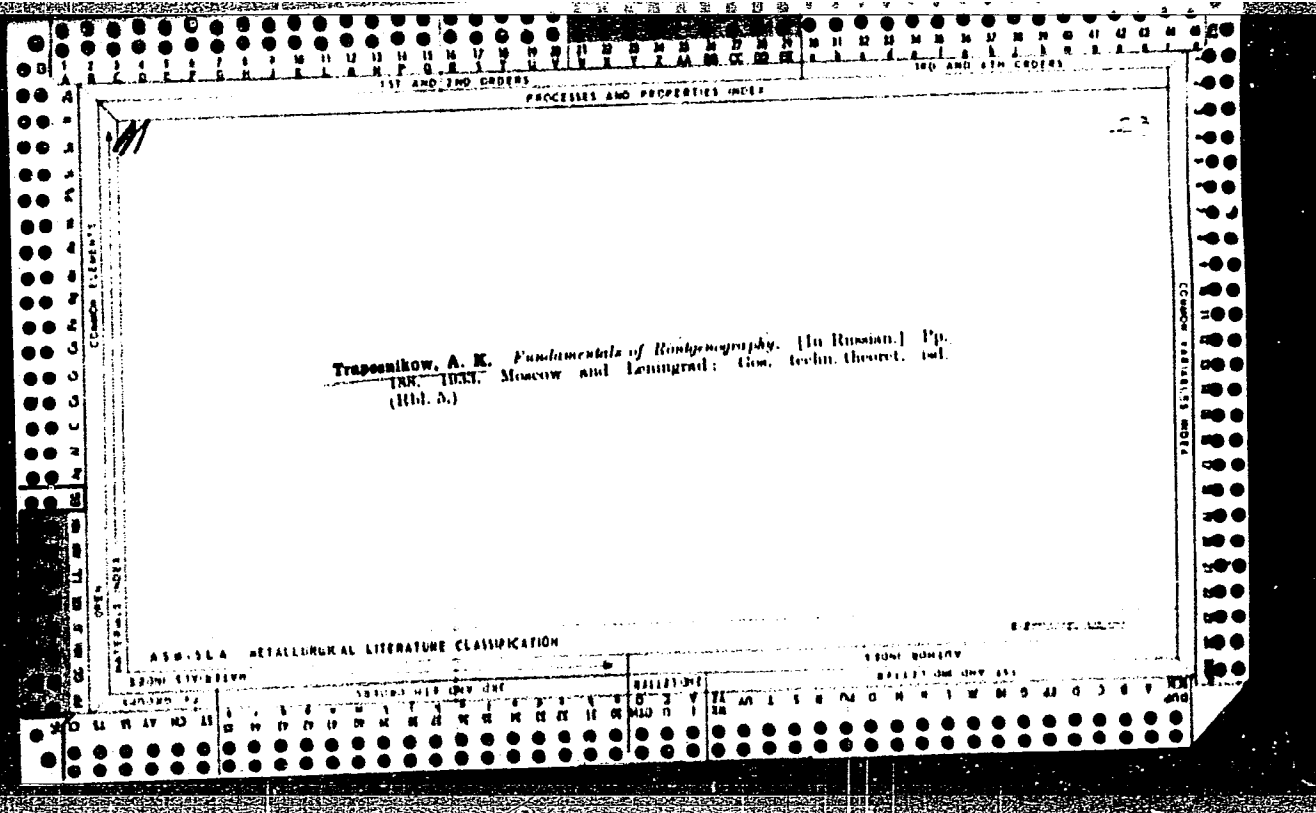
Dependence of (Pr) and (S) on the concentration nonyl alcohol additive for rapidly cooled ($t_1 = 700$) grease lithium stearate - nonpolar vaseline oil.

It was found that the additives had a strengthening effect on the structure of lithium stearate grease. This effect decreased with increase in the molecular size of the additive. Lithium oleate was found to be the most effective and diphenylamine the least effective additive. From a study of electron-microscope pictures it is concluded that the strengthening effect of the additives is due to a change in the structural elements of the soap. Orig. art. has: 1 table and 4 graphs.

SUB CODE: 11/ SUBM DATE: 08Sep64/ ORIG REF: 007

FW
Card 2/2





1ST AND 2ND ORDERS
PROCESSES AND PROPERTIES INDEX

1

M

*X-Ray Determination of the Thermal Coefficient of Expansion of Cadmium.
G. F. Kosolapov and A. K. Trapsnikay (*Zhurnal Eksperimental'noy i Teoreticheskoy Fiziki (J. Exper. and Theoret. Physics)*, 1935, 8, (8), 729-743).—[In Russian.] Determination of the linear coeff. of expansion perpendicular to the main axis (α_1) and parallel thereto (α_2) by the X-ray method of Sachs and Weerts gave the following values between 20° and 180° C.: $\alpha_1 = 1.7-2.2 \times 10^{-6}$ and $\alpha_2 = 4.8 \times 10^{-6}$.—N. A.

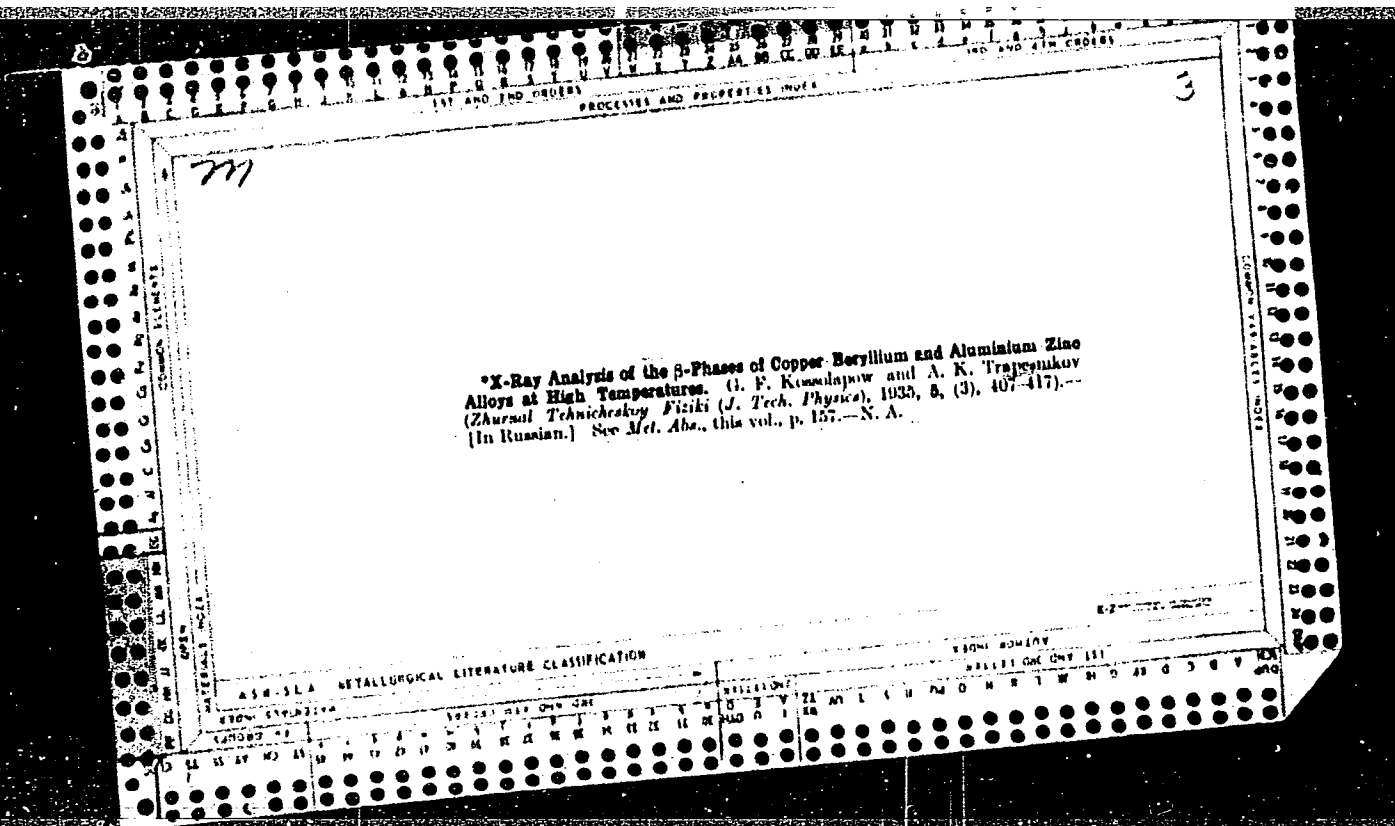
OPEN COMMON ELEMENTS
MATERIALS INDEX
METALS
NON-METALS
POLYMERS
COMPOUNDS
SPECIALS

