"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1

Card 2 10

V yielded 0.5 g. HCO_2H, and 5 g. β,β-dipropylpropionic acid, b. 240-2°, n_D^{20} 1.4338. $CH_2:CHCOCH_2C_6H_{11}$ (VI) (13 g.) was obtained from 20 g. 2-methoxyethyl hexahydrobenzyl ketone, $b_{0.5}$ 92-4°, n_D^{20} 1.4591, on vacuum distn. in the presence of 0.1 g. p-$C_7H_7SO_3H$. VI b_{17} 96°, n_D^{20} 1.4724, d_4^{20} 0.9223, MR found 46.18, calcd. 45.47. Hydrogenated with a Pt catalyst in EtOH VI yielded Et hexahydrobenzyl ketone, b_{10} 109-10°, b_{760} 212-14°, n_D^{20} 1.4515; semicarbazone, m. 153-4°. **XVI. Action of ethylene oxide on vinylethynylcarbinols. Esterification of β hydroxyethyl ethers of vinylethynylcarbinols with organic acids.** I. N. Nazarov and V. M. Romanov. *Ibid.* 559-70(in English, 570).—Ethylene oxide (I) in the presence of powd. KOH (II) reacts with vinylethynylcarbinols, yielding a mixt. of mono-, di- and polyglycolic ethers of vinylethynylcarbinols. *Reaction of I with $CH_2:CHC:CC(OH)Me_2$* (III). In a 3-neck flask equipped with a mech. stirrer, a thermometer, a dropping funnel and a reflux condenser were placed 60 g. II and 100 cc. dry ether. A mixt. of 60 g. $CH_2:CHC:CH$ and 60 g. of acetone was gradually added to I while stirring constantly and cooling with ice water. The reaction mass was stirred for 5 hrs. at room temp. after all the mixt. had been added. To the formed III was added dropwise 70 g. I in 60 cc. of dry ether. A small rise of temp. (20-30°) was noted during the addn. of I. After all of I was added the mixt. was stirred for 4 hrs. at 25-30°. It was allowed to stand overnight and the next morning the alkali was washed off with water, the product was neutralized with dil. AcOH, dried over anhyd. Na_2SO_4 and carefully vacuum-distd. The following fractions were obtained: 25 g. of unchanged III, b_5 45-7°, n_D^{20} 1.4780; 45 g. monoglycolic ether (IV) of III; 30 g. diglycolic ether (V); 22 g. of triglycolic ether, b_5 136-7°, n_D^{20} 1.4811; and a flask residue of 43 g. of polyglycolic ethers of III. A similar run where 50 g. of I was used yielded 40 g. unchanged III, 59 g. IV and 15 g. V. IV b_4 80-1°, n_D^{20} 1.4810, d_4^{20} 0.956, MR found 157, calcd. 154. V b_5 103-4°, n_D^{20} 1.4810, d_4^{20} 0.9952, MR found 197, calcd. 198. *The action of I on $CH_2:CHC:CC(OH)MeEt$* (VII). (*a*) I (68 g.) was added to VI which was prepd. by the condensation of 90 g. $CH_2:CHC:CH$ with 110 g. MeCOEt in 120 cc. of ether, in the presence of 70 g. II. The molar ratio of VI and I was 1:1 and the reaction conditions the same as before. The following fractions were obtained: 80 g. of unchanged VI, 65 g. of monoglycolic ether (VII) of VI, 36 g. diglycolic ether (VIII), 21 g. flask residue of polyglycolic ethers (IX). (*b*) To 45 g. of II and 70 cc. of ether was added 110 g. freshly distd. VI (b_5 58°, n_D^{20} 1.4900). To the resulting mixt. was added 54 g. I. The molar ratio of VI and I was 1:1.5. On careful vacuum-distn. the following fractions were obtained: 30 g. of unchanged VI, 60 g. VII, 38 g. VIII and 18 g. IX. VII b_5 89-90°, n_D^{20} 1.4800, d_4^{20} 0.9498, MR found 169, calcd. 168; 13 g. of VI were obtained on the hydrolysis of 30 g. of VII by heating at 60-70° with 80 cc. 10% H_2SO_4 for 6 hrs., while stirring vigorously, and 5 g. of a diene hydrocarbon (b_{15} 39-40°, n_D^{20} 1.5028) formed by the dehydration of VI also sepd. in this run. VIII b_5 125-7°, n_D^{20} 1.4802, d_4^{20} 0.9849, MR found 215, calcd. 212. *The action of I on $CH_2:CHC:CC(OH)MePr$* (X). I (48 g.) was added to acetylene and 90 g. MeCOPr in the presence of 50 g. of II and 100 cc. of ether. The reaction products were 85 g. unchanged X, 41 g. monoglycolic ether (XI) of X, 30 g.

over

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1

diglycolic ether (**XII**), and 5 g. residue. By the action of 20 g. of I on 85 g. of freshly distd. **X**, in 100 cc. of ether in the presence of 35 g. of II, were obtained 25 g. of unchanged **X**, 33 g. of **XI**, and 18 g. of **XII**. **X** b_5 65-6°, n_D^{20} 1.4780. **XI** b_4 96-7°, n_D^{20} 1.4780, d_4^{20} 0.9377, *MR* found 182, calcd. 182. **XII** b_4 135-6°, n_D^{20} 1.4816, d_4^{20} 0.9607, *MR* found 229, calcd. 226. *Action of* I *on* $CH_2:CHC:CC(OH)Pr_2$ (**XIII**). I (70 g.) was added to **XIII**, which was formed by the condensation of 90 g. of I and 172 g. Pr_2CO in 150 cc. of ether in the presence of 80 g. of II. It yielded 105 g. unchanged **XIII**, 68 g. monoglycolic ether (**XIV**) of **XIII**, 47 g. diglycolic ether (**XV**) and a flask residue of 60 g. The same results were obtained by the action of molar proportions of I and freshly distd. **XIII** in the presence of II. **XIII** b_4 83°, n_D^{20} 1.4760, d_4^{20} 0.8781, *MR* found 100, calcd. 166. **XIV** b_4 108-9°, n_D^{20} 1.4780, d_4^{20} 0.9230, *MR* found 211, calcd. 210. **XV** b_4 140-2°, n_D^{20} 1.4781, d_4^{20} 0.9564, *MR* found 261, calcd. 254. *Action of* I *on* $CH_2.CH_2.CH_2.CH_2.C(OH)C:CH:CH_2$ (1:1) (**XVI**). 80 g. of I was added to **XVI**, formed by the condensation of 90 g. of vinylacetylene with 150 g. of cyclohexanone, in the presence of 80 g. of II in 100 cc. of ether. The products obtained were: 114 g. unchanged **XVI**, b_3 70-80°, n_D^{20} 1.5170; 80 g. of monoglycolic ether (**XVII**) of **XVI**; 40 g. diglycolic ether (**XVIII**); and a flask residue of 23 g. **XVII**, b_3 118-19°, n_D^{20} 1.5092, d_4^{20} 1.008, *MR* found 197, calcd. 194. **XVIII** b_3 149-50°, n_D^{20} 1.5052, d_4^{20} 1.0031, *MR* found 249, calcd. 238. *Esterification of 2-hydroxyethyl ethers of vinylethynylcarbinols with org. acids.* $CH_2:CHC:CCMe_2OCH_2CH_2OAc$ (**XIX**). $CH_2:CHC:CCMe_2OCH_2CH_2OH$ (**XX**) (40 g.), b_6 84-5°, was mixed with 120 g. glacial AcOH contg. 2 g. HCl. The temp. rose from 16° to 30°. The mixt. was stirred for 4 hrs. at room temp. and 1 hr. at 35-40°. The residual AcOH was then neutralized with soda, the substance dried and carefully vacuum-distd. The yield was 1 g. $CH_2:CHC:CCMe_2CH_2Cl$ (**XXI**), b_7 39-40°, n_D^{20} 1.4800; 18 g. of unchanged **XX** (with an admixt. of glycol and its acetate); 21 g. of **XIX**. Similar results were obtained on acetylation with AcOH contg. H_3PO_4. **XIX** b_6 92-3°, n_D^{20} 1.4658, d_4^{20} 0.980, *MR* found 230, calcd. 196. *Hydrolysis of* **XIX**. (*a*) A mixt. of 30 g. of **XIX** and 20 g. of concd. HCl was stirred for 4 hrs. at room temp. The top layer was washed with H_2O, dried with K_2CO_3 and vacuum-distd. It yielded 8 g. of **XXI** and 15 g. of a mixt. of **XIX** and glycol acetate. (*b*) A mixt. of 20 g. of **XIX** and 45 g. of 20% alc. KOH was heated at 50-60° for 1 hr. The mixt. was dild. with 2 vols. of H_2O. The top layer was extd. with ether, washed once more with H_2O, dried and vacuum-distd. The yield was 14 g. of **XX**, b_6 81-3°, n_D^{20} 1.4812. *Methanolysis.* **XIX** (30 g.) and 60 g. of MeOH contg. 3 g. concd. H_2SO_4 were heated for 4 hrs. at 60-65°, with const. stirring. After dilg. with H_2O the top layer was extd. with ether, washed with a soda soln., dried and vacuum-distd. The yield was 10 g. of $CH_2:CHC:CCMe_2OCH_2CH_2OH$, b_{10} 131-3°, n_D^{20} 1.4530. *$CH_2:CHC:CCMe_2OCH_2CH_2OCOEt$* (**XXII**) (*dimethylvinylethynylcarbinyl propionyloxyethyl ether*). **XX** (280 g.), 110 g. of $EtCO_2H$ and 20 cc. H_3PO_4 (d. 1.5) were placed in a flask equipped with an exhaust steam dephlegmator. The mixt. was heated at 60-70° for 8 hrs. under a vacuum of 20-30 mm. so that the water formed distd. and collected in the receiver. Six g. of vinylisopropenylacetylene, b_{10} 21-5°, n_D^{20} 1.5000, were recovered from the receiver after neutralizing the $EtCO_2H$ and sepg. the aq. layer. The flask residue was neutralized with soda, dried and carefully vacuum-distd. It yielded 98 g. of a mixt. of **XX** and the products of hydrolysis, b_6 80-92°, n_D^{20} 1.4565; 70 g. of **XXII**, b_7 102-4°, n_D^{20} 1.4678, d_4^{20} 0.9680, *MR* found 209, calcd. 210. *$CH_2:CHC:CCMe_2OCH_2CH_2OCOPr$* (*dimethylvinylethynylcarbinyl butyryloxyethyl ether*) (**XXIII**). **XX** (255 g.), 250 g. $PrCO_2H$ and 20 cc. H_3PO_4 were heated at 65-70° for 7 hrs. while stirring constantly. The mixt. was then transferred to a flask with a dephlegmator and heated for 5 hrs. at 65-70° under 20-30 mm., so that the water formed gradually distd. over and was collected in the receiver. A small amt. of vinylisopropenyl-

