"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000103310010-2

PODSHIVALENKO, P.D.; BALIKHIN, M.I.; KASHINSKIY, S.V.[deceased]; IVANOV, N.A.; KACHALOV, N.N.; NEMKOV, G.P.; ONUFRIYEV, I.A.; PERESLEGIN, V.I.; RUMYANTSEV, A.F.; RUSAKOV, A.N.; SEMENOV, I.Ya.; STOMAKHIN, I.B.; FILIPPOV, V.F.;

[Economics of construction; a textbook] Ekonomika stroitel'-stva; uchebnik. Moskva, Politizdat, 1964. 542 p. (MIRA 18:8)

1. Kommunisticheskaya Partiya Sovetskogo Soyuza. Vysshaya partiynaya shkola.

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000103310010-2"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000103310010-2

BALIKHIN, P.

Brushes with carbolite handles. Prom. koop. 14 no.5:15 My '60. (MIRA 13:12)

1. Glavnyy inzhener Shchetochno-kistevyazal'noy arteli, Moskva. (Moscow--Broom and brush industry)

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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000103310010-2

S/598/60/000/004/003/020
D215/D302

AUTHORS: Reznichenko, V.A., Balikhin, V.C. and Karyazin, I.A.

TITLE: The influence of titanium dioxide on the electrical conductivity of slag

SOURCE: Akademiya nauk SSSR. Institut metallurgii. Titan i yego splavy. No. 4. Moscow, 1960. Metallurgiya titana, 24-27

TEXT: Since titanium dioxide and titanium tetrachloride were obtained by high-temperature electrolytic reduction of ilmenite concentrate melts, it is important to know the effect of slag constituents on electrical conductivity in order to avoid a dissipation of electrical energy instead of its conversion into heat. As a first step the influence of TiO_2 was selected for investigation. The method was based on measuring the out-of-balance current in a 4-arm bridge circuit with the furnace-enclosed electrolytic cell and a variable resistance constituting one arm and fixed resistances the other three. The bridge was initially

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balanced at a certain resistance value close to that expected, so that when unbalance arose current was fed across the bridge diagonal, proportionally to the deviation. This was recorded by a d.c. microammeter of the M 95 (M95) type, included in the diagonal together with a rectifier. Calibration was effected by using standard resistances in place of the cell; the limits of accuracy were 0.0001 ohm. Current supply was from a.c. mains at normal frequency. The measuring cell consisted on a eccentrically bored molybdenum crucible of 24 mm internal diameter forming one electrode, and a 3 mm diameter rod electrode which was immersed in the slag to a depth of 10 mm. The cell constant was determined using a standard 0.1N KCl solution, the circuit resistance by shorting the electrodes. Synthetic slags based on TiO_2-SiO_2-Al_2O_3-FeO-MgO with Al_2O_3 and MgO constant at 2% each and FeO/SiO_2 = 0.6 were investigated. These were made from chemically pure oxides, carefully mixed and briquetted. The furnace was of the Tamman type and the atmosphere oxygen-free nitrogen. The results are shown graphically. The anomalously

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high conductivity of high-titanate slags in comparison with silicates and the weak temperature dependence and high conductivity even in the solid state suggested that titanium dioxide conferred both ionic and electronic conductivity. There are 2 figures and 1 table.

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REZNICHENKO, V.A.; BALIKHIN, V.S.; KARYAZIN, I.A.

Effect of titanium dioxide on the electric conductivity of slags.
Titan i ego splavyy no.4:24-27 '60. (MIRA 13:11)
(Titanium oxide) (Slag--Electric properties)

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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000103310010-2

S/137/62/000/002/003/14
A006/A101

AUTHORS: Balikhin, V. S., Reznichenko, V. A.

TITLE: Electric conductivity of melts of the ferrous oxide-titanium dioxide system

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 2, 1962, 11-12, abstract 2A55 ("Izv. AN SSSR, Otd. tekhn. n.", 1961, no. 4, 24-28)

TEXT: Electric conductivity of slags was measured by the method of a non-equilibrium bridge at up to 1,900°C. The samples were prepared by mixing and briquetting of chemically pure components. After completed experiments samples were pumped-off for mineralogical and X-ray analyses. It was established that Ti-oxides have high (for oxides) electronic conductivity. Bends corresponding to ferrous ortho- and metatitanate, were observed on isotherms showing changes in the electric conductivity of slags in the $FeO-TiO_2$ system. The high electronic conductivity of Ti-dioxide under weakly reducing conditions is apparently caused by the appearance of defects in the rutile lattice on account of the partial oxygen loss. The high electronic conductivity of the slags investigated in the $FeO-TiO_2-Ti_2O_3$ system, leads to the assumption that the solid solutions

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S/137/62/000/002/003/144
A006/A101

Electric conductivity of melts ...

on Ti_3O_5 and Ti_2O_3 lattice base (anosovite and tagirovite) possess also high conductivity. These minerals are the basic phases of industrial titanium slags and assure their high conductivity.

T. Kolesnikova

[Abstracter's note: Complete translation]

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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000103310010-2

S/137/62/000/007/004/072
A052/A101

AUTHORS: Balikhin, V. S., Reznichenko, V. A.

TITLE: Electric conductivity of titanium slags

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 7, 1962, 10, abstract 7A54 (In collection: "Titan i yego splavy". Moscow, AN SSSR, no. 5, 1961, 95 - 101)

TEXT: Electric conductivity $\varkappa$ of high-titanium slags (80 - 90% TiO_2) is reduced 2 - 3 times by adding limestone or dolomite to the charge with the purpose of obtaining slag with 4 - 6% CaO which creates conditions for a smoother electro-smelting process. A further increase of fluxing components in the slag, although it secures more favorable conditions for smelting concentrates, makes the slag considerably poorer in respect of TiO_2 and deteriorates its quality. The presence of FeO in slag has no considerable effect on its $\varkappa$. A further increase of FeO up to 15% causes a gradual decrease of $\varkappa$ owing to TiO_2 impoverishment of slag, which is a decisive factor affecting $\varkappa$ of slag. Contrary to notions that existed previously, it has been established that an increase of the degree of overreduc-

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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000103310010-2

Electric conductivity of titanium slags

S/137/62/000/007/004/072
A052/A101

tion of Ti_2O_3/TiO_2 slag from 0 to 0.8 changes its $\varkappa$ insignificantly. A decrease of the resistance of the smelt at the end of the electrosmelting and the change of the furnace to the arc process are connected obviously with a higher Ti concentration in slag and not with the emergence of lower Ti oxides. As an explanation of unusually high $\varkappa$ for slags, which TiO_2 imparts to them, the assumption can be made that at smelting in a reducing atmosphere TiO_2, like FeO and MnO, has an electronic conduction.

Authors' summary

[Abstracter's note: Complete translation]

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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000103310010-2

BALIKHIN, V.S.; REZNICHENKO, V.A.

Studying the electroconductivity of titanium slags. Titan i ego splavy no.8:41-48 '62. (MIRA 16:1)
(Titanium oxide--Electric properties)
(Slag--Electric properties)

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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000103310010-2

S/180/62/000/002/003/018
E091/E135

AUTHORS: Balikhin, V.S., and Reznichenko, V.A. (Moscow)

TITLE: Electrochemical separation of titanium-aluminium alloys

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Otdeleniye tekhnicheskikh nauk. Metallurgiya i toplivo, no.2, 1962, 49-55

TEXT: In order to study the possibility of separating Ti and Al by means of electrolytic refining, the authors measured the potentials of Ti and Al electrodes, functioning both as cathodes and anodes. NaCl was fused in a graphite crucible placed in a stainless steel sleeve, and the electrodes were immersed in it. One electrode was of steel, and was lowered directly into the melt, while the other, upon which measurements were made, was enclosed in a quartz test tube to effect maximum separation between the electrolyte in its vicinity and the body of the melt. The test tube had an opening of 2 mm diameter for the passage of current. The Ti electrode consisted of a

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cylinder, 6 x 50 mm. It was attached to a steel wire and lowered into the melt to a depth of 10 mm below the surface. The Al electrode consisted of a graphite rod suspended in a quartz test tube of 16 mm diameter, containing molten aluminium. The working surface of each of the electrodes was 2 cm^2. Prior to measuring the potentials, the electrode under investigation was anodically polarised for a period of time necessary to ensure the required Ti or Al ion concentration in the melt of the cell. These concentrations were checked before each test by means of calorimetric analysis. Electrode potentials were first measured under conditions of anodic polarisation, with current densities varying from 0 to 1 A/cm^2 and down to zero again. The behaviour during cathode polarisation was subsequently investigated in a similar manner. Each cycle of measurements lasted approximately 5 minutes. For the measurement of electrode potentials, a silver reference electrode was used. To maintain electrical contact between the electrolytes in the cells investigated and the reference electrode, without allowing them to mix, the latter was jacketted

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by two test tubes possessing openings of 1 mm diameter covered with asbestos diaphragms. The outermost of these was made of graphite, in order to protect the inner quartz tube from attack by metallic sodium which was evolved at the cathode, and also to create an additional obstacle to the mixing of the electrolytes. Thus the authors measured the e.m.f. of the cell Ag^+/NaCl, AgCl (5%)/NaCl/NaCl, $MeCl_x/Me^-$ at 870 °C, under conditions both of electrolysis with various current densities, and without polarising action (i.e. under conditions approaching those of equilibrium). A low frequency electron oscillograph was used as the measuring instrument. The solubility of $AlCl_3$ in molten chlorides was studied by an electrolytic method, using the same apparatus as that used for the determination of potentials but without reference electrode. Aluminium, placed at the bottom of a double-walled quartz test tube, was anodically dissolved in the molten salt, using a current of 2 A. Molten lead was used as the cathode. The current was supplied through graphite rods. The anode and cathode compartments communicated through an opening of 3 mm diameter made in the walls of the test tubes.

