LYAKHOVSKIY, D.N., kand.tekhn.nauk; ANISIMOVA, Ye.N., inzh.

Aerodynamics of square-section chamber furnaces with tangential arrangement of burners. Energomashinostroenie 5 no.2:16-22 F '59. (MIRA 12:3)

(Furnaces) (Aerodynamics)

LYAKHOVSKIY, D. N.

"On the Distribution of the Intensity of Turblent Velosity Pulsations in Streams."

Report submitted for the Conference on Heat and Mass Transfer, Minsk BSSR, June 1961.

LYAKHOVSKIY, D.N., kand. tekhn. nauk, nauchn. red.; DESHALYT, M.G., ved. red.; YASHCHURZHINSKAYA, A.B., tekhn.red.

[Theory and practice of gas combustion] Teoriia i praktika szhiganiia gaza. Pod red. D.N.Liakhovskogo. Leningrad, Izd-vo "Nedra." Vol.2. 1964. 626 p. (MIRA 17:4)

ACC NR: AR6026067 SOURCE CODE: UR/0124/66/000/001/B049/B049

AUTHOR: Lyakhovskiy, D. N.

41

TITLE: Turbulence and mixing of air jets

SOURCE: Ref. zh. Mekhanika, Abs. 1B347

REF SOURCE: Teoriya i raschet ventilyats. struy, L., 1965, 107-135

TOPIC TAGS: gas jet, turbulent jet, jet flow, flow analysis

ABSTRACT: Data are given from an experimental investigation of the intensity of turbulence in the longitudinal component of pulsation velocity in straight-flow and twisted turbulent jets. / The experiments were done at low velocities at distances of 2.5, 10 and 20 diameters from the nozzle cutoff. The pulsation characteristics in jets of this type are given as well as theoretical values for the length of the mixing path determined by dividing the root-mean-square value of the pulsation velocity by the transverse gradient of the average velocity. A. S. Ginevskiy. [Translation of abstract]

SUB CODE: 20

Card 1/1 jb

MOCHALOV, V.A.; MATYUSHCHENKO, D.D.; KRIVITSKIY, A.A.; GLEZER, G.N.; OPARIN, I.M.; KHEYMAN, E.L.; SMETNEV, N.N.; EPSHTEYN, A.L.; GUSEV, B.Ya.; LEYKIN, L.P.; MARCHENKO, G.M.; FISHKOV, V.G.; SAPROVSKIY, S.V.; LYAKHOVSKIY, I.I.; SMELYAKOV, Ye.P.; VAYNTRAUB, D.A.; BUDYLIN, M.M.; NOTKIN, Ye.M.; KUR, G.Ye.; ARONSHTEYN, N.A.; SUKHAREV, V.I.; VINOGRADOV, K.N.; BOBROVSKIY, N.S.

Innovators' certificates and patents. Mashinostroenie no. 2: 103-109 Mr-Ap '64. (MIRA 17:5)

LYAKHOVSKIY, L.K., inzhener.

Determining the basic dimensions of the steam cylinders of direct-acting twin steam-pumps. [Trudy] MVTU no.56:92-109 '55.(MLRA 9:6)
(Steam engines--Cylinders)

LYAKHOVSKIY, L.K.

112-3-5327D

Translation from: Referativnyy Zhurnal, Elektrotekhnika, 1957, Nr 3, p. 39 (USSR)

AUTHOR: Lyakhovskiy, L. K.

TITLE: Internal Heat Balance of a Direct-Acting Steam Pump (Vnutrenniy teplovoy balans parovogo pryamodeystvuyushchego nasosa)

ABSTRACT: Bibliographic entry on the author's dissertation for the Degree of Candidate of Technical Sciences, presented to the Moscow Higher Technical School (Mosk. vyssh. tekhn. uch-shche), Moscow, 1956.

ASSOCIATION: Moscow Higher Technical School (Mosk. vyssh. tekhn. uch-shche)

Card 1/1

LYAKHOVSKIY, L.K., kand.tekhn.nauk

Analysis of thermal losses in the steam cylinder of a direct-acting pump. [Trudy] MVTU no.100:120-147 '60. (MIRA 14:4)
(Pumping machinery) (Steam engines)

SHCHERBAK, G.S.; LYAKIN, A.I.

Designing percussion drills with electric drives. Trudy Inst. gor. dela AN Kazakh. SSR 11:78-90 '63. (MIRA 16:8)

(Boring machinery--Electric driving)

POPOV, K.N., kand.tekhn.nauk; LYAKHOVSKIY, L.K., kand.tekhn.nauk

Testing direct-acting steam pumps manufactured by the Svessa Plant. [Trudy] MVTU no.100:99-117 '60. (MIRA 14:4)
(Svessa--Pumping machinery) (Steam engines)

LYAKHOVSKIY, Leonid Markovich;POSTERNYAK, Ye.F., inzh., red.;
SHILLING, V.A., red. izd-va; BELOGUROVA, I.A., tekhn. red.

[Modernization of the 1336 and 1336M turret lathes]Moderni-
zatsiia tokarno-revol'vernykh stankov 1336 i 1336M. Lenin-
grad, 1962. 17 p. (Leningradskii dom nauchno-tekhnicheskoi
propagandy. Obmen peredovym opytom. Seriia: Mekhanicheskaia
obrabotka, no.13) (MIRA 15:10)
(Lathes--Technological innovations)

LEBEDOVSKIY, Mstislav Stepanovich; LYAKHOVSKIY, L.M., inzh., red.; FREGER, D.P., red.izd-va; GVIRTS, V.L., tekhn. red.

[Design of vibrating hopper feed mechanisms] Konstruirovanie vibratsionnykh bunkernykh pitatelei. Leningrad, 1963. 20 p. (Leningradskii dom nauchno-tekhnicheskoi propagandy. Obmen peredovym opytom. Seriia: Mekhanicheskaia obrabotka metallov, no.3) (MIRA 16:8)
(Feed mechanisms--Design and construction)

LEBEDOVSKIY, Mstislav Stepanovich; LYAKHOVSKIY, L.M., inzh., red.; FREGER, D.P., red.izd-va; GVIRTS, V.L., tekhn. red.

[Construction of vibrating hopper feeders] Konstruirovanie vybratsionnykh bunkernykh pitatelei. Leningrad, 1963. 20 p. (Leningradskii dom nauchno-tekhnicheskoi propagandy. Obmen peredovym opytom. Seriia: Mekhanicheskaia obrabotka metallov, no.3) (MIRA 16:5)

(Metalwork--Equipment and supplies)
(Feed mechanisms)

LYAKHOVSKIY, Mikhail Isakovich; SOLYANOVA, N.M., redaktor; RAKHMATULLIN, F., tekhnicheskiy redaktor

[A collective farm of leading cotton growers] Kolkhoz masterov vysokikh urozhaev khlopka. Tashkent, Gos. izd-vo UzSSR, 1956. 19 p. (MLRA 9:10)

(Cotton growing)

L 08767-67 EWT(1)/EWT(m)/EWP(t)/ETI IJP(c) JD

ACC NR: AP6029134 SOURCE CODE: UR/0048/66/030/006/1062/1064

AUTHOR: Rodichev, G.M.; Lyakhovskiy, N.P.; Rodichev, G.M.

ORG: Krasnoyarsk Polytechnic Institute (Krasnoyarskiy politekhnicheskiy institut)

TITLE: Investigation of magnetic moment rotation in Permalloy films [Report, All-Union Conference on the Physics of Ferro- and Antiferromagnetism held 2-7 July 1965 in Sverdlovsk]

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v. 30, no. 6, 1966, 1062-1064

TOPIC TAGS: ferromagnetic film, permalloy, pulsed magnetic field, magnetic coercive force, magnetic anisotropy, MAGNETIC MOMENT

ABSTRACT: The authors have investigated pulsed switching in Permalloy films of the magnetization from the easy direction in the plane of the film to the hard direction, also in the plane of the film. Two types of film were investigated: in the type 1 films quasistatic switching from the easy to the hard direction was realized without domain wall displacement, and without formation of domains at all when the magnetization was saturated; in the type 2 films domain wall displacement occurred during quasistatic switching but accounted for less than 10% of the total magnetization change. In all the films the coercive force was nearly equal to, and in some of them it was greater than, the anisotropy field. The different treatments required to produce type 1 and type 2 films are not described. In the present experiments switching

Card 1/2

was accomplished with pulses having rise times of less than 2 nanosec. The switching times in the type 1 films were too short to measure, but rough estimates gave values for the damping constant α in the equation of T.L.Gilbert (Phys. Rev., 100, 1243 (1965)) that were of the order of magnitude of those obtained by the resonance method. In the type 2 films the switching time increased with increasing switching field, reached a maximum (of about 100 nanosec in at least one 3300 Å thick film) at a switching field approximately equal to the anisotropy field, and decreased with further increase of the switching field. It is suggested that the increase in switching time with increasing switching field may be due to inertial properties of the magnetization and to nonuniformity of the magnetization rotation occasioned by the large angular dispersion of the local easy axes. Orig. art. has: 2 figures.