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1

(Pd, (Part 3)

acetylene was obtained from the distillate as in the pre-OH (**XXVII**) (b, 89°, n_D^{20} 1.4892), 23 g. $BuCO_2H$ and 5 cc. vious run. From the flask residue were obtained after H_3PO_4 to stand for 10 days at room temp. and then heat- neutralization and careful vacuum-distn.: 51 g. of CH_2: ing for 6 hrs. at 65-70°, while stirring continuously. The CHC:CC(OH)Me_2, b 50-3°, n_D^{20} 1.4700; 118 g. of a water layer formed (9 g.) was sepd. and the product was mixt. of **XX** and products of hydrolysis, b_4 80-90°, n_D^{20} neutralized with soda, dried and carefully vacuum-distd. 1.4505; 110 g. of **XXIII**, b. 110-13°, n_D^{20} 1.4640, d_4^{20} 0.9533. The yield was: 3 g. of dienyne hydrocarbon C_8H_{10}, b_8 *MR* found 227, calcd. 224. On hydrolysis of 20 g. of **XXIII** 36-8°, n_D^{20} 1.500; 4 g. CH_2:CHC:CC(OH)MeEt, b_8 by stirring vigorously with 20 cc. concd. HCl for 3 hrs. was 56-7°, n_D^{20} 1.4718; 10 g. of a mixt. of **XXVII** and the hydroly- obtained 7 g. of **XXI**, b_{14} 43-5°, n_D^{20} 1.4778. *CH_2:CHC*is product, b. 90-100°, n_D^{20} 1.4630; 18 g. of **XXVI**, b. *CCMe$_2$OCH$_2$CH$_2$OCOCHMe$_2$* (**XXIV**) was obtained under the 129-31°, n_D^{20} 1.4620, d_4^{20} 0.9455, *MR* found 246, calcd. 252. same conditions as the previous ester. **XXIV** $b_{3.4}$ 98-100°, *o*-$HO_2CC_6H_4CO_2CH_2CH_2OCMe_2C$:CCH:$CH_2$ (*dimethyl-* d_4^{20} 0.9503, n_D^{20} 1.4620, *MR* found 222.6, 222.8, calcd. 224. *vinylethynylcarbinyloxy)ethyl H phthalate*). This ester was *CH_2:CHC:CCMe$_2$OCH$_2$CH$_2$OCOBu* (**XXV**) was obtained easily obtained by boiling **XX** in benzene with phthalic an- by heating a mixt. of 200 g. of **XX**, 170 g. $BuCO_2H$ and 20 hydride. It sepd. as a clear light yellowish oil after the cc. H_3PO_4 (d. 1.5) at 65-80° under 15-20 mm. for 9 hrs. solvent was distd. The product was completely sol. in a From the distillate were sepd. 13 g. vinylisopropenyl- soda soln. and was pptd. on acidification. On sapon. with acetylene, b_{14} 24-5°, n_D^{20} 1.5000. The flask residue was alkali **XX** and phthalic acid were formed. The 2-hydroxy- neutralized with soda, dried and vacuum-distd. It ethyl, 2-acyloxyethyl and diglycolic ethers of vinylethynyl- yielded: 93 g. of a mixt. of **XX** and the products of hy- carbinols are capable of polymerization. The rate of poly- drolysis, b_8 70-95°, n_D^{20} 1.4465; 90 g. of **XXV**, b. 120-1°, merization decreases with increase of the satd. part of the n_D^{20} 1.4580, d_4^{20} 0.9537, *MR* found 223, calcd. 238. $BuCO_2H$ mol. and with the accumulation of ether bonds and at the and **XX** were formed on hydrolysis of **XXV** with 20% alc- same time the final polymers become softer. The poly- KOH. **XXI** was obtained by the action of concd. HCl on mers of the diglycolic and acyloxyethyl ethers of vinyl- **XXV**. *CH_2:CHC:CCMeEtOCH$_2$CH$_2$OCOBu* (**XXVI**) was ethynylcarbinols are friable, crumbly, transparent gel- obtained by allowing 38 g. CH_2:CHC:CCMeEtOCH:CH-

James J. Lichtin

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1

ROMANOV, V. M.

I. N. Nazarov, V. M. Romanov and M. V. Kuvarsina, Derivatives of acetylene. 59. The chemistry of divinylketones XI. Combining alcohols with β, β-dimethyldivinylketone. P. 236.

SO: Bulletin of the U.S.S.R. Academy of Sciences (Chemistry Series) Izvestia Akad. Nauk, S.S.S.R., No. 2, 1948.

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1

ROMANOV, V. M. FD 194

USSR/Chemistry - Silicon-organic Compounds

Card 1/1

Authors : Romanov, V. M., Candidate of Chemical Sciences; Golubtsov, S. A., Candidate of Technical Sciences.

Title : Organosilicon liquids and their applications

Periodical : Khim. prom. 4, 25-28 (217-220), June 1954

Abstract : Describe in detail the properties and applications of organosilicon liquids, pointing out that products of this class are now being manufactured by enterprises of the Ministry of Chemical Industry. Six USSR references, all since 1940; 68 foreign references.

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1

ANDRIANOV, K.A.; ROMANOV, V.M., kandidat khimicheskikh nauk;
SOLUBTSOV, S.A., kandidat tekhnicheskikh nauk.

Hydrophobing fluid and some other silicon organic fluids.
Khim. prom. no.3:142-143 Ap-My '56. (MLRA 9:10)

1. Chlen-korrespondent AN SSSR (for Andrianov).
(Silicon--Organic compounds)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1

ROMANOV, V.M.

Maintenance qualities of mesh-reinforced concrete roofing. Nauch. trudy AKKH no.31:60-67 '64. (MIRA 18:9)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1

ROMANOV, V.M.

Make use of new developments in the production. Veterinariia 38 no.11:12-13 N '61 (MIRA 18:1)

1. Nachal'nik veterinarnogo otdela Krymskogo oblastnogo upravleniya sel'skogo khozyaystva.

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1

ROMANOV, V.M.

Competition of laboratories and departments of the State Design and Planning Research Institute (GIPI-4) and of workshops of experimental plants for the title of "the enterprise of communist labor". Lakokras.mat.i ikh prim. no.1:1-2 '62. (MIRA 15:4)
(Paint industry)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1

ROMANOV, Viktor Mikhaylovich; ZHILYAKOVA, O., red.; FISENKO, A., tekhn.red.

[Tissue extracts and antibiotic feed supplements in stockbreeding] Tkanevye preparaty i kormovye antibiotiki v zhivotnovodstve. Simferopol', Krymizdat, 1960. 23 p. (MIRA 14:12)
(Tissue extracts) (Antibiotics)
(Stock and stockbreeding)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1

ROMANOV, V.M.

Self-imposed socialist obligations of the State Design and Planning Scientific Research Institute No.4 and of an experimental plant to meet the 22nd Congress of the CPSU. Lakokras.mat. i ikh prim no.2:1-2 '61. (MIRA 14:4)

(Paint industry)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1

ROMANOV, V. M., (Head of the Veterinary Department of the Krimean Oblast' Administration of Agriculture)

"News in Production"
Veterinariya vol. 38, no. 11, November 1961, p. 12

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1

ROMANOV, V.M.; TSAREGORODTSEV, A.Kh.; NESTEROVA, Yu.F.; KORENEV, G.P.; MELENT'YEV, A.A.

Groundless refusal to act on the basic link in the prevention of brucellosis (reply to S.M. Smirnov's article "Results and prospects of burucellosis prevention in the U.S.S.R." in "Zhur. mikrobiol.epid i immun., No.11, 1958). Zhur.mikrobiol.epid.i immun. 31 no.2:144-146 F '60. (MIRA 13:6)
(BRUCELLOSIS) (SMIRNOV, S.M.)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1

Akademiia Nauk SSSR. Sovet po Izucheniiu Proizvoditel'nykh Sil. [USSR Academy of Sciences. Council on the Study of the Productive Forces].

Voprosy orosheniia v nizov'iakh Amu-Dar'i

[Problems of irrigation along the downstream of Amu-Dar'ia]

Moskva, Izd. Akad. Nauk, 1956. [xx]p. (Arsolo-Khozyistvennoe Kompleksnoe Issledovanie. Trudy no. 6)
55 AR137

(In Russian)

TABLE OF CONTENTS

Preface 5

NIKKIN, S. L. Irrigation systems of the lower delta of Amu-Dar'ia and ways of reconstructing them 7

Natural conditions of lower delta of Amu-Dar'ia 7
Characteristics of irrigation systems 15
Machine irrigation 23
Reconstruction of the inter-farm irrigation net 32
Irrigation system on kolkhozes 36
Water supply to districts and their enlargement 39
The water supply net 43
Utilization of water and its account 50
Intake of water by the irrigation systems 70
Losses of water in the irrigation canals 77
Usage of water for irrigation 110
Work on the exploitation of the irrigation system 125
Conclusions 132

LAZUCHKINA, L. A. Control of water losses from the irrigation canals along the downstream of Amu-Dar'ia 136

Experiments on argillaceous ground [sand and 25-50 per cent clay] 137
Experiments on fine-sandy ground 147

BUDAGOVSKIY, A. N. Relation of evaporation to meteorological conditions and soil moisture 150

Meteorological conditions of evaporation 150
Movement of water in the soil during evaporation 165
Relation of evaporation to meteorological conditions and soil moisture 170
Conclusions 190

NIKKIN, S. L. and LAZUCHKINA, L. A. Study of the actual irrigation system of cotton on kolkhozes along the downstream of Amu-Dar'ia 194

BONDARCV, V. M. and NIKKIN, V. V. Irrigation systems for cotton on "salyr" soils along the downstream of Amu-Dar'ia 212

Irrigation system for cotton on districts with deep ground water beds 212
Dynamics and of water and salt regimes on districts with subsurface ground water beds [illegible]

NIKKIN, S. L. Meliorative effect of field-protective forest plantations in irrigated zones [illegible]

Influence of forest plantations on the climate [illegible]
Coordination of the location of forest belts with the irrigation net [illegible]
Interception of filtration water of the canals by forest plantations [illegible]

5

Romanov V. M.

4/9/70

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1

USSR / Soil Science. Tillage. Reclamation. Erosion.

Abs Jour: Ref Zhur-Biol., No 2, 1959, 6108.

Author : Romanov, V. M.
Inst : AS USSR.
Title : The Problems of Choosing Automatic Irrigation Systems.

Orig Pub: Tr. Aralo-Kaspiysk. kompleksnoy ekspeditsii. AN SSSR, 1957, vyp. 8, 98-119.

Abstract: In Mirzachul'skiy Rayon in Tashkentskaya Oblast' and in the irrigated districts of the Golodnaya steppe three kinds of automatic furrow irrigation systems were employed: 1. Open furrows with an overflow spillway [?] under slight pressure and saturating the soil with water at a small rate, 2. slightly inclined blind furrows

Card 1/3

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1

USSR / Soil Science. Tillage. Reclamation. Erosion. J

Abs Jour: Ref Zhur-Biol., No 2, 1959, 6108.