ASM-ILA METALLURGICAL LITERATURE CLASSIFICATION

FROM SOURCE

1ST AND 2ND ORDERS

1ST AND 2ND ORDERS



3

m

*X-Ray Determination of Coefficients of Thermal Expansion of Beryllium
 and Tin. G. F. Kosolapov and A. K. Trapoznikov (*Eksperimental'naya
 i Teoreticheskaya Fizika (J. Exper. Theoret. Physics)*, 1936, 6, (6), 577-583). —
 [In Russian.] α and α' for beryllium and tin were determined by X-rays at
 different temperatures. The calculated coeffs. of expansion are: beryllium,
 $\alpha_{11} = 1.04 \times 10^{-6}$, 1.10×10^{-6} , and 1.31×10^{-6} ; $\alpha_1 = 1.50 \times 10^{-6}$, $1.54 \times$
 10^{-6} , and 1.57×10^{-6} ; for the temperature ranges 18°-220°, 18°-320°, and
 18°-454° C., respectively; tin, in the range 23°-150° C., $\alpha_{11} = 2.2 \times 10^{-6}$,
 and $\alpha_1 = 4.66 \times 10^{-6}$.—N. A.

A.S.S.S.R. METALLURGICAL LITERATURE CLASSIFICATION
 FROM SOURCE

MATERIALS INDEX
 COMMON ELEMENTS
 COMMON VARIABLES INDEX

PROCESSES AND PROCEDURES UNIT

9

CPA

X-ray studies of the structure of the β -phases of silver-cadmium at high temperatures. G. F. Kosolapov and A. K. Trapsznikov. *J. Tech. Phys. (U. S. S. R.)* 6, 1131-4(1938).—The β -phase obtained at 500° has a hexagonal lattice $a = 3.16$, $c = 4.95$ A.; the β' at 1270°P. is cube-centered like the β'' phase and is best formed from the latter; the β'' phase at room temp. has $a = 3.32$ A. Two transformations $\beta \rightarrow \beta' \rightarrow \beta''$ are indicated, the β being most stable. P. H. Rathmann

COMMON ELEMENTS

ASME-3LA METALLURGICAL LITERATURE CLASSIFICATION

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
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117 AND 120 INDEX 120 AND 121 INDEX

PROCESSES AND PROPERTIES INDEX

CA

The structure of beryllium. G. P. Kozlov and A. K. Tolmachev. *J. Exptl. Theoret. Phys.* (U. S. S. R.) 6, 1153-76 (1936); *Chem. Zvest.* 1936, 1, 3433; cf. C. A. 30, 7409. Debye photographs were made of powd. Be, of powd. Be after tempering in vacuum 10 hrs. at 600° and subsequent chilling, and of powd. Be after tempering at 900° for 10-12 hrs. with exposure to the air. All photographs showed a no. of addnl. lines which could be ascribed neither to Be nor to BeO. With the exception of 2, these lines could be identified as belonging to the β -modification of Be reported by Jaeger and Zanstra (cf. C. A. 27, 5504). It possesses a hexagonal lattice with the consts. $a = 7.12$ and $c = 10.77$ A., $c/a = 1.51$. Whether the question here was one of the β -modification of Be or whether the lines were those of a previously unknown compd. of Be could not be detd. M. G. Moore

2

COMMON PERIODIC INDEX

COMMON ELEMENTS

OPEN MATERIALS INDEX

ASS-SEA METALLURGICAL LITERATURE CLASSIFICATION

FROM HOW INV

FROM HOW INV

RELATIONS

FROM HOW INV

FROM HOW INV

TRAPEZNIKOV, A. K.

Prosvechivanie materialov luchami Rentgena; rentgenodefektoskopiia. Moskva, Oborongiz, 1939. 347 p. illus. (Trudy Vsesoiuznogo nauchno-issledovatel'skogo instituta aviat-sionnykh materialov, vyp. 57)

Bibliography: p. 336-346.

X-raying of materials, radios-copy.

DLC: TA406.5T68

SO: Manufacturing and Mechanical Engineering in the Soviet Union, Library of Congress, 1953.

13

X-Ray Control of Magnesium Alloy Castings. A. K. Trapeznikoy and S. I. Ettingon (*Zavsk. Lab.*, 1939, 8, 875-877; *Brit. Chem.*, 1944, [111], 32). [In Russian.] The detection of flaws in magnesium aluminum castings by X-ray methods is described.

ASB-31A METALLURGICAL LITERATURE CLASSIFICATION

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

PROCESSES AND PROPERTIES INDEX

1ST AND 2ND GROUPS

3RD AND 4TH GROUPS

M

2

***The Effect of Layer Porosity on the Mechanical Properties of Magnesium Alloys of the MA-4 Type. [Magnesium with 4 per cent. Aluminium.] A. K. Trajzernikov, M. S. Tardetnitakaya, and S. I. Eitingon (Aciaprom. *Met. Ind.*), 1940, (4/5), 32-36; *Chem. Zentr.*, 1941, 112, (1), 271).—[In Russian.]**
 In an investigation of the mechanical properties of magnesium alloys of the MA-4 type, it was observed that these properties (with the exception of the bending strength and the notch impact strength) are higher for test-pieces cut from round bars (12.5 mm. diameter) than for those cut from square bars (22 x 22 mm.). At the same time X-ray examination revealed the presence, in the square bars, of the so-called "layer porosity," i.e., porous areas in the metal structure. These, which are characteristic of magnesium alloys, appear in fractures as yellow-grey spots with black sections running parallel or radially. They are apparently due to unsuitable cooling conditions in the metal during casting, and must be regarded as responsible for the deterioration of mechanical properties.

A S A - S L A METALLURGICAL LITERATURE CLASSIFICATION

E-2

MATERIALS INDEX

1ST AND 2ND GROUPS

3RD AND 4TH GROUPS

COMMON ELEMENTS

COMMON ELEMENTS

PROCESSES AND PROPERTIES INDEX

1ST AND 2ND COLUMNS

190 AND 4TH COLUMNS

COMMON ELEMENTS

COMMON ELEMENTS

11

On the Determination of the Sensitivity of the Visual Method of Control by X-Rays. A. K. Trapeznikov (*Zavod. Lab.*, 1940, 9, (8), 870-878). [In Russian]. Screens at the Semashko works reveal defects of 0.5% thickness; Katterson screens 5 0% for magnesium alloys and 4.5% for aluminium.