SUB CODE: 20 SUBM DATE: 00 ORIG. REF: 002 OTH REF: 001

LYAKHOVSKIY, S.B.

Theory of the working process of a sandslinger head. Lit.proizv. no.2:14-15 Mr-Ap '54. (MLRA 7:4) (Founding)

LYAKHOVSKIY, S. B.

USSR/Miscellaneous

Card 1/1 : Pub. 61 - 6/23

Authors : Lyakhovskiy, S. B.

Title : Problems of the theory of the working process of the sand-slinger head

Periodical : Lit. proizv. 4, 15-17, July 1954

Abstract : A step-by-step description of the working process of a sand-slinger used in foundry plants, is presented. The construction of the blade of a sand-slinger head and its function in conveying the charge from stage to stage, are explained. The forces affecting the batch during standstill of the sand-slinger blade, are listed. Five USSR references (1949-1950). Graphs.

Institution : ...

Submitted : ...

LYAKHOVSKIY, V.N., kand.tekhn.nauk; BERESTOVENKO, K.M., inzh.; ZAYTSEV, R.V., inzh.; KIZ', A.M., inzh.; SIBIRKO, A.N., inzh.

Choosing the optimum red line over difficult terrain using electronic digital computers. Transp. stroi. 12 no.2:42-43 F '62. (MIRA 15:7)
(Electronic digital computers)

KLYUCHNIKOVA, L.A.; LYAKHTMAN, D.L.; TSEYTIN, G.Kh.

Calculation of the vertical wind profile in the surface boundary layer. Trudy GGO no.167:3-28 '65. (MIRA 19:1)

LYAKIN, V.

Publicizing up-to-date practice is the most important task of our trade unions. Sov.profsoiuzy 16 no.15:12-14 Ag '60. (MIRA 13:8)

(Trade unions) (Efficiency, Industrial)

LYAKIN, V.F.; TETEREVENKOV, V.V., starshiy nauchnyy sotrudnik

Efficiency of advancing the stope with various orders of working steep seams. Ugol' Ukr. 7 no.6:11-13 Je '63. (MIRA 16:8)

1. Upravlyayushchiy Trestom predpriyatiy ugol'noy promyshlennosti Gorlovskogo rayona (for Lyakin). 2. Vsesoyuznyy nauchno-issledovatel'skiy marksheyderskiy institut (for Teterevenkov).

KULEZNEV, V.N.; KROKHINA, L.S.; LYAKIN, Yu.I.; DOGADKIN, B.A.

Study of the structure of mixtures of polymer solutions by the light scattering method. Koll. zhur. 26 no.4:475-480 Jl-Ag '64. (MIRA 17:9)

1. Moskovskiy institut tonkoy khimicheskoy tekhnologii imeni Lomonosova.

SUKHODOL, V.F.; GRABOVOY, I.A.; TALANOV, B.I.; Prinimala uchastiye: LYAKINA, T.V.

Content of nitrogenous substances in fusel oil. Ferm. i spirt. prom. 30 no.2:10-13 '64.

On the occasion of the 400th anniversary of book printing. Ibid.:8-9 (MIRA 18:2)

1. Kiyevskiy tekhnologicheskiy institut pishchevoy promyshlennosti imeni Mikoyana.

LYAKHOVSKIY, V.N., kand.tekhn.nauk; MIKHALEVICH, V.S., kand.fiz.-matem.nauk; BYKOV, V.I., inzh.; ZAYTSEV, R.V., inzh.; SIBIRKO, A.N., inzh.; SHOR, N.Z., inzh.

Determination on an electronic digital computer of the most advantageous location of a red line of longitudinal section which may move freely. Transp. stroi. 12 no.4:41-43 Ap '62. (MIRA 15:5)

(Electronic digital computers) (Railroads--Location)

S/191/60/000/005/019/020
B004/B064

AUTHORS: Tsipes, L. Ya., Sokolov, A. D., Kochanova, M. K., Lyakina, Z. N.

TITLE: Molding of Products From Novolak Molding Material

PERIODICAL: Plasticheskiye massy, 1960, No. 5, pp. 67-69

TEXT: It is the aim of the present paper to raise the efficiency of presses by increasing the molding temperature for the production of materials from novolak molding powders of the K-15-2 (K-15-2), K-17-2 (K-17-2), K-20-2 (K-20-2), K-119-2 (K-119-2), and K-118-2 (K-118-2) types. The laboratory of the zavod "Karbolit" ("Karbolit" Plant) developed in 1938-1939 a procedure to render molding possible at 175 - 185°C with the molding material being preheated. Experiments with material preheated in a high-frequency field to 100 - 110°C showed that the product No. 3388/1 (safety cartridge), 46 mm high, wall thickness 6 mm, can be molded at 205 - 215°C, and the product No. 3388/2 (incandescent lamp socket) 28 mm high, wall thickness 4 mm, can be molded at 215 - 230°C. Thus, the time of molding was reduced without any change in strength, heat resistance, and water adsorption. M. G. Gurariy is mentioned. There are 5 tables and 6 references: 5 Soviet and 1 British.

Card 1/1

ARISTOV, P.I.; LYAKISHEV, B.M.

New form of silver packages. Tekst. prom. 19 no.9:28-31 S '59. (MIRA 12:12)

1.Nauchnyy rukovoditel' Ivanovskogo nauchno-issledovatel'skogo instituta tekstil'noy promyshlennosti (IvNITI) (for Aristov). 2.Rukovoditel' laboratorii konstruirovaniya Ivanovskogo nauchno-issledovatel'skogo instituta tekstil'noy promyshlennosti (for Lyakishev).
(Spinning machinery)

LYAKISHEV, N.I., inzh.; VAVILOV, V.I., inzh.

Introduction of an instrument laminated with hard alloys. Der. prom. 11 no.9:20-21 S '62. (MIRA 17:2)

1. Skhodnenskaya mebel'naya fabrika.

Lyakishev, N.P

133-5-10/27

AUTHOR: Khazanova, T.P., Lyakishev, N.P. and Grishankova, E.A.

TITLE: The influence of the mineralogical composition of molybdenum concentrates on the process of their roasting. (Vliyaniye mineralogicheskogo sostava molibdenitovykh kontsentratov na protsess obzhiga)

PERIODICAL: "Stal'"(Steel), 1957, No.5, 425-429 (U.S.S.R.)

ABSTRACT: A laboratory investigation of the process of roasting molybdenum concentrates was carried out. Roasting temperature 600 and 650 and 700 °C. Sulphur content of the final product was taken as a roasting criterion. The behaviour of molybdenum concentrates during roasting is determined by their mineralogical composition. The individual minerals have the following influence on the process: a) calcite - negative, due to the formation of stable calcium sulphates which increase the final sulphur content in the roasted product; b) chalcopyrite in combination with calcite - negative; c) quartz - positive; d) galenite - has no influence but its content is limited by the conditions of subsequent production of ferro-molybdenum; and e) feldspars, hematite, grey copper ore have no noticeable effect on the roasting process. As the results of this investigation were not considered in the standard specifications for concentrates valid at present, it is recommended that,