Abstract: composition of soils. The planning of soils to be irrigated permits the organization of the most perfect means of irrigation, thus improving the water utilization and uniformity of field moistoning. -- M. K. Deulina.

Card 3/3

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1

Kozlinskiy V.M.

30(1) SOV/99-59-10-7/11

AUTHOR: Dorozhko, P.K., Engineer

TITLE: Extra-mural Session of the Scientific Council of the VNIIGiM at the "Pakhta-Aral" Sovkhoz

PERIODICAL: Gidrotekhnika i melioratsiya, 1959, Nr 10, pp 58-60 (USSR)

ABSTRACT: The Extra-mural Session of the Uchennyy sovet Vsesoyuznogo nauchno-issledovatel'skogo instituta gidrotekhniki i melioratsii imeni A.N. Kostyakova (Scientific Council of the All-Union Research Institute for Hydraulic Engineering and Melioration imeni A.N.Kostyakov) was held from 15-17 July 1959 at the "Pakhta-Aral" sovkhoz (Kazakh SSR) and was devoted to the introduction and further development of sprinkling and other methods of mechanized watering in cotton-growing districts. The Session was attended by representatives of 76 research, planning, construction and operating organizations connected with the water economy of the Kazakh, Uzbek, Turkmen, Tadzhik, Kirgiz, Azerbaydzhan, Georgian, Armenian, Moldavian and Ukrainian republics, and also by representatives of cotton sovkhozes and kolkhozes in the Golodnaya step' region. The Session heard the following papers: Director of VNIIGiM, Corresponding Member of the VASKhNIL, A.N. Tsarevskiy on "The Introduction of New Irrigation Equipment in Cotton-growing"; the Director of the "Pakhta-Aral" sovkhoz V.V. Kulikov on "The Results and Prospects of Using Sprinkling Equipment on the "Pakhta-Aral" Sovkhoz"; Senior Agronomist of the "Pakhta-Aral" Sovkhoz A.V. Paradiyev on "The System of Agrameliorative Measures on the "Pakhta-Aral" Sovkhoz in Irrigating Cotton with Sprinklers"; Candidate of Agricultural Sciences T.S. Bymar' of the VNIIGiM on "The Scientific and Practical Results of Studies of Cotton Sprinkling"; Candidate of Engineering Sciences N.M. Bukov of the VNIIGiM on "The Technical and Economic Indices of Sprinkling Machines"; Candidate of Engineering Sciences N.N. Nechayev of the Uzbekskaya dozhdeval'naya stantsiya (Uzbek Sprinkling Station) on "Experience From the Introduction of Sprinkling in the Uzbek SSR"; Candidate of Agricultural Sciences V.V. Romanov of the VNIIGiM and M.P. Tespalov of the Pakhta-Aral'skaya opytnaya stantsiya (Pakhta-Aral Experimental Station) on "Cotton-watering Routines With Sprinklers"; Candidate of Agricultural Sciences M.V. Prachrachenskaya of the VNIIGiM on "The Course of the Water-Salt Cycle in Soils With Sprinkling"; Candidate of Agricultural Sciences A.I. Orlov of the VNIIGiM on "The Economic Efficacy of Irrigating Cotton With Sprinklers"; Engineer Kh. G. Ibragimov of the VNIIGiM on "The Experience of Organizing Planned Water Utilization in Sprinkling Cotton Over Large Areas"; Candidate of Engineering Sciences M.A. Grigoryan of the VNIIGiM on "The Experience of Using Sprinkling Machines on the "Pakhta-Aral"Sovkhoz"; Candidate of Engineering Sciences M.M. Samsonova of the VNIIGiM on "Leveling Irrigable Areas With Long-Framed Levelers"; Engineer I.I. Velichko of the VNIIGiM on "The Irrigation of Cotton and Other Agricultural Crops With a Watering Installation Made of Flexible Pipes". In the discussion on points raised

Card 1/7

Card 2/7

Card 3/7

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1

KURCHATOV, V.I., doktor biol.nauk; NECHINENNYY, D.K., kand.vet.nauk; ROMANOV, V.M.

Eradication of parasitic diseases of livestock and poultry in the Crimea. Veterinariia 36 no.5:16-17 My '59. (MIRA 12:7)

1. Krymskaya nauchno-issledovatel'skaya veterinarnaya stantsiya (for Kurchatov, Nechinennyy). 2. Nachal'nik veterinarnogo otdela Krymskogo oblastnogo upravleniya sel'skogo khozyaystva (for Romanov).
(Crimea--Ticks as carriers of disease)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1

ROMANOV, V.M., inzh.

Instrument for determining the amplitude and phase of the first harmonic of periodic nonsinusoidal infra-low frequency oscillations. Izv.vys.ucheb.zav.; prib. no.3:3-10 '58. (MIRA 12:2)

1. Ural'skiy politekhnicheskiy institut im. S.M.Kirova.
(Electronic instruments) (Oscillations--Measurement)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1

ROMANOV, V. M.

Sverkhskorostnyi aeropoezd. [High speed motor train]. (Sots. transport, 1934, no. 1, p. 68-75, illus.).

DLC: HE7.S6

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

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1

RYZHKOV, S. V.; ROSTOV, M. L.; ROMANOV, V. N.; YAKIMENKO, V. G.

Use of radioactive gold (Au^{198}) in radical operations for stomach cancer. Vop. onk. 8 no.2:51-56 '62. (MIRA 15:2)

1. Iz kliniki fakul'tetskoy khirurgii No. 1 (nach. - prof. V. M. Sitenko) Voyenno-meditsinskoy ordena Lenina akademii im. S. M. Kirova.

(STOMACH--CANCER) (GOLD--ISOTOPES)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1

ROMANOV, V.N., inzh.

Special problems in planning ships producing titanium-magnesium alloys. Stroi. prom. 36 no.3:26-27 Mr '57. (MIRA 11:3)
(Corrosion and anticorrosives) (Titanium-magnesium alloys)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1

ACC NR: AP7002600 (A) SOURCE CODE: UR/0413/66/000/023/0108/0108

INVENTORS: Golovanov, Yu. K.; Ol'shevskiy, M. V.; Romanov, V. N.

ORG: none

TITLE: A fuel feeding system of an internal combustion engine. Class 46, No. 189249

SOURCE: Izobretoniya, promyshlennyye obraztsy, tovarnyye znaki, no. 23, 1966, 108

TOPIC TAGS: engine fuel pump, internal combustion engine, engine fuel system

ABSTRACT: This Author Certificate presents a fuel feeding system of an internal combustion engine. The system includes a fuel pump with a suction bypass. This pump feeds fuel through a fine filter and along a tube to a high pressure pump (see Fig. 1). To maintain a constant fuel pressure in filling the pump and to lower the flow of fuel through the filter, a damper is installed in front of the high pressure pump plunger couples. This damper has the form of a cylinder with a spring-loaded piston.

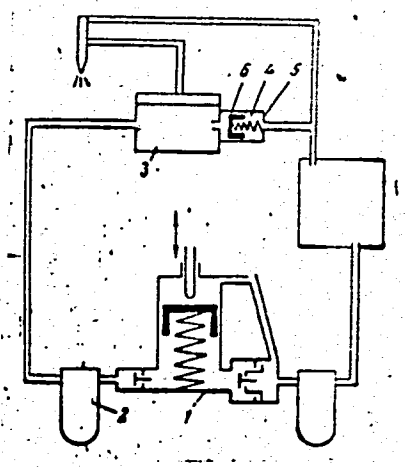
Card 1/2 UDC: 621.43.038.77--543.67

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1

ACC NR: AP7002600

Fig. 1. 1 - fuel pump; 2 - fine fuel filter; 3 - high pressure pump; 4 - damper; 5 - damper cylinder; 6 - spring-loaded piston



Orig. art. has: 1 figure.

SUB CODE: 21/ SUBM DATE: 29Apr65

Card 2/2

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1

ROMANOV, V.N.

New lay-out plans for the building of a magnesium electrolysis plant. Prom. stroi. 39 no.5:50-52 '61. (MIRA 14:7)
(Metallurgical plants)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1

CHEKIN, V.V., kand. tekhn. nauk; ROMANOV, V.N., inzh.

Photometric attachment to the MIM-7 microscope. Met. i gornorud. prom. no.1:66-67 Ja-F '62. (MIRA 16:6)

1. Institut chernoy metallurgii AN UkrSSR.
(Microscopes) (Photometry)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1

43203
S/046/62/008/004/003/017
B108/B186

AUTHORS: Bogorodskiy, V. V., Romanov, V. N.

TITLE: Relief-capacitance technique of measuring the intensity of ultrasound

PERIODICAL: Akusticheskiy zhurnal, v. 8, no. 4, 1962, 415-419

TEXT: A possibility of measuring the intensity of ultrasound is discussed. The pressure of ultrasound and some minor factors will produce a relief on the free surface of a liquid or on the interface between two immiscible liquids. The height of this relief depends monotonically on the intensity of the ultrasound. The free surface or interface can therefore be used as one electrode of a measurement cell serving as a capacitor, the capacitance changing with the height of the relief. It was verified in experiments that the height of the relief is directly proportional to the intensity of the ultrasound. The error does not exceed 15-20%. Measurements with the relief-capacitance technique, in which a plane electrode was placed above the free surface of the liquid, showed that at high intensities the relief height increases more slowly than expected in proportion to the intensity.

Card 1/2

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1

Relief-capacitance technique of... S/046/62/008/004/003/017
B108/B186

This is due to a higher absorption resulting from the distortion of the shape of the wave. Capacitor cells with two liquids are more suitable for intensity measurements, since the reflected ultrasound does not interfere as much as in free-surface-liquid cells. There are 8 figures.

ASSOCIATION: Arkticheskiy i antarkticheskiy n.-i. institut, Leningrad (Arctic and Antarctic Scientific Research Institute, Leningrad)

SUBMITTED: July 26, 1960

Card 2/2

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1

1. ROMANOV, V. N.

2. USSR (600)

4. Reforestation - Sakhalin

7. Natural restoration of Sakhalin dark-conifer forests after clear cutting, Les. khoz. 6, No. 1, 1953.

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

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1

L 33755-66 EWT(m)/EWP(t) IJP(c) JD

ACC NR: AP6016054 (A) SOURCE CODE: UR/0185/66/011/005/0572/0574

AUTHOR: Lashkar'ov, V. Ye.; Malyutenko, V. K.; Rarenko, I. M.; Romanov, V. O.