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Argon was passed into the test tube containing the Al in order to provide an inert atmosphere and to remove $AlCl_3$ vapours. After definite periods of time, samples of the electrolyte were withdrawn for determination of their Al content. Synthetic alloys were used for the study of the separation of Ti and Al. Melting was carried out in an arc furnace with a tungsten electrode, in an atmosphere of argon at 0.5 atmospheres pressure. Binary alloys, containing between 5 and 60% Al at intervals of 5%, were electrolytically refined. Electrolysis was carried out at 670 °C, using a current of 8 A (cathode C.D. = 1.3 A/cm^2, anode C.D. = 0.1 A/cm^2) for one hour. It was found that Ti and Al cannot be effectively separated by means of electrolytic refining in molten sodium chloride baths. However, the solubility of $AlCl_3$ in chlorides which do not form complex compounds with it is only a few hundredths of 1%, and experience with the refining of Ti-Al alloys has shown that electrolytic separation of these metals can be based on the low solubility of $AlCl_3$ in a melt of $CaCl_2$. There are 3 figures and 4 tables.

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APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000103310010-2"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000103310010-2

BALIKHIN, V.S.; REZNICHENKO, V.A.

Titanium and aluminum electrode potentials in fused sodium chloride. Titan i ego splavy no.9:220-224 '63. (MIRA 16:9)
(Titanium chloride) (Aluminum chloride)
(Separation (Technology))

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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000103310010-2

BALIKHIN, V.S.; REZNICHENKO, V.A.

Solubility of aluminum and titanium chloride in fused chlorides.
Titan i ego splavy no.9:225-229 '63. (MIRA 16:9)
(Separation (Technology)) (Solubility)
(Chlorides)

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000103310010-2"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000103310010-2

BALIKHIN, V.S.; REZNICHENKO, V.A.

Electrolytic separation of binary alloys in the system Ti - Al.
Titan i ego splavy no.9:230-235 '63. (MIRA 16:9)
(Titanium-aluminum alloys)
(Separation (Technology))

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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000103310010-2

ACCESSION NR: AP4019821 S/0279/64/000/001/0191/0192

AUTHOR: Balikhin, V. S.

TITLE: Second conference on physical chemistry and electrochemistry of fused salts and slags

SOURCE: AN SSSR. Izv. Metallurgiya i gornoye delo, no. 1, 1964, 191-192

TOPIC TAGS: physical chemistry, electrochemistry, electrolysis, salt, electrolyte, ionic melt, slag

ABSTRACT: The Second Conference on physical chemistry and electrochemistry of molten salts and slags took place in Kiev, October 15-18, 1963. It was organized by the Institut obshchey i neorganicheskoy khimii AN USSR (Institute of General and Inorganic Chemistry, AN Ukrainian SSR). Over 100 papers were presented on electrochemical kinetics, physicochemical properties of fused salts, slags, and electrolysis. At the plenary session the speakers included A. I. Belyayev, "An experimental study of P. P. Fedot'yev and V. P. Il'inskiy on the electrometallurgy of aluminum," Yu. K. Delimarskiy on "The kinetics of electrode processes and the

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polarography of thermodynamics in ionic melts," B. F. Markov on "The structure and physicochemical properties of ionic melts of salts," Yu. V. Baymakov on "The crystallization of metals on the cathode," and N. K. Voskresenskaya on "The thermodynamic basis of the Kablukov Law." The attention of the Conference was directed along two lines: 1) the study of the nature of ionic melts; 2) investigations dealing with the electrode processes in fused salts. A report of E. A. Ukshe and N. G. Bukun dealt with "An investigation of the structure of molten salts by the method of physical modeling." Their models were wooden disks floating on water, representing the ions and approximating the distribution of sodium and potassium chloride. B. F. Markov and V. D. Prisyazhnyy reported on "Physicochemical characteristics of certain mutually soluble fused salts." I. N. Sheyko and V. T. Barchuk submitted a paper on "The behavior of zirconium dichloride in molten salts," showing that above 550C zirconium dichloride yields zirconium tetrachloride and metallic zirconium. Yu. V. Baymakov presented a report on electrocrystallization of silver from fused electrolytes, and A. N. Baraboshkin reported on the electrocrystallization of copper. N. T. Krasil'nikov discussed new investigations in the field of anode and cathode processes in his paper on "Electrode processes in electrolysis of niobium," while O. V. Skiba reported on "Electrode processes in chloride fusions containing uranium." The next conference will

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ACCESSION NR: AP4019821

be held in 1966 in Leningrad.

ASSOCIATION: none

SUBMITTED: 00 DATE ACQ: 31Mar64 ENCL: 00

SUB CODE: MM NO REF SOV: 000 OTHER: 000

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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000103310010-2

BALIKHINA, G.S.

Action of gaseous chlorine on sulfides, oxides and sulfates of lead, zinc, copper, silver and iron in relation to temperature. D. M. Chizhikov and G. S. Balikhina. *Tsvetnye Metal.* 1935, No. 4, 59-77; cf. *C. A.* 30, 1188[1]. The effect of gaseous Cl on PbS, ZnS, Cu_2S, Ag_2S, FeS, PbO, ZnO, CuO, $PbSO_4$, $ZnSO_4$ and $CuSO_4$ was studied at temps. from 100° to 800°. Exptl. technic is described in detail, and numerous quantitative data are given. Conclusions: The sulfides are the most easily converted into chlorides and the sulfates the least. The chlorination of sulfides and oxides is easily completed at temps. up to 700°, while the chlorination of sulfates below this temp. proceeds only very slowly. As a rule the chlorination of sulfides begins at lower temps. than that of oxides and sulfates. With increasing temps. the velocities of chlorination of sulfides and oxides tend to equalize.

B. N. Danilloff

AMERICAN METALLURGICAL LITERATURE CLASSIFICATION

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BALIKHINA, G.S.

Cu

18

Sulfate formation from the action of chlorine on mixtures of cupric sulfate, cupric oxide, cuprous sulfide and ferric oxide. D. M. Chizhikov and G. S. Balikhina. *J. Chem. Ind.* (Moscow) 12, 1038-41(1935).—When Cl reacts with a mixt. of Cu_2S and CuO, a small amt. of $CuSO_4$ is formed. Addn. of Fe_2O_3 to the mixt. greatly increases the amt. of $CuSO_4$, especially at higher temps. Addn. of $CuSO_4$ (contg. H_2O of crystn. decreases the formation of more $CuSO_4$ at high temp. Anhyd. $CuSO_4$ has little effect. $CuSO_4$ and Cu_2S react to give S, which also oxidizes CuO, but not as easily as Cu_2S does. When a mixt. of $CuSO_4$ (H_2O), CuO, Cu_2S and Fe_2O_3, approximating the compn. of Cu pyrites slag, is chlorinated, the amt. of $CuSO_4$ formed rises to 85% of the possible amt.

H. M. Leicester

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

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BALIKHINA, G.S.

9

The purification of solutions from iron in the hydrometallurgy of zinc. D. M. Chizhikov and G. S. Balikhina.—*Tsvetnye Metal.* 1936, No. 9, 67-70.—Air and O_2 are not satisfactory for oxidizing Fe to the trivalent state before pptg. it from the electrolytic soln. MnO, in acid soln., or in neutral soln. contg. ZnO is best for this purpose.

H. M. Leicester

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BALIKHINA, G.S.

CA

4

The oxidation of lead and zinc sulfides by pure oxygen. D. M. Chizhikov and G. S. Balikhina. *Tsvetnye Metal.* 1937, No. 4, 72-4.--Oxidation of powd. galena and ppted. ZnS begins strongly only at 500° and at 600° is nearly complete. ZnS is more completely oxidized than PbS.
H. M. Leicester

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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000103310010-2

CA

BALIKHINA, G.S.