Card 1/2

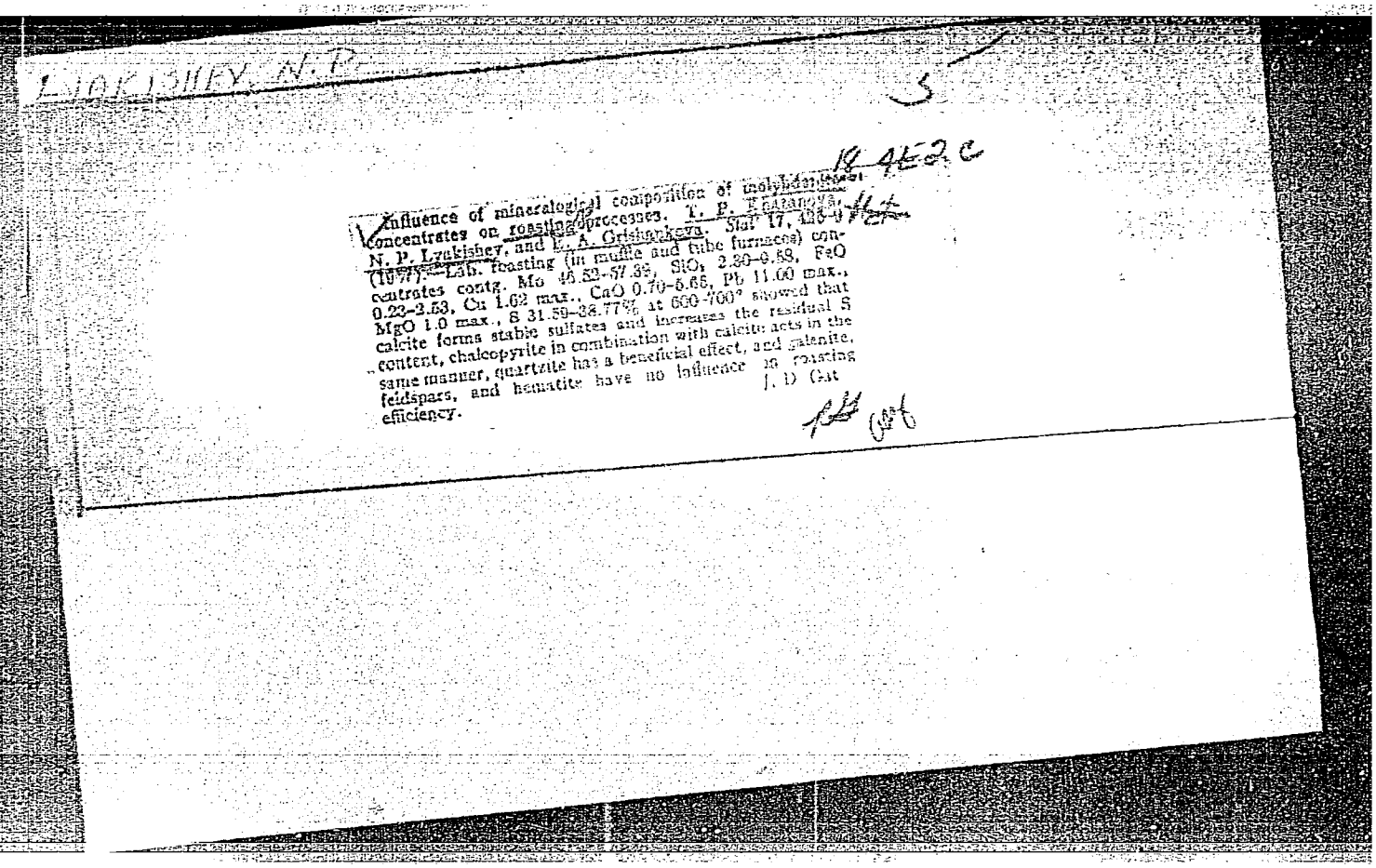
The influence of the mineralogical composition of molybdenum concentrates on the process of their roasting. (Cont.)

after check experiments on industrial furnaces, new standards should be prepared. There are 4 tables, 2 figures and 3 Slavic references.

ASSOCIATION: TsNIIChM.

AVAILABLE:

Card 2/2



IZVAKISHEV, N. P.

Influence of mineralogical composition of molybdenite concentrates on roasting processes. T. P. Baranova, N. P. Izvakishev, and L. A. Grishankova. Stal' 17, 488-9 (1957).—Lab. roasting (in muffle and tube furnaces) concentrates contg. Mo 46.53-57.3%, SiO_2 2.30-6.58, FeO 0.23-2.53, Cu 1.62 max., CaO 0.70-5.66, Pb 11.00 max., MgO 1.0 max., S 31.59-38.77% at 600-700° showed that calcite forms stable sulfates and increases the residual S content, chalcopyrite in combination with calcite acts in the same manner, quartzite has a beneficial effect, and galenite, feldspars, and hematite have no influence on roasting efficiency.

35220
S/148/62/000/001/004/015
E111/E435

19.1295

AUTHORS: Lyakishev, N.P., Bogolyubov, V.A.

TITLE: Reduction of niobium concentrate with carbon

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Chernaya metallurgiya, no.1, 1962, 70-77

TEXT: In the USSR, ferroniobium is produced by the "furnaceless" aluminothermic method, using the niobium concentrate from Vishnevogorsk ores. This ferroniobium is contaminated by aluminium, silicon and titanium. For pure ferroniobium expensive high-grade raw materials or alternative processes are needed. Reduction with carbon enables a high selectivity of reduction and a pure ferroniobium to be obtained from relatively lean concentrates (vanadium recovery, in concentration, is then 8 to 10% better). In the present article the authors consider some basic aspects of the carbon reduction process: reducibility of the concentrate (on which no work has been published), reaction of carbon with the metallic melt and the physical properties of the slag. The charge in a graphite crucible (150 mm tall, 20 mm bore, to give uniform temperature) was placed

Card 1/4

Reduction of niobium ...

in a furnace with a carbon-resistance tubular heater element with facilities for continuous weighing of the charge to an accuracy of 0.5 g and for feeding-in a flow of nitrogen. The charge consisted of 2 to 3 mm pellets made from a mixture of niobium concentrate: 29.95% $(Nb + Ta)_2O_5$, 23.25% SiO_2, 8.35% TiO_2; 7.52% ZrO_2; 11.40% CaO; 0.84% MgO; 5.00% Al_2O_3; 6.78% FeC; 2.18% of rare earth metal oxides; 0.057% P; 0.72% S; 0.15% C; 4.50% Na; 0.12% K; minus 100-mesh graphite (99.86% C) and minus 60-mesh iron (98.0% Fe_{met}). The reacting surface of the graphite crucible was negligibly small compared with that of the pellets. Reduction was carried out in two stages: first at 1300 then at 1500 or 1700°C. Charge weights were 32 to 37 g approximately. The mixtures used were 100 parts by weight of concentrate with 10.59, 12.97 or 17.73 parts graphite and 15.9 or 29.0 iron powder. Within this range, the reducibility (as indicated by weight loss) rises with increasing contents of iron and of graphite and with rising temperature. The authors studied the solubility of carbon in Nb-Fe-Si alloy in relation to the silicon contents using a method in which fused alloys with various silicon contents were

Reduction of niobium ...

saturated with carbon at the given temperature. The alloys were made from electrolytic iron, grade MLM(MTsM) niobium and crystalline silicon, the compositions being as follows: iron: 99.0% Fe; niobium: 0.08% Fe, 98.8% Nb, 0.02% Si, 0.11% Ti, 0.10% Pb and 0.10% C; silicon: 0.95% Fe, 98.52% Si and 0.55% Al. To accelerate melting and reduce oxidation, the niobium was always placed in the alundum crucible first, then silicon, then iron. After heating to 1750°C and thorough stirring, the temperature was reduced to 1650°C and a graphite rod was inserted for 15 minutes. After holding for a further 10 minutes the charge was water quenched and analysed. The carbon is shown as a function of silicon content in Fig.5, curves 1 and 2 relating, respectively, to niobium:iron ratios of 0.6 and 1.0. The influence of the CaO/SiO_2 ratio on the viscosity of SiO_2, TiO_2, ZrO_2, CaO, Al_2O_3 slags, similar in composition to those obtained when ferroniobium is being produced from lean concentrates by the carbon reduction method, was studied. It was found that the viscosity falls with increasing silica content and is least at a basicity of 0.65. The authors recommend a basicity of 0.65 to 0.7 for ferroniobium production by the carbon

Card 3/5

Reduction of niobium ... S/148/62/000/001/004/015
E111/E435

reduction method; they consider this method practicable.
There are 6 figures and 3 tables.

ASSOCIATION: TsNIIChERMET

SUBMITTED: October 16, 1961

Card 4/5

LYAKISHEV, P.P.; FROLKIN, V.M.

Automatic regulation of water heating. Sbor.rats.predl.vnedr.v proizv. no.1:42-43 '61. (MIRA 14:7)

1. Novo-Tul'skiy metallurgicheskiy zavod.
(Electric controllers)

L 42867-66 EWT(1)

ACC NR: AR6017222 SOURCE CODE: UR/0058/65/000/012/B011/B011

40
B

AUTHOR: Aliyev, D. A.; Lyakishev, V. S.