ORG: Institute of Semiconductors AN UkrSSR, Kiev (Instytut napivprovidnykiv AN UkrSSR); Chernovtsy State University (Chernivets'kyy derzhuniversytet)

TITLE: Photoelectric properties of cadmium antimonide

SOURCE: Ukrayins'kyy fizychnyy zhurnal, v. 11, no. 5, 1966, 572-574

TOPIC TAGS: photosensitivity, photoelectric property, cadmium compound, antimonide, photoconductivity, crystal, tellurium, crystal impurity, photoresistance, absorption coefficient, absorption edge, minority carrier, carrier lifetime, temperature dependence

ABSTRACT: The photoelectric properties of N-type CdSb crystals with Te impurities were investigated because the subject has been inadequately researched. The experimental results show that 1) the photoconductivity of the crystals at temperatures from 77 to 130 K is monopolar and the nonequilibrium carriers have substantially different lifetimes, 2) the lifetime of the nonequilibrium holes does not exceed 10^{-7} sec, 3) the temperature dependence of the electron lifetime, the drastic decrease in the electron lifetime with illumination from the self-excitation region, and the

Card 1/2

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1

L 33755-66

ACC NR: AP6016054

saturation of the lux-ampere characteristics with increase in illuminance indicate an adherence of minority carriers, 4) the photoconductivity spectrum shifts to the long-wave side and the photocurrent abruptly increases with decrease in temperature, and 5) the temperature dependence of the absorption coefficient indicates that the absorption edge shifts to the short-wave side during the cooling of the crystal. These results practically agree with those obtained by M. Zavetova (Chekh. fizichn. zh., 14, 615, 1964). The authors thank G. G. Tsybuli for carrying out the measurements. Orig. art. has: 2 figures.

SUB CODE: 20/ SUBM DATE: 17Feb66/ ORIG REF: 007/ OTH REF: 002

Card 2/2 BLG

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1

L 51440-65 EWT(1)/EEC(t)/T/EWA(h) Pz-6/Peb IJP(c) AT

ACCESSION NR: AP5011073 UR/0185/65/010/004/0459/0461

36
33
B

AUTHOR: Malyutenko, V. K.; Romanov, V. O.

21

TITLE: Some features of the kinetics of photoconductivity of inhomogeneous semiconductors

SOURCE: Ukrayins'kyy fizychnyy zhurnal, v. 10, no. 4, 1965, 459-461

TOPIC TAGS: semiconductor, resistivity, germanium, volume photoemf, photoconductivity, semiconductor resistivity distribution

ABSTRACT: The kinetics of photoconductivity of n-type germanium doped with antimony, in which the specific resistivity is not uniform over the volume of the sample, was analyzed with an aim at measuring the distribution of the resistivity along the sample by determining the degree of motion of minority carriers from the low-resistivity sections to high-resistivity sections (and vice-versa) under the influence of applied short pulses of light. The apparatus was described by one of the authors elsewhere (Romanov, with I. P. Zhad'ko and O. M. Koshel', Ukr. fizychn. zh. v. 8, 1092, 1963). A typical result is shown in Fig. 1 of the Enclosure. It was obtained by illuminating a sample with a narrow modulated light probe (0.7 mm

Card 1/3

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1

L 51440-65

ACCESSION NR: AP5011073

3

probe width, duration of square wave pulse 8 μsec, λ = 1.5 μ, lifetime τ = 50 μsec). The effect is more strongly pronounced if strongly absorbed radiation is used. The effect can be especially pronounced in the case of material with resistivity larger than germanium, such as silicon, cadmium sulfide, etc. "The authors thank Academician of AN UkrSSR V. Ye. Lashkar'ov (V. Ye. Lashkarev) and M. K. Sheynkman for a discussion of the work." Orig. art. has: 2 figures.

ASSOCIATION: Instytut napivprovidnykiv AN URSR, Kyyiv [Institut poluprovodnikov AN UkrSSR] (Institute of Semiconductors, AN UkrSSR)

SUBMITTED: 12Jan65 ENCL: 01 SUB CODE: SS

NR REF SOV: 004 OTHER: 000

Card 2/3

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1

L 51440-65

ACCESSION NR: AP5011073

ENCLOSURE: 01

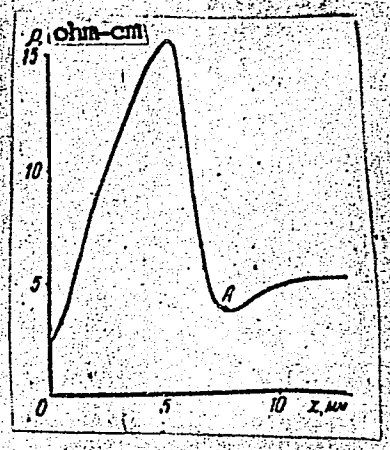


Fig. 1. Distribution of specific resistivity along the length of a germanium sample.

Card 3/3

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1

L 6463-66 EWT(1)/EWP(e)/EPA(s)-2/EWT(m)/EWP(i)/EPA(w)-2/EWP(t)/EWP(b) DIAAP/

ACC NR: AP5025259 IJP(c) JD/WH SOURCE CODE: UR/0386/65/002/004/0186/0189

AUTHOR: Chekin, V. V.; Romanov, V. P.; Verkin, B. I.; Bokov, V. A.

ORG: Physicotechnical Institute of Low Temperatures, Academy of Sciences UkrSSR (Fiziko-tekhnicheskiy institut nizkikh temperature Akademii nauk UkrSSR)

TITLE: Change in the probability of the Mossbauer effect on Sn^{119} impurity nuclei in the ferroelectric phase transition in $BaTiO_3$

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki. Pis'ma v redaktsiyu (Prilozheniye), v. 2, no. 4, 1965, 186-189

TOPIC TAGS: Mossbauer effect, ferroelectric effect, phase transition, barium titanate, impurity center, tin containing alloy

ABSTRACT: This is a continuation of earlier work (FTT v. 7, 1886, 1965), where it was assumed that the phase transition in solid solutions of the $Ba(Ti_{0.8}Sn_{0.2})O_3$ system is considerably spread out. In the present study, the authors have investigated the probability of the Mossbauer effect on Sn^{119} impurity nuclei in the $Ba(Ti_{0.99}Sn_{0.01})O_3$ system near the ferroelectric phase-transition temperature. The introduction of so small an amount of tin impurity into barium titanate does not change its ferroelectric properties noticeably, but at the same time makes it possible to measure the resonance absorption of 23.8-kev γ quanta by the Sn^{119} impurity nuclei. The samples were prepared by standard ceramic technology, using tin oxide enriched with Sn^{119} to 65.1%. The measurements were made with a setup in which the absorber was driven at constant

Card 1/3

0701 1497

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1

L 6463-66

ACC NR: AP5025259

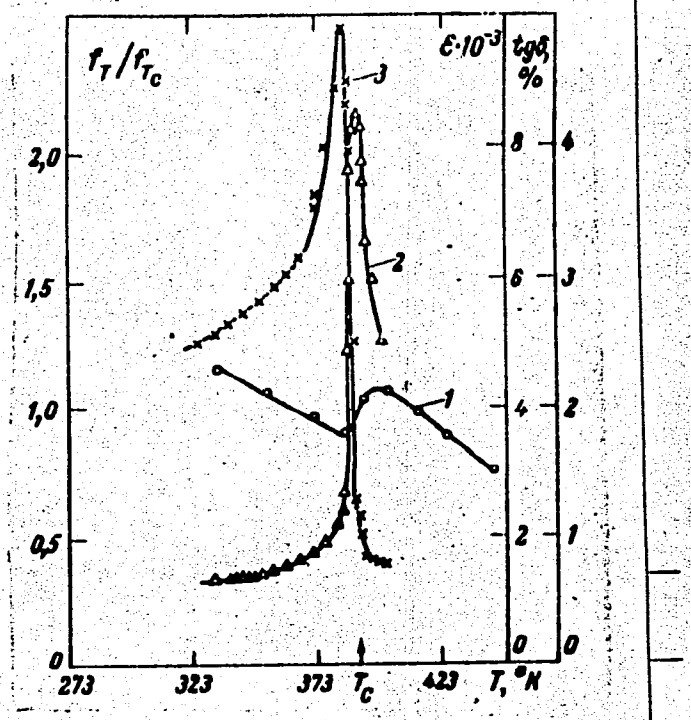


Fig. 1. Temperature dependence of the relative Mossbauer effect probability (1), dielectric constant (2), and dielectric loss tangent for the system $Ba(Ti_{0.99}Sn_{0.01})O_3$.

Card 2/3

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1

L 6463-66

ACC NR: AP5025259

9

speed by means of a mechanical cam drive. The γ-quantum source was magnesium stannide ~18 mg/cm^2 thick. Measurements were made of the temperature dependence of the relative Mossbauer-effect probability (1), of the dielectric constant (2), and of the dielectric loss tangent (3) for the system $Ba(Ti_{0.99}Sn_{0.01})O_3$ (Fig. 1). The relative probability of the effect was determined from the ratio of the areas of the absorption spectra at the given temperature to the area of the spectrum at the Curie temperature, the value of which (T_C = 390K) was chosen to correspond to the maximum of the dielectric constant. It is seen from the figure that the relative Mossbauer-effect probability decreases quite sharply on approaching the Curie point from the paraelectric region, passes through a minimum, and then begins to grow with decrease in temperature in the usual manner. This singularity can be attributed to the temperature dependence of the frequency of the anomalous optical branch. A comparison of the results with earlier measurements (Bokov, Romanov, and Chekin, FTT v. 7, 1886, 1965) confirms the previously advanced hypothesis that the phase transition in solid solutions of the $Ba(Ti_{0.8}Sn_{0.2})O_3$ system is considerably "smeared." Authors thank Professor G. A. Smolenskiy for continuous interest in the work, Candidate of Technical Sciences I. E. Myl'nikov for preparing the samples, and L. I. Kazakevich for help with the measurements. Orig. art. has: 1 figure.

SUB CODE: SS/ SUBM DATE: 21Jun65/ ORIG REF: 003/ OTH REF: 002

nw

Card 3/3

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1

L 32432-65 EWT(d)/TDB(jj)/BXT/T/EWD-2/EWP(1) Po-4/Pq-4/Pg-4/Pk-4 IJP(c)
BR/GQ

ACCESSION NR: AP5000880 S/0315/64/000/007/0026/0029

48
B

AUTHOR: Romanov, V. P.

