RASSUDOV, N.S., Doc Tech Sci--(diss) "Thermal engineering studies and the creation of new ~~constructions~~ designs of low-capacity boilers, ~~of small capacity~~," Mos, 1958. 34 pp (Central Sci Res Boiler-Turbine Inst im. I.I. Polzunov), [TsKTI] 140 copies (KL,25-58,111)

-68-

NECHAYEV, Yevgeniy Vasil'yevich, inzh.; KANAYEVA, A.A., kand.tekhn.nauk, red.; RASSUDOV, N.S., doktor tekhn.nauk, nauchnyy red.; SIMONOVSKIY, N.Z., red.izd-va; SHCHETININA, L.V., tekhn.red.

[Furnaces with pneumatic stokers] Topki s pnevmo-mekhanicheskimi zabrasyvateliami. Moskva, Gos.nauchn.-tekhn.izd-vo mash.lit-ry, 1959. 155 p. (Leningrad, TSentral'nyi nauchno-issledovatel'skii kotloturbinnyi institut. [Trudy], vol.35) (MIRA 13:2)
(Boilers--Firing)

RASSUDOV, N.S.

New boiler with a 12 ton/hour productive capacity for 4000 kw. electric power plants mounted on railroad cars. Energomashinostroenie 7 no.6:26-46 Je '61. (MIRA 14:7)
(Boilers) (Steam power plants)

YUSIM, Veniamin Il'ich; RAKHMAN, Aron Davydovich; MODYLEVSKIY, David Naumovich; RASSUDOV, N.S., doktor tekhn. nauk, retsenzent; SINEL'NIKOVA, L.N., red.

[Steam-turbine power trains] Paroturbinnye energopoezda. Moskva, Gosenergoizdat, Pt.2. 1963. 174 p. (MIRA 17:5)

RASSUDOV, N.S., doktor tekhn.nauk; GARDENINA, G.N., inzh.

New block-type small boilers with 15 and 20 ton/hr. evaporative capacity. Energomashinostroenie 9 no.4:1-4 Ap '63. (MIRA 16:5)
(Boilers)

RASSUDOV, N.S., doktor tekhn. nauk; [illegible], O. [illegible], inzh.; [illegible], Ya.M.

Design and results of testing a stationary boosted [illegible]-10-13 boiler unit. Energomashinostroenie 10 no.10:1-4 O '64. (MIRA 18:2)

RAZUVAYEV, G.A.; STEPOVIK, L.P.; PERVEYEV, F. Ya.; DEMIDOVA, V.M.; ALANIYA, V.P.; SOKOLOV, N.A.; KHARCHENKO, V.G.; KRUPINA, T.I.; KLIMENKO, S.K.; RASSUDOVA, A.A.; GORELIK, M.V.

Letters to the editors. Zhur. org. khim. 1 no. 12:2244-2246 D '65 (MIRA 19:1)

1. Nauchno-issledovatel'skiy institut khimii pri Gor'kovskom gosudarstvennom universitete (for Razuvayev, Stepovik). 2. Leningradskiy gosudarstvennyy universitet (for Perveyev, Demidova). 3. Moskovskiy institut neftekhimicheskoy i gazovoy promyshlennosti imeni Gubkina (for Alaniya, Sokolov). 4. Saratovskiy politekhnicheskiy institut (for Kharchenko, Krupina, Klimenko, Rassudova).

VAKHURKIN, V.M.; GLADSHTEYN, L.I.; KARMILOV, S.S.; KLIMOV, S.A.; LEVITANSKIY, I.V.; MALININ, B.N.; MOSOV, A.K.; PAL'M, Yu.A.; POLYAK, V.S.; POPOV, G.D.; RASSUDOV, V.M.; KRASYUKOV, V.P.; SOKOLOV, A.G.; Prinimali uchastiye: GORBATSKIY, Ye.I.; MATVEYEV, S.S.; STRELETSKIY, N.S., prof., retsenzent; MUKHANOV, K.K., dots., retsenzent; BOLOTINA, A.V., red.; MIKHEYEVA, A.A., tekhn. red.

[Light-weight supporting metal structures] Oblegchennye nesushchie metallicheskie konstruktsii. Moskva, Gosstroiizdat, 1963. 282 p. (MIRA 17:2)

RASSUDOVA, G.N., GERASIMOV, F.M.

Precision diffraction gratings for meteorological purposes.
Opt. i spektr. 11 no.2:259-261 Ag '61. (MIRA 14:8)
(Diffraction gratings)
(Meteorological instruments)

RASSUDOVA, G.N.; GERASIMOV, P.M.

GOI echelon diffraction gratings. Izv. AN SSSR. Ser. fiz. 26 no.7:960-963 Jl '62. (MIRA 15:8)
(Diffraction gratings)

S/051/63/014/004/018/026
E039/E420

AUTHORS: Rassudova, G.N., Gerasimov, F.M.

TITLE: The use of reflecting diffraction gratings in interference systems for measuring linear shifts. II

PERIODICAL: Optika i spektroskopiya, v.14, no.4, 1963, 559-563

TEXT: The results are described of an experimental investigation of three variants of interference systems using reflection and transmission gratings and also for two systems using reflection gratings, one with a half silvered mirror and the other a Wollaston prism as a beam divider. A comparison is made of the main properties of these systems. It is shown that they each cover a limited range and that in this respect they are complementary to each other. These limits are connected with differences in dependence of the band contrast on distance between the gratings, the angular size of the source and the width of the wavelength range used. The merit of the different systems within the limits of their applicability lies in the value of the bands rather than in the resulting light fluxes. The systems using reflecting gratings can only be effectively used for obtaining

The use of reflecting ...

interference bands of small value (from 0.1 to 10 μ) and require very accurate measurements. It is essential that gratings of spectroscopic quality are used for this type of measurement. There are 3 figures and 1 table.

SUBMITTED: June 7, 1962

Card 2/2

RASSUDOVA, N.S.; Prinimala uchastiye KOLOBKOVA, A.T.

Physical and technological properties of lead oxide obtained by the electrochemical method. Lakokras.mat.i ikh prim. no.1: 63-64 '62. (MIRA 15:4)

(Lead oxides)

RASSUDOV, P. M., Physician

"Clinical Treatment and Therapy of Stomach Burns in Children, Caused by Caustic Soda." Thesis for degree of Dr. Medical Sci. Sub 19 June 50, Second Moscow State Medical Inst imeni I. V. Stalin

Summary 71, 4 Sep 52. Dissertations Presented for Degrees in Science and Engineering in Moscow in 1950. From Vechernyaya Moskva, Jan-Dec 1950.

RASSUDOV, P.M.

Modification of certain instruments for broncho-esophagoscopy. Vest.otorinolar. 12 no.2:66-67 Mr-Ap '50. (CLML 19:2)

1. Of the Pediatric Branch of the LOR (Otorhinolaryngological) Department (Director -- Honored Worker in Science Prof. B.S. Preobrazhenskiy), Second Moscow Medical Institute imeni I.V.Stalin attached to LOR (Otorhinolaryngological) Division of Children's Hospital imeni N.F.Filatov (Head Physician -- Honored Physician RSFSR V.V.Kvitnitskaya).

RASSUDOV, S. M.

USSR/Medicine - Paratyphoid Nov 53

"Experimental Reproduction of Septic Paratyphoid B Infection in White Mice," V. V. Akimovich, S. M. Rassudov, Chair of Microbiol, Saratov Med Inst

Zhur Mikro, Epid, i Immun, No 11, pp 46-51

In order to bring about a lethal septic paratyphoid B infection in white mice, which normally are not susceptible to this disease, huge doses of bacteria are required. These doses can be considerably reduced by using bacteria which are in the lag-phase (phase of delayed multiplication) or by administering at the same time agents which induce inflammation in the animals. 271T42

RASSUDOV, Sergey, Mikhaylovich

Antigene and immune properties of paratyphoidic B-bacteria in dependence from aged cultures.

Dissertation of candidate of a Medical Science Degree.
Chair of Microbiology (head prof. S.I. Cherishorina)
Saratov Medical Institute, 1954

RASSUDOV, S.M.

VASILOV, S.I.; RASSUDOV, S.M.; RADIONOVA, L.N.

Quantitative determination of intensity of luminescence in suspensions of various bacteria using objective method. Report No.2. Zhur. mikrobiol.epid. i immun. 29 no.4:11-14 Ap '58. (MIRA 11:4)

1. Iz kafedr fiziki i mikrobiologii Chitinskogo meditsinskogo instituta.

(BACTERIA,
luminescence, determ. (Rus)
(LUMINESCENCE,
of bact., determ. (Rus)

RASSUDOV, V.M.

124-57-1-869

Translation from: Referativnyy zhurnal, Mekhanika, 1957, Nr 1, p 116 (USSR)

AUTHOR: Rassudov, V. M.

TITLE: The Stressed and Deformed State of a Slanted Orthotropous Shell Reinforced by Stiffening Ribs (Napryazhennoye i deformirovannoye sostoyaniye pologoy ortotropnoy obolochki, podkreplennoy rebrami zhestkosti)

PERIODICAL: Nauch. yezhegodnik za 1954 g. Saratovsk. un-t, Saratov, 1955, pp 688-689

ABSTRACT: Examination of the flexure of a thin slanting orthotropous shell, having a rectangular planform, reinforced by stiffening ribs. The shell is bent by a normal pressure, distributed over the surface of the shell. Differential equations are adduced for the deflection of the shell and the stress function; the boundary conditions for the integration of these equations are also shown.

1. Shells--Stresses--Mathematical analysis Ye. F. Burmistrov
2. Shells--Deflection--Mathematical analysis 3. Shells--Theory
4. Differential equations--Applications

Card 1/1

Deformation of Shallow Shells Reinforced With Stiffener Ribs

$$\nabla^2 = \frac{\partial^2}{\partial x^2} + \frac{\partial^2}{\partial y^2} \quad \nabla_k^2 = \frac{\partial}{R_2 \partial x^2} + \frac{\partial}{R_2 \partial y^2}$$

where E is Young's modulus, D the cylindrical stiffness, ν the Poisson ratio, h the thickness of the shell, R_1 and R_2 the principal radii of curvature, q_i the loading distributed over the various regions of the shell, and Φ_i the function sought in terms of which all desired values are expressed. The solution of equation (1) is given for a shallow shell, two edges of which are freely supported while the other two may be fixed in any arbitrary manner. The solution is found in the form of the series

$$\Phi_i = \sum_{k=1} \Phi_{ik}(x) \sin \frac{k\pi}{b} y \qquad (2)$$

The author then examines the deformation of a shallow cylindrical arched roof reinforced by n rectilinear rib stiffeners. He then integrates the differential equations for a shallow cylindrical arched roof reinforced by a single rectilinear rib stiffener and subjected to a normal, uniformly distributed, pressure force acting in

SOV/124-57-4-4609

Deformation of Shallow Shells Reinforced With Stiffener Ribs

conjunction with specified conditions on the edges of the shell. The case of a shell with all edges pin-hinged is studied in detail. Numerical values of deflections, normal forces, and bending moments are given for certain values of the ratio g/h, where g is the height of the shell at its mid point. The application of the method described to the problem of the deformation of a shallow cylindrical arched roof supported on all four sides and reinforced by straight stiffener ribs leads to the solution of a nonhomogeneous, linear algebraic system of four equations with four unknowns.

Ye. F. Burmistrov

Card 3/3

Rassudov, V. M.

24. Deformation of Shallow Shells Reinforced by Rigid Ribs

"Deformation of Shallow Shells Reinforced by Rigid Ribs," by V. M. Rassudov, Uch. zap. Saratovsk. un-t, 1956, 52, pp 51-91, (from Referativnyy Zhurnal -- Mekhanika, No 4, Apr 57, Abstract No 4609, by E. F. Burmistrov)

"This article contains an investigation of shallow isotropic shells including those of zero Gauss curvature, both reinforced by rigid ribs.

"The variation method is used to obtain the basic differential equations and their relationships with the theory of shallow shells of given forms and with rigid ribs.

The derivation is given for the basic differential equations and the boundary conditions of the rigid ribs during conditions of small deformations. The obtained system of equations boils down in the beginning to a system of two equations for the functions of stresses and the functions of bending and afterward to one equation of the eighth order in the form:

$$\left(\nabla^2\nabla^2\nabla^2\nabla^2 + \frac{Eh}{D}\nabla_k^2\nabla_k^2\right)\Phi_i = \frac{q_1}{D}\left(\right. - \frac{Eh^2}{12(1-\nu^2)}\Big) \quad (1)$$

$$\nabla^2 = \frac{\partial^2}{\partial x^2} - \frac{2}{\partial y^2}\nabla_k^2 = \frac{\partial}{R_2 x^2} + \frac{\partial}{R_1 y^2}$$

where E is Young's Modulus, D is the cylindrical rigidity, v is Poisson's coefficient, h is the thickness of the shell, R_1 and R_2 are the main radial curvatures, q_1 is the load distributed on sections of the shell, and Φ_1 is the unknown function through which all the unknown values are expressed.

"The solution is given for equation (1) for a shallow shell, two sides of which are resting freely and the others supported in any arbitrary way. The solution is derived in the series form:

$$\Phi_i = \sum_{k=1} \Phi_{ik}(x) \sin \frac{k\pi}{b} y, \qquad (2)$$

"Afterward, the deformations of a shallow cylindrical arch reinforced by n rectilinear rigid ribs are described. Later, the integrations of the differential equations for a shallow cylindrical shell with one rectilinear rigid rib are performed for the case of a normal uniformly distributed pressure, under certain conditions, on the sides of the shell. The case is studied in detail where all sides of the shell rest freely on roller bearings. Also given are the numerical values of bending, the normal stresses, and the bending moments for certain ratios of g/h, where g is the rise of the shell in the center.