ORG: none

TITLE: Potential on the axis of a conducting circular cylinder of finite length, neglecting the edge effect

SOURCE: Ref. zh. Fizika, Abs. 12B122

REF SOURCE: Tr. po teorii polya, vyp. 1, 1964, 19-25

TOPIC TAGS: electric potential, distribution function, charge density, ~~conducting circular cylinder~~, edge effect, electric conduction, absorption edge

ABSTRACT: The potential has been found on the axis of a circular cylinder of finite length, neglecting the function of the electric-charge distribution on the surface, when the surface density is assumed to be constant. [Translation of abstract] [NT]

SUB CODE: 20/ ~~SUBM DATE: none~~/ ~~ORIG REF: none~~/ ~~SOV REF: none~~/ ~~OTH REF: none~~/

Card 1/1

L 02314-67 EWT(d)/EWT(m)/EWP(w)/EWP(v)/EWP(k) IJP(c) WW/EM

ACC NR: AR6016551 SOURCE CODE: UR/0196/65/000/012/A008/A008

43
B

AUTHOR: Aliyev, D. A.; Lyakishev, V. S.

TITLE: Potential along the axis of a conducting circular cylinder of finite length without regard to edge effect

SOURCE: Ref. zh. Elektrotekhnika i energetika, Abs. 12A52

REF SOURCE: Tr. po teorii polya, vyp. 1, 1964, 19-25

TOPIC TAGS: electric potential, electric conductor, electric theory

ABSTRACT: A hollow circular conducting cylinder of finite length with extremely thin walls has a total charge e uniformly distributed over the surface with a density σ. The expression for the potential is taken in the form $U=\int_{S_1}\frac{\sigma dS}{\rho_1}$. The distance ρ_1 between the point of observation and a point on the surface of the cylinder is given in the form of the difference between the vector-parametric equation for the surface of the conductor and the radius-vector of the observation point. When the expression for ρ_1 is substituted in the general formula for the potential after integration, a design formula is derived which may be used to calculate the distribution of the potential along the axis of the cylinder for various ratios between radius and altitude. 2 illustrations, bibliography of 3 titles. Yu. Chalisov. [Translation of abstract]

SUB CODE: 09, 20

Card 1/1 UDC: 537.213

LYAKISHEV, V.T.; PLATONOV, G.P.; SINITSYN, A.A.

Spectral determinaion of silicon in blast furnace cast iron. Zav.lab. 29 no.12:1452 '63. (MIRA 17:1)

1. Chelyabinskiy metallurgicheskiy zavod.

LYAKISHEV, V.Ya.

Process and production quality control in blast furnace plants.
Metallurg no.11:34-35 N '56. (MLRA 10:1)

1. Master domennogo tsekha zavoda imeni Dzerzhinskogo.
(Cast iron--Quality control) (Metallurgy)

MORYGANOV, P.V.; MEL'NIKOV, B.N.; LYAKISHEVA, O.B.

Mechanism of the reaction of cation dyes with nitron. Izv.vys.-ucheb.zav.; tekh.tekst.prom. no.5:114-117 '62. (MIRA 15:11)

1. Ivanovskiy khimiko-tekhnologicheskiy institut.
(Dyes and dyeing--Textile fabrics)

LYAKISHEVA, O.B.; MEL'NIKOV, B.N.; MORYGANOV, P.V.

Studying the development of the technology for a continuous dyeing method of nitron with cationic dyes. Izv. vys. ucheb. zav.; tekh. tekst. prom. no.2:114-120 '65.

(MIRA 18:5)

1. Ivanovskiy khimiko-tekhnologicheskiy institut.

LYAKOVSKIY, M.S., podpolkovnik meditsinskoy sluzhby; BABKINA, A.S.

Change in the time of simple motor reaction in students. Voen.-med. zhur. no.3:34-35 Mr '60. (MIRA 14:1)
(MOVEMENT (PHYSIOLOGY))

SHPAK, V.M., dotsent; KARSHENBAUM, R.I.; LYAKSUTKINA, M.F.

Observations on the iontophoresis of nicotinic acid. Klin. med., 33no. 9:92 S '55. (MLRA 9:2)

1. Iz kafedry psikhiatrii (zav.-dotsent V.M. Shpak) Stalinskogo meditsinskogo instituta (dir.-dotsent A.M. Ganichkin)
(CATAPHORESIS) (NICOTINIC ACID)

SHPAK, V.M.; KARSHENBAUM, R.I.; LYAKSUTKINA, M.F.

Observations of electrophoresis with nicotinic acid. Vop.kur., fizioter. i lech. fiz. kul't. 22 no.2:34-36 Mr-Ap '57. (MIRA 11:1)

1. Iz kafedry psikhiatrii (zav. - dotsent V.M.Shpak) Stalinskogo meditsinskogo instituta (dir. - dotsent A.M.Ganichkin)
(ELECTROPHORESIS) (NICOTINIC ACID)

Lyakumovich, A.G.

Treating latex and aqueous dispersions of synthetic rubber and resins. M. K. Nikitin, F. I. Zakharchenko, V. V. Listopadov, I. M. Bisev, A. G. Lyakumovich, N. S. Churilin, and S. P. Goncharov. U.S.S.R. 105,131, [illegible] 1957. Distearylhexamethylenediamine is added to latex and aq. dispersions of synthetic rubber and resins before treating them in a packed column or other app. to remove the nonpolymerized isomers and to avoid loss of rubber or resin. The diamide, 0.1% based on the rubber, is added as a soln. in an org. or chloroorg. solvent. M. Hosch

9

AUTHORS: Gel'perin, N. I., Lyakumovich, A. G., Listopadov, M. V. SOV/156-58-1-46/46

TITLE: Solvent Extraction in a Countercurrent Injector Column (Ekstraktsiya iz rastvorov v protivotochnoy inzhektornoy kolonne)

PERIODICAL: Nauchnyye doklady vysshey shkoly, Khimiya i khimicheskaya tekhnologiya, 1958, Nr 1, pp. 193 - 198 (USSR)

ABSTRACT: Among the separation processes playing an important part in chemical engineering, solvent extraction is of great significance. It is based upon the laws of diffusion and of equilibrium distribution. Though related to each other, extraction, rectification, and absorption processes are not always conveniently arranged alike as regards equipment. In particular, rectifying and absorption columns will often be of very little efficiency in extraction. A search has therefore been made for more perfect designs, and for a more intensive operation of usual extraction equipment. Some of these types are mentioned (Refs 1-11). No exhaustive solution to this problem having been found until now, further research work

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is still of current interest. The authors have developed the column mentioned in the title, and have introduced it into large-scale use. It has no filling bodies, and is provided at both ends with an injector each. These, being directed against each other, serve for introducing the original solution, and the solvent (Fig 1). Under certain hydrodynamical conditions and structural dimensions, the injectors not only assure dispersion of the two liquid phases but also their thorough mixture by creating areas of high turbulence at both ends of the column. For testing the new extraction equipment, 4 types of this apparatus having equal working dimensions (diam. 50 mm, height 2 m) were studied. Two systems of practical interest in synthetic rubber industry were investigated: 1) a mixture of n-butylenes- acetone - water, 2) a mixture of diene hydrocarbons C_6 and higher - divinyl ether with water (Fig 2). The experimental results which are given in table 1 show that the injector column has double capacity at a height at least 4 times smaller. Table 2 shows experimental results obtained with the hydrocarbon - diethyl ether - water system in all 4 column types. Furthermore two injector columns in sequence, and one column having 2 and 3 water injectors installed in

series and one injector for the original mixture, were also studied. From this the maximum capacity of the injector column may be seen especially if the solvent is fed through several injectors installed serially. Capacity increases with increasing discharge velocity of liquid from injector nozzles. Optimum dimensions of the injector were determined with the petroleum - acetic aldehyde - water system (Figs 3,4, Table 5). Large-scale use of these injector columns has fully comfirmed laboratory results, and has proven that the design based on the nozzle discharge velocity was correct. There are 4 figures, 5 tables, and 11 references, 1 of which is Soviet.

ASSOCIATION: Kafedra protsessov i apparatov khimicheskoy tekhnologii Instituta tonkoy khimicheskoy tekhnologii im.M.V.Lomonosova (Chair of Chemical Engineering Processes and Equipment of the Institute for Fine-Chemical Engineering imeni M.V. Lomonosov)

SUBMITTED: October 9, 1957

Solvent Extraction in a Countercurrent Injector Column SOV/156-58-1-46/46

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USCOMM-DC-60472

SOV/63-3-6-5/43

AUTHORS: Gel'perin, N.I., Professor, Lyakumovich, A.G.