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PROCESSES AND PROPERTIES INDEX

Chlorination of tin concentrates. D. M. Chizhikov and G. S. Balikhina. *Tsvetnye Metal.* No. 8, 69-75 (1947).—The authors' expts. showed that Sn can be recovered from ore by chlorination, and the following advantages of this method are claimed: (1) Concentrates as low in Sn as 25-30% can be treated while pyrometallurgical processes require 50 to 60% Sn concentrates. This means that the use of this process will result in increased recovery of Sn from ore, because the losses in tailings are the higher the richer the concentrate. (2) Metal free from impurities can be obtained whereas in pyrometallurgical processes the tin is contaminated by other metallic elements and requires further refining operations. The authors experimented with chlorination of oxides and sulfides of Sn, Pb, Zn, Cu, Fe, Ag and As at temps. from 150° to 700°. These metals, with the exception of Fe, are converted into chlorides at 700° to the extent of 70 to 100%, while SnO_2 is little affected. At 700° the chlorides Zn and As volatilize, and the chlorides of Pb, Fe, Cu and Ag can be easily leached out. Natural SnO_2 (cassiterite) does not react with Cl. However, in presence of C, CO, or oxides of Fe, chlorination takes place. Samples of cassiterite contg. 97.4% SnO_2 and 1.79% Fe_2O_3 were chlorinated for 2 hrs. in the presence of C and (or) CO at 400°, 600° and 800°. At 800° in presence of CO_2 10.3% of Sn was converted into chloride, and in presence of solid C, 73%. When both C and CO were present 84% of the Sn was chlorinated. With Fe_2O_3 present (in the ratio of 1 part Fe to 3 parts Sn) 5.8% Sn was chlorinated at 800°. The chlorination is still further favored by simultaneous presence of C and Fe_2O_3, or CO and Fe_2O_3 whereby over 98% of Sn is chlorinated. Further expts. on semicom scale are contemplated. B. N. Danilloff

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000103310010-2

SOBINYAKOVA, N.M.; IVANTSOVA, G.A.; BALIKHINA, S.I.

Extraction of molybdenum from ores in alkali solutions using a catalyst. Min.syr'e no.9:49-57 '63. (MIRA 17:10)

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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000103310010-2

JANOVSKY, M.; MARTINEK, J.; STANINCOVA, V.; Technicka spoluprace: BALIKOVA, V.; BOUCKOVA, R.; CERNA, Z.

Water and electrolyte balance in infants on various nutritional regimen. (On problems of humanized milk). Cesk. pediat. 20 no.9: 759-766 S '65.

1. Ustav pro peci o matku a dite v Praze (reditel doc. dr. J. Horsky, DrSc.; vedouci pediatrickeho vyzkumu doc. dr. K. Polacek) a Fyziologicky ustav Ceskoslovenske akademie ved v Praze (reditel prof. dr. Z. Servit, DrSc.).

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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000103310010-2

BALIKOVA, Z; CERNAKOVA, R.

Therapeutic possibilities in pemphigus vulgaris. Cesk. derm. 25 no.7-8:254-256 July 1950. (CLML 20:1)

1. Of the Second Skin Clinic in Prague (Head—Prof. K. Hubschmann, M. D.).

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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000103310010-2

BALKOVSKIY, B.Ye.

Thesis, antithesis, and character series in the identification of plants. Bot. zhur. 45 no.11:1640-1644 N '60. (MIRA 13:11)

1. Dendropark "Aleksandriya", g. Belaya TSerkov'.
(Botany--Classification) (Biomathematics)

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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000103310010-2

TIUCRA, A. Dr.; BALIMBERG, M. Dr.; GANEA, D. Dr.; SASS, H., Dr.; BILEU, Clementina (Chimista)

Cortisone and ACTH in therapy of epidemic hepatitis; personal experience. Med. int., Bucur. 10 no.3:403-411 Mar 58.

1. Lucrare efectuata in Spitalul contagiosi nr. 2, Bucuresti.
(HEPATITIS, INFECTIOUS, therapy
ACTH & cortisone with classical ther.)
(ACTH, ther. use
hepatitis, infect., with classical ther.)
(CORTISONE, ther. use
hepatitis, infect., with classical ther.)

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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000103310010-2

BALIN, A.A.

Automatic radio beacon and buoy for permanent self-contained stations. Trudy AANII 254:67-68 '63.

(MIRA 17:11)

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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000103310010-2

ACCESSION NR: AM4020758 S/0169/64/000/001/V009/V009

SOURCE: RZh. Geofizika, Abs. 1V58

AUTHOR: Balin, A. A.

TITLE: Automatic radio-beacon buoy for long-term autonomous stations

CITED SOURCE: Tr. Arkt. i Antarkt. n.-i. in-ta, v. 254, 1963, 67-68

TOPIC TAGS: radio beacon buoy, call signal transmitter, position indicator, position transmitter, direction finding, call signal broadcasting equipment

TRANSLATION: A description and circuit diagram are given for the ARBM-1 radio-beacon buoy designed to facilitate the search for autonomous stations. The instrument consists of a one-tube radio transmitter with a power of about 20 W and an operating frequency of 577 Kc (wave of 520 m), mounted inside a buoy (displacement of 200 kg). The transmitter is turned on every 3 min by a special electric timer. The call signal consists of one letter and a long dash for radio direction finding. The instrument can operate for 75 days,

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ACCESSION NR: AR4020758

and its effective radius is 20 miles. Yu. A.

DATE ACQ: 03Mar64 SUB CODE: SD, AS ENCL: 00

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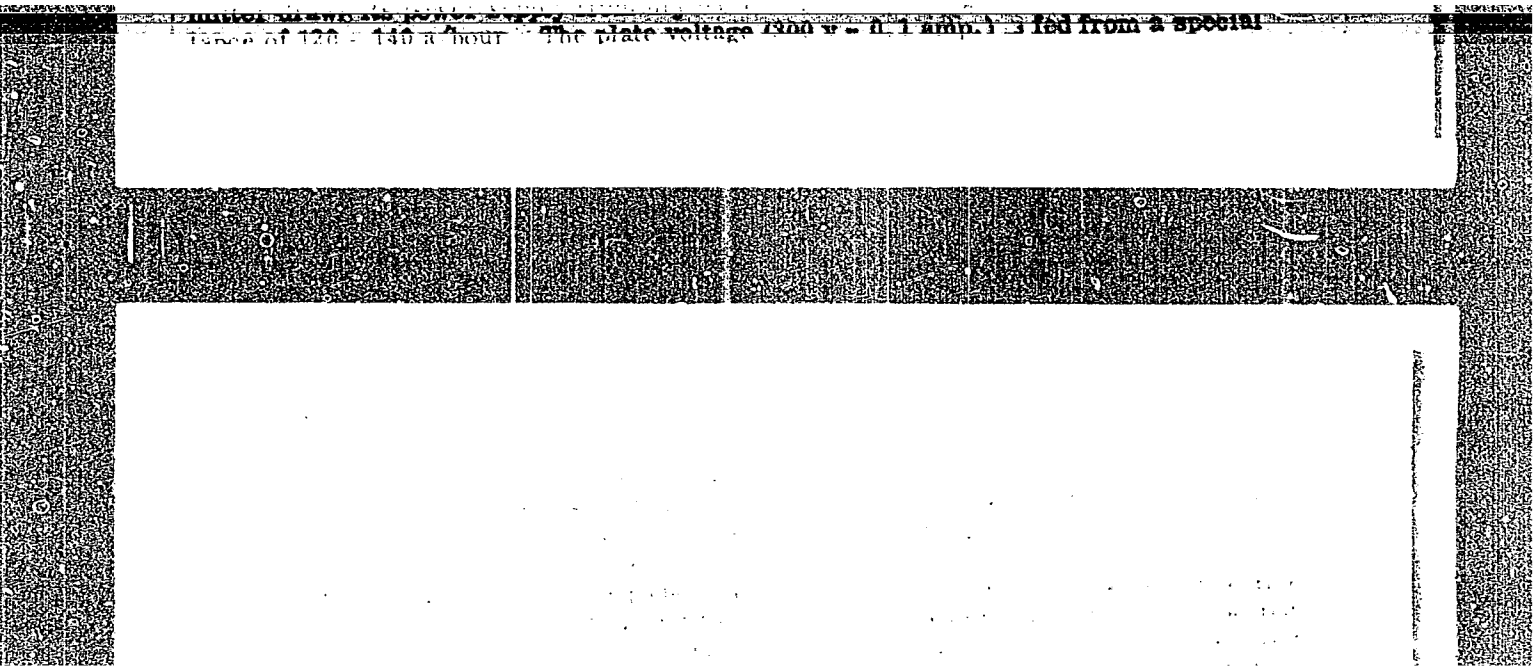