"A method is described for the solution of the problem of the deformation of a shallow cylindrical arch resting freely on all sides and reinforced by rectilinear ribs, which reduces the calculations to the solution of a heterogenous linear algebraic system of four equations with four unknowns." (U)

Sum. 1955

Yellowing of white paints. V. S. Kiselev and Kavun[illegible] *[illegible]* 1930, No. 2, 33-4. Zn white and TiO_2 pigments were made into paints with different drying oils and the discoloration under conditions of natural and artificial illumination was studied. The yellowing is more rapid in insufficient light than in the absence of light. The yellowed films are bleached in direct sunlight, and also in the presence of numerous oxidizing agents. Yellowing and bleaching depend on a certain amt. of light, but their rates are not changed equally by an increase in illumination. The yellowing is due to the drying oils, but different pigments have different effects on the oils; Zn white, giving practically nonyellowing films, oxidizes the oil much more than the TiO_2 pigments. The following is a series of white pigments in their diminishing ability to yellow drying oils: TiO_2, TiO_2-$CaSO_4$, $BaSO_4$, $CaSO_4$ (ignited), $CaSO_4$, mixed Ti-Ca white, mixed Ti-Ba white, lithopone, $PbO \cdot PbCl_2$, white lead, zinc white. Addn. of Zn white or of mixts. of $BaSO_4$ and Zn white to TiO_2 and white lead gave films with un[illegible] drying oil which did not yellow in 3 months, while analogously prepd. films of TiO_2 and white lead and polymerized drying oil yellowed in 3.5 months. Addn. of ZnO or ZnO and $BaSO_4$ retards the yellowing of polymerized drying oil by TiO_2 and white lead. Antioxidants do not retard yellowing. TiO_2 as such grays but does not yellow under ultraviolet light. Reduction of covering power with aging in films contg. Zn white is due to soap formation. David Aelony

ASA-SLA METALLURGICAL LITERATURE CLASSIFICATION

24(4), 24(7) SOV/51-6-6-29/34

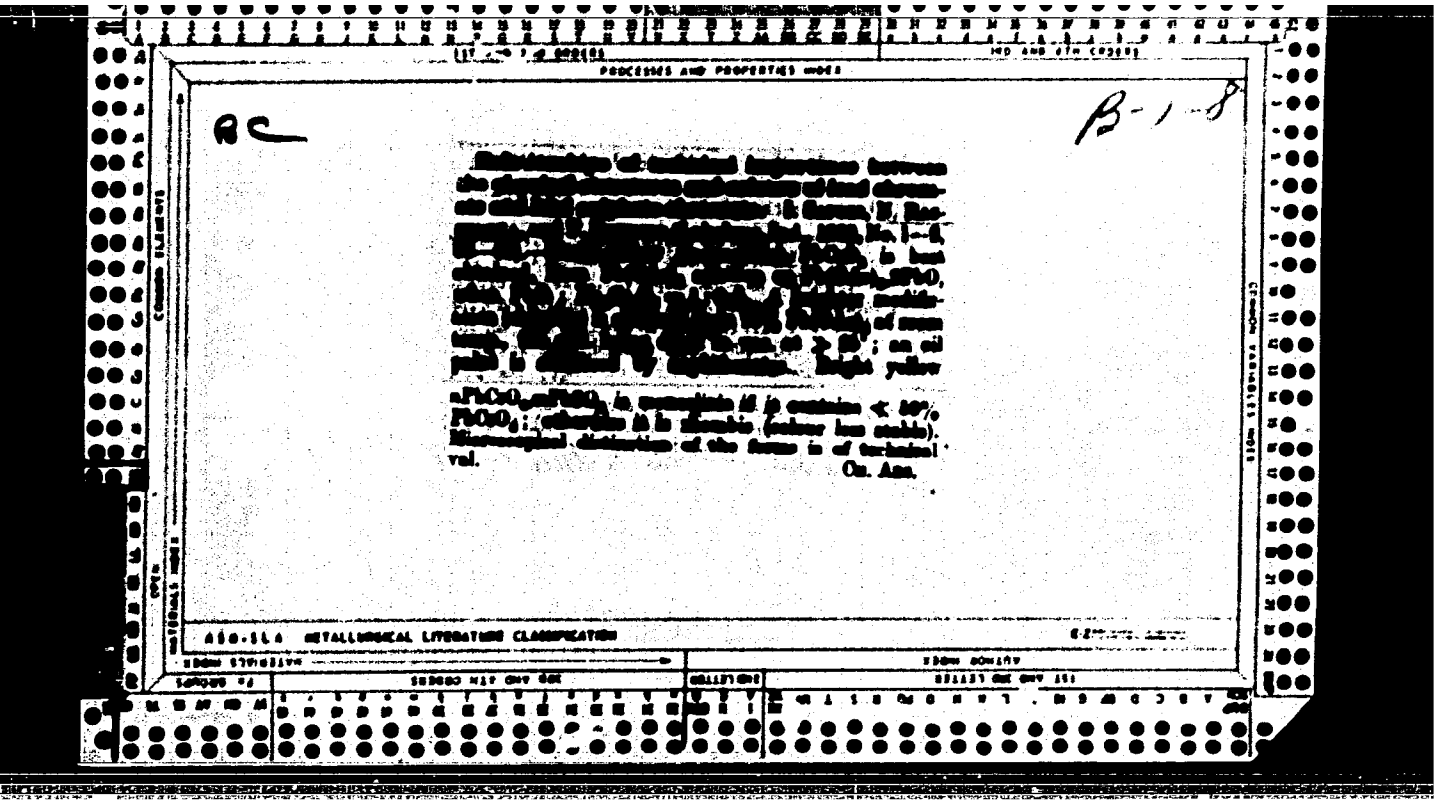
AUTHORS: Rassudova, G.N. and Gerasimov, F.M.

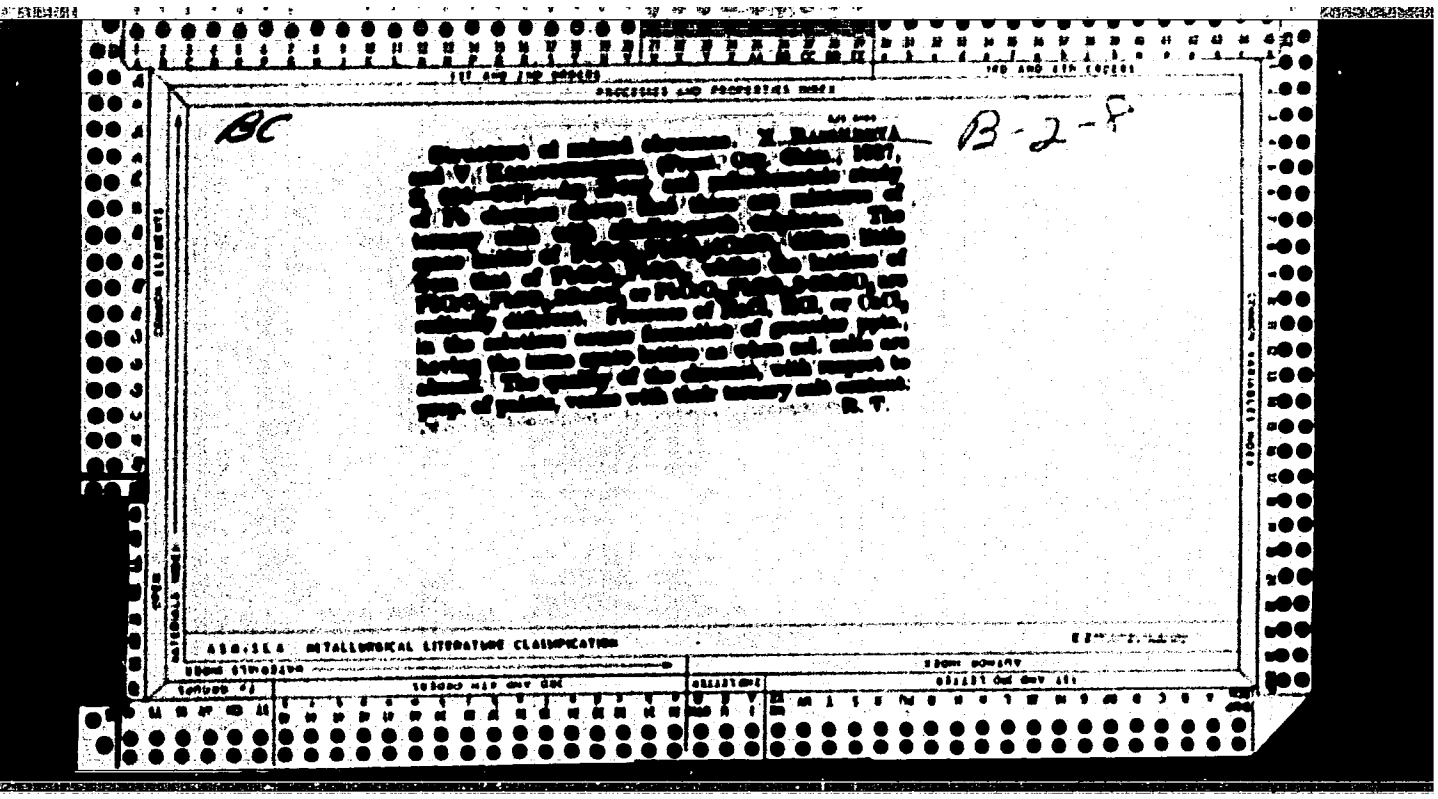
TITLE: Diffraction Gratings for Separation of Spectral Orders (Difraktsionnyye reshetki dlya razdeleniya poryadkov spektra)

PERIODICAL: Optika i spektroskopiya, 1959, Vol 6, Nr 6, pp 826-827 (USSR)

ABSTRACT: The authors prepared special reflection gratings which could be used to separate spectra of various orders produced by other diffraction gratings with any number of lines per mm. These reflection gratings (separator-gratings) had 50 or 100 lines/mm. Their line profile was step-like with working surfaces inclined at 1° to the original surface in order to concentrate light in the first order. The separator gratings were crossed with other gratings (used at diffraction angles of 40-60°) and tested in an autocollimating spectrograph with f = 3 m. A parallel beam reached a separator-grating (which was horizontal) making an angle of 20-45° with the plane parallel to the lines on this grating. After diffraction from the main grating (whose lines were vertical) the beam reached the separator gratings for the second time and then passed on to an objective. Under these conditions multiple diffraction of beams was avoided but weak additional lines appeared due to neighbouring orders of the separator-grating. Spectral regions of the order of 1/2 octave both in the visible and ultraviolet regions

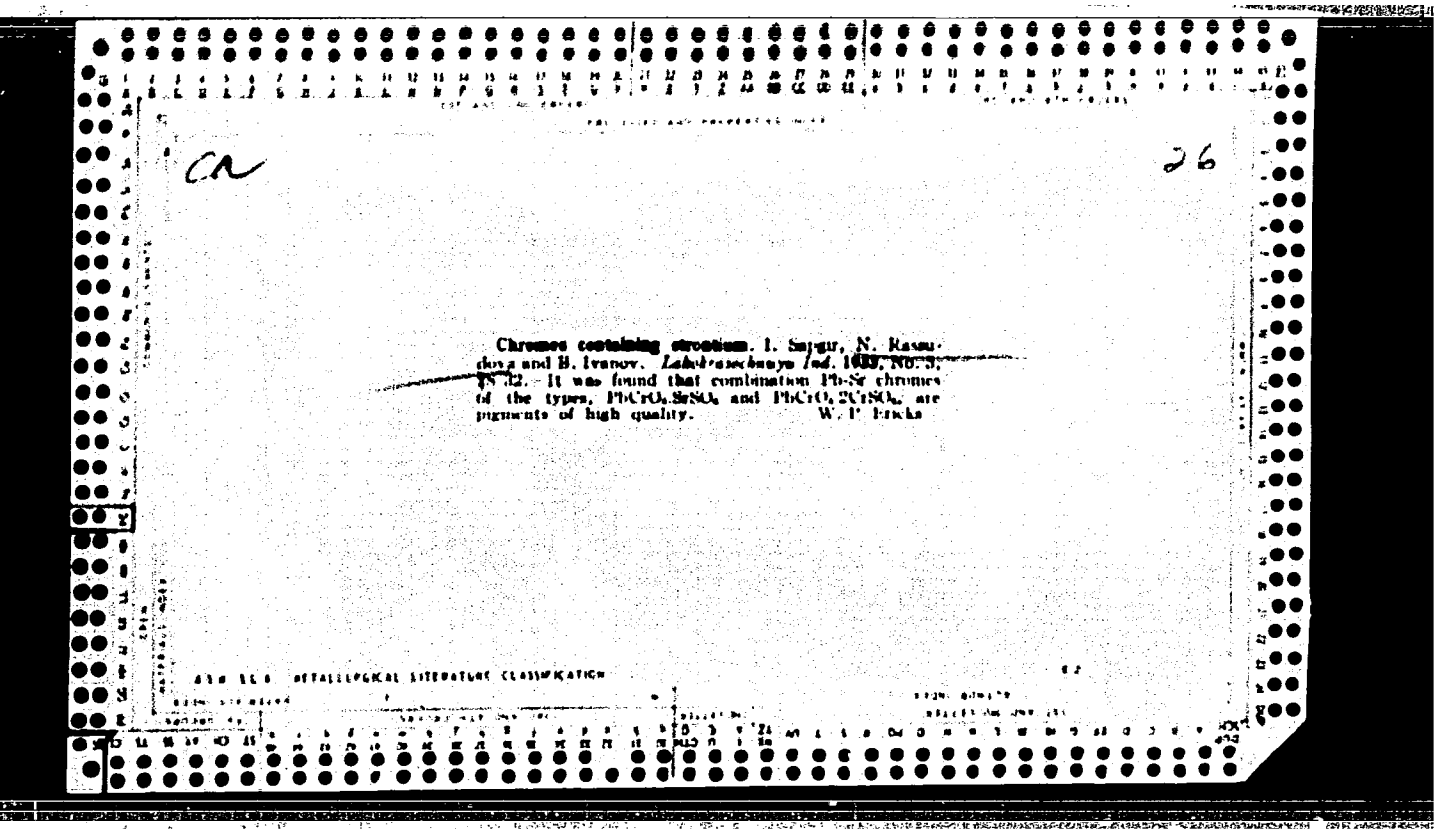
Card 1/2





Relationships of technical importance between the physical structures and the colors of lead chromate and of lead sulfate chromate. I. Sapgir, N. Rasstrigova and F. Kvitska. *Lakokrasochnaya Ind.* 1932, No. 1-2, 56-63.—$PbCrO_4$ can exist either in the rhombic modification having a color tone O2 or in the monoclinic modification having a color tone of 13. $PbCrO_4$ having a citron yellow color can be prepd. from $Pb(OAc)_2$ soln. of av. concn. or from $Pb(OAc)_2 \cdot 2PbO$. The best citron yellow color is obtained when $PbO : Na_2Cr_2O_7$ = 1 : 0.8. If more of the basic Pb acetate is added the ppt. is brighter. The brighter colored modification of $PbCrO_4$ can be prepd. by pptg. $Pb(OAc)_2$ of av. concn. (1 : 10) at room temp. The ppt. must be washed with distd. water and must be dried *in vacuo* at not more than 25°. It is stable for months, and paint made from it by incorporation with glue is not very changeable; the oil paint, however, is changeable, but can be stabilized by naphthenic acid salts. X-ray patterns indicate that the bright colored modification of $PbCrO_4$ is rhombic and the dark yellow modification monoclinic. $xPbCrO_4 \cdot nPbSO_4$ having a bright yellow color may be either rhombic or monoclinic depending on the ratio of $m : n$. It is monoclinic if $PbCrO_4$ · $PbSO_4$ contains 50% or more $PbCrO_4$. The color of the rhombic modification is less stable. Under the microscope the rhombic modification of $PbCrO_4$ appears as small grains, the monoclinic modification as small needles of rather irregular shape. This could be utilized as a qual. criterion of the value of $PbCrO_4$ paints from the technical standpoint. Exptl. results on lead chromate paints indicate that the rhombic modification is very much less stable than the monoclinic modification. G. S. Stamatoff

ASD-SLA METALLURGICAL LITERATURE CLASSIFICATION



CA

26

Chromes containing strontium. I. Sajgur, N. Rasudova and B. Ivanov. *Lakokrasochnaya Prom.* 1959, No. 3, pp. 32. - It was found that combination Pb-Sr chromes of the types, $PbCrO_4.SrSO_4$ and $PbCrO_4.2CrSO_4$, are pigments of high quality. W. P. Hicks

ASM SLA METALLURGICAL LITERATURE CLASSIFICATION

RASSUDOVA, N.S.; TEREKHOVA, A.I.; LILO, G.N.; ALEKSANDROVA, N.A.; STRELITSOV, I.S.; RUBINSHTEYN, B.L.