TITLE: Use of two-dimensional image filtration for increasing the reliability of automatic reading. Part II. Investigation of a model of a reading automaton on a digital computer

SOURCE: Nauchno-tekhnicheskaya informatsiya, no. 7, 1964, 26-29

TOPIC TAGS: reading automaton, pattern recognition, 16 character recognition, image filtration, computer programming

ABSTRACT: The author describes the model of an optimal system for a reading automaton, as well as the results of experiments and actual runs made on the Ural-4 computer. The model for distinguishing alphabetical, numerical and punctuation characters is organized along the following lines: (1) Reorganization of the image into discrete electrical signals; (2) Recognition of defects in the picture and their correction; (3) Character Recognition; (4) Comparison of an unknown character with a standard character; (5) Coding of a recognized character in the output code and the recognition of the result. The author states that only points (2) through (5) were utilized in the model. All letters of the Russian and Latin

Card 1/3

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1

L 32432-65

ACCESSION NR: AP5000880

alphabets, as well as the ten numerals and the major punctuation marks, are stored in the machine. Letters traced on perforated cards are used as standard characters are stored in the machine's memory for later comparison by means of programmed signals. Filtering is used to remove "noise" around a character in a given field. The author also deals with the problem of centering characters and cites the difficulties of some earlier methods in terms of establishing the identity of a character and the search time involved. The current problem in the modeling of a reading automaton is to combine or coordinate the center of a field of 39 x 39 points with the actual center of a character. Coordinates for the center of a character are determined by two formulas which are presented and explained in the paper. After being filtered and centered, each character is scanned, and a comparison is made with the standard stored in the computer's memory, for a coincidence check. Following this, a program operates which results in the writing of a corresponding character. Two drawings are presented in the paper which represent the output of the URAL-4 digital computer, used as a reading automaton. In the model, the output of a character was written out by the URAL-4 by means of points superimposed on a background of zeroes. Two tables are presented in the article to provide some idea of the distance between letters

Card 2/3

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1

L 32432-65

ACCESSION NR: AP5000880

that are similarly shaped, in the Russian as well as the Latin alphabets. The author also points out that because of insufficient storage in the URAL-4, it is not possible to utilize, within the computer, all of the standards for all of the letters at one time. It is an interesting fact that the distances between several letters usually considered similar are unexpectedly great, E and F of the Latin alphabet being one of several noteworthy examples. The program for verifying characters in terms of the standard stored in the computer memory consists of more than 1,000 instructions. The time for the recognition of one character on the URAL-4 computer is three minutes. Orig. art. has: 2 figures, 2 tables and 2 formulas.

ASSOCIATION: None

SUBMITTED: 22Apr64 ENCL: 00 SUB CODE: DP

NO REF SOV: 005 OTHER: 001

Card 3/3

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1

L 32434-65 EWT(d)/TDB(jj)/BXT/T/EED-2/EWP(1) Po-4/Pq-4/Pg-4/Pk-4 IJP(c)
BB/GG

ACCESSION NR: AP5000879 S/0315/64/000/007/0024/0026

51
50
B

AUTHOR: Romanov, V. P.

TITLE: Use of two-dimensional image filtration for increasing the reliability of automatic reading. Part. I. Experiments in the processing and writing of machine-written characters by digital computer

SOURCE: Nauchno-tekhnicheskaya informatsiya, no. 7, 1964, 24-26

TOPIC TAGS: character recognition, 16 pattern recognition, digital computer, reading automaton, image filtration

ABSTRACT: The author discusses the formation o: generation of the letters and numerals of the Latin alphabet in a 32 x 32 point raster, totalling 1024 points, by means of electron-beam tubes and a photomultiplier. A video signal is discri inated according to one of two levels, one corresponding to the impinging of an electron beam on a black field and the other, to a white field. A signal or pulse to the black field corresponds to a 1, while a signal to the white field corresponds to a zero. As characters are formed or generated, they are introduced into the new Soviet high-speed digital computer, URAL-4. The author points out that the objectives of the experiments discussed in this paper centered around increasing the reliability of an automatic reading device by increasing

Card 1/3

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1

L 32434-65

ACCESSION NR: AP500879

0

its ability to discriminate between characters. The method used consisted of five steps: (1) A smoothing or averaging operation; (2) Differentiation of a character; (3) Isolation of the straight portions of a character; (4) Isolation of the curved portions of a character; (5) Isolation of the special points of a character. The author is especially interested in the possible application of models of neural networks to the problem of automatic character recognition. Two approaches to the problem were investigated, differing from one another in terms of weights assigned and in the size of the area used (the latter in terms of points). A very important factor in the entire process of improving the reliability of a reading automaton is the isolation of the elements of a given character. Thus, research into algorithms for the isolation of such elements makes it possible to: (1) Isolate the straight-line elements of complex characters; (2) Isolate the contours of an image into special points, coincident with its differentiation. The URAL-4 computer program for analyzing an image in an aperture containing 3 x 3 points, consists of 200 instructions and has a running time of 65 seconds. A similar program, based on 5 x 5 points, involves 300 instructions and 145 seconds running time. The author devotes considerable discussion to the isolation of curved elements, which is the most complex function of the proposed reading automaton. Although the experiments he conducted assured the

Card 2/3

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1

L 32434-65

ACCESSION NR: AP500879

possibility of isolating the curved sections of a character, the number of operations involved was quite large, and it would take, at present, some 8 minutes to process one character. The author concludes by saying that the algorithms described in his paper can be applied to the construction of a reading automaton, and that the realization of such a device can come about with the assistance of some type of neuronal design. "The author acknowledges the work of Engineer V. V. Mozolevsky in connection with the algorithm development and the actual experiments with the reading automaton." Orig. art. has: 4 figures and 4 formulas.

ASSOCIATION: None

SUBMITTED: 06Mar64 ENCL: 00 SUB CODE: DP

NO REF SOV: 000 OTHER: 000

Card 3/3

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1

L 27612-65 EWT(d)/TDB(jj)/BXT/T/EED-2/EWP(1) Po-4/Pq-4/Pg-4/Pk-4 IJP(c)
BB/GG
ACCESSION NR: AP5000873 S/0315/64/000/002/0034/0038

48
29B

AUTHOR: Romanov, V. P.

TITLE: Extraction of informational invariant characters by a reading automaton

SOURCE: Nauchno-tekhnicheskaya informatsiya, no. 2, 1964, 34-38

TOPIC TAGS: character recognition, pattern recognition, information theory, reading automaton, reading algorithm

16

ABSTRACT: This article is concerned with the process of forming a system of letters and characters, and stresses the importance of this function in a reading automaton; at the present time, there are no absolute rules for the choice of such letters and characters. The article attempts to describe such characters mathematically and to formulate a basis for their selection by a reading automaton. The steps taken by a reading automaton are described as follows: (1) Transformation of a letter, or character, into an electric signal; (2) Discrete and optimal filtration of noise; (3) Isolation of characters; (4) The formulation of a conclusion on the basis of the given characters. This article is concerned mainly with the third step enumerated above, namely, the isolation of characters. The author shows how this can be done by means of a geometric representation of char-

Card 1/2

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1

L 27612-65
ACCESSION NR: AP5000873

acters which describe letters in the reading automaton as components of a multi-scale vector. This particular theory is expanded in the discussion of character abstraction as the calculation of a linear function, and the calculation of invariant characters by means of logical analysis of the character's contour utilizing the methods of integral geometry. The article concludes with an algorithm for the extraction of characters. Orig. art. has: 1 figure and 37 formulas.

ASSOCIATION: None

SUBMITTED: 04Nov63 ENCL: 00 SUB CODE: DP

NO REF SOV: 004 OTHER: 001

Card 2/2

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1

ROMANOV, V.P.

Retrieving the ivariant information symbols by automatic recognition. NTI no.2:34-38 '64. (MIRA 17:6)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1

ROMANOV, V.P.

Conversion of images in a model of a continuous neural system.
NTI no.2:36-41 '63. (MIRA 16:11)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1

ROMANOV, V.P.

Using two-dimensional filtration of images to improve the reliability of automatic reading. Part 1: Practices in retrieving images of typewritten symbols by computers. NTI no.7:24-26 '64.

Using two-dimensional filtration of images to improve the reliability of automatic reading. Part 2. Studying the model of a reading automaton with a calculating machine. Ibid.:26-29 (MIRA 17:11)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1

L 24372-66 EWT(1)/EWT(m)/EPF(n)-2 IJP(c) JD/JG

ACC NR: AP6010437 SOURCE CODE: UR/0386/66/003/005/0212/0216

AUTHOR: Sklyarevskiy, V. V.; Lukashevich, I. I.; Romanov, V. P.; Filippov, N. I.; Venevtsev, Yu. N.; Viskov, A. S.

ORG: none

TITLE: Mossbauer effect in the ferroelectric $Pb(Fe_{1/2}Nb_{1/2})O_3$

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki. Pis'ma v redaktsiyu. Prilozheniye, v. 3, no. 5, 1966, 212-216

TOPIC TAGS: ferroelectric material, Mossbauer spectrum, miltiplet splitting, critical point, phase transition, Curie point, electron spin

ABSTRACT: The purpose of the investigation was to check on the presence of a minimum of the probability of the Mossbauer effect on Sn^{119} in the investigated compound, similar to that observed for $Ba(TiSn)O_3$ (with different Ti/Sn ratios) by V. A. Bokov et al. (FTT v. 7, 1886, 1965 and elsewhere). It was also desired to check on other singularities in the behavior of the quadrupole splitting and of the position of the symmetry center of the Mossbauer spectrum observed near the temperature T_c of the ferroelectric phase transition. To this end, the authors investigated the variation of the parameter of the Mossbauer absorption spectrum of Fe^{57} nuclei of the ferroelectric in question at the phase transition temperature (T_c = 114C). The absorbers were made by the usual ceramic technology, using $Fe_2^{57}O_3$ (60% Fe^{57}). The source was Co^{57} in stainless steel. The apparatus for the Mossbauer spectra is described by the authors elsewhere (PTE No. 4, 43, 1964). The results confirm the existence of the

Card 1/2

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1

L 24372-66

ACC NR: AP6010437

10

singularities in the vicinity of the Curie point T_c = 214C and a minimum in the Mossbauer-effect probability. These singularities are apparently connected with the fact that an anomalous decrease in the frequency of one of the transverse optical branches of the lattice takes place on approaching the ferroelectric transition point in crystals with perovskite structure. The decrease in the quadrupole splitting with increase of temperature to T_c is connected with a decrease in the spontaneous polarization. The asymmetry of the quadrupole-splitting line, which has a minimum near T_c and reverses sign, can be due either to anisotropy of the Mossbauer-effect probability or to relaxation of the electron spins in a ferromagnet. It is concluded that an investigation of the temperature variation of the asymmetry can give important information on the dynamics of the realignment of the crystal structure during the ferroelectric transition. The authors thank F. Ye. Chukreyev and V. I. Man'ko for the computer programming, Yu. M. Kagan, A. M. Afanas'yev, B. N. Samoilov, and B. I. Verkin for discussions, K. P. Aleshin for producing the electronic part of the Mossbauer spectrometer, I. B. Filippov for help with the experiments, and L. I. Kazakevich and E. M. Kabanova for help with the measurements. Orig. art. has: 2 figures.

SUB CODE: 20/ SUBM DATE: 17Jan66/ ORIG REF: 010/ OTH REF: 005

Card 2/2

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1

L 45305-66 EWT(d)/EWT(1)/T/EWP(1) IJP(c) BB/GG/JXT(BF)
ACC NR: AR6015989 SOURCE CODE: UR/0044/65/000/011/V013/V013

AUTHOR: Romanov, V. P.