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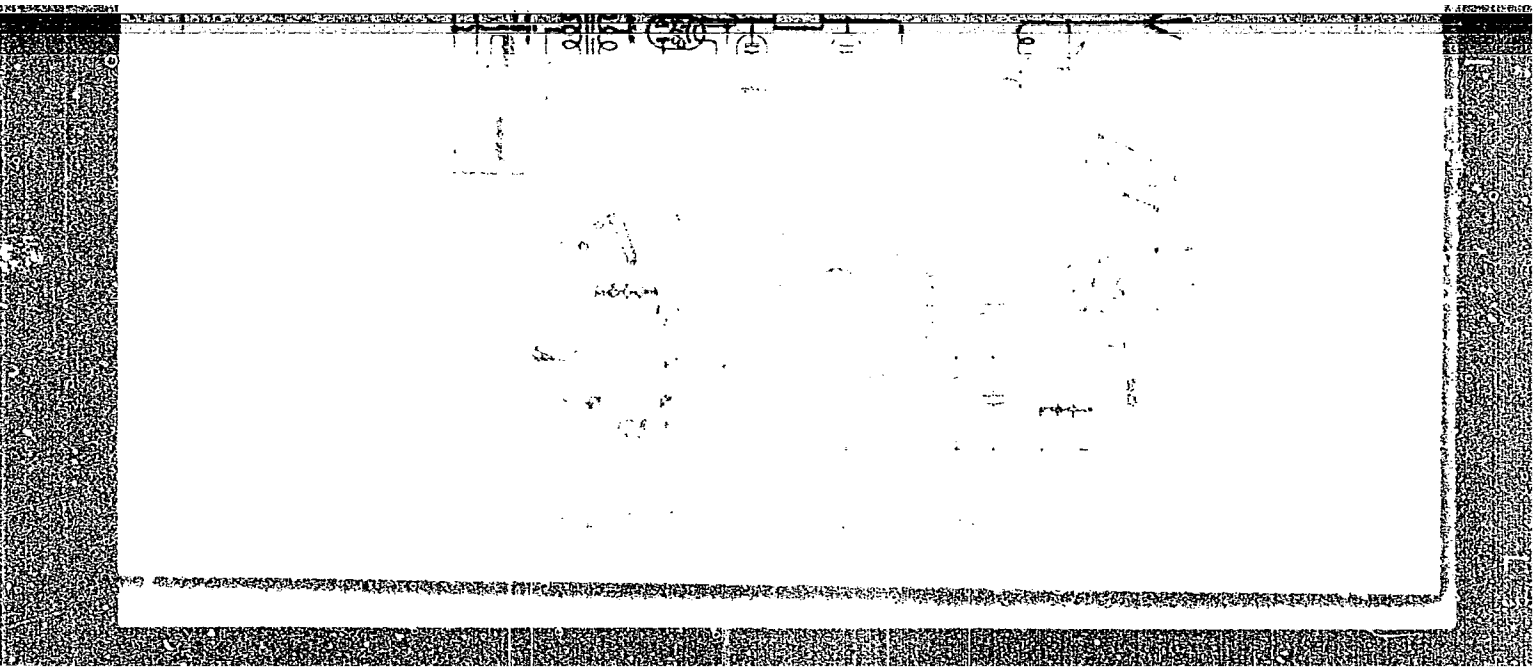

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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000103310010-2

BALIN, A.F., inzhener.

Economizing metals by the introduction of periodically-rolled iron. (In: Ryzhkov, D.A., ed. Ekonomiia metallov v kuznechno-shtampovochnom proizvodstve. Moskva, 1953, p.158-161.) (MLRA 7:1)

(Forging) (Punching machinery)

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000103310010-2"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000103310010-2

BALIN, A.F.; VALITOV, R.Kh.; KORACHISTOV, A.N.

Experience in coarse thread rolling. Kuz.-shtam.proizv. 4 no.12:9-11 D '62. (MIRA 16:1)
(Rolling (Metalwork)) (Screw threads)

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000103310010-2"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000103310010-2

25(1) PHASE I BOOK EXPLOITATION SOV/2811

Balin, Andrey Fedorovich

Poperechno-vintovaya prokatka kuznechnykh zagotovok (Helical Cross Rolling of Forged Blanks) Moscow, Mashgiz, 1959. 74 p. 2,500 copies printed.

Ed.: G. M. Makovskiy, Engineer; Ed. of Publishing House: L. A. Osipova; Tech. Ed.: G. V. Smirnova; Managing Ed. for Literature on Heavy Machine Building (Mashgiz): S. Ya. Golovin, Engineer.

PURPOSE: This book is intended for technical personnel in forging and rolling shops and for engineers interested in the use of shaped blanks in forging. General readers interested in developments in this field may find the booklet useful.

COVERAGE: The author presents the results of experiments in helical cross rolling of periodic profile stock and its use in forging. Following the description of helical cross rolling an explanation is given of the design features of mills and roll design for special periodic profiles. It is stated that Soviet engineers are

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attempting to produce preshaped blanks by this method in order to facilitate and streamline the forging of parts with complex configuration and in some cases to reduce machining operations. No personalities are mentioned. There are 5 references, all Soviet.

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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000103310010-2

S/182/62/000/006/003/004
D040/D113

AUTHOR: Balin, A.F.

TITLE: Rolling by wedges

PERIODICAL: Kuznechno-shtampovochnoye proizvodstvo, no. 6, 1962, 12-16

TEXT: General data is given on a rolling method first used in 1947 for preparing forging blanks of automobile engine connecting rods and now employed by Soviet plants for producing balls, rings, bushings, scraper conveyer shafts, etc. The method is called "cross or helical cross rolling", and consists in passing stock through a pair of rolls with wedge-shaped protrusions placed in a straight or in a helical line (Fig. 1 and 4). The output of a rolling mill with 500 mm diam. rolls, working with 3 electric heaters, is 3,000 billets per shift and may be higher when using more productive heating equipment. One latest mill design uses a roll and a concave segment instead of a pair of rolls. Experiments were conducted with two 400 mm diam. rolls mounted in a specially designed attachment to a hydraulic press. In this case, called open rolling, the wedges and spacing inserts between them are attached to the rolls by screws

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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000103310010-2

Rolling by wedges

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D040/D113

and may be exchanged and used in various combinations for different work. The force equations in open and closed rolling are included. Wedge rolling of forging blanks is economical because of (a) the very low waste of metal that has to be cut off from blanks rolled in strings, and (b) the very high wear resistance of wedge rolls in comparison to dies, high productivity of rolling, and automation of the rolling process. It has quickly replaced other methods of producing large balls in the ball bearing and cement industries. There are 7 figures.

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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000103310010-2

BALIN, A.F.; VALITOV, R.Kh.

Automatic forging rolls. Kuz.shtam. proizv. 3 no.1:18-23 Ja '61. (MIRA 14:1)

(Forging machinery) (Rolling mills)

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L 1899-66 EWT(m)/EPF(c)/EWP(j)/T RM

ACCESSION NR: AP5021550 UR/0286/65/000/013/0016/0016
547.584.07

AUTHOR: Veretenova, T. N.; Balin, A. I.

TITLE: Preparative method for alkyl or aryl vinyl terephthalates. Class 12, No. 172305

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 13, 1965, 16

TOPIC TAGS: monomer, alkyl vinyl terephthalate, aryl vinyl terephthalate

ABSTRACT: An Author Certificate has been issued for a preparative method for alkyl or aryl vinyl terephthalates involving the reaction of terephthaloyl chloride alkyl or aryl half ester with vinylating compounds. To widen the range of monomers suitable for preparing polymers having different physicomechanical properties, the vinylating compound used is chloromercuric acetaldehyde [sic]. (SM)

ASSOCIATION: none

SUBMITTED: 01Dec61 ENCL: 00 SUB CODE: MT, GC
NO REF SOV: 000 OTHER: 000 ATD PRESS: 4088

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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000103310010-2

~~BALIN, A.I.~~; RODIONOV, R.A.

Analysis of esters of terephthalic acid. Plast.massy no.2:24-26 '61. (MIRA 14:2)

(Terephthalic)

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000103310010-2"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000103310010-2

RODIONOV, R.A.; BALIN, A.I.; KOROSTYLEV, B.N.

Synthesis of polyethylene terephthalate. Khim.volok. no.6:11-12 '61. (MIRA 14:12)

1. Filial Vsesoyuznogo nauchno-issledovatel'skogo kinofotoinstituta, g. Shostka.

(Terephthalic acid)

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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000103310010-2

S/081/62/000/019/035/053
B101/B180

AUTHORS: Veretenova, T. N., Balin, A. I.

TITLE: Synthesis and polycondensation of new esters of terephthalic acid

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 19, 1962, 512, abstract 19P69 (Tr. Vses. n.-i. kinofotoin-ta, no. 43, 1961, 80 - 86)

TEXT: Terephthalic esters of the general formulas $XCH_2CH_2COOC_6H_4COOCH_2CH_2X'$ (where X = Cl, Br, I, CNS, CN, ONO_2, OCH_3, OC_2H_5, and X' = Cl, Br, I, F, CNS, CN, ONO_2, OCH_3, OC_2H_5) and $H_3COOCC_6H_4COOCH_2CH_2X$ (where X = Cl, Br, I, F) were synthesized to study the possibilities of the polycondensation of various β,β'-disubstituted diethyl terephthalates. The polycondensation of the therephthalic esters was conducted in the presence of $ZnCl_2$, $Zn(CH_3COO)_2$, Sb_2O_3, and Li_2CO_3. Polymers of methyl-β-chloroethyl terephthalate, of β,β'-dichloro-diethyl terephthalate, and of β,β'-dibromo-diethyl terephthalate were obtained. The esters synthesized, the

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Synthesis and polycondensation of new ... S/081/62/000/019/035/053
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catalysts used, and the characteristics of the resulting polymers are listed. [Abstracter's note: Complete translation.]