Synthesis and investigation of the characteristics of nickel titanates and mixed nickel-titanium pigments. Lakokras.mat. i ikh prim. no.2: 25-29 '63. (MIRA 16:4)
(Titanium) (Nickel) (Pigments)

77/011/61/016/011/003/005
E112/E553

AUTHORS: Rassudova, N.S., Yermakova, G.A. and Istomina, V.A.

TITLE: Recovery of titanium dioxide (rutile) from concentrated solutions of titanium sulphate by the addition of various additives prior to hydrolysis. I

PERIODICAL: Chemie a chemická technologie; Přehled technické a hospodářské literatury, v.18, no.11, 1961, 513, abstract Ch61-7085 (Lakokrasochnyye materialy, no.1, 1961, 30-33)

TEXT: Titanium dioxide (rutile) was prepared from concentrated solutions of titanium sulphate in the presence of additives such as zinc chloride, formic acid, titanium tetrachloride etc. Additions ranged from 1 to 3%. The resulting titanium dioxide consisted of 99% rutile.
1 figure, 6 tables, 9 references.

[Abstractor's Note: Complete translation]

Card 1/1

RASSUDOVA, N.S.; YERMAKOVA, G.A.; ISTOMINA, V.N.

Production of titanium dioxide in the form of rutile from concentrated solutions of titanium sulfate by adding certain substances prior to hydrolysis. Report 1. Lakokras.mat.i ikh prim. no.1:30-33 '61. (MIRA 14:4)

(Rutile) (Titanium sulfate)

YUSIM, Veniamin Il'ich; RAKHMAN, Aron Davydovich; MODYLEVSKIY, David Naumovich; RASSUDOV, N.S., doktor tekhn. nauk, retsenzent; SINEL'NIKOVA, L.N., red.; LARIONOV, G.Ye., tekhn. red.

[Steam-turbine power plants mounted on railroad cars] Paroturbinnye energopoezda. Moskva, Gosenergoizdat. Pts.2-3.[Steam-turbine power plants with 1000-5000 kw. ratings mounted on railroad cars] Paroturbinnye energopoezda moshchnost'iu 1000-5000 kvt. 1963. 174 p. (MIRA 17:3)

RASSUDOVA, N.S.; STREL'TSOV, I.S.; ALEKSANDROVA, N.A.

Studying the transformation taking place during the synthesis of nickel metatitanates. Lakokras. mat. i ikh prim. no.5:27-29 '63. (MIRA 16:11)

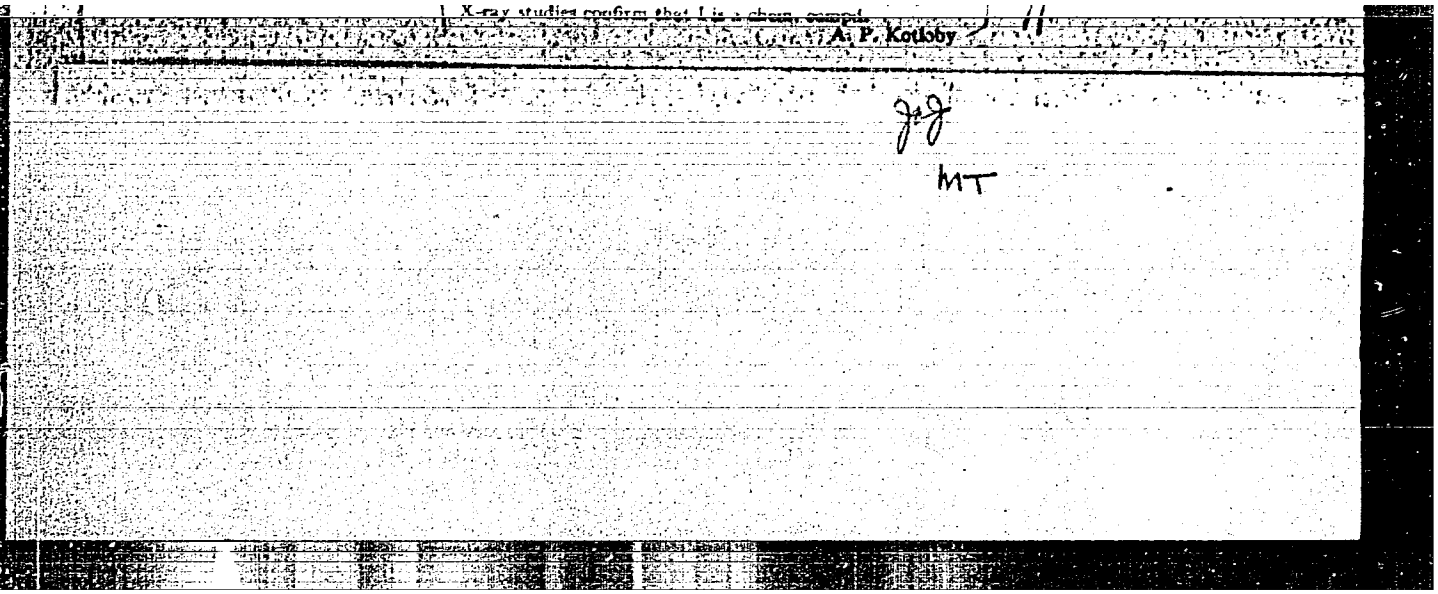
SAFOIH, I.N.; RASSUDOVA, N.S.

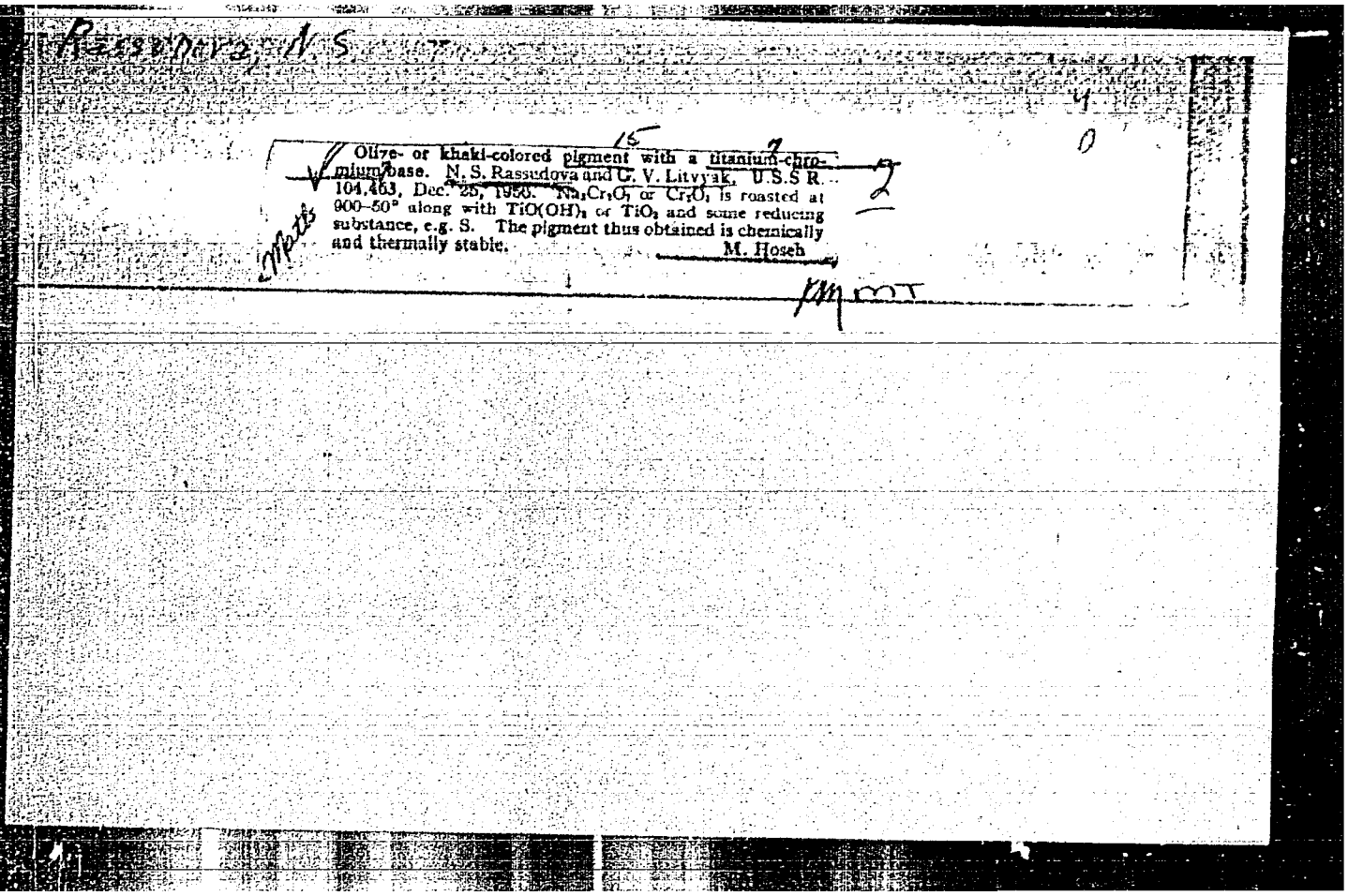
"History of the chemical trades and the chemical industry in Russia" by P.M. Luk'ianov. Reviewed by I.N. Safoin, N.S. Rassudova. Khim. prom. no.8:500 D '57. (MIRA 11:2)
(Chemistry, Technical)
(Luk'ianov, P.M.)

RASSUDOVA, N.S.

462c (4)

Chromium titanate. N. S. Rassudova and G. A. Litvyak. *Trudy Moskov. Khim.-Tekhnol. Inst. im. D. I. Mendeleeva* 1956, No. 22, 227–31.





Olive- or khaki-colored pigment with a titanium-chromium base. N. S. Rassudova and G. V. Litvyak, U.S.S.R. 104,463, Dec. 25, 1956. $Na_2Cr_2O_7$ or Cr_2O_3 is roasted at 900–50° along with $TiO(OH)_2$ or TiO_2 and some reducing substance, e.g. S. The pigment thus obtained is chemically and thermally stable.

M. Hoseh

S/081/61/000/022/071/076
B144/B138

Synthesis of titanium dioxide ...

rutile modification obtained by calcination of anatase-type metatitanic acid with zinc oxide. 9 references. [Abstracter's note: Complete translation.]

Card 2/2

KARETNIKOV, G.S.; KUDRYAVTSEV, N.T.; GOLOVCHANSKAYA, R.G.; Prinimala uchastiye RASSUDOVA, N.S., dotsent

Study of alkaline solutions of sodium metatitanate in the presence of glycerol. Zhur. fiz. khim. 39 no.9:2298-2300 S '65. (MIRA 18:10)

1. Moskovskiy khimiko-tekhnologicheskiy institut imeni D.I. Mendeleyeva.

AUTHORS: Sapgir, I. N., Rassudova, N. S. 64-8-17/19

TITLE: P. M. Luk'yanov. History of the Chemical Profession and the Chemical Industry in Russia (P. M. Luk'yanov. Istoriya khimicheskikh promyslov i khimicheskoy promyshlennosti Rossii).

PERIODICAL: Khimicheskaya Promyshlennost', 1957, Nr 8, pp. 52-52 (USSR)

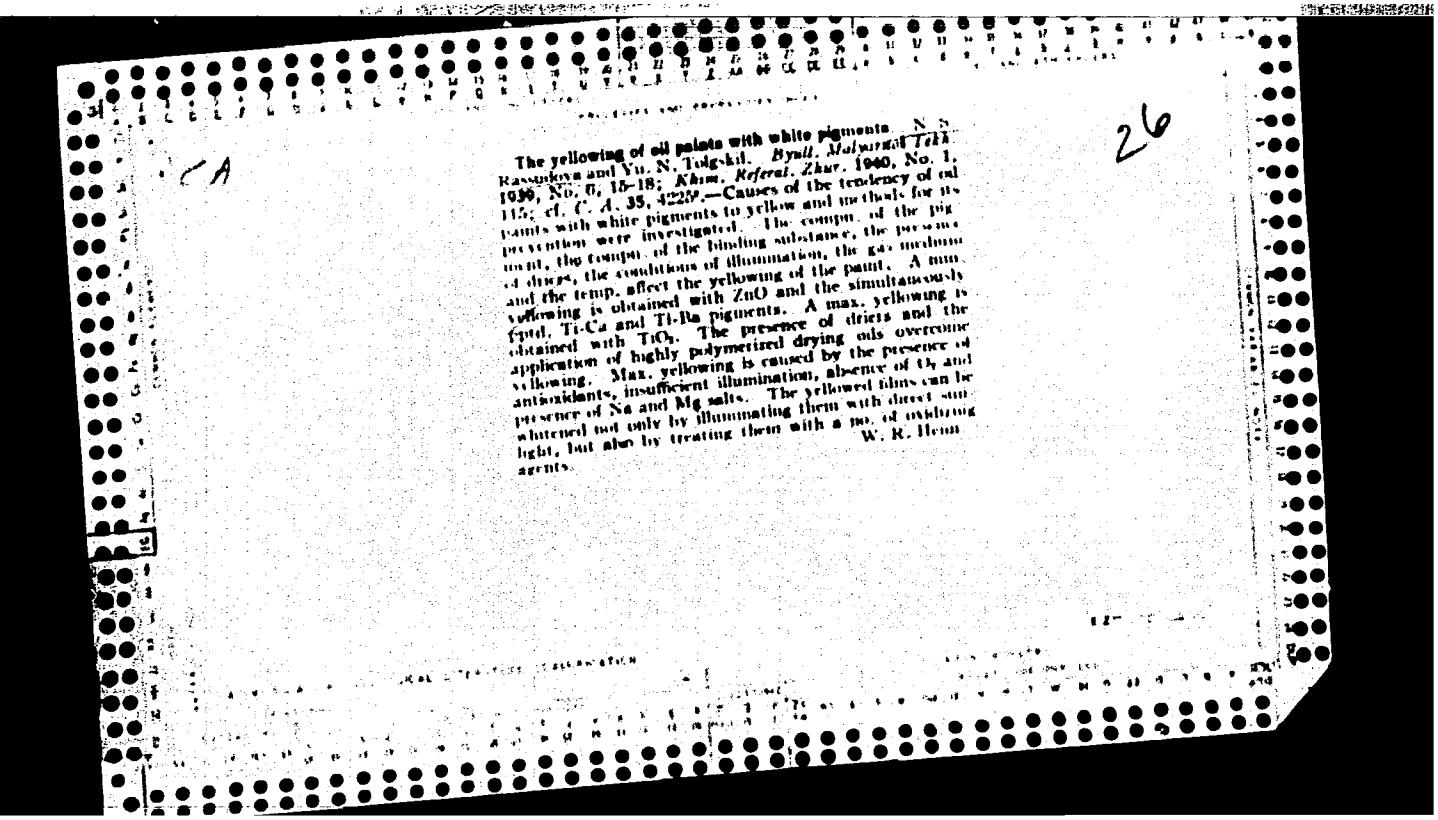
ABSTRACT: This is volume number 4. Under the editorship of S. I. Vol'fkovich, member of the Academy. Publishing house of the Academy of Science USSR, 1955. 622 pages. The book is here discussed in short. This volume is entirely given to the history of the production of dyes in Russia from ancient times up to the begin of the 20th century. A great number of original documents, manuscripts, etc. are given. A great part deals with the investigation of fresco-paintings, miniatures, and icons. The author procured, often with great difficulties, small quantities of these old dyes and investigated them by means of the spectral analysis. The results are comprised in a table. The fresco-paintings, miniatures, and icons are contained in the book in good reproduction. The book is well-written, and contains a detailed name-, subject-,

Card 1/2

Yellowing of linseed oil-titanium paints. N. S. Rasudova and L. F. Dreving. *Org. Chem. Ind.* (U.S.S.R.) 7, [illegible] (1940).—A study was made of the O_2, peroxide and acid nos. of aq. and alc.-benzene exts. of linseed-oil paints contg. TiO_2 and ZnO in the course of their drying and aging. In the dark, linseed oil yellows of its own accord and the pigments do not increase the process but decrease it to an extent dependent upon their effect on the formation and decompn. of the peroxides. The process of yellowing is reversible (yellowing ⇄ bleaching) and is closely connected with the rate and extent of oxidation. Bleaching causes oxidation of the film and occurs under natural conditions with the aid of the O_2 liberated during the decompn. of org. peroxides in the film itself. The processes of aging and yellowing are different for the ZnO and TiO_2 paints. With the ZnO the aging proceeds through the process of soap formation or parallel with it while for TiO_2 this intermediate stage does not exist. In the aging of TiO_2 paints there is destruction of the org. portion of the film whereas for ZnO paints both components of the paint film are destroyed at the same time with the formation of salts of low-mol. acids. In the end these lead to chalking for TiO_2 paints and decrease of the covering power for ZnO paints. Practical means for reducing yellowing are: (1) addn. of zinc white or a mixt. of zinc white and heavy spar, (2) use of TiO_2 contg. a min. of sulfate and salts and (3) addn. of drying metals in larger amts. than is customary.