TITLE: Extraction From Solutions (Ekstraktsiya iz rastvorov)

PERIODICAL: Khimicheskaya nauka i promyshlennost', 1958, Vol III, Nr 6, pp 725-735 (USSR)

ABSTRACT: Extraction from solutions is growing in importance. There are several types of extraction devices. Shelf columns are only incompletely studied (Figure 1). The industrial types of such columns are 2 m in diameter. They have more than 100 shelves, the distance between which is 45 - 125 mm. The speed of the liquids varies between 0.006 - 0.010 mm/sec. Extraction columns with grid plates are similar to rectification columns. The Koch plate (Figure 2) used in these columns has an efficiency factor of 75%. Spraying columns are hollow cylinders with sprayers at one or both ends. In [Ref. 16] a method for calculating the efficiency of these columns by means of the droplet movement in the dispersed phase is given. Injector columns have been proposed in the recent years [Ref. 27, 28]. The injectors form a fine dispersion and a zone of intensive mixing of the two phases. The height of the column has only a slight influence in its efficiency (Figure 5). Columns with inserts have a higher effi-

Card 1/3

ciency than the above-mentioned types and are of very simple construction. The inserts are mostly Rashig rings of 6 - 50 mm in diameter. The diameter of a column with an output of 20,000 kg/h in a toluol-water system is calculated by several equations and the results are shown in Table 2. The efficiency of static extraction columns can be increased by pulsation of their content. These columns are also filled with inserts. Figure 11 shows that the best results are obtained by a high frequency and a low amplitude of the pulsations. The calculated values have been experimentally tested in a column of 600 mm in diameter, an operating height of 12 m, and 450 plates with stainless steel grids. The rotation-cylinder apparatus (Figure 18) has been investigated in [Ref. 56]. The coalescence of the droplets in these apparatuses is at a minimum. Figure 19 shows a rotation disc extractor developed by Reman [Ref. 58]. It is a continuously operating vertical column with central shaft on which horizontal discs are fastened. In Reference 67 an extractor with an output of 450

cm^3/min and 5,000 rpm has been investigated.
There are 14 diagrams, 9 graphs, 2 tables, and 68 references,
9 of which are Soviet, 46 English, 10 American, 1 Canadian,
1 Indian, and 1 French.

LYALEKO, V.E., kand. istoricheskikh nauk

Struggle of the Moscow party organization for industrial reconstruction in compliance with military needs during the first years of the Great Patriotic War (June 1941 - November 1942). Trudy MIIGAIK no.43:75-96 '60. (MIRA 16:7)

(World War, 1939-1945—Economic aspects)
(Moscow—Industrial efficiency)

LYALEKO, V.F., kand. istoricheskikh nauk; MIGALIN, V.F., starshiy prepodavatel'

From the history of the development of socialist competition at the Moscow enterprises during the first years of the Great Patriotic War (1941-1942). Trudy MIIGAIK no.43:97-109 '60. (MIRA 16:7)

(World War, 1939-1945—Economic aspects)
(Moscow—Socialist competition)

YEVSEYEV, I.G., kand. tekhn. nauk; LYALICHEV, V.S., inzh.

Study of dangerous voltages and currents in track circuits with short-circuits in the contact network. Avtom., telem. i sviaz' 9 no.6:16-20 Je '65. (MIRA 18:8)

LYALIK, G., [redacted]. and SAATCHYAN, L. O.,

"The Role of Water Power in the Formation of Large Power System and Consolidated System in the Soviet Union."

report presented at the 14th Sectional Meeting of the World Power Conference, Montreal, Canada, 7-12 Sep 58.

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Lyalikov, A. S. "The problem of heat conductivity of granualr material." Min Higher Education USSR. Tomsk Order of Labor Red Banner Polytechnic Inst imeni S. M. Kirov. Chair of Theoretical and General Heat Engineering. Tomsk, 1956. (Dissertation for the Degree of Candidate in Technical Science)

So: Knizhnaya letopis', No. 27, 1956. Moscow. Pages 94-109;111.

ANDREYEV, Konstantin Konstantinovich, professor, doktor tekhnicheskikh nauk; SHITKO, B.S., professor, doktor tekhnicheskikh nauk, redaktor; LYALIKOV, B.S., polkovnik, redaktor; LEVINSKAYA, N.Z., tekhnicheskiy redaktor.

[Explosions and explosives] Vzryv i vzryvchatye veshchestva. Moskva, Voen.izd-vo Ministerstva obor. soiuza SSR, 1956. 116 p. (MLRA 9:5)
(Explosives)

FUKS, G.I., prof., doktor; LYALIKOV, A.S.

Calculation of the overheating of the winding surfaces of the additional resistances of electric measuring instruments. Izv.TPI 137:3-12 '65.

Concise method for calculating the overheating of resistor winding surfaces of electric measuring instruments. Ibid.: 13-21.
(MIRA 19:1)

LYALIKOV, A.S.; FUKS, G.I., prof., doktor; LONINOV, G.D.

Selection of additional resistances of electric measuring instruments according to their power rating and hull characteristics. Izv.TPI 137:22-24 '65.

(MIRA 19:1)

LYALIKOV, A.S.; ZAGROMOV, Yu.A.; YERSHOVA, L.S.

Experimental data on the dissipation power of the additional resistances of electric measuring instruments (under conditions of free convection). Izv.TPI 137:25-28 '65.

(MIRA 19:1)

LYALIKOV,A.S.; ZAGROMOV, Yu.A.

Free convectional heat transfer in a closed volume during the displacement of the heat emission source. Izv.TPI 137:99-101 '65.

(MIRA 19:1)

L 32998-66 EWT(1) WW

ACC NR: AP6014984 SOURCE CODE: UR/0170/66/010/005/0577/0583

AUTHOR: Zagromov, Yu. A.; Lyalikov, A. S.

ORG: Polytechnic Institute im. S. M. Kirov, Tomsk (Politekhnicheskiy institut)

TITLE: Free convective heat transfer in a horizontal cylindrical slot with a different position of the heat evolving element

SOURCE: Inzhenerno-fizicheskiy zhurnal, v. 10, no. 5, 1966, 577-583

TOPIC TAGS: convective heat transfer, thermodynamic analysis

ABSTRACT: The basic elements of the experimental apparatus (shown in a figure) were: a thin walled polished and nickeled copper foil (thickness 0.25 mm), an electric heater consisting of a thick walled polished and nickeled copper tube. The surface temperature of the heater was measured directly by thermocouples welded to the wall of the tube. The convective heat transfer medium was air. All measurements were made under strictly steady state conditions. Based on experimental data, a figure shows the change in the dimensionless temperature for vertical and horizontal displacement. For purposes of comparison an exhaustive table shows relationships proposed by various authors for

Card 1/2 UDC: 536.25

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calculation of heat transfer in horizontal cylindrical slots. Finally, a relationship is derived which is said to permit, with sufficient accuracy, calculation of heat transfer through gas and liquid cylindrical symmetrical slots in the range of $3 \leqslant \log(Ra\delta)_f \leqslant 8$. Orig. art. has: 1 formula, 4 figures and 1 table.

SUB CODE: 20/ SUBM DATE: 29Sep65/ ORIG REF: 006/ OTH REF: 005

Card 2/2

DEMISOV, Nikolay Nikolayevich, polkovnik; ANDREYEV, Ye.S., general-mayor inzhenerno-tekhnicheskoy sluzhby, professor, redaktor; LYALIKOV, B.S., polkovnik, redaktor izdatel'stva; SLEPTSOVA, Ye.N., tekhnicheskiy redaktor

[In jet aircraft] Na reaktivnykh samoletakh. Moskva, Voen. Izd-vo Ministerstva obor. SSSR, 1956. 165 p. (MLRA 9:7)
(Jet planes) [Microfilm]

LYALIKOV, D.N.

Some considerations concerning "Geographic atlas for secondary school teachers" Book reviewed by D.N.Lialikov. Vop.geog. no.37: 212-219 '55. (MLRA 8:12)
(Geography--Study and teaching) (Kolosovskii, Nikolai Nikolaevich, 1891-1954)

LUKASHOVA, Yevgeniya Nikolayevna; LYALIKOV, Dmitriy Nikolayevich; ZABIROV, B.Sh., red.; KOSHELEVA, S.N., tekhn.red.