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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000103310010-2

VERETENOVA, T.N.; BALIN, A.I.

New method of preparing mercury-bis-acetaldehyde. Zhur.ob.khim. 33 no.6:2079 Je '63. (MIRA 16:7)
(Acetaldehyde) (Mercury compounds)

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000103310010-2"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000103310010-2

TULAYEV, A.; BALIN, B.

A useful manual ("Standard designs of pavements." Reviewed by A.Tulaev, B.Balin). Avt.dor. 23 no.1:25 Ja '60. (MIRA 13:5)

(Pavements)

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000103310010-2"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000103310010-2

BALINA, G.I.

Standard programs for solving systems of linear algebraic equations using the "Ural-1" electronic computer. Vych. tekh. i vop. prog. no.1:92-103 '62. (MIRA 16:6)

(Electronic computers)
(Programming (Electronic computers))

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000103310010-2"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000103310010-2

BALIN, G.P.

CA

1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

The refractive index of thallium vapor near the line λ = 5350.46 A. G. Balin and S. Mandelstam, Jr. *Physik. Z. Sowjetunion* 6, 159-62(1934).—From an expt. showing that the intensity near λ = 5350 A. of the light scattered from Tl vapor (550-600°) is less than $^1/_{100}$ of that from C_6H_6 it is concluded that $\mu - 1$ (μ = refractive index) for Tl vapor at λ = 5461 is at least 300-450 times smaller than the value reported by McClennan. The results are compatible with the much lower value of $\mu - 1$ found by Fermi and Rasetti. Morris Muskat

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ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000103310010-2

BALIN, G.P.

BC

a-1

PROCESSES AND PROPERTIES INDEX

Determination of the absorption coefficient, $K(\lambda_0)$, of the mercury resonance line, 2536·5 A., by the resonance scattering method. G. P. BALIN (Physikal. Z. Sowjetunion, 1935, 8, 93—99).—The theory of the method of Goos and Meyer (A., 1926, 334) for determining absorption coeffs. by resonance scattering is discussed and extended. If the density of the saturated vapour used is not too great, the vals. of $K(\lambda_0)$ are in good agreement with those obtained by other methods. A. J. M.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000103310010-2"

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BALIN, G.P.

DA

A 55

2021. **Broadening of the Hg Resonance Line 2536·7 Å with Increasing Density of Hg Vapour.** G. P. Balin. *Phys. Zeits. d. Sowjetunion*, 12. 6. *pp.* 701-728, 1937. *In German.*—The breadth of the Hg line 2536·7 Å is investigated by the absorption method at a pressure of 7·2 mm. As far as possible all factors are taken into consideration which might influence the form and breadth of the emission line including the quantitative influence of the diffusely reflected light and the additional broadening due to the finite thickness of the emitting layer. In calculating the absorption the superposition of the hyperfine structure components of the line is considered. The line breadth obtained from the observations is

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BALIN, G.P.

No. 1

3

Luminescence of phosphors with a layer structure of the crystal lattice. G. P. Balin. *Doklady Akad. Nauk S.S.S.R.* 66, 33-6(1949).—The positions (in mμ) of luminescence maxima, in excitation by the Hg line 366 mμ, were detd. for the following phosphors prepd. by fusion of the host-activator mixt. at 300-400° and rapid cooling; activator contents (in parentheses) are in mole %. At 20°, CdI_2 + $MnCl_2$ (3) (I) 1 bright band 665-685; CdI_2 + $MnCl_2$ (5) + ZnI_2 (5) (II), as above; CdI_2 (III) none; PbI_2 (IV) none; CdI_2 + $MnCl_2$ (9) + PbI_2 (1) (V) 670 and maybe (552); CdI_2 + $MnCl_2$ (3) + PbI_2 (3) (VI) bright 552, (595), 670; CdI_2 + PbI_2 (VII) bright 552, (618), 670; ZnI_2 (VIII) none; ZnI_2 + $MnCl_2$ (5) (IX) one band 546; (CdI_2 + ZnI_2, in equal amts.) + $MnCl_2$ (3), one band 500. At −195°, I, 3 weak bands 555, 600, 670; II, weak; III, 4 bands 470, 555, 600, 670; IV, 2 weak bands; V, 470, 546, 665-685; VI, bright 470, 546, 645-665; VII, bright 470, 552, (595), 645-665; VIII, none; IX, one weak band 546; X, one weak band 546. In the 1st group, I-II, the only bright band in the red, at 20°, belongs to Mn; at −195° the Mn band disappears and the Cd bands 555 and 600 appear. In the 2nd group, V-VII, the intensity of the red band increases at the lower temp., and new bands appear in the blue. The 3rd group, IX-X, has a band in the green, at both 20° and −195°. Photometry of the individual bands at the 2 temps. shows that, in IX the intensity of the band decreases at −195°, whereas in X it remains unchanged. From the fact that IV does emit at −195°, it follows that, in the 1st group absorption occurs in the host lattice, from where the energy is transmitted to the activator at 20°, but not at −195°. In the 2nd group, the red band at 20° belongs to Mn, the others to Cd; the intensities increase at −195°; PbI_2 does not affect the position of the bands, it only modifies their intensities. All of the above phosphors show an afterglow at −195°, none at 20°. The decay is hyperbolic. N. Thon

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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000103310010-2

24(4) SOV/51-6-6-3/34

AUTHOR: Balin, G.P.

TITLE: The Effect of Ultraviolet Irradiation and Temperature on Luminescence of CdI_2-$MnCl_2$ and CdI_2-$MnCl_2$-PbI_2 Phosphors (Vliyaniye ul'trafioletovogo oblucheniya i temperatury na lyuminestsentsiyu fosforov CdJ_2-$MnCl_2$, CdJ_2-$MnCl_2$-PbJ_2)

PERIODICAL: Optika i spektroskopiya, 1959, Vol 6, Nr 6, pp 760-763 (USSR)

ABSTRACT: The author found earlier (Ref 1) that CdI_2-$MnCl_2$ phosphor becomes darker after irradiation with 365 mμ. This darkening was accompanied by a weakening of luminescence proportional to the duration of ultraviolet irradiation. The present paper describes studies of the effects of ultraviolet irradiation and of temperature (acting separately and together) on the 675 mμ red luminescent band of CdI_2 phosphors activated with $MnCl_2$ and $MnCl_2$+PbI_2. After one hour of ultraviolet irradiation at 20°C the red emission fell considerably (Fig 1 curve 1) but it was partly re-established after 44 hours in darkness. Further irradiation (after these 44 hours) produced a similar effect, as shown by curve 2 in Fig 1. This decrease of the red emission intensity was always hyperbolic (Fig 2). The author studied the effect of ultraviolet irradiation on the following phosphors: CdI_2+1%$MnCl_2$, CdI_2+10%$MnCl_2$, CdI_2+20%$MnCl_2$,

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SOV/51-6-6-6/34

The Effect of Ultraviolet Irradiation and Temperature on Luminescence of CdI_2-$MnCl_2$ and CdI_2-$MnCl_2$-PbI_2 Phosphors

CdI_2+50%$MnCl_2$, CdI_2+3%$MnCl_2$+3%PbI_2, CdI_2+3%PbI_2. For five of them the results are shown in Fig 3. It was found that with increase of the $MnCl_2$ content from 1 to 10% (curves 1-3, Fig 3) the effect of ultraviolet radiation became smaller. To explain this effect the author assumes that the red emission of CdI_2-$MnCl_2$ is due to Mn and ultraviolet radiation destroys manganese emission centres. The fact that phosphors with larger amounts of $MnCl_2$ are less affected by ultraviolet radiation may be related to thermal motion and presence of a sufficient number of manganese ions which rapidly reform luminescent centres continuously destroyed by ultraviolet radiation. This was confirmed by studies of the temperature dependence of luminescence quenching by ultraviolet radiation (Fig 4). This figure shows that on increase of temperature the effect of ultraviolet radiation becomes smaller and practically disappears at 100°C. At this temperature practically no darkening of the phosphor can be produced by ultraviolet radiation. At still higher temperatures (150-250°C) the effect

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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000103310010-2

The Effect of Ultraviolet Irradiation and Temperature on Luminescence of CdI_2-$MnCl_2$ and CdI_2-$MnCl_2$-PbI_2 Phosphors SOV/51-6-6-6/34

of ultraviolet radiation reappears together with temperature quenching (see below). The author studied also the temperature dependence of the intensity of luminescence CdI_2+$MnCl_2$ phosphors. At low temperatures the red emission disappears completely but it increases with rise of temperature up to about 60°C and then falls again rapidly (at 300°C the red emission intensity is eleven times smaller than at 60°C). Such temperature dependence of emission was found in CdI_2 phosphors with 3, 10 and 50% of $MnCl_2$ (curve 1, 2 and 3 in Fig 5). In all these phosphors an almost linear fall of intensity with temperature is observed between 60 and 100-150°C. At higher temperatures this fall follows a more complex curve (Fig 5). The exponential rate of fall with temperature is observed only at temperatures between 100 and 250°C. There are 5 figures and 2 Soviet references.