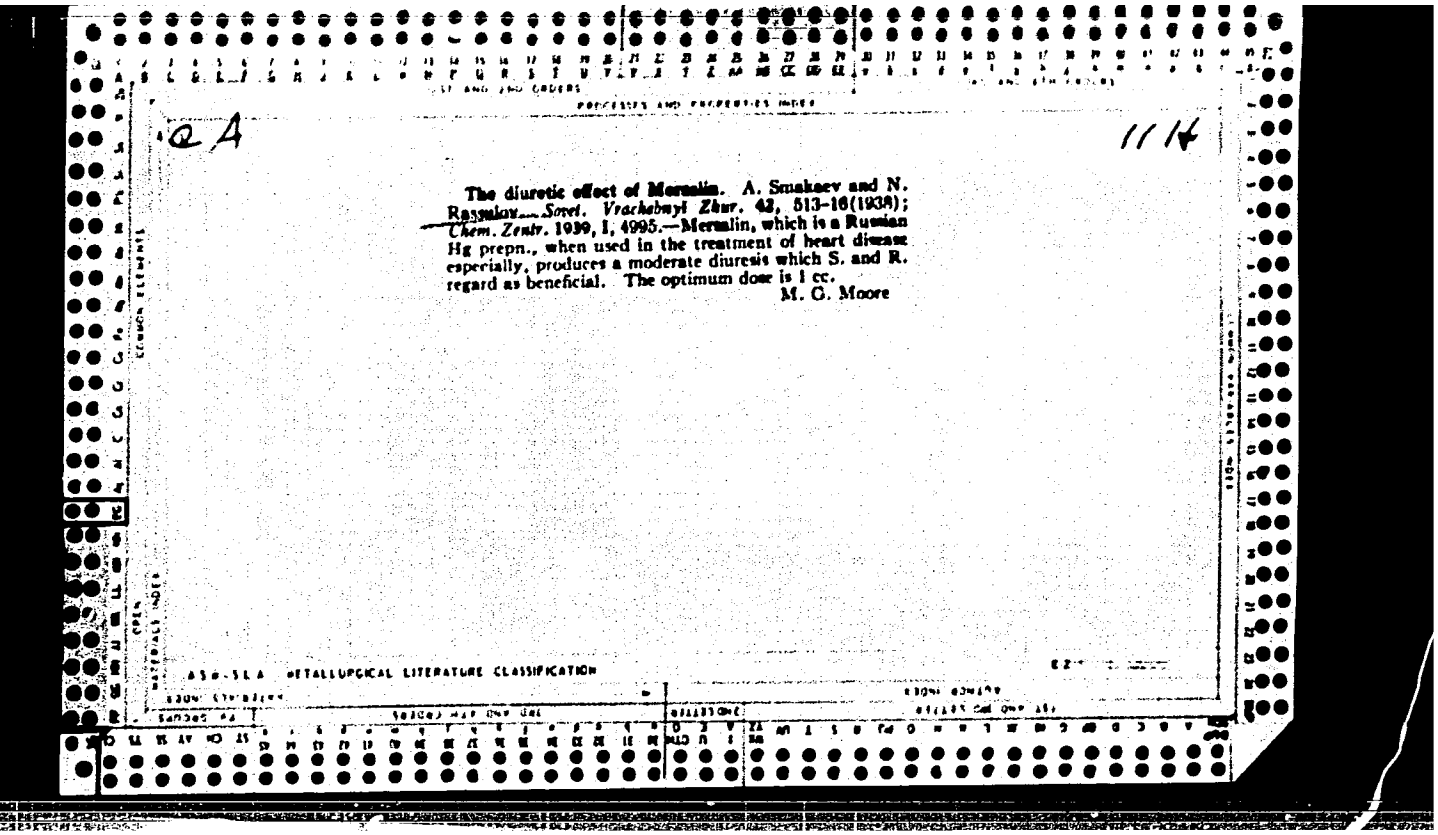
B. Z. Kamich

METALLURGICAL LITERATURE CLASSIFICATION



The yellowing of oil paints with white pigments. N. S. Rassudova and Yu. N. Tolg-kii. *Byull. Malyarnal Tekh.* 1939, No. 6, 15–18; *Khim. Referat. Zhur.* 1940, No. 1, 115; cf. *C. A.* 35, 4229.—Causes of the tendency of oil paints with white pigments to yellow and methods for its prevention were investigated. The compn. of the pig ment, the compn. of the binding substance, the presence of driers, the conditions of illumination, the gas medium and the temp. affect the yellowing of the paint. A min. yellowing is obtained with ZnO and the simultaneously fpnd. Ti-Ca and Ti-Ba pigments. A max. yellowing is obtained with TiO_2. The presence of driers and the application of highly polymerized drying oils overcome yellowing. Max. yellowing is caused by the presence of antioxidants, insufficient illumination, absence of O_2 and presence of Na and Mg salts. The yellowed films can be whitened not only by illuminating them with direct sun light, but also by treating them with a no. of oxidizing agents.