TITLE: Use of two dimensional filtering of representations to raise reliability of automatic scanning

SOURCE: Ref. zh. Matematika, Abs. 11V76

REF SOURCE: Nauchno-tekhn. inform. Sb. Vses. in-t nauchn. i tekhn. inform., no. 7, 1964, 24-29

TOPIC TAGS: information theory, filter

ABSTRACT: A grid of 32 rows and 32 columns is imposed on representations of machine writing of letters and figures of the Latin alphabet. If in some cell of this grid there is a representation, then a one is put in it, otherwise a zero is put there. Such discrete representations of letters and figures were introduced into the computer Ural-4. Distortions were imposed on these representations, of the type where a sign is reversed at 50 or 100 points, or a gap is set in every other row or every fourth column. The author studied various means of working out distortions of representations with the aim of restoring the original representation. He was able to make use of summation with certain weights of neighboring points of a table, of separation of straight-line and curvilinear parts of a representation, and end and node points. Further, the center of gravity of the worked-out representation was combined with the

Card 1/2 UDC: 519.281

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1

L 45305-66

ACC NR: AR6015989

centers of gravity of the standard representations, and for this representation the author computed the mean square deviation from the standard ones. For the value of a representation he used the value of the closest of the standard ones. The procedure for working out the distorted representation until its recognition on the Ural-4 takes 3 minutes. According to the author, the principles employed can be used as the bases of projection of a real reading automation. V. Kolchin [Translation of abstract]

SUB CODE: 12

Card 2/2 mjs

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1

ACC NR: AP7002243 SOURCE CODE: UR/0280/66/000/006/0123/0129

AUTHOR: Romanov, V. P. (Moscow)

ORG: none

TITLE: Pattern recognition system based on analyzing the directions of local sections of the pattern

SOURCE: AN SSSR. Izvestiya. Tekhnicheskaya kinernetika, no. 6, 1966, 123-129

TOPIC TAGS: pattern recognition, [redacted] mechanics, inertia ellipse, direction field

ABSTRACT:
A method of analyzing the patterns and directions of local sections and a method of pattern recognition based on these analyses are presented. The author shows how the direction of the local section is determined, and a pattern recognition system which utilizes not only the brightness field but also the field of directions can be constructed. The ideas of theoretical mechanics are used to determine the directions of local sections of patterns.

Card 1/2 UDC: none

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1

ACC NR: AP7002243

[A two-dimensional pattern is defined by the given function g(x, y) ($0 \leq g(x, y) \leq 1$) which is considered as the distribution of masses in a plate, and the distribution of mass in the neighborhood of a certain point is described with the aid of the ellipse of inertia.] The description of the pattern is obtained in the form of a two-dimensional vector field. Experimental tests of the method were carried out on letters of the Latin and Cyrillic alphabets, digits and some geometrical figures obtained from the paper by means of the device which transforms the above-mentioned characters into electrical signals. The results indicate the high accuracy of the method. The method is compared with other existing methods. Orig. art. has: 1 figure and 14 formulas.

SUB CODE: ~~12~~ 20,09/ SUBM DATE: 21Apr66/ ORIG REF: 005/ OTH REF: 004/
ATD PRESS: 5113

Card 2/2

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1

ACC NR: AP7004770 SOURCE CODE: UR/0413/67/000/001/0085/0085

INVENTOR: Romanov, V. P.; Fedorets, O. L.; Sidorin, Yu. M.

ORG: none

TITLE: Scanning unit of an automatic readout device. Class 42, No. 190059

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 1, 1967, 85

TOPIC TAGS: optic scanning, data readout, computer output unit

ABSTRACT: The proposed scanning unit of an automatic reading device contains an image-into-electric-signal conversion system. To increase the reliability of image perception, the following elements are used: a two-dimensional fitter containing a shift register; a video-signal summing d—c amplifier; a reference-signal summing d-c amplifier; and a comparator. The input weighting resistors of the video-signal d-c amplifier are connected with the outputs of the shift register cells, the input weighing resistors of the reference signal d-c amplifier are connected with the source of the reference signal, and outputs of both d-c amplifiers are connected with the inputs of the comparator. Orig. art. has: 1 figure. [JP]

Card 1/2 UDC:681.142.07:621.391.88

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1

ACC NR: AP7004770

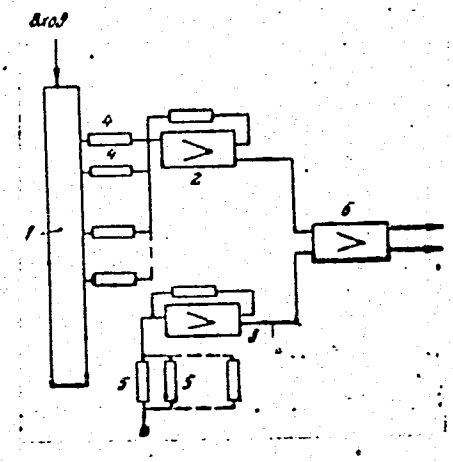


Fig. 1. Scanning unit

1 - Register; 2 - video-signal d-c amplifier; 3 - reference-signal d-c amplifier; 4,5 - weighing resistors; 6 - comparator.

SUB CODE: 09/ SUBM DATE: 21May64/

Card 2/2

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1

L 32829-66 EWT(d)/EWP(1) IJP(c) BB/GG/GD/JXT(bf)

ACC NR: AT6008555 SOURCE CODE: UR/0000/65/000/000/0014/0024

AUTHOR: Romanov, V. P.

ORG: None

TITLE: Using statistical criteria in automatic reading

SOURCE: AN SSSR. Institut nauchnoy informatsii. Chitayushchiye ustroystva (Reading devices). Moscow, VINITI, 1965, 14-24

TOPIC TAGS: information theory, reading machine, recognition process, light reflection coefficient

ABSTRACT: The author studies the applicability of statistical criteria to the problem of automatic reading. A general diagram is given for an automatic reading machine. A sheet of paper or film serves as information carrier for recognition. The images are characterized by the reflection and transmission coefficients, at every point M(x, y), assuming that the function g(x, y) is given in both cases. The operation of the reading apparatus is represented as a sequence of transformations in the function g(x, y) and output signals D are the result. The output signals correspond to the given letter. An expression is given for calculating the output signals

$$D = GNHQST\,[g(x, y)]$$

where D are the output signals of the machine and G, N, H, Q, S, T are the operations performed by the respective blocks of the circuit. The physical characteristics and the function of all the blocks are discussed. The solution rule derived from the probability relationships incor-

Card 1/2

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1

L 32829-66

ACC NR: AT6008555

porates all possible permissible letter transformations weighted with the probabilities. For the more general case, the optimal boundary may be determined by similar arguments where the distribution of the matrix T is continuous. An expression is given showing that during permissible transformations, the resulting distribution can be presented as a composition of normal modes where their means and matrix covariations are a function of the transformation of parameter values. Orig. art. has: 4 figures and 25 formulas.

SUB CODE: 09, 12 / SUBM DATE: 09Sep65 / ORIG REF: 005 / OTH REF: 005

Card 2/2

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1

L 37153-66 JXT(BF)

ACC NR: AP6018049 SOURCE CODE: UR/0020/66/168/003/0539/0542

AUTHOR: Romanov, V. P.

ORG: All Union Institute of Scientific and Technical Information, Academy of Sciences, SSSR (Vsesoyuznyy institut nauchnoy i tekhnicheskoy informatsii Akademii nauk SSSR)

TITLE: Local image analysis with the aid of anisotropic spatial filters

SOURCE: AN SSSR. Doklady, v. 168, no. 3, 1966, 539-542

TOPIC TAGS: optic image, character recognition, character reading equipment, vector function, ~~bubble chamber~~, track analysis, aerial reconnaissance

ABSTRACT: This is a continuation of earlier work by the author (Nauchno-tekhnicheskaya informatsiya no. 7, 24, 1964), where methods were described for separating straight-line and curvilinear elements of an image with the aid of two-dimensional spatial filters, to permit automatic reading and recognition of images of complicated form. The present article describes the new method of analyzing shapes of images, in which certain ideas of theoretical mechanics are used. The analysis of the image begins with a study of its local structure and spatial orientation of its elementary sections. The index assigned to a given element involves the use of ordinary geometrical recognition methods. The field of the amplitudes (brightnesses) and the field of the directions (phases) is then used in the system for recognition of symbols of the alphabet or numbers. The theory of this recognition method is briefly described. Experiments on Latin and Russian letters, numbers, and certain geometrical figures, using the auto-

Card 1/2 UDC: 612.825.8.001.57: 51: 681.142

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1

L 37153-66

ACC NR: AP6018049

0

matic reading machine developed in the electric modeling laboratory of the All Union Institute of Scientific and Technical Information AN SSSR, are described. A formula is given for comparing the vector fields of the unknown image against vector fields of standard images. It is claimed that the proposed procedure will necessitate a relatively simple technical realization and can be used for the analysis of elementary-particle tracks and to determine automatically the angles of track convergence and divergence in a bubble chamber. It can also be used to determine directions of roads on aerial photographs and the location of objects relative to these roads. This report was presented by Academician A. A. Dorodnitsyn 12 November 1965. Orig. art. has: 1 figure and 4 formulas.

SUB CODE: 20/ SUBM DATE: 05Nov65/ ORIG REF: 003/ OTH REF: 002

Card 2/2 af

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1

L 2508-66 EWT(1)/EWT(m) DIAAP/IJP(c)

ACCESSION NR: AP5014603 UR/0181/65/007/006/1886/1888

AUTHOR: Bobov, V. A.; Romanov, V. P.; Chekin, V. V.

TITLE: Mossbauer effect on Sn^{119} nuclei in the ferroelectric phase transition in the solid solution $Ba(Ti_{0.8}, Sn_{0.2})O_3$.

SOURCE: Fizika tverdogo tela, v. 7, no. 6, 1965, 1886-1888

TOPIC TAGS: ferroelectric material, Mossbauer effect, phase transition, Curie point, solid solution, barium compound, titanium containing alloy, tin containing alloy

ABSTRACT: The purpose of the investigation was to check by independent means the correctness of the theory that the spontaneous polarization of crystals with perovskite structure is due to the instability of some transverse normal oscillations of the low-lying optical branch. The use of the Mossbauer effect for this purpose was theoretically described by C. Musikar et al. (Phys. Stat. Sol. v. 3, K9, 1963). The authors investigated the Mossbauer absorption by Sn^{119} in polycrystalline samples of the solid solution $Pa(Ti_{0.8}, Sn_{0.2})O_3$, prepared by a usual ceramic technique, using natural tin. The 23.8 keV gamma source was Me_2Sn^{119m}

Card 1/3

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1

L 2508-66

ACCESSION NR: AP5014603

15

with natural emission line width (0.38 ± 0.01) mm/sec. The source was always at liquid-nitrogen temperature. The temperature of the investigated samples varied from 77 to 300K. It is deduced from the anomaly of the temperature dependence of the ratio of resonance absorption probability to the absorption probability at 300K that near the ferroelectric region the frequency of the transverse normal oscillations of one of the optical branches does indeed decrease, but the temperature at which this occurs is lower than the temperature corresponding to the maximum dielectric constant. This difference is attributed to the fact that the phase transition in the investigated solid solution does not occur at a clearly defined temperature, and that the fluctuations of the composition or microinhomogeneities cause different microscopic regions of the crystal to have different Curie temperatures. Another possible cause of the anomaly in the Mossbauer effect is the fact that the mass of the impurity (Sn) exceeds by more than two times the mass of the host (Ti). "The authors thank B. I. Verkin and G. A. Smolenskiy for interest in the work and I. Ye. Myl'nikova for preparing the samples." Orig. art. has: 2 figures.