—N. A.

ASB-51A METALLURGICAL LITERATURE CLASSIFICATION

190: 574334

190: 504104

1ST AND 2ND COLUMNS

190 AND 4TH COLUMNS

COMMON ELEMENTS

COMMON ELEMENTS

117 AND 120 CROSS

121 AND 124 CROSS

PROCESSES AND PROPERTIES INDEX

X-raying of commercial goods and detection of interior defects of different density. A. K. Trapeznikov. *J. Tech. Phys. (U. S. S. R.)* 11, 250-85(1941).—T. shows that Orlov's (C. A. 34, 4179) simplified method of detn. of foreign inclusions by x-rays is inaccurate and, except for air inclusions which check fairly well, gives errors of 23-97%. G. M. Kosolapoff

13

COMMON ELEMENTS

COMMON VARIANTS INDEX

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

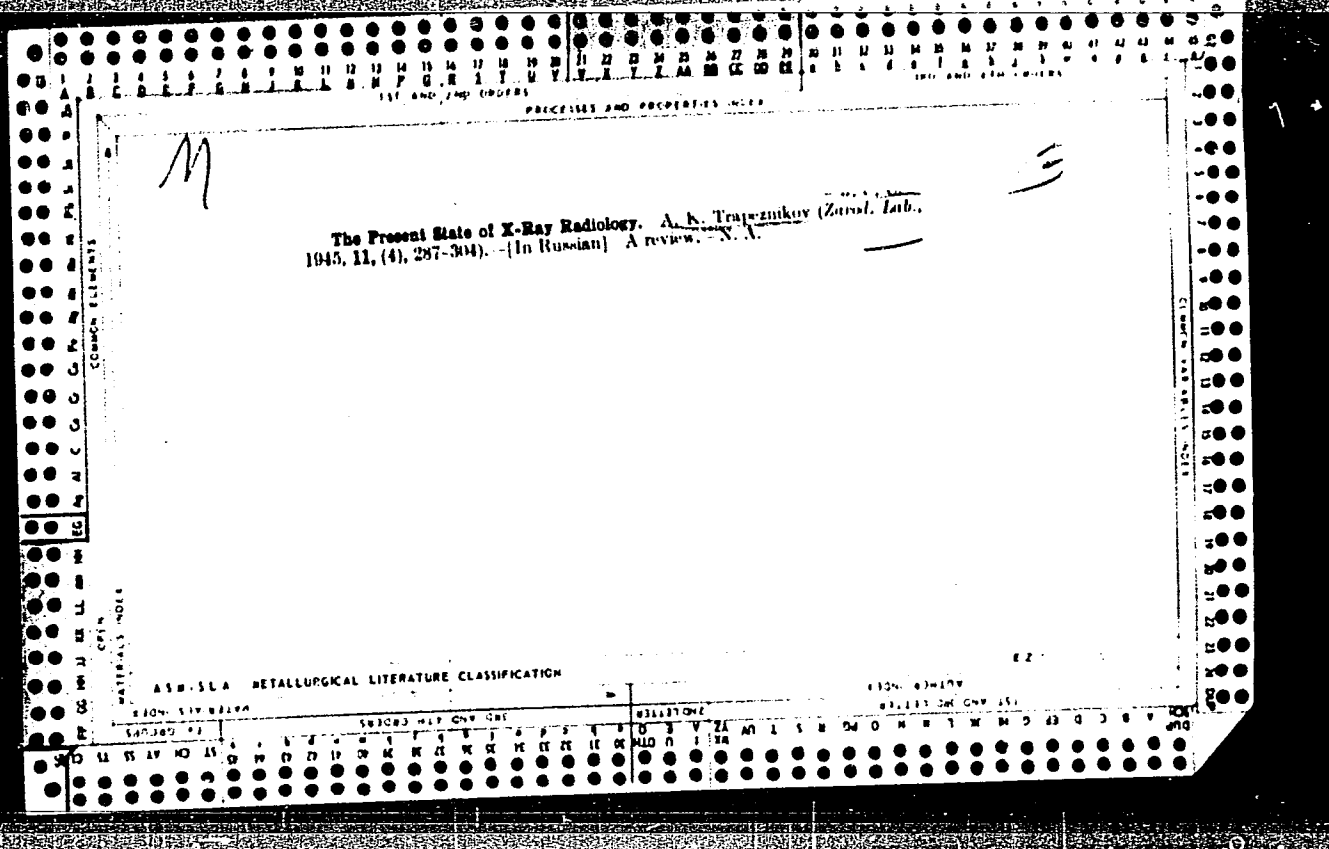
117 AND 120 CROSS

121 AND 124 CROSS

GROUP

LETTERS

AND LETTERS



16

235. X-Ray Investigation by Means of "Photo-Electrons."
(In Russian.) A. K. Trapennikov. *Factory Laboratory (U.S.S.R.)*, v. 13, Aug. 1947, p. 945-949.

It was found that very thin objects, too transparent for direct X-ray investigation, may be studied by means of secondary beta rays induced by the primary beam. By reverse beta radiation it is possible to detect fractures and cracks in coatings and to determine the homogeneity of the surfaces of solid substances. The latter requires the presence of components having greatly differing atomic numbers.

COMMON ELEMENTS
OPEN MATERIALS INDEX
METALLURGY
METALS
NON-FERROUS METALS
FERROUS METALS
ALLOYS
CORROSION
SURFACE TREATMENT
WELDING
METALLURGICAL LITERATURE CLASSIFICATION
A U T I O N O M O N H M M B C D E F G H I J K L M N O P Q R S T U V W X Y Z
A U T I O N O M O N H M M B C D E F G H I J K L M N O P Q R S T U V W X Y Z

ТРАПЕЗНИКОВ, А. К.

ТРАПЕЗНИКОВ, А. К.

Rentgenodefektoskopiia. Moskva, Mashgiz, 1948. 422p., illus.

bibliography: p. 416-420.

Title tr.: Roentgen defectoscopy.

ТА406.5.Т7

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

UMANSKIY, Ya. S., TRAPEENIKOV, A. K. and KITAYGORODSKIY, A. I.

Rentgenografiia (X-Rays Applied to the Industry), 310 p., Moscow, 1951.

TRAPEZNIKOV, A. K.

Kontrol i Materialov I Izdeliy rentgenovym lucham. (Checking of Materials and Products through x rays) Moskva, Mashgiz, 1951.