W. R. Henn

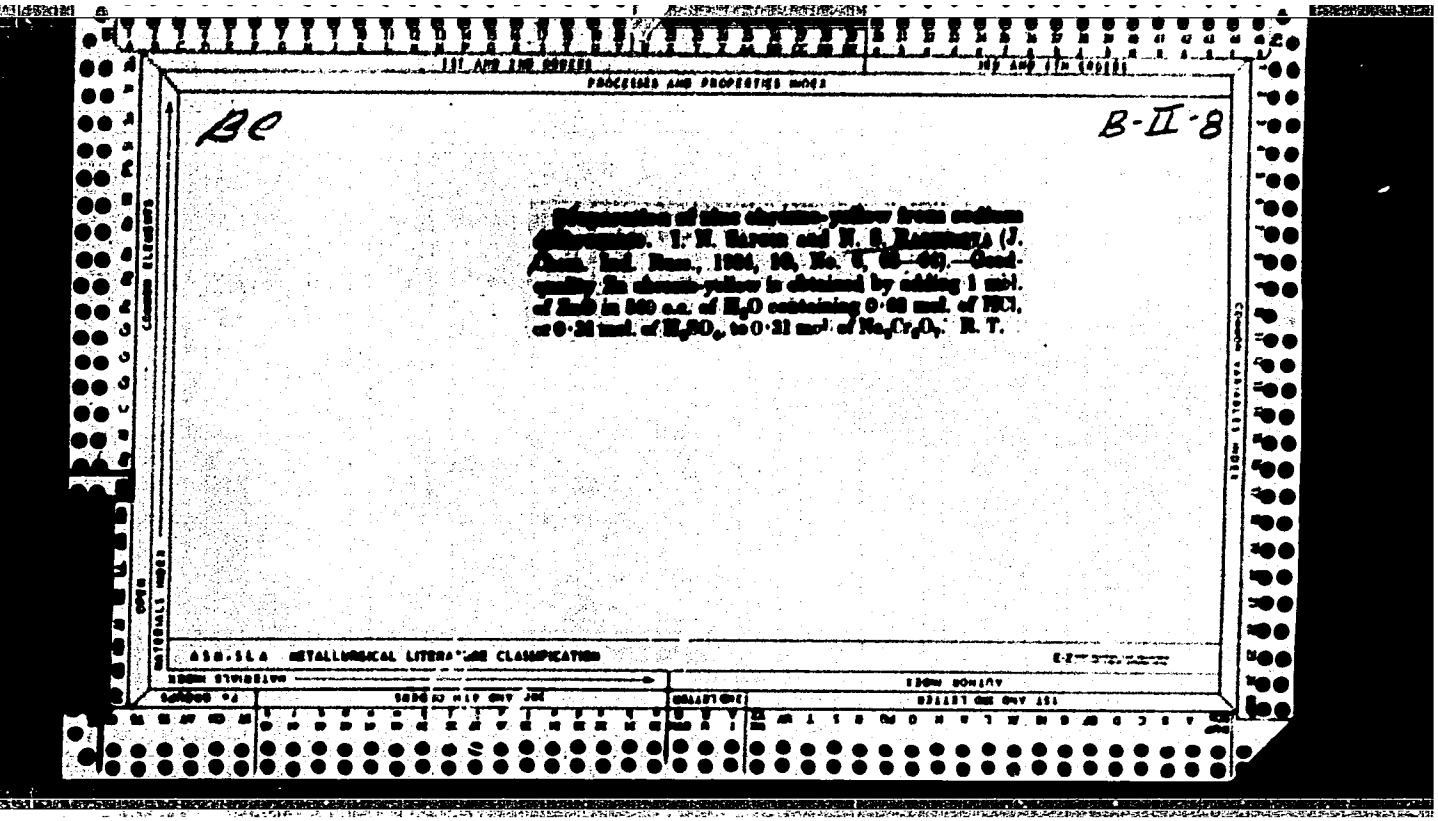


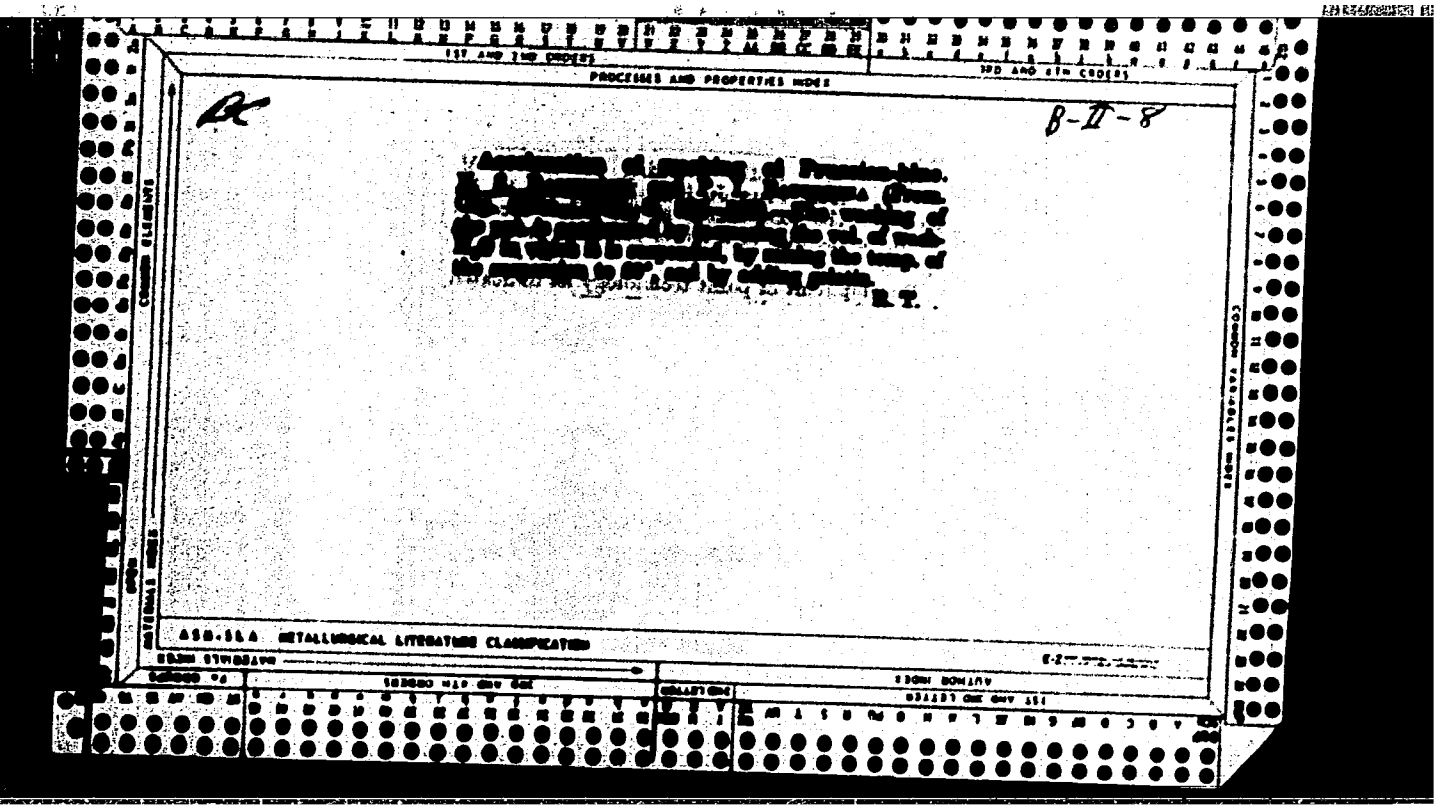
QA

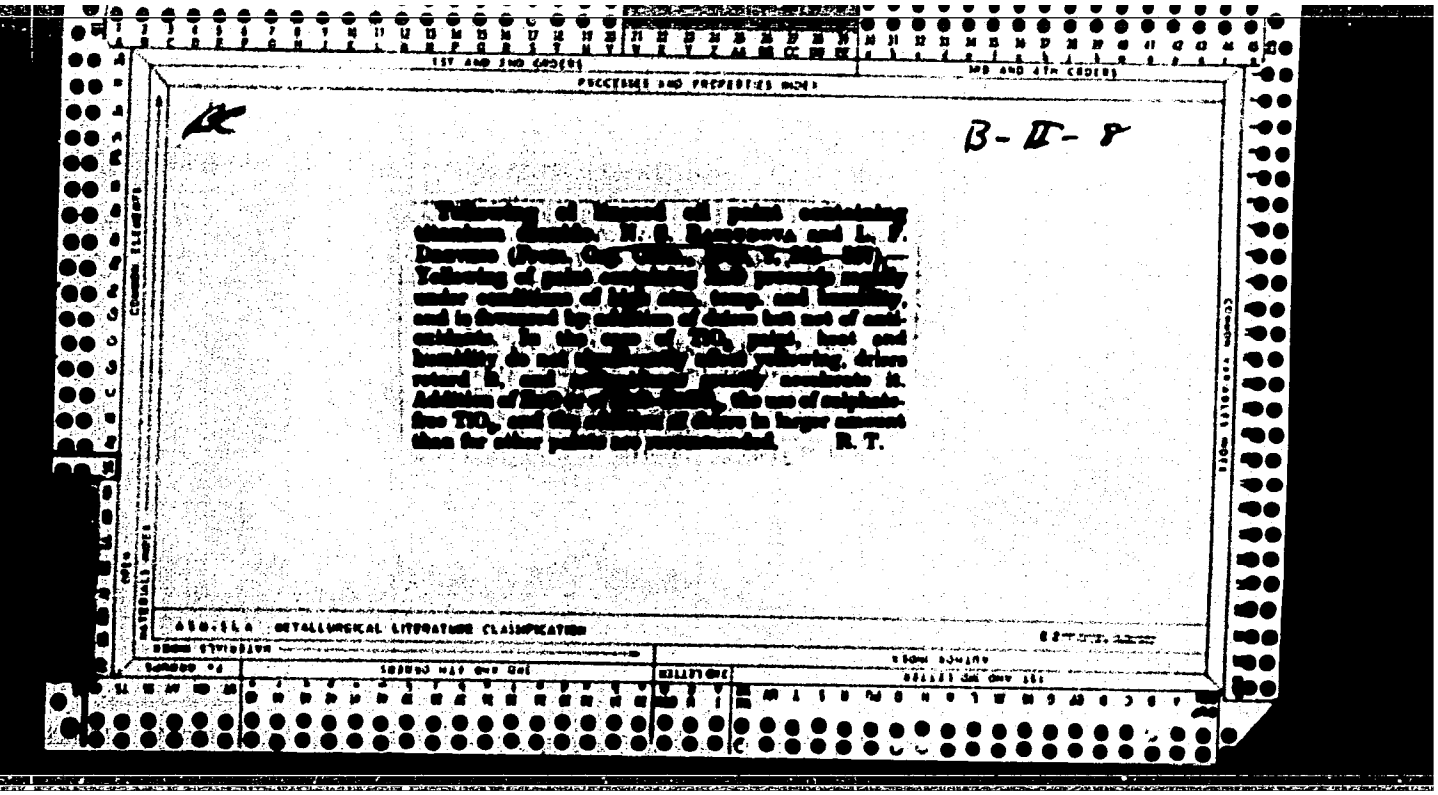
1114

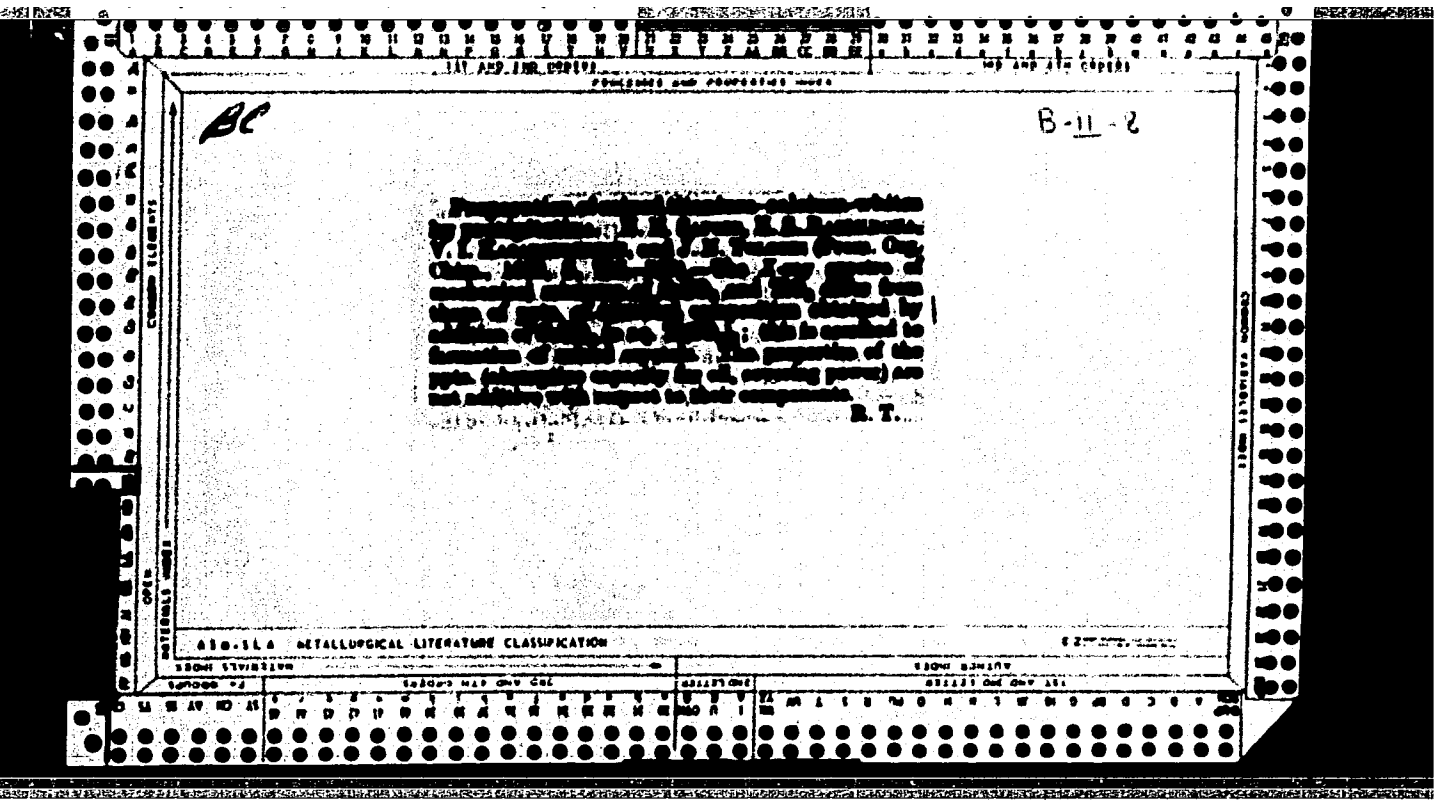
The diuretic effect of Mersalin. A. Smakaev and N. Rassulov. *Sovet. Vrachebnyi Zhur.* 42, 513–16(1938); *Chem. Zentr.* 1939, I, 4995.—Mersalin, which is a Russian Hg prepn., when used in the treatment of heart disease especially, produces a moderate diuresis which S. and R. regard as beneficial. The optimum dose is 1 cc.
M. G. Moore

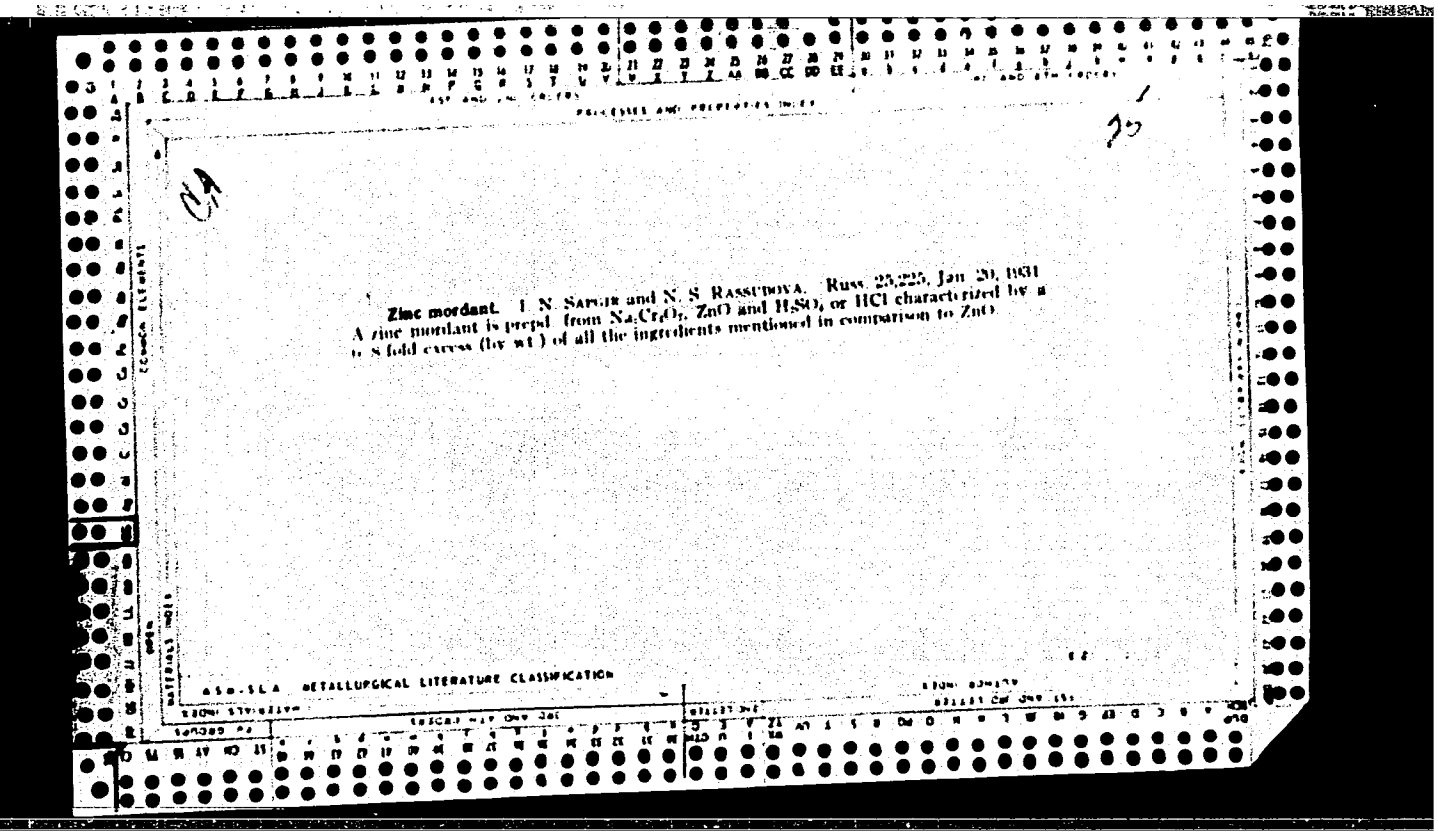
ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION





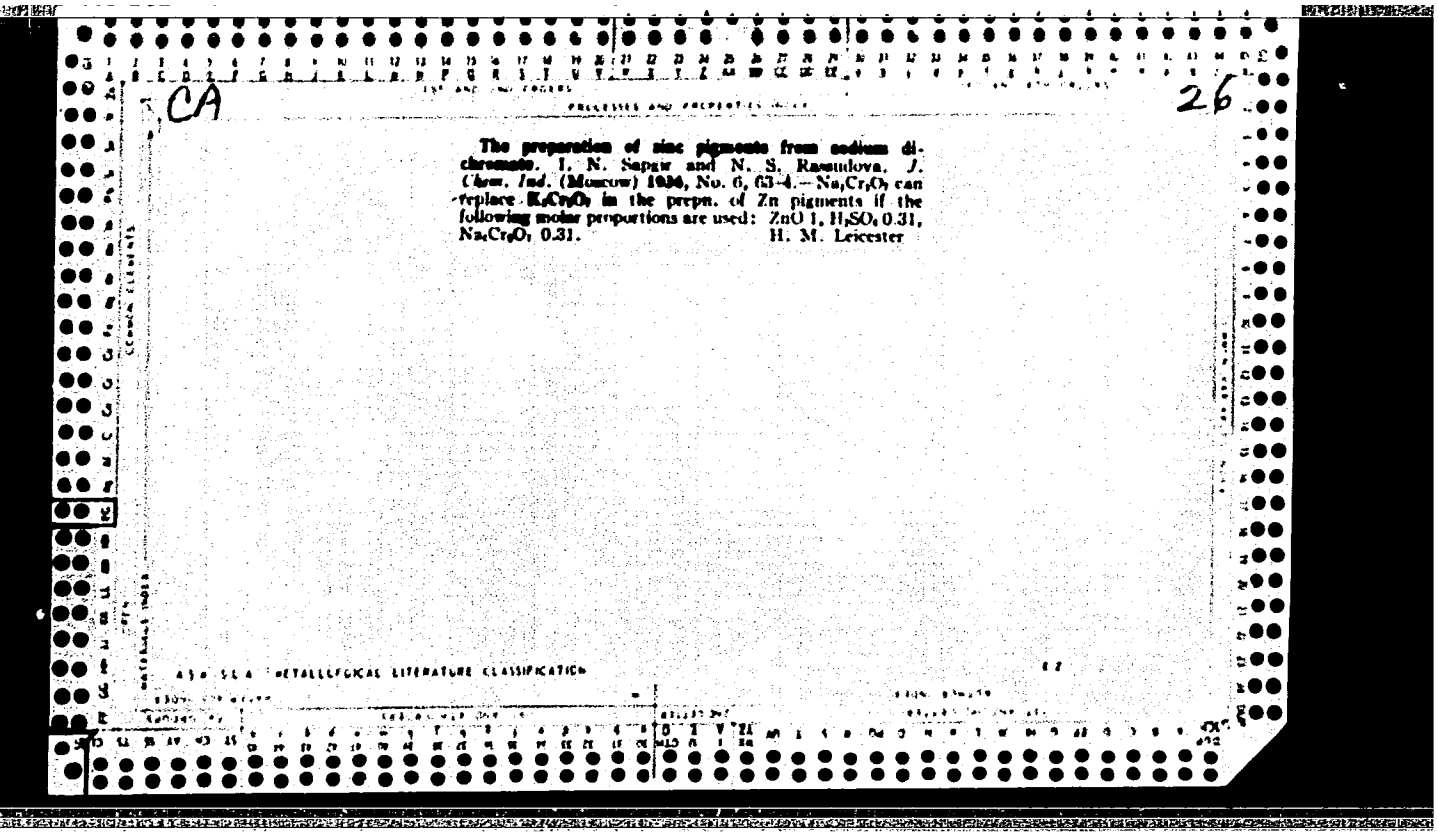






Zinc mordant. I. N. Sarvin and N. S. Rassudova. Russ. 25,225, Jan. 30, 1931. A zinc mordant is prepd. from $Na_2Cr_2O_7$, ZnO and H_2SO_4 or HCl characterized by a 1–8 fold excess (by wt.) of all the ingredients mentioned in comparison to ZnO.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