[Columbia] Kolumbiia. Moskva, Gos.izd-vo geogr.lit-ry, 1959. 48 p. (MIRA 12:9)
(Columbia)

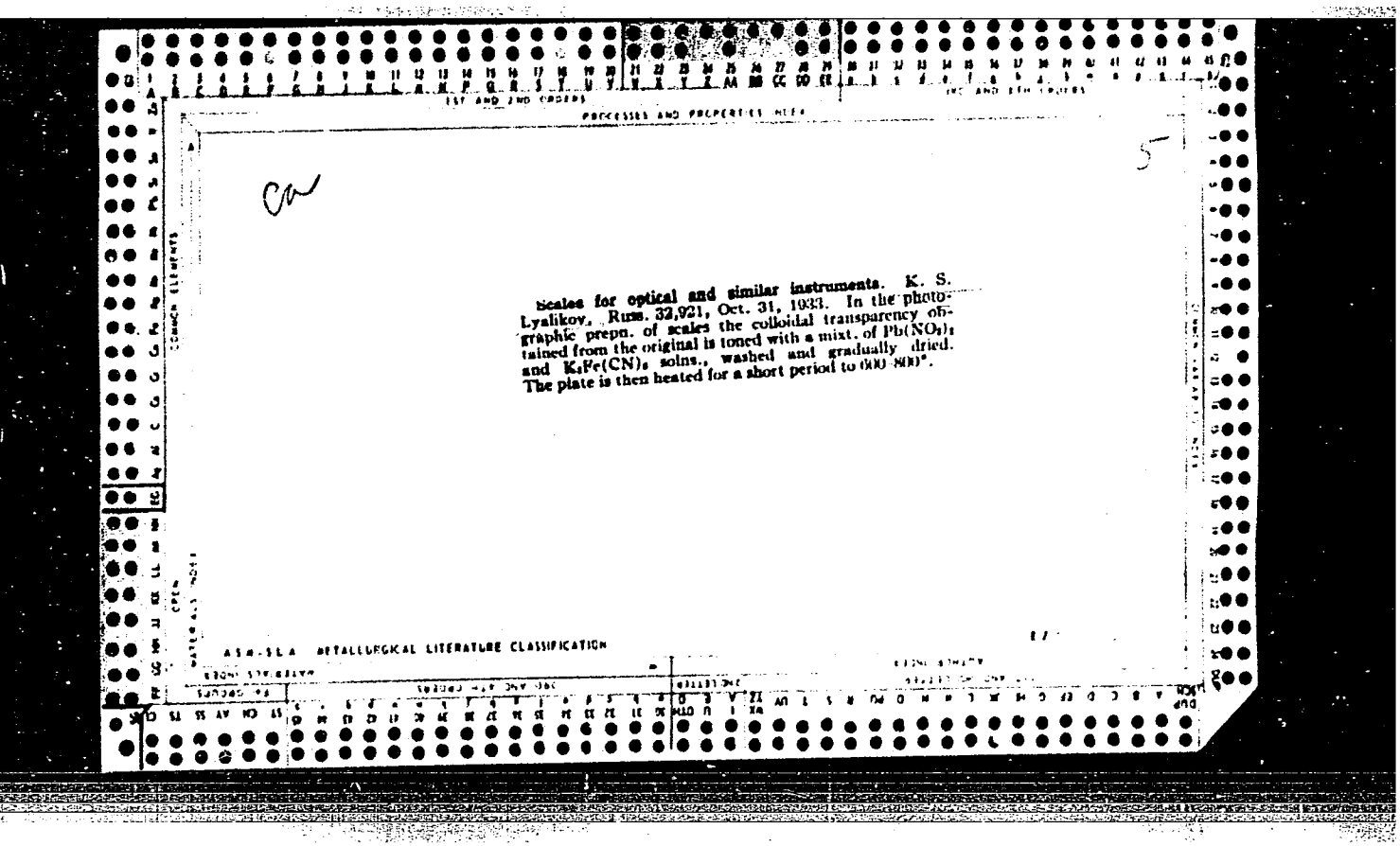
LYALIKOV, D.N.

Some problems in the agriculture of Colombia. Uch.zap.MGPI vol. 121:56-86 '59. (MIRA 15:3)
(Colombia--Agriculture)

BELOV, A.A.; BELOV, Yu.D.; BEZHETSKIY, A.Ye.; KUNYAYEV, Ye.V.;
IVALIKOV, G.I.; PETROV, N.S.; SLAVOROSOV, A.Kh.;
BOLDYREVA, Z.A., tekhn. red.

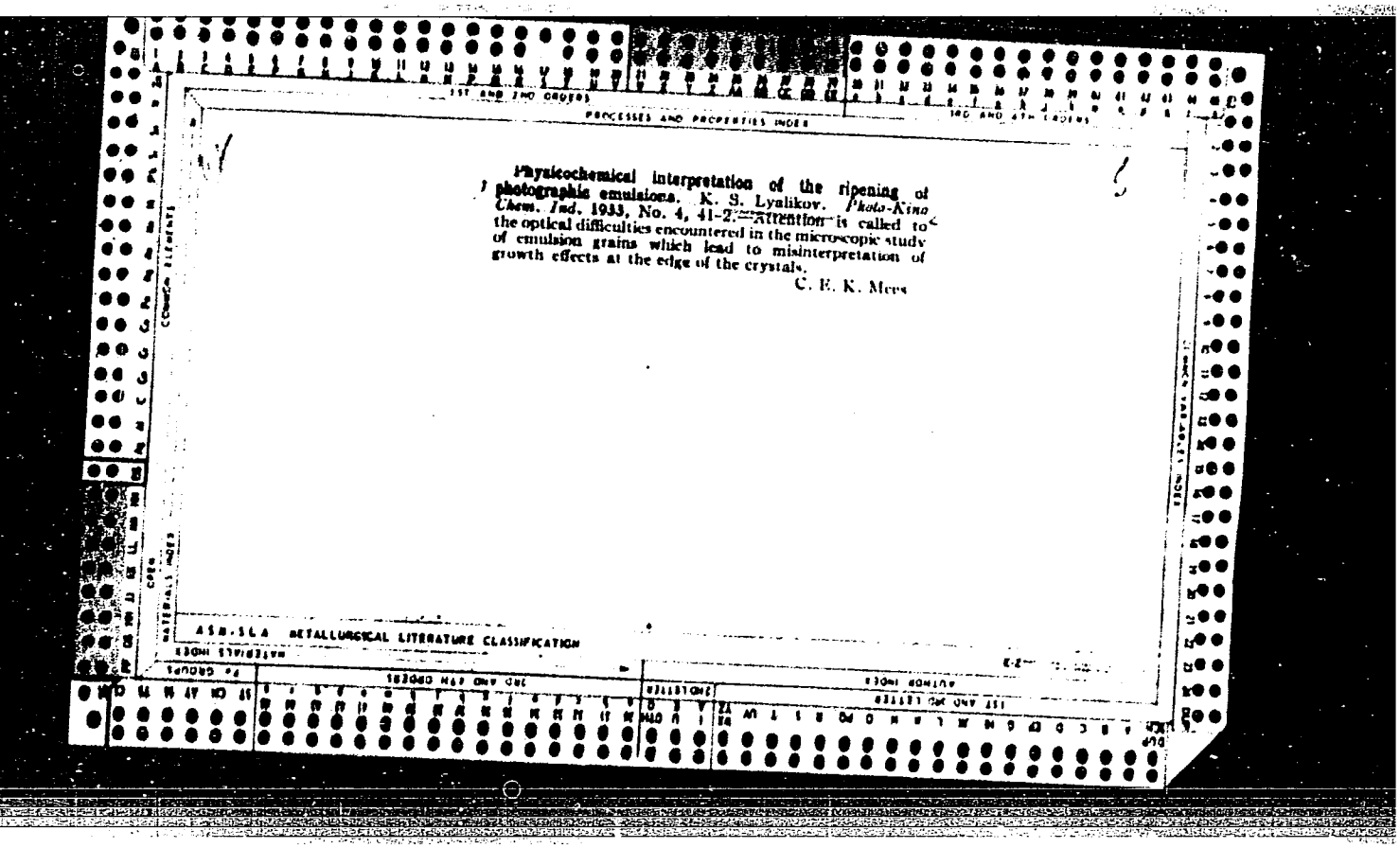
[Concise mine surveyors' reference book]Kratkii spravochnik
marksheidera shakhty. Moskva, Gosgortekhizdat, 1962. 416 p.
(MIRA 15:9)

(Mine surveying)