SUBMITTED: July 15, 1958

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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000103310010-2

S/081/61/000/023/001/061
B108/B147

AUTHOR: Balin, G. P.

TITLE: Some problems in the luminescence of substances with schistose crystal lattice

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 23, 1961, 31, abstract 23B208 (Uch. zap. Mordovsk. un-t, no. 8, 1960, 158 - 178)

TEXT: The phosphors $CdI_2(MnCl_2)$, $CdI_2(MnCl_2+PbI_2)$, $ZnI_2(MnCl_2)$, $[ZnI_2+CdI_2]$ $(MnCl_2)$, and $CdI_2(MnCl_2+ZnI_2)$ are examined. Emission spectrum, afterglow of the phosphors, and law of quenching are studied. The nature of the luminescence centers of these phosphors is discussed.
[Abstracter's note: Complete translation.]

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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000103310010-2

BALIN, I.K., pomoshchnik sanitarnogo vracha

Organization of an extensive active sanitary group for the assumption of some control functions. Fel'd. i akush. 28 no.11:40-42 N'63 (MIRA 16:12)

1. Iz Krasnogorskoy sanitarno-epidemiologicheskoy stantsii, Kamensk-Ural'skiy, Sverdlovskaya oblast'.

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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000103310010-2

DALIN, L.V.

6(7);9(3) p.8.

PHASE I BOOK EXPLOITATION SOV/2666

USSR. Ministerstvo svyazi. Tekhnicheskoye upravleniye

Elektronnaya fototelegrafiya; informatsionnyy sbornik (Electronic Facsimile Systems; Information Handbook) Moscow, Svyaz'izdat, 1958. 132 p. (Series: Tekhnika svyazi) 9,000 copies printed.

Resp. Ed.: B. Z. Kisel'gof; Ed.: L. S. Salitan; Tech. Ed.: K. G. Markoch.

PURPOSE: This collection of articles is intended for specialists in facsimile systems.

COVERAGE: This collection summarizes information on Soviet and non-Soviet developments in electronic facsimile systems and equipment. Results of investigations in this field at the laboratory of the NIITS (Scientific Research Institute of City and Rural Telephone Service) are presented. These investigations were connected with a project for the adaptation of regular telephone channels, wideband channels and direct communication links for facsimile transmission in place of the previously used special facsimile transmission channels.

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Electronic Facsimile Systems (Cont.) SOV/2666

The necessity of replacing drum scanning by planar and of introducing several improvements in the transmitting and receiving equipment led to intensified research in this field. Thus emerged the idea of using cathode-ray tubes in those systems similar to the ones used in television. References follow each article.

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Foreword 3

Yurchenko, V. P. Problems in Electronic Facsimile Systems 6

The author describes the principles in the design of analyzing and sythesyzing devices and enumerates the requirements of cathode-ray tubes and special features of their performance for facsimile systems. The problems of designing picture elements, the recording system and methods of securing stability of operation are also described. The author reveals some deficiencies of separate technical solutions, studies methods for improving them and discusses some theoretical problems in the development of a facsimile system. He also presents a brief history of the problem with some details on

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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000103310010-2

Soviet accomplishments since 1950. The following mentioned institutions have made contributions in research on electronic scanning: The Leningrad Electrical Engineering Institute of Communications under the direction of P.V. Shmakov, the Leningrad branch of NIITS, the Odessa Electrical Engineering Institute and the Scientific Research Institute of the Ministry of Communications. There are 27 references: 17 Soviet, 7 English and 3 German.

Yurchenko, V. P. The Resolving Power of a Facsimile System With Electronic Scanning 47

The author presents details of investigations on the resolving power of cathode-ray tubes taking into consideration a required increase in brightness intensity necessary in documentary reproduction of images. Similar data, according to the editors, have been published for the first time and may be of considerable interest to specialists for facsimile, television

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and vacuum tube techniques. The author discusses the evaluation of the resolution of a facsimile system which uses experimental cathode-ray tubes of the 18LK9Zh, 18LK9A and other types, and he defines the requirements for the size of the spot on the tube screen. A schematic diagram of the experimental layout is presented and the methods and results of measurements are given. There are 6 Soviet References.

Karpeshko, Yu.Ye. Half-tone Distortions in Facsimile Systems With Electronic Scanning 67

The author examines the half-tone characteristic of the facsimile system. This characteristic is determined by the characteristic of the the analysis and synthesis of half-tones and by the amplitude characteristic of the electric channel. The study of such characteristics for various kinds of analyzing and synthetizing devices is well described in technical literature. However, according to the author, the characteristic of the synthesis of half-tones in facsimile systems with electronic scanning of the image, where the role of light modulator is accomplished by a cathode-ray tube, has not yet been adequately studied. The author investigates the half-tone characteristic of the system, assuming a linear amplitude characteristic of the communication channel. The author compares favorable

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experimental results with analytical investigation and presents results in two tables and 4 diagrams. There are 4 Soviet references.

Svetlov, N. I. Methods of Elimination of Perpendicular Streaks in the Half-tone Image Received With the Electronic Single-Scan Line Method 83

The author discusses methods for the elimination of parasitic perpendicular streaks appearing in the half-tone image of the electronic facsimile system. These streaks are caused by the irregular luminescence of the luminophor along the scanning trace, resulting from nonuniformity of the structure or composition of the luminophor and also from defects in the glass of the tube screen. Since the technology of producing luminophores has not been perfected, the author looks for methods for eliminating the parasitic streaks. Among the electromechanical methods, he describes the "Scanning device" submitted by him in 1954, the method of rotating the cathode-ray tube, submitted in 1954 by P. A. Yunakov and the electronic-mechanical vertical sweep method,

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submitted in 1954 by V. P. Yurchenko. A method of cylindrical optics was submitted in 1955 by Ye. A. Nikitin and the author (Author's certificate No. 105386). The author presents an example of calculating the quantity of illumination in utilizing cylindrical optics and auxiliary electronic scanning. He concludes that the use of the optical and electromechanical methods brings several improvements. However, some negative characteristics result from these methods, the elimination of which may be affected by using a special tube with a scanning spot. This tube was submitted for an Author's Certificate by V. P. Yurchenko, N. I. Svetlov, and Ye. A. Nikitin on February 18, 1956. The author claims that this tube is satisfactory in operationing conditions and preliminary tests made at the NIITS gave favorable results. In an appendix the author gives the derivation of formulae for the calculation of cylindrical lenses, according to data submitted by V. V. Khvalovskiy. There are 3 Soviet references.

Balin, L. N., L. V. Afanas'yeva. Electrophotographic Method of Obtaining Images 104

The authors describe the newly developed technique of electrophotography, which combines principles of regular photography with the properties of some semiconductor photocells. They note

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the deficiencies of this new technique and point out necessary improvements. There are 13 references; 6 Soviet and 7 English. No personalities are mentioned.

Yunakov, P. A. Selection of a Scanning Method for an Electronic Fascimile System 118

The author speaks about the difficulties in affecting strict linearity of scanning in facsimile systems, which is more difficult at facsimile scanning frequencies lower than those used in television. Nonlinear distortions result from various sources. The author describes methods used at the laboratory of the NIITS to affect scanning linearity. Best results were obtained with the following types of cathode-ray tubes of Soviet make: 18LK2B, and two experimental types 18LGZh and 18LK9A, all of which have magnetic focusing and deflection. There are 7 references; 6 Soviet and 1 English. No personalities are mentioned.

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Card 7/7

JP/fal
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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000103310010-2

AUTHOR: Balin, L.N., Senior Engineer SOV-111-58-9-9/30

TITLE: A New Method of Recording Images in Facsimile Telegraphy (Novyy sposob zapisi izobrazheniy v fototelegrafii)

PERIODICAL: Vestnik svyazi, 1958, Nr 9, pp 11 - 12 (USSR)

ABSTRACT: The author describes the xerography method of recording images in facsimile telegraphy. This method does away with the need for liquid reagents and makes use of the properties of some photo-semi-conductors. At the receiving end, the reconstituted image is focussed on to the photo-semi-conductor film and produces various surface charges, according to the intensity of the light at any given point. If powder is sprinkled over the film's surface it will be attracted to the charged portions and an image will be reproduced. If the powder is given a charge opposite to that of the film this process will be intensified. The constitution of the powder "developer" is given. For finer reproduction finer powder (soot) must be used. Best results were obtained by coating a metal film with selenium, or paper with zinc oxide. There are two variants of the method: 1) recording onto a metal drum coated

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SOV-111-58-9-9/30

A New Method of Recording Images in Facsimile Telegraphy

with selenium and subsequent transfer of the image onto paper, 2) direct recording on special electro-photographic paper. Details of both methods are given. There are 3 schematic diagrams.