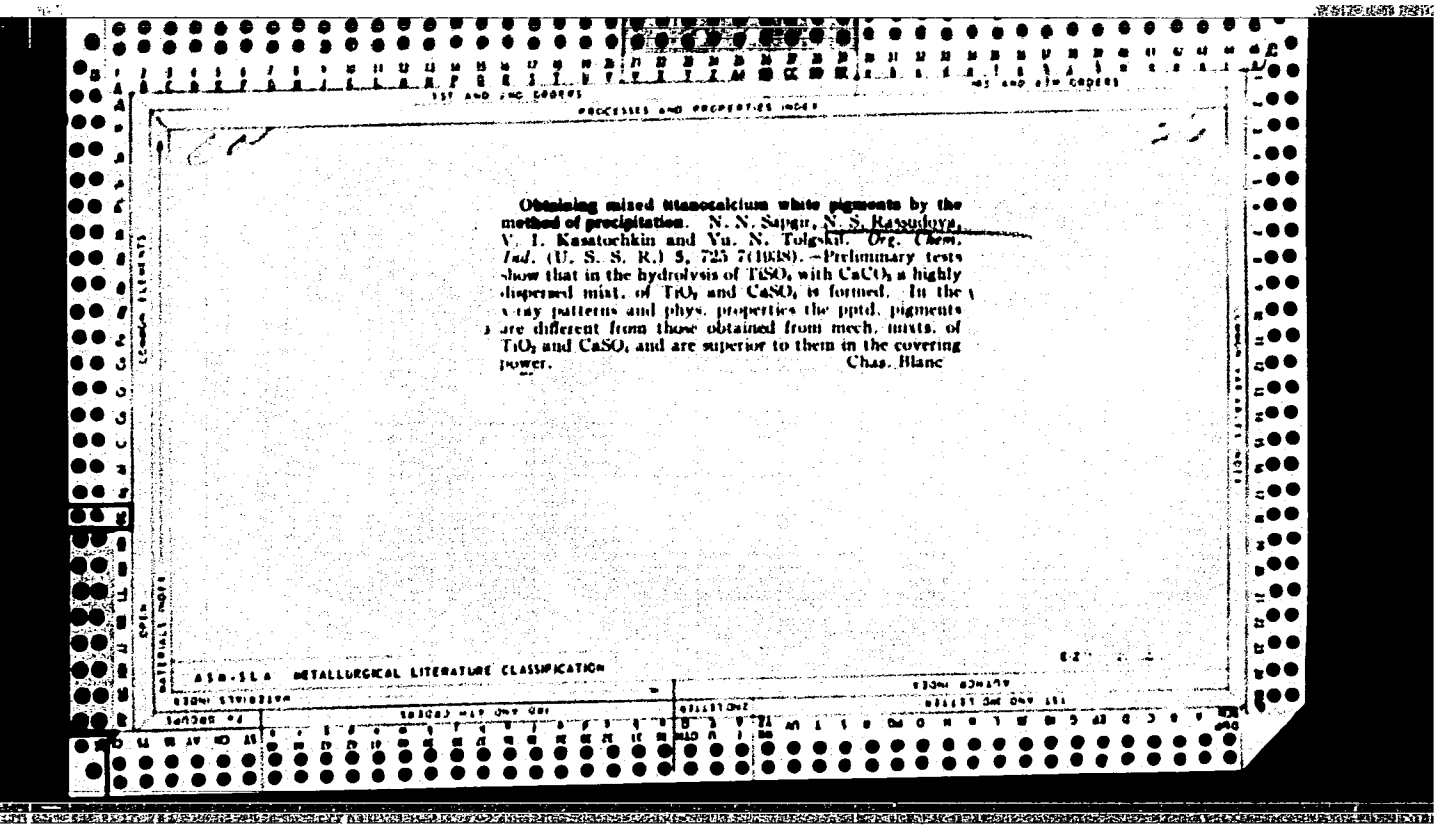


CA

26

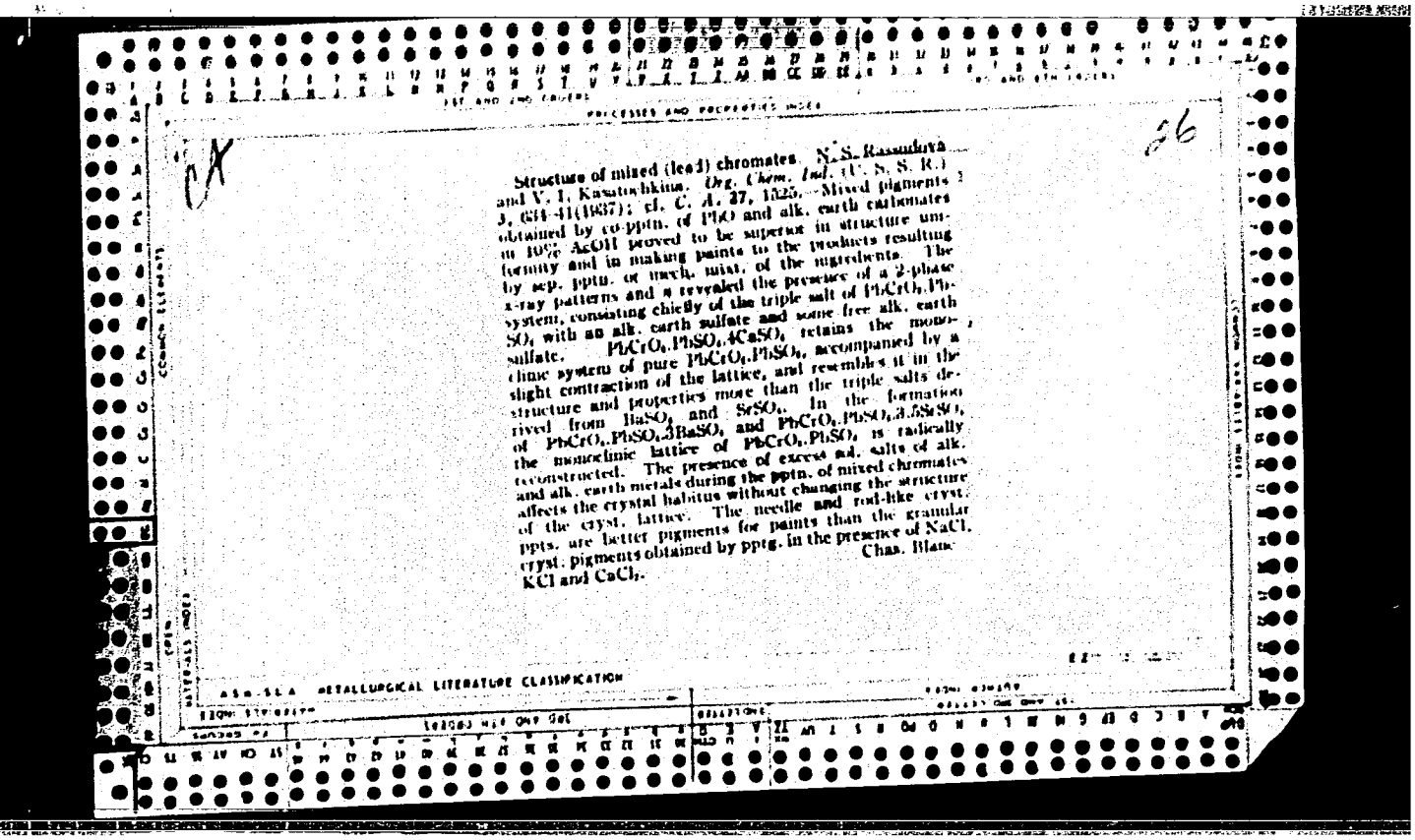
The preparation of zinc pigments from sodium dichromate. I. N. Sapgir and N. S. Rasmulova. *J. Chem. Ind.* (Moscow) **1936**, No. 6, 63–4.—$Na_2Cr_2O_7$ can replace $K_2Cr_2O_7$ in the prepn. of Zn pigments if the following molar proportions are used: ZnO 1, H_2SO_4 0.31, $Na_2Cr_2O_7$ 0.31. H. M. Leicester

ASM SLA METALLURGICAL LITERATURE CLASSIFICATION



Obtaining mixed titanocalcium white pigments by the method of precipitation. N. N. Sapgir, N. S. Rassudova, V. I. Kasatochkin and Yu. N. Tolgskil. *Org. Chem. Ind.* (U. S. S. R.) 5, 725 7(1938).—Preliminary tests show that in the hydrolysis of $TiSO_4$ with $CaCO_3$ a highly dispersed mixt. of TiO_2 and $CaSO_4$ is formed. In the x-ray patterns and phys. properties the ppted. pigments are different from those obtained from mech. mixts. of TiO_2 and $CaSO_4$ and are superior to them in the covering power.
Chas. Blanc

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



Structure of mixed (lead) chromates. N. S. Rassudova and V. I. Kasatochkina. *Org. Chem. Ind.* (U. S. S. R.) 3, 614-41(1937); cf. C. *A.* 27, 1225.—Mixed pigments obtained by co-pptn. of PbO and alk. earth carbonates in 10% AcOH proved to be superior in structure uniformity and in making paints to the products resulting by sep. pptn. or mech. mixt. of the ingredients. The x-ray patterns and ρ revealed the presence of a 2-phase system, consisting chiefly of the triple salt of $PbCrO_4.Pb$-SO_4 with an alk. earth sulfate and some free alk. earth sulfate. $PbCrO_4.PbSO_4.4CaSO_4$ retains the monoclinic system of pure $PbCrO_4.PbSO_4$, accompanied by a slight contraction of the lattice, and resembles it in the structure and properties more than the triple salts derived from $BaSO_4$ and $SrSO_4$. In the formation of $PbCrO_4.PbSO_4.3BaSO_4$ and $PbCrO_4.PbSO_4.3.5SrSO_4$, the monoclinic lattice of $PbCrO_4.PbSO_4$ is radically reconstructed. The presence of excess sul. salts of alk. and alk. earth metals during the pptn. of mixed chromates affects the crystal habitus without changing the structure of the cryst. lattice. The needle and rod-like cryst. ppts. are better pigments for paints than the granular cryst. pigments obtained by pptg. in the presence of NaCl, KCl and $CaCl_2$.

Chas. Blanc

ca

25

Rapid washing of Prussian Blue. N. S. Rassudova and P. I. Baturkina. *Org. Chem. Ind.* (U.S.S.R.) 5, 350-8 (1938).—In the production of Prussian Blue the settling of the ppt. and the washing process can be considerably accelerated by decantation at lower concns. (1:200 instead of 1:70 or 1:100) with water at 50-55° (instead of 20°) and addn. of a little gelatin. Chas. Blanc

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

CA

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The use of mixed lead-calcium pigments for varnish-pigment films. I. N. Sargir, N. S. [illegible] and I. N. Kolotukhin. *Byull. Malyarnoi Tekh.* 1959, No. 7, 19-20; *Khim. Referat. Zhur.* 1960, No. 2, 110; cf. C. A. 53, 2450f. A method for producing mixed Pb-Ca pigments is given. The weather resistance of mixed Pb-Ca pigments is equal to that of pure Pb sulfate chromate pigments.

W. R. Henn

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

RASSUDOVA, N.S.; TIKHONOVA, N.A.; BUTKUTE, A.A.

Synthesis of yellow and red cadmium lithopones and investigation of their physical and technical properties. Lakokras.mat.i ikh prim. no.5:22-24 '60. (MIRA 13:11)
(Pigments) (Cadmium sulfite)

RASSULEV, P.K.

Popkovich's solution. Sbor.nauch.-issl.rab. TTI no.9:119-131 '60.
(MIRA 15:6)

(Elasticity)

SOV/24-59-4-6/33

AUTHORS: Moskvitin, A.I. and Rassulov, A.M. (Moscow)

TITLE: Concerning Heat Transfer in the Hydrogen Cooling System of Turbo-alternators

PERIODICAL: Izvestiya Akademii nauk SSSR, Otdeleniye tekhnicheskikh nauk, Energetika i avtomatika, 1959, Nr 4, pp 43 - 48 (USSR)

ABSTRACT: In modern turbo-alternators gas coolers are used to cool the circulating hydrogen; these coolers are very big and can have a considerable influence on the design and overall dimensions of the alternators. It is important to be able to make these gas coolers small. However, heat transfer and the aerodynamic resistance of bundles of tubes with wire ribbing has been little studied and published data relates only to tests in air. In the summer of 1958, the Energeticheskiy institut AN SSSR (Power Institute of the Ac.Sc.USSR) together with the "Elektrosila" Works made an experimental study at various hydrogen pressures of heat transfer and resistance to flow of gas coolers with wire ribbing as used in turbo-alternators. As the tube bundles were of full size and the cooling medium was the same as

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Concerning Heat Transfer in the Hydrogen Cooling System of Turbo-alternators

in operation it was possible to determine the heat-transfer coefficient and resistance at various hydrogen pressures and also to obtain generalised criterial relationships. The tests were made in special equipment designed for testing parts of large machines in an atmosphere of hydrogen at pressures of 1 to 10 atm; it is a cylindrical chamber 5 300 mm long and 1 050 mm diameter. The chamber contains a wind tunnel with fans forming a closed circuit in which the gas can be circulated in amounts up to 1.5 m^3/sec. Appropriate control measurement devices were provided. The tests were made at various hydrogen pressures from 1.2 to 7.5 atm and for a wide range of gas speeds from 2 to 10 m/sec. The gas temperature at inlet to the coolers reached 50 - 60 °C and the cooling-water temperature was around 20 °C. During the tests the thermal loading of the gas cooler corresponded to practical operating conditions and was 800 - 1 200 kcal/h per metre run of tube. Hydrogen of 97.5 - 98.5% purity was used as in practical machines.

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SOV/24-59-4-6/33

Concerning Heat Transfer in the Hydrogen Cooling System of Turbo-alternators

Heat transfer from a ribbed gas cooler is given by Formula (1) and the efficiency of the ribbing is given by Formula (2). Using these formulae, by experimental determinations of the amount of heat transferred and the appropriate temperature drop it is easy to determine the heat-transfer coefficients for the ribbed surface. On going over from air to hydrogen cooling at a pressure of 4 atm, the effectiveness of using the gas cooler is reduced by about 20% and, therefore, with hydrogen cooling at 4 atm, it is advisable to use wire ribbing with a larger wire diameter and smaller loop height or to use solid fins. The criterial heat-transfer relationship of the gas cooler plotted in Figure 1 and given by expression (4) was plotted from experimental data for hydrogen pressures from 1.2 to 7.5 atm.
The aerodynamic resistance of the tube bundle is then considered. The criterial equation for the resistance is of the form of expression (7). On working out the experimental data, it is found that the resistance

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Concerning Heat Transfer in the Hydrogen Cooling System of Turbo-alternators

coefficient drops as the hydrogen pressure is increased, for instance, on raising the hydrogen pressure from 1.2 to 4.0 atm, the resistance coefficient drops by 15-20% for a rate of flow of 3.0 m/sec. Figure 2 shows a graph of the criterial relationship between the resistance coefficient obtained on tests for several hydrogen pressures and for air. It is found that whilst air increase in the Reynolds number reduces the resistance coefficient only slightly, the reduction is greater for hydrogen and increases as the pressure is dropped. On the basis of the test results, Eq (9) is recommended to determine the resistance coefficient of the wire ribbed gas cooler considered, at a pressure of 4 atm. The tests also showed that on going over from air to hydrogen cooling at a pressure of 4 atm, the resistance of the gas cooler is more than halved.