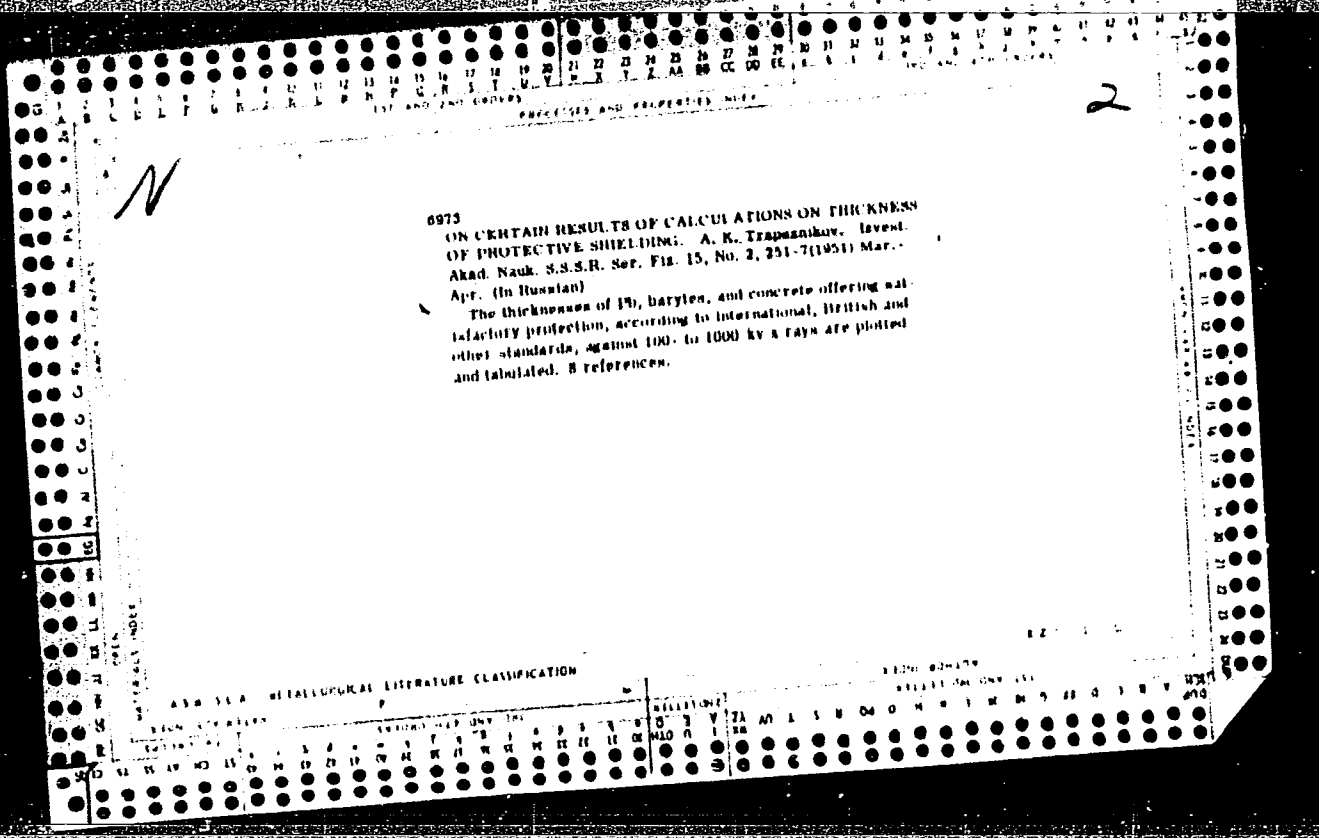
75 p. illus., charts, tables.

Relates methods for checking products by way of x-rays, characteristics of x-rays and how to obtain them. Explains principles and possibilities of their utilization. Book is for technical workers of the machine construction industry, interested in quality checking of various products.

TRAPEZNIKOV, A.K.

BIBERGAL', A.V.; BOCHKAREV, V.V.; ISAYEV, B.M.; MARGULIS, U.Ya.; FRANK, G.M.;
TRAPEZNIKOV, A.K., professor, redaktor

[Application of radioactive isotopes to gamma-defectoscopes;
methods of using and protective measures] Primenenie radio-
aktivnogo kobal'ta dlia tselei gamma-defektoskopii; rukovodstvo-
instruktsiia po tekhnike ispol'zovanie i metodam zashchity. [Moskva]
Izd-vo Akademii nauk SSSR, 1951. 131 p. (MLRA 9:2)
(Cobalt--Isotopes)



TRAPEZNIKOV, A.P.; UVAROV, V.A.

Hydraulic manipulator. Metallurg 8 no.2:35 P '63. (MIRA 16:2)

1. Listoprokatnyy tsekh Novolipetskogo metallurgicheskogo zavoda.

(Rolling mills--Equipment and supplies)

TRAPEZNIKOV, F.F.; MINASHINA, N.G.; TOPALOV, G.M.

First results of the reclamation of new lands in the Murgab Oasis.
Izv.AN Turk.SSR.Ser.biol.nauk no.3:28-33 '62. (MIRA 15:9)

1. Institut pustyn' AN Turkmenskoy SSR.
(MURGAB OASIS--RECLAMATION OF LAND)

RABOCHEV, I.S.; LAVROV, A.P.; PALETSKAYA, L.N.; TRAPEZNIKOV, F.F.;
KOSTYUCHENKO, V.P.; NOSOV, A.K.; SEMERGEY, K.N.

Grigori' Il'ich Dolenko, 1886-1864; an obituary. Izv. AN Turk.SSR.
Ser.biol. nauk no.1:99-100 '65. (MIRA 18:5)

PALETSKAYA, L.N.; LOBOVA, Ye.V.; LAVROV, A.P.; RABOCHEV, I.S.; BABAYEV, A.G.;
TRAPEZNIKOV, F.F.; KOSTYUCHENKO, V.P.; NOSOV, A.K.

Grigoriĭ Il'ich Dolenko, 1886-1964; an obituary. Pochvovedenie
no.5:119-120 My '65. (MIRA 18:5)

RABOCHEV, I.S.; TRAPEZNIKOV, F.F.

Improvement of saline soils. Izv. AN Turk. SSR. Ser. biol. nauk
no.4:3-7 '63. (MIRA 16:9)
(Turkmenistan—Saline and alkali soils)

TRAPEZNIKOV, G.I.

Experimental designing and introducing of automatically controlled mechanized processing lines for crankshaft and canshaft gears of ZIL-164 and ZIL-130 automobiles. Avt.prom. no.9:34-35 S '61. (MIRA 14:9)

1. Moskovskiy avtozavod imeni Likhacheva.
(Assembly-line methods) (Moscow--Automobile industry)

ТРАПЕЗНИКОВ, Г. И.

"APPROVED FOR RELEASE: 03/20/2001" CIA-RDP86-00513R001756510005-1

Raschety na prochnost'; teoreticheskiye i eksperimental'nyye issledovaniya prochnosti mashinostroitel'nykh konstruktsiy; sbornik statey Vyp. 4
(Strength Calculations: Theoretical and Experimental Studies of the Strength of Machine Structural Elements; Collection of Articles, No. 4)
Moscow, Mashgiz, 1959. 393 p. Errata slip inserted. 3,600 copies printed.

Editorial Commission: Ye. N. Tikhomirov (Chairman) Honored Worker in Sciences and Technology of the RSFSR, Professor, S. V. Serensen, Corresponding Member, Ukrainian SSR Academy of Sciences, Doctor of Technical Sciences, Professor, G. S. Glushkov, Doctor of Technical Sciences, Professor, S.D. Ponomarev, Doctor of Technical Sciences, Professor, S. N. Sokolov, Doctor of Technical Sciences, Professor, N. D. Tarabasov, Doctor of Technical Sciences, Professor V. M. Makushkin (Secretary) Candidate of Technical Sciences, Docent: Ed.: N. D. Tarabasov, Doctor of Technical Sciences, Managing Ed. for Literature on General Technical and Transport Machine Building: V. I. Kubarev, Engineer: Ed. of Publishing House: R. M. Korableva, and A. G. Nikitin; Tech. Eds.: Z. I. Chernova, and V. D. El'kind.