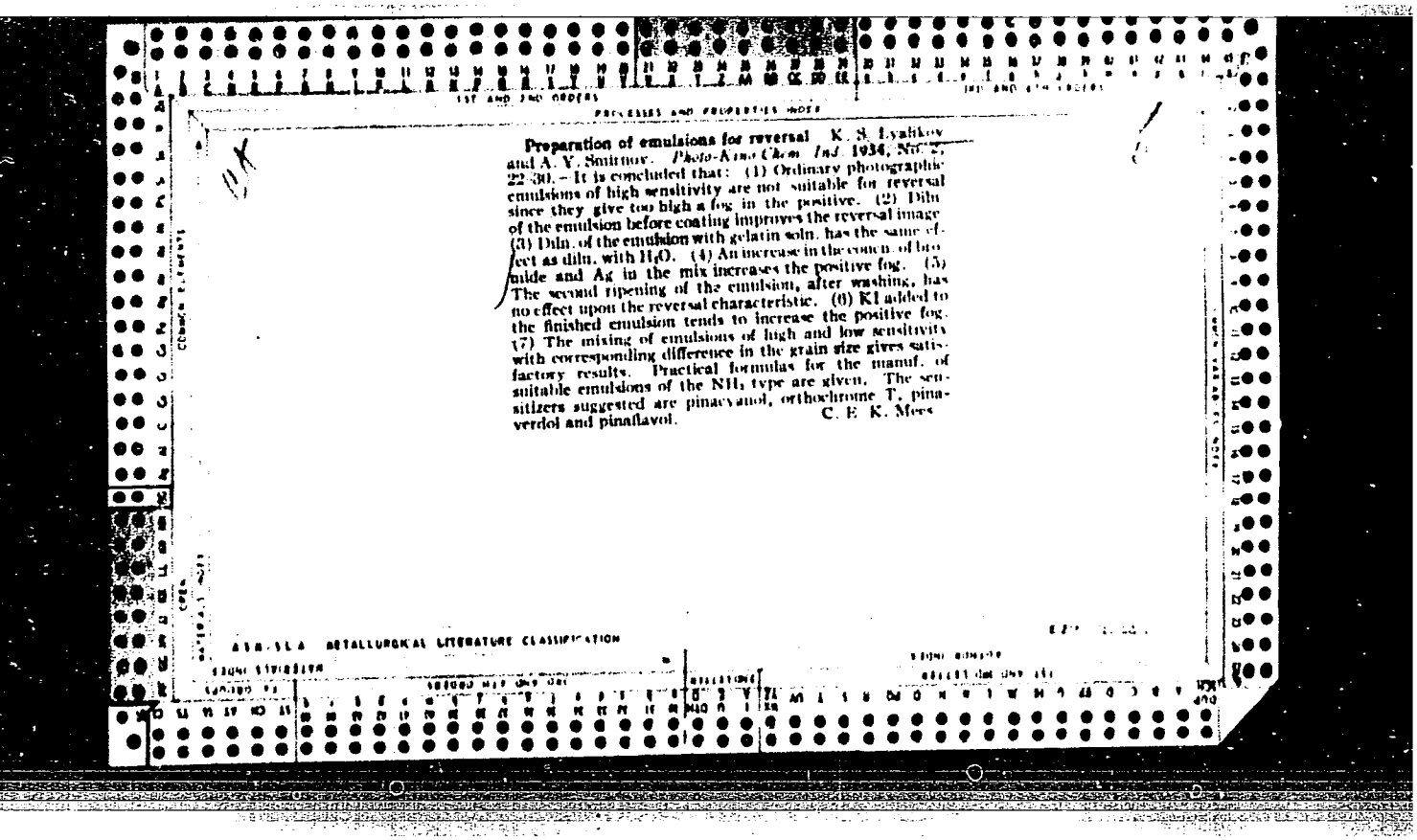
Scales for optical and similar instruments. K. S. Lyalikov. Russ. 32,921, Oct. 31, 1933. In the photographic prepn. of scales the colloidal transparency obtained from the original is toned with a mixt. of $Pb(NO_3)_2$ and $K_4Fe(CN)_6$ solns., washed and gradually dried. The plate is then heated for a short period to 000-800°.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



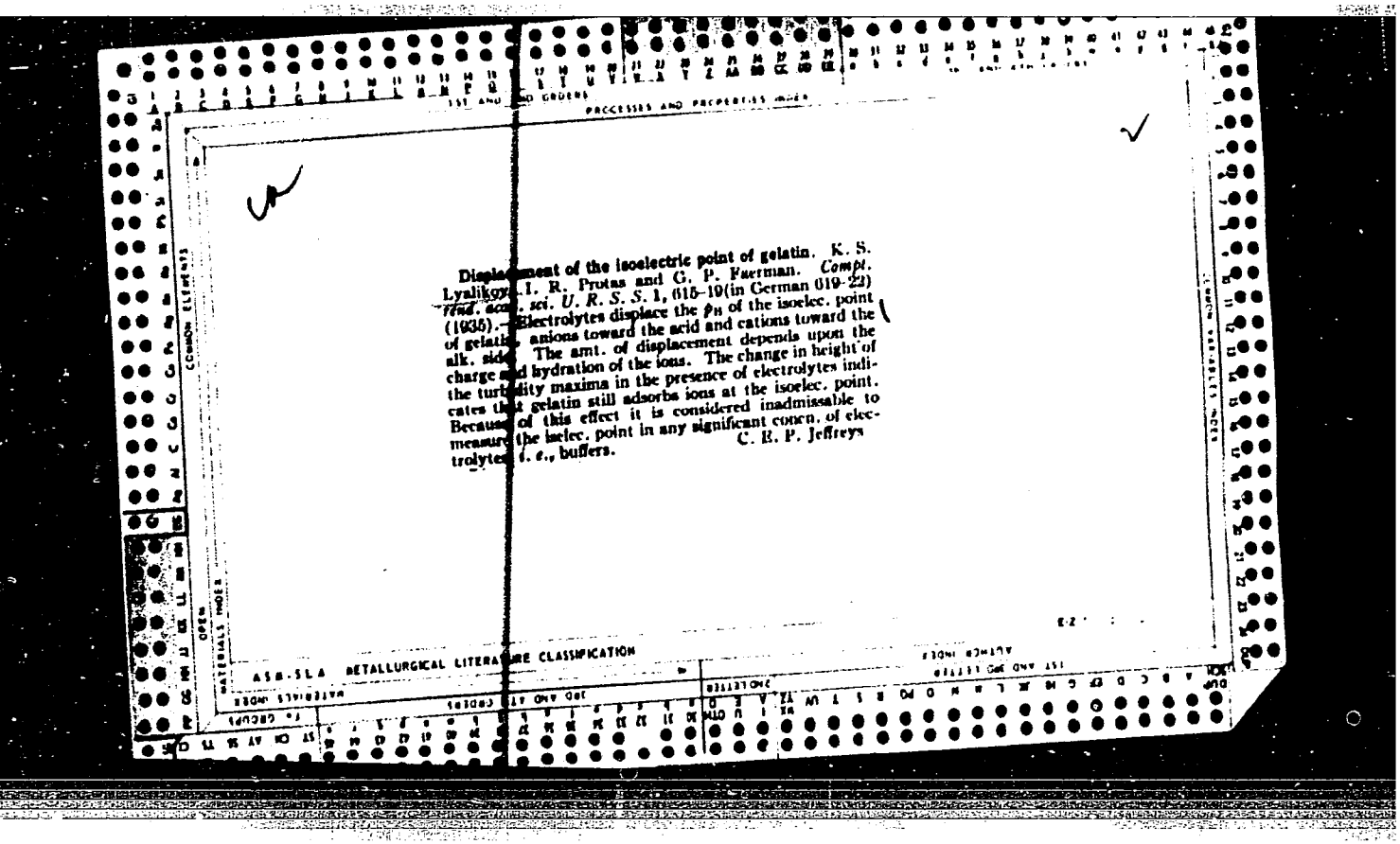
Physicochemical interpretation of the ripening of photographic emulsions. K. S. Lyalikov. *Photo-Kino Chem. Ind.* 1933, No. 4, 41-2.—Attention is called to the optical difficulties encountered in the microscopic study of emulsion grains which lead to misinterpretation of growth effects at the edge of the crystals.