ASSOCIATION: NIITS

1. Facsimile communications systems--Equipment 2. Facsimile communications systems--Operation 3. Recording devices--Applications

Card 2/2

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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000103310010-2

BALIN L.N.
p.2.

SOV/77-4-2-15/18

23(4) 23 (5)

AUTHOR: Lyalikov, K.S.

TITLE: Successes of Soviet Electrophotography (Uspekhi sovetskoy elektrofotografii) A Scientific and Technical Conference on Questions of Electrography (Nauchno-tekhnicheskaya konferentsiya po voprosam elektrografii)

PERIODICAL: Zhurnal nauchnoy i prikladnoy fotografii i kinematografii. 1959, Vol 4, Nr 2, pp 149-152 (USSR)

ABSTRACT: This is an account of a scientific and technical conference on electrography, the first to be held in the Soviet Union and evidently in the world. It was organized in Vil'nyus on December 16-19, 1958 by the Soviet narodnogo khozyaystva Litovskoy SSR (Council for National Economy of the Lithuanian SSR), the Gosudarstvennyy nauchno-tekhnicheskiy komitet Soveta ministrov Litovskoy SSR (State Scientific and Technical Committee of the Council of Ministers of the Lithuanian SSR) and the Nauchno-issledovatel'skiy institut elektrografii (Scientific Research Institute of Electrography). The conference, attended by over 300 scientific workers, was opened by the Deputy Chairman of the Council for National Economy of the Lithuanian SSR P.A. Kul'vets, after which the director of the Institute for Electrography, I.I.Zhilevich, reviewed the state and prospects for development of electrography in the USSR. He stated that research in this field should be carried out along the following lines: a) a search for new photo-active materials with high dark resitance; b) physical research into the internal photoeffect; c) development of photosemiconductor layers; d) development of the theory of the electrophotographic process. K.S. Lyalikov (speaking also for O.G. Popova) gave a report in which he suggested determining the light sensitivity of electrophotographic layers in GOST units. N.Z. Plavina (speaking also for I.I.Zhilevich, L.I.Nyun'ko, N.N.Markevich, P.I. Kalinauskens and O.M. Suveyzdis) reported on some research on the sensitization of a semiconductor in electrophotographic layers. V.M. Fridkin gave a report on highly sensitive electrophotographic layers and an electrophotocopying device, and reviewed the formation process of the latent electrophotographic image on the basis of the zonal theory. He also described the design of an electrosensitometer for determining sensitivity by the relaxation period of a charge on the surface of the layer, and the circuit of an electrophotographic copying device. Anfilov finished describing the latter and then spoke on the mechanics and kinetics of the development of the latent electrophotographic image in liquid developers.

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SOV/77-4-2-15/18

Successes of Soviet Electrophotography; A Scientific and Technical Conference on Questions of Electrography

K.M. Vinogradov described some of the features of the cascade and liquid methods of electrophotographic development. Yu.Ye. Karpeshko devoted his report to the criterion of light sensitivity of the elctrophotographic process. After the reports, a discussion took place on methods of determining the light sensitivity of electrophotographic layers. A.N. Chernyshev spoke on the prospects of developing polygraphic processes using electric and magnetic forces. O.V. Gromov (speaking also for I.I. Zhilevich, A.A. Sukhiy, V.A. Gordeyeva, A.S. Pauzha and Yu. I. Kevalaytis) reported on the development of elctrophotographic reproducing equipment. A.S. Pauzha (speaking also for I.I. Zhilevich, A.S. Borisovich, N.M. Gal'vidiks and M.I.Rautkauskas) reported on the use of electrographic methods in recording oscillographs and other recording instruments. V.P. Yurchenko (speaking also for L.K.Zalin) spoke on the possibility of electrophotographically recording images from electron-beam tubes. L.S. Korol' (speaking also for N.M. Markevich, T.I. Kozlovskaya, B.I. Kalinauskene, N.K. Naynens, I.I. Zhilevich and B.A. Montrimas) gave a detailed description of laboratory and machine methods of producing photosemiconductor papers (zinc oxide was used). A.A. Sukhiy (speaking also for I.I. Zhilevich, O.V. Gromov, V.A. Gordeyev , N.V. Fedotov and T.N. Ger) described a laboratory and industrial machine for producing photosemiconductor papers. T.A. Shishkina (speaking also for Ya.A. Ckanan) reported on a method of examining electrophotographic materials using an a/c bridge. S.I. Khotyanovich (speaking also for A.I. Gikens and Z.S. Zhileykens) spoke on developing materials for electrophotography and ferromagnitography, including developers giving a "reverse" image. B.I. Tikhonov reviewed methods of measuring the electrostatic potentials of electrophotographic layers, stressing that the oscillating electrode should not be placed above a layer with varying potential as this causes self-discharge. E.V. Krukovskis (speaking also for R.G.Gorevoy, A.V.Ozipov and Ye. S. Cheyfets) spoke on the practice of producing velveteen papers in an electrostatic field, and showed samples produced by the Grigishskaya paper factory. Ye.L. Kepirovskiy then gave a historical review of the development of electrographic methods in which he paid tribute to the work of the Scientific Research Institute of Electrography in Vil'nyus and the Institut poligraficheskogo mashinostroyeniya (Moskva)-(Polygraphic Machine-Building Institute (Moscow)). Debates were then held

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on methods of measuring the potential of charged electrophotographic layers; the vibration pick-up most-used was shown in B.I. Tikhonov's report to be not always accurate. S.G.Grenishin stated that the bad influence of the oscillating electrode can be eliminated if the electrode probe above its surface is fixed and the pick-up is connected to it by a shielded cable. In the debate on Ye.L. Nemirovskiy's report it was stated that the research of Academicians A.N. Terenin and Ye.K. Putseyko should be considered as the basis of all work on electrophotographic papers with ZnO, as they were the first to show the possibility of optical sensitization of the internal photoeffect in ZnO. N.M.Gol'vidis then gave a report on the depositing of charges by a corona discharge. A.I. Kaniaskas and A.P. Yanulis reviewed some of the results of the use of electrographic methods in radiography. L.I. Nyun'ko (speaking also for I.I. Zhilevich, I.Z. Plavin, Yu.K. Vishchakas and Yu.A.Zibuts) reported on relaxation processes in semiconductor layers, using a vibration electrometer. Yu.K.Vishakas gave a report on research on some physical properties of the polycrystalline layers of selenious cadmium. M.P. Mikalkyavichyus spoke on some of the photoelectric properties of Sb_2S_3 and Sb_2Se_3: the absorption maximum of the latter is about 900 m μ. S.M. Meyman reported on methods of obtaining selenium light-sensitive layers, including sublimation and thermal treatment; it was also found that the sensitivity of the layers increased after storage for 1.5 to 2 months at room temperature. P.M. Podvigalkin (speaking also for S.G.Grenishin) spoke on research into the electrical properties of electrophotographic layers of amorphous selenium and powdered zinc oxide. N.K. Shikorov (speaking also for A.M. Taurnaytis) discussed the production of selenium layers and some of their properties. Finally the following reports on ferromagnetography were delivered; 1) B.Ya. Kaznacheyev, V.M.Zhogina, "Electrodeposition of Magneto-hard Alloys with Given Magnetic Characteristics" 2) M.T.Arutyunov, "Visualization of Magnetic Oscillograms by the Ferrographic Method" 3) V.T.Patrunov, "Ferrographic Recording of Facsimile Images" 4) I.I.Zhilevich, I.I. Gikis, B. Ye. Buchek, I.I. Kaynise, A.K.Kirhis, "Mock Experiments in Non-Pressure Ferromagnetic Printing". There was also an exhibition showing the work of the Electrographic Institute. The most important conclusion of the conference was that a solid approach had been made to the possibility of wide technical use of the methods of electrography. It was considered that although work in this field actually started only in 1955-56 it has covered as much ground as the USA in 10 years. While admitting that it was easier to reproduce results already achieved than to be the first to arrive at them, the conference observed that the Americans took good care that no important information appeared in the literature available.

Card 10/10

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KONOVALOV, I., doktor tekhn.nauk; PARFENOV, A.; BALANIN, V., kand.tekhn.-nauk; SHCHERBAKOVA, R., kand.tekhn.nauk; BAKHTIN, A.; BALIN, N.

Measures for preventing ice jams on the lesser and greater Northern Dvina. Rech. transp. 21 no.2:44-46 F '62. (MIRA 15:3)

1. Predsedatel' Kotlasskogo ispolnitel'nogo komiteta deputatov trudyashchikhsya (for Parfenov). 2. Nachal'nik Kotlasskogo tekhnicheskogo uchastka Severnogo basseynovogo upravleniya puti (for Bakhtin). 3. Glavnyy inspektor Kotlasskogo tekhnicheskogo uchastka (for Balin).

(Northern Dvina River--Ice on rivers, lakes, etc.)

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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000103310010-2

KIRILLOV, I. Ye., inzh.; BALIN, N. M., inzh.