Strength Calculations: (Cont.)

SOV/3189

PURPOSE: This book is intended for engineers and designers ⁱⁿ machine building as well as for engineers of other specialties working on stress analysis. It may be used as a text by students in the field.

COVERAGE: This book contains original stress analysis calculations made on machinery elements and parts. Analyses are made of coiled springs with an arbitrary helix angle, bending of turbine discs, strain state of flat pistons, and a circular cylinder. A number of original applications of general methods of the theory of elasticity to the study of lateral bending and torsion of rods is given. In the calculations on stability, new methods of determining critical forces for compressed rods and analyzing the stability of circular and ring-shaped plates are applied. Calculations for dynamic loadings are represented by a study of the analysis of variations of the indicators of devices during vibration. References accompany individual articles.

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TA460.T7

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

TRAPEZAVIKOV, A. A.

15(6)

AUTHOR:

TITLE:

PERIODICAL:

ABSTRACT:

Babinder, P. A., Akademian
Nov Trends of Colloid Chemistry (Novye puti razvitiya
kolloidnoy khimii)
Vestnik Akademi nauk SSSR, 1959, Nr 1, PP 44-51 (USSR)

207/30-59-1-5/37

At present, colloid chemistry plays an especially important part in political economy and it is a physical-chemical science concerning substances of modern engineering. It is of great practical importance that at present it is possible to carry on uninterrupted transitions from lyophobic to lyophilic systems. Thus, it is possible to obtain chemically inert substances with the required structural-mechanical properties. The theory of highly molecular substances and their solutions has developed into an independent branch of colloid chemistry. The vitality of modern colloid chemistry is proved by the fact that it produces many new independent branches of science. Perhaps, the author describes the course of the 4th All-Union Conference of Colloid Chemistry which took place in Tallin on May 13-16, 1959.

A. A. TRAPEZAVIKOV (born in 1911, St. Yuryevskiy, A. P. Pisarevskoye and collaborators) examined the process of the formation of active fillers on the processes of structural formation of polymers. A. A. Trapezavikov, A. P. Pisarevskoye and collaborators examined the properties of soap solutions in connection with their structural peculiarities and the theory of consistent lubricants. The reports on questions of dispersion systems in polymers shed the light on the physical chemistry of polymers of colloid chemistry. The conference indicates that, besides limited results on individual scientific problems, comprehensive conclusions are also useful. It is necessary, in the future, to make comprehensive scientific problems, comprehensive conclusions comprising the results of achievements in wide fields of science. There is 1 Soviet reference.

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1. Institut zemledeliya Ministerstva proizvodstva i zagotovok
sel'skokhozyaystvennykh produktov Turkemskoy SSR.
(MURGAB OASIS—SOLONCHAK SOILS)

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USSR / Soil Science. Physical and Chemical Properties of Soils. J

Abs Jour: Ref Zhur-Biol., No 21, 1958, 95677.

Author : Trapeznikov, F. F.

Inst : AS TurkmSSR.

Title : Physical Properties of Takys of Western Turkmenia.

Orig Pub: Izv. AN TurkmSSR, 1957, No 1, 104-108.

Abstract: Within Western Turkmenia, the author differentiates deposited (young), clayey takys and those with algae and lichens. Results are cited of determinations of the mechanical composition of soils, specific and volume weight, general porosity, and of the indicator of water substances of the soils. For the agriculture assimila-

Card 1/2

USSR / Soil Science. Physical and Chemical Properties of Soils. J

Abs Jour: Ref Zhur-Biol., No 21, 1958, 95677.

Abstract: tion of takyrs, deep plantation plowing (self-melioration), irrigation and measures for enriching the soil with organic substances are recommended. -- F. I. Shcherbak.

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PROCESSES AND PROPERTIES INDEX

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Temperature dependence of monolayer pressure as a method of investigating hydrates of higher aliphatic compounds. I. A. Trapeznikov. *Atta Physicochim. U.R.S.S.* 19, 563-70 (1944).—A new app. is described for the measurement of the temp. dependence of the 2-dimensional pressure and the viscosity of monolayers in equill. with a bulk cryst. phase. The new method was used in studying the properties of the hydrates of higher aliphatic compounds. The app. was an adaptation of the Wilberny method used in former work (C.A. 35, 771AP), and is housed in a thermostat that allows the temp. to be raised slowly and continuously with pauses at necessary points. The temp. dependence of a monolayer of tetradecyl alc. in equill. with a crystal or lens was investigated and was found to differ essentially from the dependence found by Cary and Riebel (C.A. 20, 133, 131). The exptl. curves obtained for the pressure, $P_s = f(\text{temp.})$ can be divided into 3 characteristic temp. ranges: (1) a region of solid hydrate structures with the m.p. (T_1) as the upper limit; (2) a region of liquid-cryst. structures limited by T_1 , the temp. of their formation and T_2 , the temp. at which they "clarify," i.e., transform into an isotropic liquid; and (3) a region of isotropic liquid lying above T_2 . For tetradecyl alc. there is no change in the appearance of the crystal up to 39.5° ; the curve $P_s = f(t)$ shows no change at the m.p. of anhyd. crystals and continues uninterrupted to 38.5° . At this temp., the pressure falls somewhat, reaching a min. at 39° ; then rises to a max. at 40° . At 39.5° , a visible transformation of the white, opaque hydrate into a new semi-transparent hydrate occurs and at 40° the latter melts into a lens. Region (2) is characterized by the formation in succession of two anisotropic liquid-cryst. phases. The formation of the first (I) takes place in the temp. range $40.0-41.5^\circ$. At $41.0-41.5^\circ$, internal pulsations arise within the phase, the lens often shakes and shatters and clear planes resembling phases of a crystal appear. These visible changes are accompanied by rapid increases and decreases in pressure, indicative of internal reconstruction of phase I into phase II. At 42° (T_2), P_s reaches a max. and the pulsations cease. Phase II is less turbid than phase I. On increasing the temp. further, the pressure falls linearly and at 55.0° the turbidity disappears and the lens becomes optically empty. In the region T_2-T_3 , three phases are often clearly discernible. Region (3) represents an isotropic transparent liquid, a soln. of H_2O in alc., and is characterized by a small neg. temp. coeff. of the equill. two-dimensional pressure. Thus, contrary to Cary and Riebel, who maintain that the isotropic liquid is formed at T_2 (the point of max. pressure), the authors maintain that it is produced at T_3 , and the region T_2-T_3 corresponds to another anisotropic liquid phase. The authors also believe that the three-dimensional crystals of higher aliphatic compounds get "impregnated" with H_2O and form crystal hydrates of a definite structure and that for all states in the two-dimensional system analogs can be found in the three-dimensional system. These were not discernible previously in anhyd. systems. Thus, the solid hydrate structures may be assumed to correspond to the condensed phases in monolayers, the liquid-cryst. hydrates to the intermediate state in monolayers, and the isotropic liquid soln. of H_2O in alc., to the expanded state of a monolayer. Frank Conet

FRANK CONET

SECTION NUMBER

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khir. 3 no.2:40-44 Mr-Ap '58.