ASSOCIATION: Fiziko-technickeskiy institut nizkikh temperatur, Khar'kov (Physico-technical Institute of Low Temperatures); Institut poluprovodnikov AN SSSR, Leningrad (Institute of Semiconductors AN SSSR).

Card 2/3

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1

L 2508-66

ACCESSION NR: AP5014603

SUBMITTED: 16Jan65 ENCL: 00 SUB CODE: SS

NO REF SOV: 004 OTHER: 004

Card 3/3

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1

BOKOV, V.A.; ROMANOV, V.P.; CHERKIN, V.V.

Mossbauer effect on Sn^{119} nuclei due to the ferroelectric phase transition in the solid solution $Ba(Ti_{0.8}, Sn_{0.2})O_3$. Fiz. tver. tela 7 no.6:1886-1888 Je '65. (MIRA 18:6)

1. Fiziko-tekhnicheskiy institut nizkikh temperatur, Khar'kov i Institut poluprovodnikov AN SSSR, Leningrad.

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1

[illegible] V.A.

Absorption of sound in solutions. Akust. zhur. 11 no.1:84-88 '65. (MIRA 18:4)

1. Leningradskiy gosudarstvennyy universitet.

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1

ROMANOV, V. .

Some results of the high-speed motion-picture filming of flow in a centrifugal wheel. Izv. vys. uchebn. zav.; neft' i gaz 7 no.12: 59-62 '64 (MIRA 18:2)

1. Ufimskiy neftyanoy institut.

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1

ROMANOV, V.P.

Kuznetsk Basin miners are fighting for technical progress. Ugol' 38 no.8:18-20 Ag '63. (MIRA 17:11)

1. Nachal'nik Kombinata ugol'nykh predpriyatiy Kuznetskogo kamennougol'nogo basseyna.

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1

NEKRASOV, Z.I., akademik; CHEKIN, V.V.; ROMANOV, V.P.; DUDKA, A.P. [Dudka, O.P.]

Effect of a rotating magnetic field on a boiling layer containing ferromagnetic particles. Dop. AN URSR no.1:42-44 '62. (MIRA 15:2)

1. Institut gornoy metallurgii AN URSR. 2. AN USSR (for Nekrasov).

(Founding)
(Ferromagnetism)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1

EDIGAROV, S.G.; KOLPAKOV, L.G.; ROMANOV, V.P.; SHEVKUNOV, Ye.N.

Principal results of the industrial testing of the 12N10x4 centrifugal pump in Al'met'yevsk carried out by the Oil Field Administration of the Tatar Petroleum Trust. Trudy NIITransneft' no.1:110-113 '61. (MIRA 16:5)

(Centrifugal pumps—Testing)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1

CHEKIN, V.V., kand.tekhn.nauk; ROMANOV, V.P., inzh.

Investigating the process of iron ore sintering in weak magnetic fields. Trudy Inst. chern. met. AN URSR 12:101-105 '60. (MIRA 14:5)

(Sintering)
(Magnetic fields)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1

ROMANOV, V.P. (Zhdanov, Stalinskaya oblast' USSR)

Catching tarantulas. Priroda 50 no.1:112 Ja '61. (MIRA 14:1)
(Stalino Province—Tarantulas)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1

NEKRASOV, Z.I.; CHEKIN, V.V.; ROMANOV, V.P.

Some ferromagnetic properties of an agglomerate. Dop.AN URSR no.4: 464-467 '60. (MIRA 13:7)

1. Institut chernoy metallurgii AN USSR. 2. Chlen-korrespondent AN USSR (for Nekrasov).
(Ferromagnetism)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1

ROMANOV, V.P.

Studying flow in the impeller of a submersible electric-driven centrifugal pump by the electric hydrodynamic analogy method. Izv.vys.uchab.zav.; neft' i gaz 2 no.9:81-88 '59. (MIRA 13:2)

1. Moskovskiy institut neftekhimicheskoy i gazovoy promyshlennosti imeni akad.I.M.Gubkina.
(Centrifugal pumps)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1

ROMANOV, V. P.

"On a Special Family of Infinite Unitary Matrices," Dok. AN, 52, No.4, 1946.

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1

KOLPAKOV, L.G.; ROMANOV, V.P.

Determining the quality of turbodrill turbine grids. Izv. vys. ucheb. zav.; neft' i gaz 3 no.11:39-44 '60. (MIRA 14:1)

1. Ufimskiy neftyanoy institut.
(Turbodrills)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1

20030

S/152/61/000/002/004/005
B124/B203

26.2141

AUTHOR: Romanov, V. P.

TITLE: Experimental study of the flow in a rotating centrifugal wheel

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Neft' i gaz, no. 2, 1961, 95-100

TEXT: To study the structure of the flow in the canals of a rotating centrifugal wheel, the institute mentioned under "Association" developed a special experimental arrangement of a centrifugal pump with transparent casing and transparent upper plate of the working wheel of the pump; the device should be able of reproducing the work of the pump with minimum possible deviations from operational conditions, and permit a thourough study of the flow in all canals. The working wheel and the guide were taken from the ЭН-95 (EN-95) pump produced in series. The casing of the pump in the form of two cylindrical bodies was made of organic glass and carefully polished. Under normal conditions, the wheel had a speed of 2850 rpm. The liquid was drained through 6 radial canals bored into the casing. The upper plate of the working wheel consisted of organic glass. The device included two mer-

Card 1/4

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1

20030

S/152/61/000/002/004/005
B124/B203

Experimental study of ...

cury manometers, a wattmeter, and a measuring tank. A stroboscope was used for visual observation and to photograph the interaction of wheel blades with the liquid. The device worked satisfactorily at frequencies of up to 1000 cps; a neon tube served as light source. The duration of the discharge and, thus, also the duration of a light flash was, under such conditions, about $5 \cdot 10^{-6}$ sec, and the picture obtained was sharp. Only periodic phenomena could, however, be photographed with the stroboscope. To photograph aperiodic phenomena, it was necessary to use a pulse lamp with a light intensity of some million stilbs and an ignition time of one microsecond. The author used a "Зенит-С" ("Zenit-S") camera at an exposure time of 1-1.5 sec. He used india ink to visualize the motion of the liquid. The picture obtained with a stroboscope is shown in Fig. 3 according to a photograph. The flow was greatly disturbed by a turbulent zone over 2/3 of the blade length on its working side. The difference of the theoretical values for the velocity of the liquid in the canal from the real flow velocity photographed shows that the idea of a constant value of axial turbulence is incorrect at any rate. The cavitation was also photographed; the water was preheated to 28°C, and the cock in the intake duct was partly closed. Cavitation also occurred on the working side of the blade (Fig. 4) in

Card 2/4

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1

20030

S/152/61/000/002/004/005
B124/B203

Experimental study of ...

contrast to the opinion held by other authors (Refs. 1, 2, 3). Kukharskiy is mentioned. There are 4 figures and 4 Soviet-bloc references.

ASSOCIATION: Ufimskiy neftyanoy institut (Ufa Petroleum Institute)

SUBMITTED: October 20, 1960

Legend to Fig. 3: Motion of the dyed jet (according to a photograph); a) dyed water

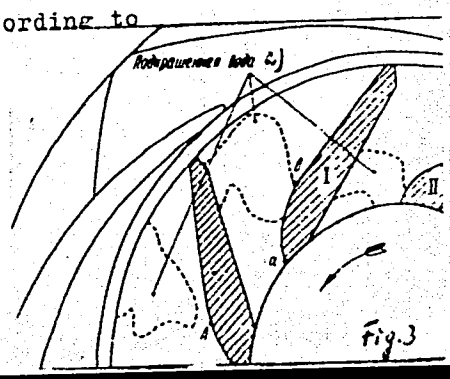


Fig.3

Card 3/4

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1

20030

S/152/61/000/002/004/005
B124/B203

Experimental study of ...

Legend to Fig. 4: Cavitation zones (according to a photograph); a) working side, b) non-operation side (reverse)

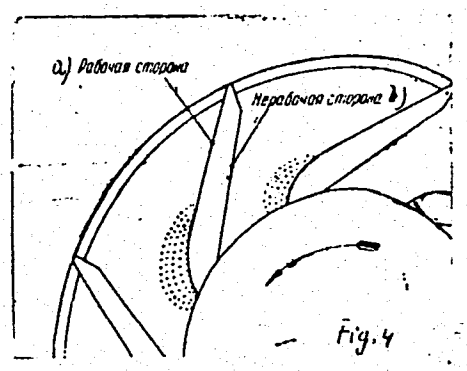


Fig. 4

Card 4/4

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1

ROMANOV, V.P.

Experimental study of flow in a rotating centrifugal runner. Izv. vys. ucheb. zav.; neft' i gaz 4 no.2:95-100 '61. (MIRA 15:5)

1. Ufimskiy neftyanoy institut.
(Oil well pumps--Fluid dynamics)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1

ROMANOV, V.P., inzh.; VIL'CHITSKIY, V.V., inzh.; FAYNER, I.A., inzh.; SEN'KO, L.S., inzh.; VOYNIKANIS, N.V., inzh.; BOYKOV, V.V., inzh.; BLOKHOV, B.G., inzh.

Making 2,753m of crosscut in hard rock in 31 days. Shakht. stroi. 8 no.6:17-21 Je '64. (MIRA 17:10)

1. Kombinat Kuzbassugol' (for Romanov, Vil'chitskiy, Fayner). 2. Shakhta No.3/3-bis tresta Prokop'yevskugol' (for Sen'ko). 3. Trest Prokop'yevskugol' (for Voynikanis). 4. Kuznetskiy mashinostroitel'nyy zavod (for Boykov, Blokhov).

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1

ROMANOV, V.R.

Power of public opinion. Bezop.truda v prom. 4 no.3:26 '60. (MIRA 13:6)

(Coal mines and mining--Safety measures)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1

ACC NR: AP6021814 (A) SOURCE CODE: UR/0413/66/000/012/0094/0094

INVENTOR: Vasil'chenko, G. S.; Chernyavskiy, L. L.; Romanov, V. S.; Skoromnaya, L. I.; Mart'yanov, N. S.