The experimental separation of the various components of the thermal resistance of the gas cooler is then considered. Since the tests were made over a wide range of

Concerning Heat Transfer in the Hydrogen Cooling System of Turbo-alternators

speeds and gas pressures and of water speeds in the tubes, it was possible to resolve the thermal resistance of the gas cooler into its component parts and this is, of course, a major object of investigations of heat-exchange equipment. Of course, the resistances of the different parts are interrelated so that the separation is necessarily somewhat arbitrary.

Figure 3 gives graphs of the total specific thermal resistance of the gas cooler as a function of the reciprocal of the water speed for tests in hydrogen and in air and for various gas speeds and pressures. The relationship is linear and the method of using these results to resolve the heat losses into various components is explained. Block diagrams of the various components of resistance as percentage of the total resistance are plotted in Figure 4 and it will be seen that for air at low speeds (Figure 4a - lefthand column) the main resistance (83%) is due to heat transfer from the gas to the ribbing. For hydrogen at high

Concerning Heat Transfer in the Hydrogen Cooling System of Turbo-alternators

speeds and pressures (pv = 33, right-hand column of Figure 4a) this resistance drops to 25% but the relative proportion due to the resistance of the metal increases considerably from 8% in air to 50% in hydrogen. Consequently, in this case, it is best to make the ribbing narrower but of thicker wire. Formulae (10)-(12) may be used for approximate recalculation of the test results for the given gas cooler from air to hydrogen and thus to obtain a generalised characteristic for the gas cooler. Such a generalised characteristic is given in Figure 5 for the thermal resistance relating to a hydrogen pressure of 4 atm and gas speed of 5 m/sec constructed from the test results given in Figure 3 for hydrogen and air.
There are 5 figures and 5 Soviet references.

SUBMITTED: March 10, 1959

Card 6/6

RASSULOV, A.M. (Moskva)

Selection of gas coolers for turbogenerators. Izv. AN SSSR. Otd. tekh.nauk.Energ. i avtom. no.4:148-150 Jl-Ag '60. (MIRA 13:8)

1. Energeticheskiy institut Akademii nauk SSSR.
(Turbogenerators—Equipment and supplies)

MOSKVITIN, A.I.; RASSULOV, A.M.

Use of models in the experimental study of direct hydrogen cooling of turbogenerator rotor windings. Elektrosila no.19:19-25 '60. (MIRA 15:2)

(Turbogenerators--Cooling)

RASSULOV, A.M., inzh.

Concerning the efficient use of the ventilating grooves in a rotor. Vest.elektroprom. 32 [illegible] '61. (MIRA 14:8)
(Electric machinery--Cooling)

RASSULOV, A.M., inzh.

Direct cooling of a rotor with helical grooves. Elektrotekh-
nika 34 no.11:57-61 N '63. (MIRA 17:2)

- MOSKVITIN, A.I., doktor tekhn. nauk, prof.; RASSULOV, A.M., inzh.

Priority in the development of the cooling system of the rotor of a turbogenerator with diagonal grooves. Elektrichestvo no.7:83-85 Jl '64. (MIRA 17:11)

RASSULOV, R.

Utilizing the labor force in the seasonal branches of industry during the entire year. Biul.nauch. inform.: trud i zar. plata 4 no.8:13-16 '61. (MIRA 14:10)

(Peat industry)

RASSULOV, T. M.

Dissertation defended for the degree of Candidate of Economic Sciences at the Institute of Economics

"Ways to Reduce Cost of Peat Recovery in the USSR."

Vestnik Akad. Nauk, No. 4, 1963, pp 119-145

GIASSULOV, R.M.

Advantages of peat consumption in different economic regions of the U.S.S.R. Torf.prom. 38 no.1:16-20 '61. (MIRA 14:2)

1. Institut ekonomiki AN SSSR.
(Peat)

RASSULOV, R.M.

Specific problems of work organisation in cut peat production during the 1953 season. Torf.prom. no.2:21-22 '54. (MLRA 7:3)

1. Zanginskoye torfopredpriyatiye. (Peat industry)

VAGINA, V.S.; RASSULOVA, Kh.N.; DMITRIYEV, O.V.

Morbid states following resection of the stomach and their compound treatment. Sbor. nauch. rab. vrach. san.-kur. uchr. profsoiuzov no.1:98-104 '64. (MIRA 18:10)

1. Zheleznodorozhnyy bazovyy sanatoriy imeni XX s"yezda Kommunisticheskoy partii Sovetskogo Soyuza (glavnyy vrach R.S.Chubarov, nauchnyy rukovoditel' kand.med.nauk Yu.S.Vishnevskaya).

DREWS, Maria; RASSUMOWSKA, Danuta; SLIWINSKA, Zofia; TYSPER, Zofia

Tentative clinical evaluation of the value of estimation of alpha-amylase in the saliva and blood serum in salivary gland diseases. Pt.1. Czas. stomat. 18 no.8/9:1099-1103 Ag-S '65.

1. Z Kliniki Chirurgii Stomatologicznej AM w Poznaniu (Kierownik: prof. dr. J. Stadnicki).

85009

9.4300 (1137, 1138, 1143)

S/048/60/024/010/018/033
B013/B063

AUTHORS: Bogdanov, S. V. and Rassushin, V. A.

TITLE: The Semiconductor Properties of $BaTiO_3$

PERIODICAL: Izvestiya Akademii nauk SSSR. Seriya fizicheskaya, 1960, Vol. 24, No. 10, pp. 1247-1250

TEXT: The authors studied the effect of some slight additions to $BaTiO_3$ upon its semiconductor properties. Some data are given concerning the dependence of log ρ on 1/T for $BaTiO_3$ monocrystals, to which lanthanum and vanadium were added. The crystals were bred according to the method described by Remeika. On the introduction of additions the number of lamella-shaped crystals was reduced, and the principal mass was granulated. In the case of V_2O_5 the crystals were bright-yellow. With La_2O_3 the color varied between pink and violet. Regarding the addition concentration in monocrystals, no precise values could be established. By indirect values it is possible to estimate whether the addition is contained in the crystal. Fig. 1 shows the temperature dependences of

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The Semiconductor Properties of $BaTiO_3$

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B013/B063

ϵ for monocrystals with La and for $BaTiO_3$. The temperature dependence of resistivity was measured for the monocrystals obtained. Individual results are given in Fig. 2 for crystals with vanadium. At room temperature, resistivity amounts to $1.37 \cdot 10^{12}$ ohm·cm. For specimens with lanthanum, data are given in Fig. 3. It may be seen that there is an anomalous section in the curve $\log \rho = f(1/T)$. This resembles the section described by Saburi for ceramic $BaTiO_3$ specimens with rare earths. Its existence can likewise serve as indirect evidence of the presence of the addition in the crystal. A great reduction of the quantity ρ could not be achieved. Similar results were obtained on a large number of specimens. The anomalous course of the curve $\rho(T)$ can be explained by the fact that this section lies in the region of the phase transition, during which a rearrangement of the zonal crystal structure takes place (Ref. 12). Below the phase transition the additions are split, which fact leads to an increase of conductivity. Above the phase transition splitting disappears and conductivity is reduced. Mention is made of M. D. Mashkovich, Ye. V. Sinyakov, B. K. Chernyy, A. F. Yatsenko. The present paper was read at the Third Conference on Piezoelectricity, which took place in Moscow from

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85009

The Semiconductor Properties of $BaTiO_3$

S/048/60/024/010/018/033
B013/B063

January 25 to 30, 1960. There are 3 figures and 12 references: 5 Soviet, 3 Japanese, 1 Swiss, and 1 US.

L 18949-63 EWT(l)/EWP(q)/EWT(m)/BDS/ES(s)-2 AFFTC/ASD/ESD-3/IJP(C)/
SSD Pt-4 GG/JD

ACCESSION NR: AP3007516 S/0181/63/005/009/2703/2704

AUTHOR: Bogdanov, S. V.; Rasaushin, V. A.; Sinkha, D. K. 12 70

TITLE: Relaxation properties of $BaTiO_3$ single crystals containing antimony impurities

SOURCE: Fizika tverdogo tela, v. 5, no. 9, 1963, 2703-2704

TOPIC TAGS: barium titanate relaxation property, single crystal relaxation property, barium titanate single crystal, barium titanate crystal property, barium titanate crystal, barium titanate, relaxation property, barium titanate dielectric property

ABSTRACT: The dielectric constant as a function of temperature was investigated in barium titanate single crystals containing Sb_2O_3 impurities. It was found that 1) the single crystals of barium titanate possess ferroelectric and relaxation properties for certain antimony impurity concentrations; 2) the introduction

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L 18949-63

ACCESSION NR: AP3007516

2

of antimony impurities lowers the Curie point, the effect being well marked at antimony concentrations above 0.01 mol%; and 3) the appearance of a maximum on a curve of dielectric constant versus temperature indicates the presence of relaxation polarization in that temperature region. Dependence of the dielectric constant on temperature was also investigated for temperatures of 120—200C. Orig. art. has: 2 figures.

ASSOCIATION: Fizicheskiy institut im. P. N. Lebedeva AN SSSR, Moscow (Physics Institute, AN SSSR)

SUBMITTED: 06Dec62 DATE ACQ: 140ct63 ENCL: 00

SUB CODE: PH NO REF SOV: 001 OTHER: 001

Card 2/2

L 25240-65 EWT(1)/EWT(m)/T/EWP(t)/EEC(b)-2/EWP(b) IJP(c) JD

ACCESSION NR: AP5004342 S/0070/65/010/001/0074/0080

AUTHOR: Bogdanov, S. V.; Kiseleva, K. V.; Rassushin, V. A. 24 23 B

TITLE: Effect of bismuth additives on some physical properties of $BaTiO_3$ single crystals

SOURCE: Kristallografiya, v. 10, no. 1, 1965, 74-80

TOPIC TAGS: bismuth additive, barium titanate, bismuth ion behavior

ABSTRACT: The effect of small concentrations of bismuth additive on the structure, dielectric properties, losses, Cury point, and the spontaneous crystallization of $BaTiO_3$ were investigated. It was shown, that two ranges: (1) from 0 to 0.16 atomic % of Bi and above 0.16 atom. % can be separated in the concentration dependency of structural parameters T_k and P_s. The different behavior of the said values in these concentration ranges is linked to different behaviors of bismuth ions in the $BaTiO_3$ lattice. In the second range, relaxation dependencies and tg , related to the electron processes, were disclosed. Probable mechanisms of relaxation processes are also discussed. Orig. art. has: 6 figures and 1 table.

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L 25240-65

ACCESSION NR: AP5004342

ASSOCIATION: Fizicheskiy institut im. P. N. Lebedeva (Physics Institute) /

SUBMITTED: 12Aug64 ENCL: 00 SUB CODE: IC, SS

NO REF SOV: 010 OTHER: 012

Card 2/2

L 57564-65 EWT(l)/EPA(s)-2/EWT(m)/EEC(t)/T/EWP(t)/EWP(b)/EWA(c) Pt-7/Pl-4 60
IJP(c) JD/GG 57
13

ACCESSION NR: AP5016138 UR/0048/65/029/006/0994/0998

AUTHOR: Bogdanov,S.V.; Kiseleva,K.V.; Matsonashvili,B.N.; Rassushin, V.A.; Sentyurina,N.N.

TITLE: Effect of doping with iron on some physical properties of barium titanate single crystals / Report, 4th All-Union Conference on Ferroelectricity held in Rostov-on-the-Don 12-18 Sept 1964/

SOURCE: AN SSSR.Izvestiya.Ser.fizicheskaya, v.29, no.6, 1965, 994-998

TOPIC TAGS: ferroelectric crystal, barium titanate, doping, iron, crystal structure, phase transition, dielectric constant, electric conductivity, optic absorption

ABSTRACT: The authors have measured the dielectric constant, electrical conductivity and optical transmission of $BaTiO_3$ single crystals containing up to 6 at.% Fe and have investigated the structure of the crystals by x-ray diffraction. At room temperature the structure of crystals containing from 0.48 to 2.6 at.% Fe was tetragonal; crystals containing more than 2.6 at.% Fe were cubic and their lat-

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tice constants were independent of the Fe content. When the temperature was reduced, the (431) reflections from crystals that were cubic at room temperature became broader, while the (222) reflections did not. This broadening was maximum at 243°K, and at 77°K the width of the (431) reflections was practically the same as at room temperature. It is concluded that the structure is tetragonal at 243°K and that a phase transition occurs between 243 and 77°K. The dielectric constants were measured at temperatures from 100 to 530°K. It was found that the Curie point is displaced toward lower temperatures with increasing Fe content. The authors also assert that the dielectric constant maximum corresponding to the 2·m → 3·m transition is displaced toward higher temperatures. Electrical conductivities were measured at temperatures from 100 to 530°K. The plots of the logarithm of the conductivity against the reciprocal of the temperature were straight lines for crystals containing 2.6 at.% or more of Fe and were broken lines for crystals containing 1.84 at.% or less. These curves are analyzed and it is concluded that the Fe impurity atoms form acceptor levels with an ionization energy of 1.5 eV. Optical transmission measurements at

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ACCESSION NR: AP5016138

wavelengths from 0.4 to 2.0 micron showed that the presence of Fe shifts the absorption edge toward longer wavelengths. Three absorption maxima were observed at photon energies of 1.8, 1.5 and 1.1 eV. The 1.8 eV absorption corresponds to ionization of F centers and the 1.5 eV absorption confirms the presence of 1.5 eV acceptor centers. The 1.1 eV absorption is not understood; it is suggested that it may be due to an intra-F center transition. Orig.art.has: 7 formulas and 4 figures.