1. Iz 2-y khirurgicheskoy kliniki (zav.-prof. N.N.Blokhin) i
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SOURCE: Byulleten' tekhniko-ekonomicheskoy informatsii, no. 9, 1964, 8-9

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Mathematics, Applied

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Trapeznikov, 6 pp

"Elektrichestvo" Vol LXVII, No 6

A criterion is determined which permits analysis of the effect of the transformer factors upon the expense and efficiency of the transformer, evaluation of the efficiency of complete constructions, and planning ways of making them cheaper. Largely mathematical discussion.

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TRAPEZNIKOV, V. A.

USSR/Electricity - Personalities Dec 51

"Academician V. S. Kulebakin (His 60th Birthday)," V. A. Trapeznikov, M. P. Kostenko, B. N. Petrov, N. V. Gorokhov, V. L. Lossilyevskiy, B. S. Sotskov, M. G. Chilikin, G. N. Petrov, A. N. Larionov, A. G. Iosif'yan, K. S. Bobov, D. A. Gorodetskiy

"Elektrichestvo" No 12, p 88

Kulebakin is very well known in the fields of elec machines, elec equipment, automatic control, and illuminating engineering and has specialized for many years in aviation elec equipment. A major general in the aviation
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USSR/Electricity - Personalities Dec 51
(Contd)

engineering service, he was one of the founders of the All-Union Elec Eng Inst and the Inst of Automatics and Telemechan and has headed chairs at the Moscow Power Eng Inst imeni Molotov and the Air Force Eng Acad imeni Zhukovskiy.

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Improving the knowledge of power engineers through correspondence courses. Remarks on B.M.Tareev's and A.O.Magidson's article. Elektrichestvo no.3:76-80 Mr '54. (MLRA 7:4)

1. Energeticheskiy institut im. Krzhizhanovskogo Akademii nauk SSSR (for Vinter).
2. Glavnyy energetik Gor'kovskogo avtomobil'nogo zavoda im. Molotova (for Kukushkin).
3. Institut avtomatiki i telemechaniki Akademii nauk SSSR (for Trapeznikov).
4. Chlen-korrespondent Akademii nauk SSSR (for Trapeznikov).
5. Leninskoye gosudarstvennoye inzhenernoye uchilishche (for Badalyants).
6. Dnepropetrovskiy institut inzhenerov transporta (for Belichenko).
7. Kurakhovskaya gres (for Klapchuk).
8. Orekhovo-Zuyevskaya tets (for Frantsuzov).
9. Vsesoyuznyy nauchnyy energeticheskiy institut (for Tareev and Magidson).

TRAPEZNIKOV, V.A. (Moscow)

Principal tasks in the complete automatization of industrial processes. Avtom. i telem. 15 no.5:384-391 5-0 '54. (MIRA 3:1)
(Machinery, Automatic)

Abs. - W-31148, 7 Feb 55

TRAPEZNIKOV, V.A.

automatization of industry and the tasks of science. Vest.AN SSSR
24 no.1:58-67 Ja '54. (MLRA 7:1)

1. Chlen-korrespondent Akademii nauk SSSR.
(Automatic control) (Russia--Industries) (Remote control)

TRAPEZNIKOV, V.A.
AYZERMAN, M.A., doktor tekhnicheskikh nauk, redaktor; VORONOV, A.A., kandidat tekhnicheskikh nauk, redaktor; KOGAN, B.Ya., kandidat tekhnicheskikh nauk, redaktor; KOTEL'NIKOV, V.A., kandidat tekhnicheskikh nauk, redaktor; LETOV, A.M., doktor fiziko-meditsinskikh nauk, redaktor; BOSSIYEVSKIY, V.L., doktor tekhnicheskikh nauk, redaktor; MEYEROV, M.V., doktor tekhnicheskikh nauk, redaktor; NAUMOV, B.N. redaktor; PETROV, B.N., redaktor; SOLODNIKOV, V.U, doktor tekhnicheskikh nauk, redaktor; TRAPEZNIKOV, V.A., redaktor; KHRAMOY, A.V., kandidat tekhnicheskikh nauk, redaktor; TSYPKIN, Ya.Z., doktor tekhnicheskikh nauk, redaktor; VORONOV, A.A., redaktor; PEVZNER, R.S., tekhnicheskii redaktor.

[Proceedings of the Second All-Union Conference on the theory of automatic control] Trudy vtorogo Vsesoyuznogo soveshchaniia po teorii avtomaticheskogo regulirovaniia.

(Continued on next card)

AYZERMAN, M.A. doktor tekhnicheskikh nauk, redaktor (Cont'd) Card 2.

Vol.3 [Methods and means of experimental research on systems of automatic control. Bibliography on the theory of automatic control and related problems] Metody i sredstva eksperimental'nogo issledovaniia sistem avtomaticheskogo regulirovaniia. Bibliografiia po teorii avtomaticheskogo regulirovaniia i smezhnym voprosam. 1955. 351 p.
(MLRA 9:1)

1. Chlen-korrespondent AN SSSR(for Petrov, Trapeznikov) 2. Vse-soyuznoye soveshchaniye po teorii avtomaticheskogo regulirovaniya 2d, Moscow, 1953.
(Automatic control) (Bibliography--Automatic control)

TRAPEZNIKOV, V.A.

LYZEMAN, M.A., dokt. tekhn. nauk, redaktor; VORONOV, A.A., kandidat tekhn. nauk, redaktor; KOGAN, B.Ya., kandidat tekhn. nauk, redaktor; KOTEL'NIKOV, V.A., kandidat tekhn. nauk, redaktor; LETOV, A.M., dokt. fiz.-mat. nauk, redaktor; LOSSEYEVSKIY, V.L., dokt. tekhn. nauk, redaktor; KHRAMOY, A.V., kand. tekhn. nauk, redaktor; TRAPEZNIKOV, V.A., redaktor; MEYEROV, M.V., dokt. tekhn. nauk, redaktor; NAUMOV, B.N., redaktor; PETROV, B.N. redaktor; SOLODOVNIKOV, V.V., dokt. tekhn. nauk, redaktor; TSYPKIN, Ya.Z. dokt. tekhn. nauk, redaktor PEVZNER, R.S., tekhn. redaktor.

[Proceedings of the Second All-Union Conference on the Theory of Automatic Control.] Trudy Vtorogo Vsesoiuznogo soveshchaniia po teorii avtomaticheskogo regulirovaniia. Moskva, Izd-vo Akad. nauk SSSR. [Vol. 1 Problem of continuous and periodic operations in the theory of automatic control] Vol.1 Problema ustoiichivosti i periodicheskikh rezhimov v teorii avtomaticheskogo regulirovaniia. 1955. 603 p. (MIRA 8:8)

1. Chlen korrespondent AN SSSR (for Trapeznikov, Petrov) 2. Akademiya nauk SSSR. Institut avtomatiki i telemekhaniki,

SOV/124-57-7-7561

Translation from: Referativnyy zhurnal. Mekhanika. 1957, Nr 7, p 15 (USSR)

AUTHORS: Trapeznikov, V. A., Kogan, B. Ya.