New regulations for the operation of heating boiler units. Bezop. truda v prom. 6 no.9:13-14 S '62. (MIRA 16:4)

1. Upravleniye Severo-Zapadnogo okruga Gosudarstvennogo komiteta pri Sovete Ministrov RSFSR po nadzoru za bezopasnym vedeniyem rabot v promyshlennosti i gornomu nadzoru.

(Steam heating)

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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000103310010-2

ACCESSION NR: AT4008632 S/3040/63/000/002/0105/0115

AUTHORS: Baluyev, A. N.; Bratchikov, I. L.; Balina, G. I.; Igolkin, V. N.; Kovrigin, A. B.; Marty*nenko, B. K.; Poroshin, B. S.; Surin, S. S.

TITLE: Compiling routine for an electronic digital computer using input language ALGOL

SOURCE: Leningrad. Universitet. Kafedra vy*chislitel'noy matematiki i vy*chislitel'ny*y tsentr. Vy*chislitel'naya tekhnika i voprosy* programmirovaniya, no. 2, 1963, 105-115

TOPIC TAGS: digital computer, digital computer compiler, ALGOL computer language, computer language, complex algorithm, computer programming, machine language, binary code computer, computer input language, ALGOL

ABSTRACT: The input language and the algorithm of the programming

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ACCESSION NR: AT4008632

program developed in the Computation Center of Leningradskiy Universitet (Leningrad University), which is an abbreviated and modified variant of ALGOL-60, is described. The language differs from ALGOL in that the program as a whole constitutes one block and there are no descriptions of types; a separate class of identifiers is used for each class. The operators (particularly the procedure operators) and the description of the procedures are simplified and standardized. The input language itself and the operating principles of the programming program are described in detail and the algorithm for solving a system of linear algebraic equations of 50th order by the Gauss method, with choice of the principal element, is used as an example. Orig. art. has: 28 formulas.

ASSOCIATION: Leningradskiy gosudarstvenny*y universitet (Leningrad State University)

SUBMITTED: 15May62 DATE ACQ: 23Jan64 ENCL: 00

SUB CODE: CP NO REF SOV: 002 OTHER: 000

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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000103310010-2

BARSKAYA, Ye.I.; BALINA, N.V.

Agglutination of chloroplasts in the leaves of Elodea.
Fiziol. rast. 12 no.3:542-545 My-Je '65. (MIRA 18:10)

1. Institut fiziologii rasteniy imeni K.A. Timiryazeva AN SSSR, Moskva.

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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000103310010-2

USSR/Physical Chemistry - Electrochemistry. B-12

Abs Jour: Referat. Zhurnal Khimiya, No 3, 1958, 7315.

Author : T.N. Balina, A.I. Krasil'shchikov.
Inst : State Scientific Research and Planning Institute of Nitrogen Institute.
Title : Kinetics of Electrode Processes under Pressure.

Orig Pub: Tr. Gos. n.-i. i proyektn. in-ta azotn. prom-sti, 1954, vyp. 3, 175-192.

Abstract: See RZhKhim, 1955, 31327, 31334.

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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000103310010-2

VOLOSHIN, N.Ye., inzh.; RESHETNYAK, Yu.V., inzh.; BERKOVICH, I.M., inzh.; DERBASOV, T.M., inzh.; BALINCHENKO, I.I., inzh.

Sudden outbursts of sand rocks in the "Shchsglovka-Glubokaya" mine. Shakht.stroi. 6 no.9:16-19 S '62. (MIRA 15:9)

1. Opornyy punkt Makeyevskogo nauchno-issledovatel'skogo instituta po bezopasnosti rabot v gornoy promyshlennosti, g.Donetsk (for Voloshin). 2. Shakhtostroitel'nyy trest Makeyevskogo rayona, Donbass (for Reshetnyak, Berkovich). 3. Makeyevskiy nauchno-issledovatel'skiy institut po bezopasnosti rabot v gornoy promyshlennosti (for Derbasov). 4. Opornyy punkt Makeyevskogo nauchno-issledovatel'skogo instituta po bezopasnosti rabot v gornoy promyshlennosti tresta Oktyabr'ugol' (for Balinchenko).

(Donets Basin--Rock pressure)
(Mining engineering)

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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000103310010-2

ZHEBIN, A.I.; BALINCHENKO, I.I.; KARAGODIN, L.N., kand.tekhn.nauk; SIMONOV, A.A., inzh.

Article "Safety measures in baring coal intercalation." Bezop. truda v prom. 6 no.2:21-23 F '62. (MIRA 15:2)

1. Pomoshchnik glavnogo inzh. shakhty "Kommunist-Novaya" tresta Oktyabr'ugol' (for Zhebin). 2. Nachal'nik opornogo punkta Makeyevskogo nauchno-issledovatel'skogo instituta po bezopasnosti rabot v gornoy promyshlennosti pri shakhte "Kommunist-Novaya" tresta Oktyabr'ugol' (for Balinchenko). 3. Makeyevskiy nauchno-issledovatel'skiy institut po bezopasnosti rabot v gornoy promyshlennosti (for Karagodin, Simonov).

(Coal mines and mining--Safety measures)
(Shchukin, V.R.)

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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000103310010-2

BALINGER, Antal

CA

9

Alloy for making artificial teeth. Antal Bálinger. Hung. 128,333, Nov. 15, 1941. An alloy contg. Al 60-90, Mg 6-40, Mn 0.1-10.0, and Si 0.1-1.0% is specified. István Finály.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

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1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

A

F BALINOV, I. M.

4619. BEHAVIOUR OF MINE ROOF DURING OPERATION OF COAL PLANES.
Balinov, I.N. (Ugol (Coal), 1949, (9), 25-27). (L).

COMMON ELEMENTS

MATERIALS INDEX

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000103310010-2

BALINOV, A.V., insh.

The K-2,5-10 truck-mounted crane is being prepared for release. Stroi.i dor.mashinostr. 4 no.12:16-17 D '59.

(Cranes, derricks, etc.) (MIRA 13:3)

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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000103310010-2

IVANISHVILI, N.N.; BALINOV, I.M.

KU-2 shuttle-type mining machine unit. Ugol' Ukr. 4 no.10:34-35 O '60. (MIRA 13:10)

1. Nachal'nik shakhty "Talovskaya" No.1 tresta Krasnodonugol' (for Ivanishvili). 2. Glavnyy konstruktor shakhty "Talovskaya" No.1 tresta Krasnodonugol' (for Balinov).
(Coal mining machinery)

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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000103310010-2

58/49T94

USSR/Mining
Coal
Mining Machinery

Jun 49

"Data on Experiments in Introducing Coal Scrapers in the Donets Coal Fields," A. L. Turich, Engr, M. I. Balinov, Voroshilovgrad Constr Offic No 2, "Gidrouglemash," 6 pp

"Ugol'" No 6 (279)

Discusses two variations of factory-made coal-scraper units US-2 (welded) and US-3 (cast) developed in 1946 by Voroshilovgrad Constr Office of "Gidroughle-mash." They were later manufactured by Voroshilovgrad

[redacted]

58/49T94

USSR/Mining (Contd)

Jun 49

Factory imeni Parkhomenko and tested in 1947 at shaft No 5 of Voroshilovugol' Trust and at shaft No 7 of Bryanskugol' Trust. Gives complete description of mechanical parts of coal scraper and their test results and advantages. Ten illustrations and four tables

[redacted]

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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000103310010-2

LOPATIN, P.V.; SIDORKOV, A.N.; BALINOV, V.V., provisor.

The work of pharmacists should be more efficiently utilized in drugstores. Apt.delo 3 no.2:47-48 Mr-Ap '54. (MLRA 7:4)

1. Studenty V kursa Moskovskogo farmatsevticheskogo instituta.
(Drugstores)

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000103310010-2"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000103310010-2

BALINSCHI, Irina; MIHALACHE, G.

Studies on the microbiological fight against Lymantria dispar L. caterpillars with Bacillus thuringiensis Berliner. Studii cerc. biol. s zool 16 no.5:457-466 '64.

1. Section of Microbiology, Institute of Research on Cereals and Industrial Plants, Fundulea, Bucharest District, and the Section of Forest Protection, Forest Research Institute, Bucharest.

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000103310010-2

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000103310010-2

BALINSKA, H.; LEWINSKA, K.; ROMANIUK, A.; WYRWICKA, W.

The effect of lesions of the medial hypothalmus on internal inhibition in the alimentary conditioned reflexes type II. Acta biol exper 21:188-197 '61.

1. Physiological Laboratory, University, Lodz and Department of Neurophysiology, Nencki Institute of Experimental Biology, Warsaw.

(HYPOTHALAMUS)

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000103310010-2

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000103310010-2

BALINSKA, H.; LEWINSKA, K.; ROMANIUK, A.; WYRWICKA, W.

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1. Z Zakladu Fizjologii Zwierzat Uniwersytetu Lodzkiego w Lodzi Kierownik: doc. dr W. Wyrwicka.
(REFLEX CONDITIONED) (HYPOTHALAMUS physiol)

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(NUTRITION) (PHYSIOLOGY) (HUNGER)

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(HYPOTHALAMUS physiol)
(REFLEX CONDITIONED)
(FOOD)

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