ASSOCIATION: Fizicheskiy institut im.P.N.Lebedeva Akademii nauk SSSR (Physics Institute, Academy of Sciences of the SSSR)

SUBMITTED: 00 ENCL: 00 SUB CODE: SS, IC

NR REF SOV: 006 OTHER: 018

Card 3/3

L 57561-65 EWT(1)/EPA(s)-2/EWT(m)/EEC(t)/T/EWP(t)/EWP(b)/EWA(c) Pt-7/Pl-4
IJP(c) JD/GG
ACCESSION NR: AP5016139 UR/0048/65/029/006/0999/1000

AUTHOR: Bogdanov, S.V.; Rassushin, V.A. 54 B

TITLE: Regarding the mechanism of appearance of relaxational polarization in barium titanate single crystals doped with antimony /Report, 4th All-Union Conf. on Ferroelectricity held in Rostov-on-the-Don 12-18 Sept 1964/

SOURCE: AN SSSR.Izvestiya.Ser.fizicheskaya,v.29,no.6,1965,999-1000

TOPIC TAGS: ferroelectric crystal, barium titanate, doping, antimony, dielectric constant, relaxation effect

ABSTRACT: The authors and collaborators have previously shown that the dielectric constant of $BaTiO_3$ single crystals containing from 0.3 to 0.6 at.% Sb is frequency dependent at temperatures well above the Curie point and does not follow the Curie-Weiss law (Zh.fiz.tverdogo tela 5,No.9,2703,1963; Kristallografiya 10,74,1965). In order to determine whether the relaxational polarization thus revealed is due to surface barriers at the electrode contacts as was shown by N.P.Bogo-

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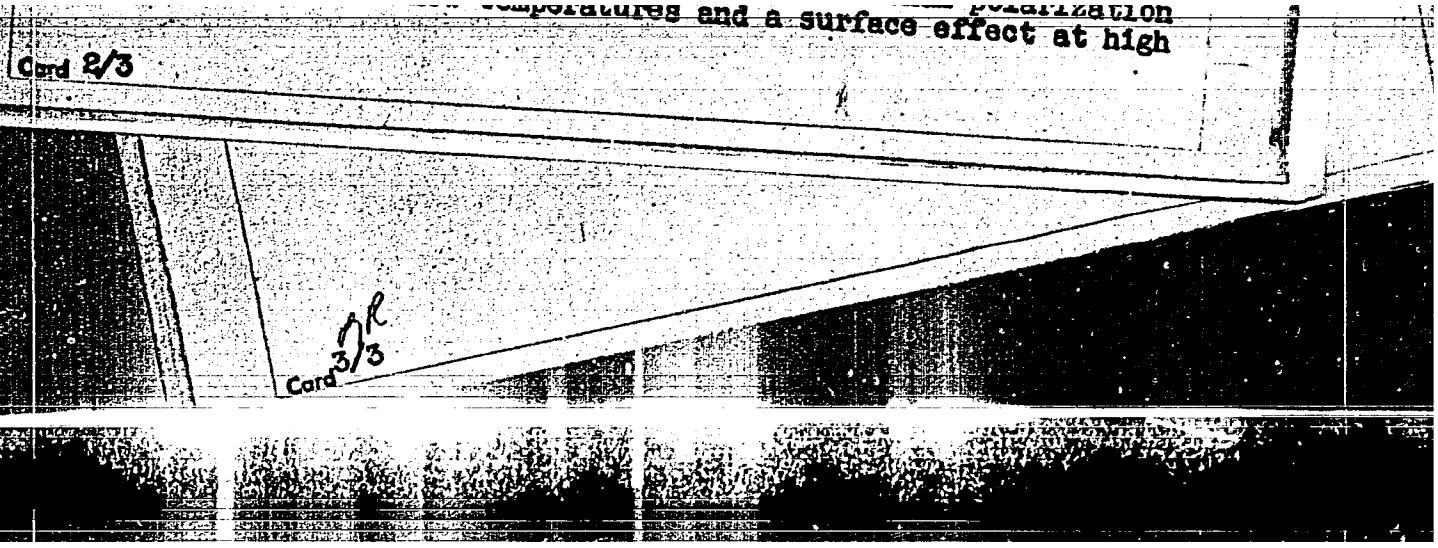
L 57561-65
ACCESSION NR: AP5016139

roditskiy and L.V.Smirnov (Fiz.tverdogo tela 4,3418,1962) to be the case for rutile, or to polarization of microinhomogenieties distributed throughout the volume of the crystal as discussed by W.A.Weyl and N.A.Terhune (Ceramic Age 62,2,23,1953), the authors have performed the further measurements reported here. The dielectric constants of Sb doped $BaTiO_3$ crystals of different thicknesses were measured at temperatures from 20 to 270°C and at frequencies of 1 and 10 kilocycle/sec. By treating the sample as consisting of three capacitors in series, of which two represent the surface effect and one represents the volume effect, the authors conclude that the observed capacity will be inversely proportional to the thickness of the sample if it is due to volume effects and that it will be independent of the thickness if it is due to surface effects. The measurements showed that the capacity was approximately inversely proportional to the thickness at temperatures well below the Curie



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ACCESSION NR: AP5016139

temperatures. In the narrow temperature range from 100 to 120°C the capacity was much less thickness-dependent than at neighboring temperatures on either side of this range. It is suggested that this may be due to the presence in $BaTiO_3$ of a surface layer in which the Curie point is somewhat higher than in the body of the crystal. Orig.art.has: 1 figure.

ASSOCIATION: none

SUBMITTED: 00 ENCL: 00 SUB CODE: SS, IC

NR REF SOV: 006 OTHER: 001

Card 3/3

L 06439-67 EWT(m)/EWP(t)/ETI IJP(c) JD
ACC NR: AP6026716 SOURCE CODE: UR/0181/66/008/008/2488/2490

AUTHOR: Galkina, T. I.; Penin, N. A.; Rassushin, V. A.

ORG: Physics Institute im. P. N. Lebedev, AN SSSR, Moscow (Fizicheskiy institut AN SSSR)

TITLE: Determination of the energetic position of the acceptor level of cadmium in indium arsenide

SOURCE: Fizika tverdogo tela, v. 8, no. 8, 1966, 2488-2490

TOPIC TAGS: arsenide, indium compound, cadmium, ionization

ABSTRACT: The ionization energy of cadmium atoms in InAs was determined from the spectral position of the recombination radiation line of indium arsenide diffusion diodes. The observations were made by transillumination through the n-region of the material, which had an electron concentration $n_0 = 2 \times 10^{16}$ cm^{-3}. It is postulated that the radiation of the diodes arises in the p-region due to radiative capture of an electron from the conduction zone by a neutral cadmium atom. In this case, the spectral characteristic of radiation for direct transitions between the conduction band and the acceptor level is expressed by the formula

$$G(y) = y^{-1/2} e^{y},$$

where $y = \frac{\hbar\omega - \epsilon_d + \epsilon_a}{kT}$ and $\hbar\omega$ is the energy of a radiation quantum. It follows that the maximum of the radiation intensity lies at $y = 1/2$, i. e., at $\hbar\omega_{max} = \epsilon_d - \epsilon_a + kT/2$. It was found graphically that $\epsilon_d - \epsilon_a = 0.395$ eV. The forbidden gap width of InAs, necessary for the calculation of the ionization energy of cadmium ϵ_d, was obtained from the photoluminescence spectra of InAs at 78°K. At this temperature, the forbidden gap width of indium arsenide $\epsilon_d \approx 0.405$ eV, and the ionization energy of cadmium $\epsilon_a \approx 0.010$ eV. Authors thank N. M. Ponomarev and D. A. Vlasov, on the staff of GIREDMET, for providing InAs samples of the highest degree of purity. Orig. art. has: 2 figures.

SUB CODE: 20/ SUBM DATE: 14Feb66/ ORIG REF: 001/ OTH REF: 006

Card 1/2

Card 2/2

L 16802-66 EWT(d)/FSS-2/EWT(1)/EWA(h)

ACC NR: AP6005292 SOURCE CODE: UR/0413/66/000/001/0034/0035

INVENTOR: Ustinov, V. B.; Rassvetalov, L. A.; Chartorizhskiy, D. N.

ORG: none

TITLE: Controlled delay line for pulsed radio signals. Class 21, No. 177459 [announced by the Leningrad Institute of Electrical Engineering im. V. I. Ul'yanov (Leningradskiy elektrotekhnicheskiy institut)]

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 1, 1966, 34-35

TOPIC TAGS: delay line, pulse signal, radio signal

ABSTRACT: The proposed delay line (see Fig. 1) utilizes the spin-echo effect. To simplify the circuit and to increase the signal-to-noise ratio of the delayed radio

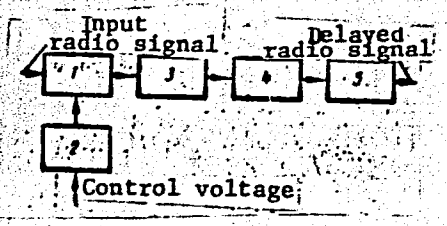

Fig. 1. Controlled delay line

1 - Mixer; 2 - master oscillator; 3 - resonance system; 4 - coupling element; 5 - pulse amplifier.

Card 1/2 UDC: 621.374.5

L 16802-66

ACC NR: AP6005292 O

signal, cobalt-59 is used as the working medium in the resonance system. Orig. art. has 1 figure. [KM]

SUB CODE: 09/ SUBM DATE: 26Mar65/ ATD PRESS: 4207

Card 2/2 mc

UGLOV, F.G., prof.; MAMEDOV, I.M.; MURSALOVA, R.A.; KRASNOSHCHEKOVA, L.I.; BOKAREV, Yu.N.; NIKITIN, G.V.; RASSVETAYEV, I.L.; ZHELVAKOV, N.M.

Deep hypothermia in combination with artificial blood circulation in heart surgery. Vest.khir.90. no.2:19-29 F'63. (MIRA 16:7)

1. Iz gospital'noy khirurgicheskoy kliniki (zav. - prof. F.G. Uglov) 1-go Leningradskogo meditsinskogo instituta imeni Pavlova.
(HYPOTHERMIA) (HEART--SURGERY)
(BLOOD--CIRCULATION, ARTIFICIAL)

UGLOV, F.G.; KURBANGALEYEV, S.M.; BOKAREV, Yu.N.; VORONOV, A.A.; DEGTYAREVA, Z.Ya.; KRASNOSHCHEKOVA, L.I.; MURSALOVA, F.A.; POTASHEV, L.V.; RASSVETAYEV, I.L.; SIMBIRTSEV, S.A.; SOKOLOV, S.S.

Use of the artificial blood circulation apparatus built by the Research Institute for Experimental Surgical Apparatus and Instruments in an experiment. Trudy NIIEKHAI no.5:132-137 '61.

(MIRA 15:3)

(PERFUSION PUMP (HEART))

USSR/Microbiology - Microbiology Pathogenic to Humans and Animals. F-4

Abs Jour : Ref Zhur - Biol., No 12, 1958, 52906

Author : Rassvetayev, V.I.
Inst : -
Title : Intrauterine Fetal Infection by Tick Spirochaetes.

Orig Pub : Za sots. zdravookhr. Uzbekistana, 1956, No 6, 41-42.

Abstract : Of 33 pregnant women under observation 12 were treated before delivery by miarsenol, 3 by streptomycin, 2 by streptomycin and syntomycin, and 2 by biomycin. In 9 newborn infants whose mothers were not treated, spirchaetes were found in the blood. 11 woman who received 1.2-1.5 g of miarsenol before delivery gave birth to healthy, uninfected children. Children born of mothers treated by other methods proved to be infected by spirochaetosis. Of all arsenic preparations, the most effective in treating pregnant women ill with tick spirochaetosis

Card 1/2

USSR/Human and Animal Physiology - (normal and Pathological). T
Physiology of Work and Sport. Aviation Physiology.

Abs Jour : Ref Zhur Biol., No 4, 1959, 18033

Author : Rassvetayev, V.V.

Inst : Military Medical Academy

Title : Secretory and Motor Functions of the Stomach in Digs in Motion Sickness. (Experimental Investigation).

Orig Pub : Tr. Voyen.-med. akad., 1957, 79, 5-50

Abstract : No abstract.

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L 11378-67

ACC NR: AT6036502

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action, time of a reaction with choice, number of errors, amount of information processed, input (or traffic) capacity, and time required for processing one unit of information. It was found that the input capacity of the visual analyzer increased gradually in the first 9 hrs of flight, and then decreased by the 15th hr. However, the input capacity of the auditory analyzer decreased regularly during the entire flight. The input capacity of the tactile analyzer increased (with some variations) until the 12th hr, and then decreased to initial levels.

The gradual increase in input capacities observed in visual and tactile analyzers in the first 9--12 hrs of flight is probably due to adaptation of the organism to new conditions, with increased analyzer lability. The subsequent decrease in input capacity is caused by fatigue, first noticed in crew commanders. The high noise level in the aircraft contributed strongly to the decrease in auditory analyzer input capacity. Characteristically, the greatest shifts in auditory function were observed in commanders and radio operators, who are responsible for external and internal radiocommunications. The visual analyzer is kept in a continual state of stress by the necessity for constant monitoring of many instruments. In the auditory analyzer inhibitory processes are developed in the cortex due to

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ACC NR: AT6036502

negative induction. The tactile analyzer showed signs of fatigue later than the other two, which suggests expanded use of this analyzer to process necessary information during long flights. [W.A. No. 22; AID Report 66-116]

SUB CODE: 06 / SUBM DATE: 00May66

Card 3/3 egk

RASSVETAYEVA, N.I., aspirantka

Simultaneous use of DDT and Diene synthesis preparations.
Zashch. rast. ot vred. i bol. 8 no.10:23-24 O '63.
(MIRA 17:6)

1. Leningradskiy sel'skokhozyaystvennyy institut.

RASSYPNOV, I.A. (Kalinin)

Preparation for written graduation tests in geometry including trigonometry. Mat. v shkole no.2:36-38 Mr-Ap '55.
(MLRA 8:6)
(Geometry--Problems, exercises, etc.) (Trigonometry--Problems, exercises, etc.)

RAST, S., instruktor

The group is the best judge. Sov. profsoiuzy 17 no.21:41 N '61. (MIRA 14:10)

1. Gruzinskiy respublikanskiy sovet profsoyuznov.
(Tiflis—Cab and omnibus service)
(Labor discipline)

ZVONAREV, A. (g. Borovichi, Novgorodskoy oblasti); RAST, S., instruktor

Answers to activists' questions. Sov. profsoiuzy 18 no.11:27 Je '62. (MIRA 15:6)

1. Gruzinskiy respublikanskiy sovet professional'nykh soyuzov, g. Tbilisi.

(Trade unions)

RASTA, H.

Old shore lines of the Baltic Sea in Estonian SSR.

p. 219 (Moksliniai Pranesimai) Vol. 4, 1957, Vilnius, Lithuania

SO: MONTHLY INDEX OF EAST EUROPEAN ACCESSIONS (EEAI) LC, VOL. 7, NO. 1, JAN. 1958

L 47224-66 RO

ACC NR: AP6022432 SOURCE CODE: CZ/0040/66/000/003/0061/0063

35
34
B

AUTHOR: Rašták, Emil

ORG: none

TITLE: The Z-37 "Čmelák" [aircraft] and its equipment for use in agriculture

SOURCE: Letecky obzor, no. 3, 1966, 61-63

TOPIC TAGS: chemical spray tank, agriculture, utility aircraft, auxiliary aircraft equipment

ABSTRACT: The article describes the application of agricultural equipment used on the aircraft Z-37 Čmelak. The mechanical transmission which powers the agricultural equipment from the motor of the aircraft (output 12 HP at 2,000 rpm), the container of chemicals (two stainless steel cones 670 dm^3 in volume), and the application equipment (sprayer, spreader, etc.) are described. A table gives comparative data for the outputs of several types of agricultural aircraft (Z-37, L-60, JAK-12, and Piper Pawnee). The data refers to the operational speed, chemical carrying capacity, type of transmission and maximum output, and the width and volume of the spraying of granulated chemicals, dust chemicals, water solutions, and oil solutions. The rotating spreader of mineral fertilizers is a technical novelty which received a Czechoslovak patent. When a dispersion wing is added to the spreader, the overall width of spraying can be increased to as much as 60 m. The output of the Z-37 Čmelak is almost twice as high

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