TITLE: Modern Methods of Experimental Investigation of Automatic-control Systems (Sovremennyye metody eksperimental'nogo issledovaniya sistem avtomaticheskogo regulirovaniya)

PERIODICAL: Tr. 2-go Vses. soveshchaniya po teorii avtomat. regulirovaniya. Vol 3. Moscow-Leningrad, 1955, pp 7-36

ABSTRACT: An account is given of the essential features of a method for full-scale testing and for physical and mathematical analog simulation of automatic-control systems. Included are circuits and descriptions of the various electronic and electromechanical elements of the latest mathematical analogs (i.e., computing elements, function-transforming elements, multiplier and divider elements, etc.) The authors describe briefly the principles of construction of mathematical analogs and list those that had been brought out by Soviet industry as of 1955; they mention also those built at the Institut avtomatiki i telemekhaniki AN SSSR (Institute of Automation and Telemechanics, Academy of Sciences, USSR). Included are general-view photographs of analog

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SO.V/124-57-7-7561

Modern Methods of Experimental Investigation of Automatic-control Systems

computers of types IPT-4, IPT-5, MPT-9, EMU-2, EMU-3, and EMU-4. The need for broader development of electronic-analog mathematical-simulation methods is emphasized.

Ye. P. Popov

Card 2/2

AID P - 2938

Subject : USSR/Electricity

Card 1/2 Pub. 27 - 3/15

Author : Trapeznikov, V. A., Corr. Memb., Academy of Sciences,
USSR

Title : Mathematical analogies of dynamic systems

Periodical : Elektrichestvo, 8, 20-26, Ag 1955

Abstract : The article is written for wide circles of engineers and presents general principles of electric circuit analogies and of mathematical analog computing with electronic analyzers. The author describes the basic elements of the electronic analyzer of the EMU-5 type developed by V. V. Gurov at the Institute of Automation and Remote Control, Academy of Sciences, USSR. This device permits solving linear and non-linear problems. The author describes in detail an output electronic cascade amplifier and other devices which permit constructing analogies of various non-linear dynamic systems. He presents some examples of analog

Elektrichestvo, 8, 20-26, Ag 1955

AID P - 2938

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computing: 1) swingings of a synchronous machinery rotor; 2) self excited oscillations of a relay system of automatic control and 3) of a **typical non-linear** equation. A number of names of Soviet scientific workers in that field is given. Eleven photographs, drawings and diagrams. 8 Soviet references (1946-1955).

Institution : None

Submitted : My 25, 1955

TRAPEZNIKOV, V. A. and KOGAN, B. Y.

"Electronic Models and Their Uses in the Research and Design of Automatic Regulating Systems," a paper read at the Convention on Control Technique, Heidelberg, 24-29 Sep 56

Inst. "Automatics and Telemechanics, Moscow

TRAPEZNIKOV, V. A. Corresponding Member of the Academy of Sciences USSR and director of the Institute of Automatics and Telemechanics of the Academy,

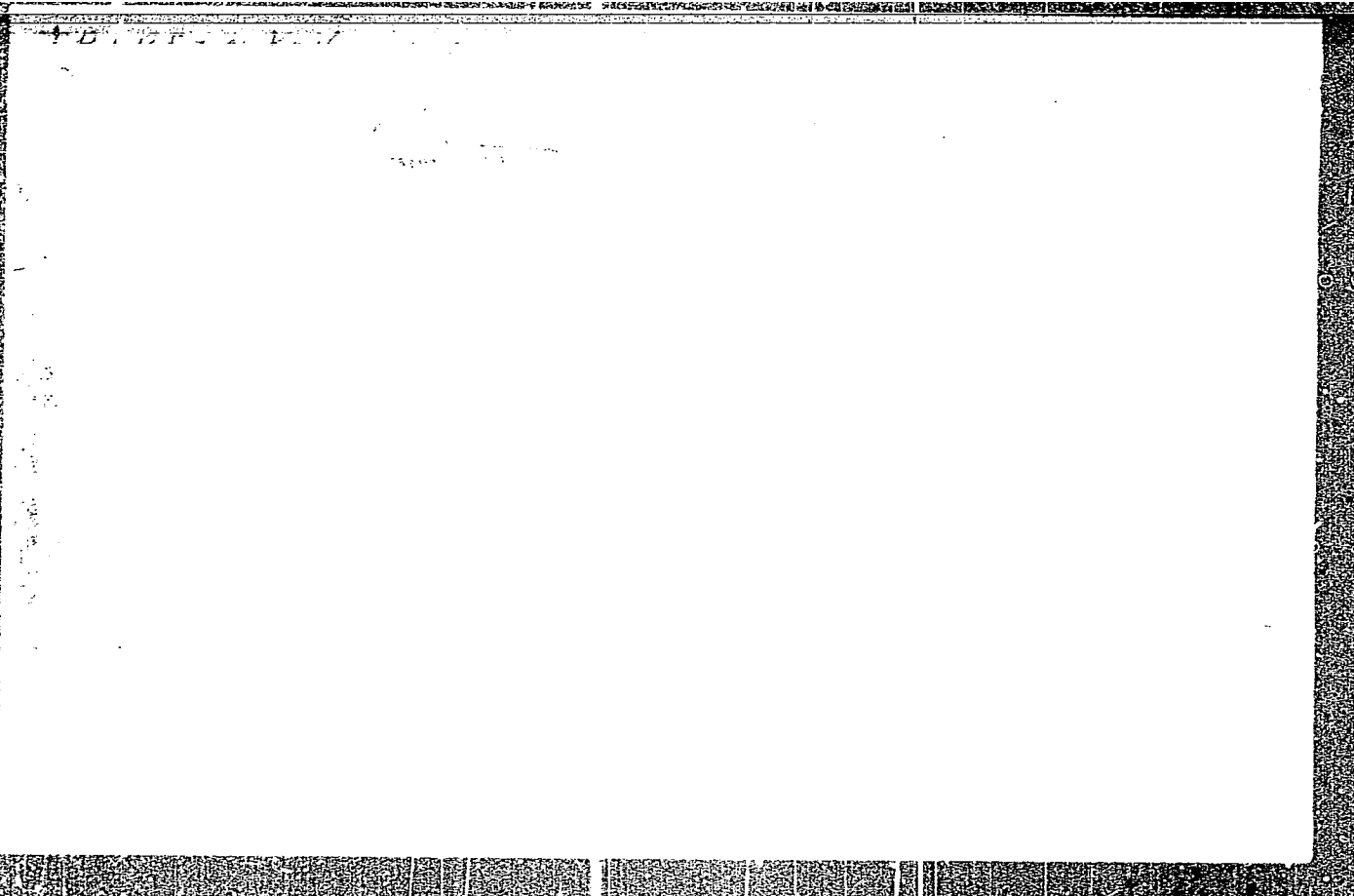
"Aims of the Technical Sciences in Developing Automatic Control and Technical Automation Equipment." a paper given at the conference on Scientific Problems of Production Automation, Moscow State U. 15-20 Oct 1956.

TRAPEZNIKOV, V.A.

Basic problems in the development of technical facilities serving
automation. Priborostroenie no.1:17-25 Ja '56. (MLRA 9:8)
(Automation)

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CIA-RDP86-00513R001756510005-1"

TOPCHYEV, A.V., akademik, glavnyy redaktor; ~~TRAPEZNIKOV, V.A.~~, otvetstvennyy redaktor; LIBENSON, D.Ya., redaktor; STRAKHOVA, L.P., redaktor; SHVAB, A.F., redaktor; KHACHATUROV, G.S., redaktor; ASTAF'YEVA, G.A., tekhnicheskiy redaktor

[Session of the U.S.S.R. Academy of Sciences on the scientific problems of automatization of production, October 15-20, 1956; plenary meeting] Sessia Akademii nauk SSSR po nauchnym problemam avtomatizatsii proizvodstva, 15-20 oktiabria 1956 g.; plenarnye zasedaniia. Moskva, 1957. 271 p. (MLRA 10:3)

1. Akademiya nauk SSSR. 2. Chlen-korrespondent Akademii nauk SSSR (for Trapeznikov)
(Automatic control) (Information theory)
(Electronic calculation machines)

SOV/112-58-1-995

Translation from: Referativnyy zhurnal, Elektrotehnika, 1958, Nr 1, p 148 (USSR)

AUTHOR: Trapeznikov, V. A.