ORG: None

TITLE: An installation for strength tests of the working wheels in high-speed turbines. Class 42, No. 182913 [announced by the Central Scientific Research Institute of Technology and Machine Building (Tsentral'nyy nauchno-issledovatel'skiy institut tekhnologii i mashinostroyeniya)]

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 12, 1966, 94

TOPIC TAGS: turbine rotor, test facility

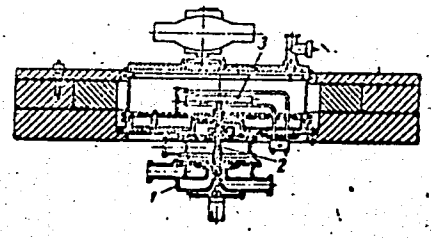
ABSTRACT: This Author's Certificate introduces an installation for strength tests of the working wheels in high-speed turbines. The unit contains a turbine drive, vacuum chamber with cylindrical wall surrounded by an annular jacket, and a device for induction heating of the components being tested. A drive shaft passes through the cylindrical wall of the vacuum chamber for holding the part to be tested. The rotational velocity of the part being tested is increased by making the turbine drive in the form of a centripetal-flow air turbine with the component to be checked mounted on its drive shaft.

 UDC: 620.172.253:620.1.05

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1

ACC NR: AP6021814



1—air turbine; 2—drive shaft; 3—part being tested

SUB CODE: 13/ SUBM DATE: 19Jul65

Card 2/2

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1

ACC NR: AT7004467 SOURCE CODE: UR/2834/66/051/001/0099/0104

AUTHORS: Romanov, V. S.; Yanishevskiy, A. A.

ORG: none

TITLE: Evaluation of the bearing capacity of support pillars with underground leaching of thick salt deposits

SOURCE: Leningrad. Gornyy institut. Zapiski, v. 51, no. 1, 1966, 99-104

TOPIC TAGS: structural engineering, mining engineering, stress analysis, photoelasticity, test model, centrifuge, optic model/ BKTs-3 centrifuge

ABSTRACT: This article deals with the problem of obtaining maximum yield from an underground mine chamber, while still leaving sufficient suport pillars to allow for safe operation. The particular case in point is the Yar-Bishkadakskiy Salt Mine, and the authors make use of the photoelastic method in studying the distribution of stresses in support pillars. Included in this study are experiments in which various mine chamber plans were made and then contrasted with respect to the magnitudes of stresses occurring in support pillars serving each type of chamber. Four three-dimensional models were prepared from optically active epoxide resins on a 1:5000 scale. The models were centrifugally loaded through the use of a BKTs-3 centrifuge (the centrifuge coefficient reached a value of 210). The tests were set up to permit measurement of various types of stresses and the concentration coefficient at selected

 UDC: 622.838.53

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1

ACC NR: AT7004467

sections in the models. The results of the optical modeling were checked with tests performed on perforated paraffin plates. The results of both forms of testing were in close agreement. The authors demonstrate a method by which the bearing capacity may be accurately characterized by a dimensionless test parameter calculated for variants of the mine chamber configuration. Orig. art. has: 4 figures and 2 tables.

SUB CODE: 13/ SUBM DATE: none/ ORIG REF: 003

Card 2/2

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1

ARTAMONOV, K.I.; LEBEDEV, N.I.; YERGALIYEV, E.Ye.; LESECHKO, A.K.; YAKUSHIN, M.V.; KAZAKOV, V.N.; BRYUKHANOV, N.G.; NIKITINA, L.I.; KHVESYUK, F.I.; Prinimali uchastiye: MATVEYEV, A.T.; KOVALEV, S.I.; ROMANOV, V.S.; MARCHENKO, B.P.; ZUDOVA, T.I.; OMAROV, M.N.; PECHENKIN, S.N.; LUKIN, Ye.G; KHLUDKOV, V.I.

Shaft-furnace copper smelting with an oxygen-enriched blow. TSvet. met. 34 no.3:32-39 Mr '61. (MIRA 14:3)

1. Irtyshskiy polimetallicheskiy kombinat (for Artamonov, Lebedev, Yergaliyev, Lesechko, Matveyev, Kovalev, Romanov, Marchenko, Zudova, Omarov). 2. Vsesoyuznyy nauchnoissledovatel'skiy institut tsvetnykh metallov (for Yakushin, Kazakov, Bryukhanov, Nikitina, Khvesyuk, Pechenkin, Lukin, Khludkov).
(Copper--Metallurgy) (Oxygen--Industrial applications)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1

K-2

USSR / Forestry. Forest Biology and Typology

Abs Jour: Ref Zhur-Biol., No 10, 1958, 43911

Author : Mishnev, V. G., Romanov, V. S.

Inst : AS Belorussion SSR

Title : On the Relationships Between the Young Growth and the Mother Trees Stand in Forest Plantings

Orig Pub: Izv. AN BSSR. Ser. biol. n., 1957, No 2, 39-45

Abstract: This study covered the effect of mother trees on the distribution of their offspring on the area under their cover. The study was conducted in Belorussia in 100 to 200-year old gout weed-spruce-hornbeam woods and in the 70-year old pine-birch plantings amid bristly fox-tail grass and green moss.

Card 1/2

14

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1

USSR / Forestry. Forest Biology and Typology K-2

Abs Jour: Ref Zhur-Biol., No 10, 1958, 43911

It was determined that the self-seeding of the maple occurs chiefly under the spruce-oak canopy. Hornbeam reproduces well under the pruce cover, avoiding the oak tree stands. Spruce self-seeding occurs abundantly under the canopy of deciduous trees (particularly oak). The young oak growth adapts itself to the "windows" in the mother tree stand. In the pine-birch plantings, the birch has a beneficial effect on the propagation of pine, the young growth of which is grouped only under the birch canopy. The reproduction of ash trees is adapted chiefly to the cover of deciduous trees and proceeds feebly under the spruce cover.
L. V. Nesmelov

Card 2/2

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1

ROMANOV, V.S., inzh.

Organization of safety engineering in Office No.394 of the Work Supervisor. Biul.tekh.inform.po stroi. 5 no.8:29 Ag '59. (MIRA 12:11)
(Leningrad--Industrial safety)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1

ROMANOV, V.S.

Boring

Applying the advanced methods of drilling-blasting operations during stoping. V. S. Romanov. Gor. zhur. 126 No. 6, 1952.

9. Monthly List of Russian Accessions, Library of Congress, September 1952 1953, Uncl.

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1

ROMANOV, V.S., gornyy inzhener.

Diffusion of the experience acquired in level mining in the Krivoy Rog Basin. Gor.zhur. no.1:28-33 Ja '56. (MLRA 9:5)
(Krivoy Rog--Mining engineering)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1

ROMANOV, V. S.

SOKOLOV, D. V. Montazh raspredelitel'nogo ustroystva elektricheskikh stantsiy i podstantsiy. Moscow, 1944. 354p.

A textbook for advanced trade and railroad schools giving information on distributing equipment of electric power stations and substations, repair and maintenance of equipment, installation of electric equipment, grounding, and the organization of electrical installation work; published by State Electric Power Publishing House.

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1

ROMANOV, V. S.

"A Study of the Pine-Birch Crops in the Forests of the Belorussian SSR." Cand Agr Sci, Inst of Socialized Agriculture, Acad Sci Belorussian SSR, Minsk, 1955. (KL, No 18, Apr 55)

SO: Sum. No. 704, 2 Nov 55 - Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (16).

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1

ROMANOV, V.S.

Undistorted model technique for determining the geodetic elevation of photographing and the horizontal parallax of points in connection with photogrammetric condensation of the control survey net. (MLRA 9:11)
Geod.i kart. no.7:15-17 S '56.
(Aerial photogrammetry)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1

ROMANOV, V.S.; SMIRNOV, N.S.

Giant trees of the Belovezhskaya Pushcha. Bot.; issl.Bel. otd.VBO no.7:118-124 '65.

(MIRA 18:12)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1

ROMANOV, V.V., inzh.

Factors in utilizing bucket excavator designed by Central Communications Research Institute. Avt. dor. 22 no.10:25-26 O '59. (MIRA 13:2)

(Excavating machinery)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1

L 9032-66 EWT(d)/EWT(m)/EWP(v)/T/EWP(k)/EWP(t)/EWP(h)/EWP(b)/EWP(l)/EWA(c)/ETC(m)
JD/WW/HW/DJ

ACC NR: AP5024954 SOURCE CODE: UR/0286/65/000/016/0015/0015

AUTHORS: Siushev, S. Kh.; Romanov, V. V.; Peskin, L. D.
44 55 44 55 44 55

ORG: none

TITLE: Working stand of rolling mill. Class 7, No. 173689 [announced by All-Union Scientific Research and Design and Construction Institute of Metallurgical Machinery Construction (Vsesoyuznyy nauchno-issledovatel'skiy i proyektno-konstruktorskiy institut metallurgicheskogo mashinostroyeniya)]

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 16, 1965, 15

TOPIC TAGS: rolling mill, roller adjustment, roller control, METALLURGIC MACHINERY, METALWORKING MACHINE ACCESSORY

ABSTRACT: This Author Certificate presents a working stand of a rolling mill which includes an eccentric compression arrangement and rollers which are shaped for a general part configuration (see Fig. 1). To permit mounting of the rollers at an angle to each other for rolling of unsymmetrical profiles, the pressurizing sections on the left and right sides are made independent of each other but with synchronization of the lower and upper parts of the compression sections. To

Card 1/3 UDC: 621.771.25

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1

L 9032-66

ACC NR: AP5024954

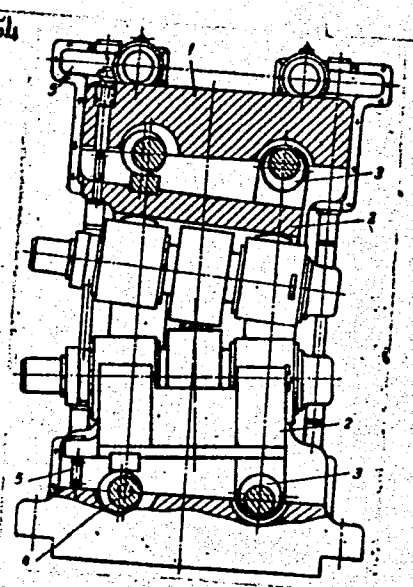


Fig. 1. 1 - Frame; 2 - common bearing; 3 and 4 - compression eccentrics; 5 - drives for eccentrics.

eliminate the need for axial control mechanisms, the upper and lower eccentrics of the compression sections on one side are enclosed in bearings which take both

Card 2/3

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1

L 9032-66

ACC NR: AP5024954

axial and radial roller loads. Orig. art. has: 1 figure.

SUB CODE: 13/ SUBM DATE: 20Apr64

Card 3/3

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445220020-1"