TITLE: Tasks Facing the Technical Sciences in the Development of Automatic Control and Technical Means of Automation (Zadachi tekhnicheskikh nauk v razvitiy avtomaticheskogo upravleniya i tekhnicheskikh sredstv avtomatizatsii)

PERIODICAL: V sb.: Sessiya AN SSSR po nauch. probl. avtomatiz. proiz-va, 1956. Plenarn. zasedaniya, M., AS USSR, 1957, pp 38-55, discussion pp 55-65

ABSTRACT: These automatic-control methods are examined: (1) open-control systems; (2) reflector-type systems; (3) self-aligning systems. A brief description is presented of control systems for large technological complexes using computers and self-aligning devices. The most important automation problems are briefly cited: (1) Monitoring problem. Technological processes are listed for which no reliable automatic-monitoring method is available. The most important are tasks associated with checking composition of a substance. Theory and methods of converting a signal obtained from a pickup

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SOV/112-58-1-995

Tasks Facing the Technical Sciences in the Development of Automatic Control . . .

should be developed. The most important trends of development are: conversion of a signal into a discrete form, switching over to no-contact devices, use of computer techniques and means. (2) The problem of automatic regulation. The most important tasks are: (a) developing optimum regulation systems that would secure the quickest attainment of predetermined results within limitations existing in a real system; (b) development of extreme-type regulating systems; (c) development of automatic control systems capable of functioning under noise conditions. (3) Application of computers to automatic process control. A possibility is considered for creation of "self-aligning" systems that would automatically change their functioning conditions according to a preset or a chance law, would accumulate control experience and would most effectively conduct the production process. (4) Telemechanics problems. Unsolved theoretical problems are listed. Fundamental tasks are mapped out which arise in connection with a forthcoming adoption of automatic control by computer-type controllers.

M. P. P.

AVAILABLE: Library of Congress

Card 2/2

1. Control systems--Theory
2. Control systems--Automation
3. Control systems--Applications

TRAPEZNIKOV, V. A., (Corr. Mem.); KOGAN, B. Ya., (Cand. Tech, Sci.)

"Electronic Models, Prospects of Their Development and Utilization in Automatics,"

paper read at the Session of the Acad. Sci. USSR, on Scientific Problems of Automatic Production, 15-20 October 1956.

Avtomatika i telemekhanika, No. 2, p. 182-192, 1957.

9015229

TRAPEZNIKOV, V. A. (Corr. Mem.)

"Tasks of the Technical Sciences in the Development of Automatic Regulation and the Technical Means of Automation,"

paper read at the Session of the Acad. Sci. USSR, on Scientific Problems of Automatic Production, 15-20 October 1956.

Avtomatika i telemekhanika, No. 2, p. 182-192, 1957

9015229

ТИХАРЕЗНИКОВ, В. А.

AUTHOR: Kobrinskiy, A. Ye., Doctor of Technical Sciences 30-2-44/49
TITLE: Programmed Control of Metal Cutting Machines (Programmnoye uprav-
leniye metallovezhushchimi stankami),
All-Union Conference (Vsesoyuznoye soveshchaniye)
PERIODICAL: Vestnik Akademii Nauk SSSR, 1958. Nr 2, pp 113-115(USSR)

ABSTRACT: This conference took place in Moscow from November 13-16, 1957. It was called by the Institute for Engineering of the AN USSR, the Experimental Scientific Research Institute for Metal Processing Machines, as well as by the Institute for Machines and Tools in Moscow. The conference aimed at the following exchange of experience and decision as to the most important work to be carried out in this field in future. The conference was attended by representatives of the Councils of Political Economy, of industry, engineering departments, scientific research institutes as well as of universities. A. A. Blagonravov, director of the Institute for Engineering opened the conference. The following reports were given:
1) V.I. Dikushin reported on the present stage of the system of preset course in the USSR and its development.
2) A. P. Vladziyevskiy reported on the tasks in the field of

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Programmed Control of Metal Cutting Machines
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machine building in connection with preset course.

3) V. A. Trapeznikov reported on current work carried out by the Institute for Automation and Remote Control of the AN USSR.

4) M. G. Breydo and A. Ye. Kobrinskiy (Institute for Machinery) reported on work carried out with a modernized model of a milling machine. They also mentioned that M. L. Bykhovskiy and A. Ye. Kobrinskiy had put equations describing the step by step principle of preset course.

5) V. G. Zusman reported on the work carried out by the Institute for Metal Processing Machines.

6) A. M. Lebedev reported on semiconductor switches.

7) G. I. Kamenetskiy described hydraulic amplifiers and drives.

8) D.R. Kritskiy spoke on peculiarities of constructions.

9) A. V. Zinchenko reported on experimental results with a model of a milling machine.

10) I. P. Konstantinov spoke on the work of the Factory for Milling Machines, Dmitrovsk.

11) L. A. Gleyser reported on the control of a turning lathe by means of a perforated paper band.

12) L. M. Kaufman reported on turning lathes controlled by counters.

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Programmed Control of Metal Cutting Machines
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- 13) A. M. Razygrayev reported on the work of the Machine Factory imeni Ya. M. Sverdlov in Leningrad
 - 14) I. I. Knyazhitskiy reported on the work in the Machine Factory imeni S. M. Kirov in Odessa
 - 15) A. I. Levin reported on the work in the Tool Factory in Moscow
 - 16) G. A. Spynu reported on the use of tape recording.
 - 17) I. M. Eterman reported on a calculation method of the program of a milling machine.
 - 18) M. P. Rashkovich reported on the application of control of drills
 - 19) Ya. M. Khaymovich reported on electro-hydraulic machine drives.
 - 20) V. S. Vikhman reported on an automatic compensation of the wear of cutting tool
 - 21) B. V. Anisimov reported on the work carried out by the Chair for Computing Machines of the Technical College imeni Bauman in Moscow.
 - 22) I. A. Vul'fson reported on the development of automation of program setting abroad.
- This conference accepted a number of scientific organizational proposals.

1. Machine tools-USSR
2. Machine tools-Automation-USSR
3. Mathematical computers-Applications

Card 3/3

307-25-58-2-3/61

AUTHOR: Trapeznikov, V.A., Corresponding Member of the USSR Academy of Sciences, Director

TITLE: New Tasks (Novyye zadachi)

PERIODICAL: Nauka i zhizn', 1958, Nr 8, pp 2-3 (USSR)

ABSTRACT: The author starts by defining the conception of automation and automatics, and indicates the transition to continuous processes, the building of machines and assemblies combined into one group, and the increase of pressure and speeds as the main tendencies in the development of technological processes. In connection with the change of the operating system, a number of problems arise in respect to the automatic control, i.e. the measuring of a variety of quantities. Without solving these problems it is impossible to ensure a continuous running of all the links and numerous machines constituting the process. The wide development of the methods and means of control is of special significance. A further problem is operation with a very high degree of accuracy and speed. One of the principal problems of automatics is to create and apply such systems of operation which themselves find the most

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