C. E. K. Mees



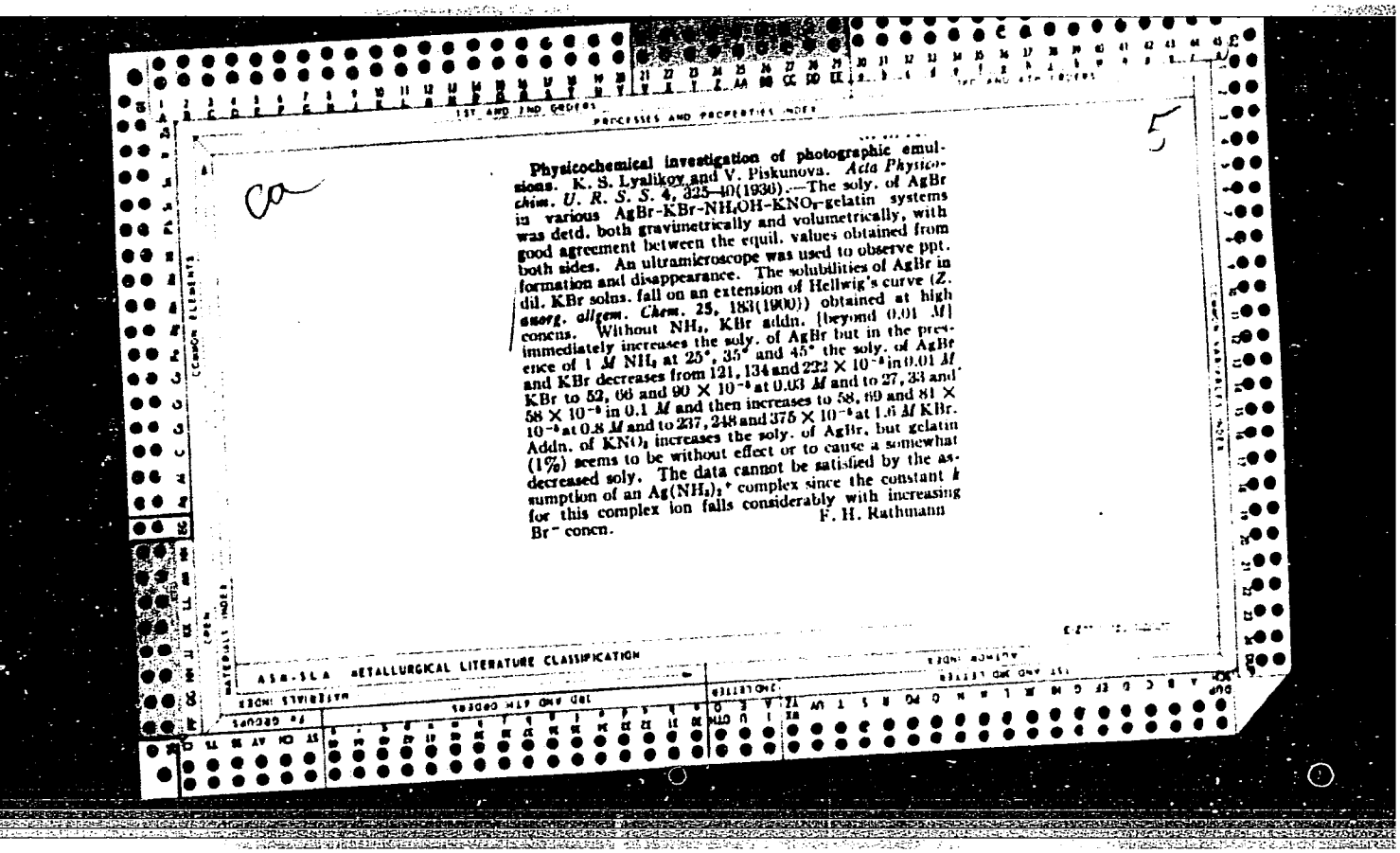
Preparation of emulsions for reversal. K. S. Lyalikov and A. V. Smirnov. *Photo-Kino Chem. Ind.* **1934**, No. 2, 22-30. – It is concluded that: (1) Ordinary photographic emulsions of high sensitivity are not suitable for reversal since they give too high a fog in the positive. (2) Dilu of the emulsion before coating improves the reversal image (3) Dilu. of the emulsion with gelatin soln. has the same effect as dilu. with H_2O. (4) An increase in the concn. of bromide and Ag in the mix increases the positive fog. (5) The second ripening of the emulsion, after washing, has no effect upon the reversal characteristic. (6) KI added to the finished emulsion tends to increase the positive fog. (7) The mixing of emulsions of high and low sensitivity with corresponding difference in the grain size gives satisfactory results. Practical formulas for the manuf. of suitable emulsions of the NH_3 type are given. The sensitizers suggested are pinacyanol, orthochrome T, pinaverdol and pinaflavol.

C. E. K. Mees



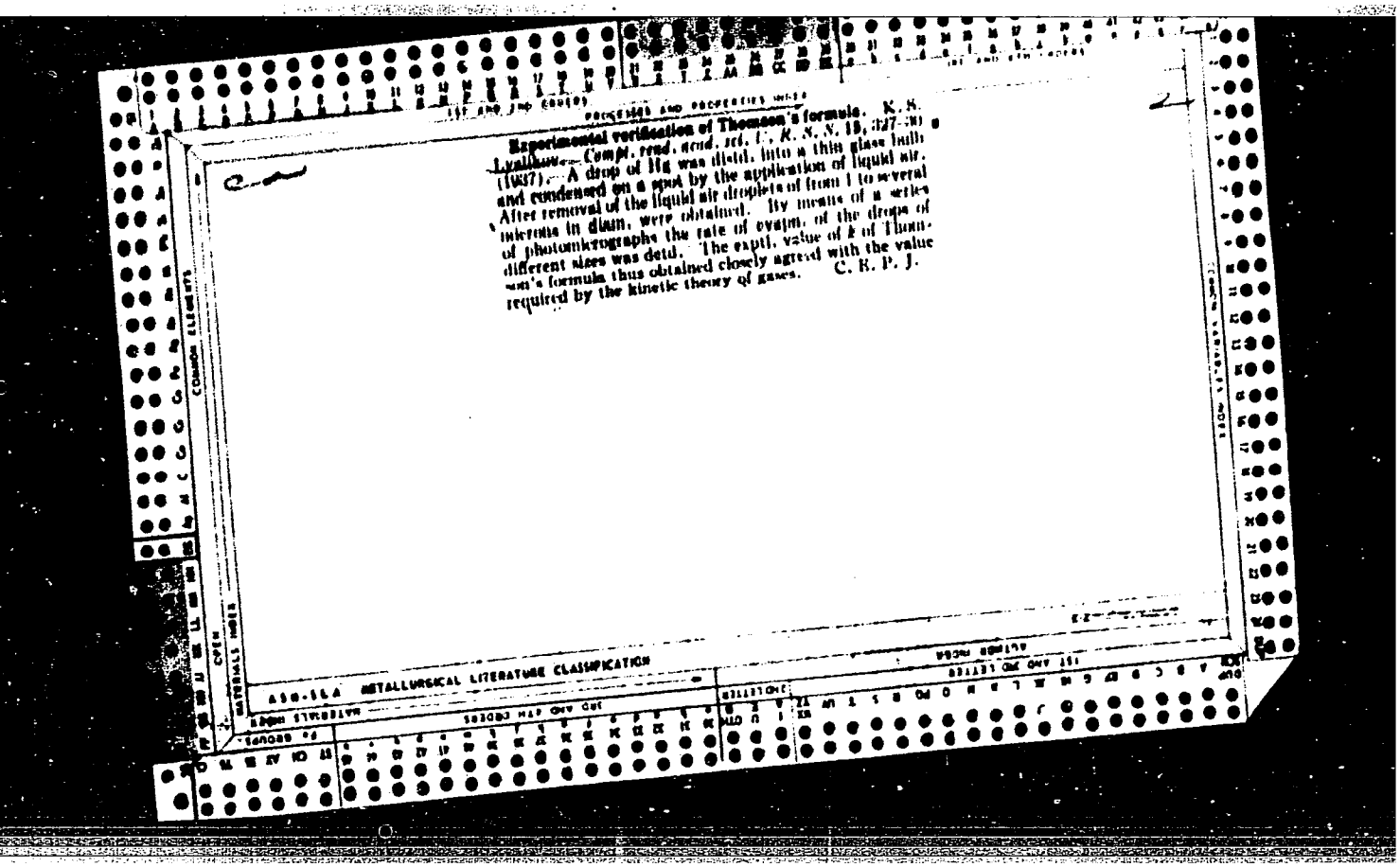
Displacement of the isoelectric point of gelatin. K. S. Lyalikov, I. R. Protas and G. P. Fuerman. *Compt. rend. acad. sci. U. R. S. S.* 1, 615–19 (in German 619–22) (1935).—Electrolytes displace the p_H of the isoelec. point of gelatin; anions toward the acid and cations toward the alk. side. The amt. of displacement depends upon the charge and hydration of the ions. The change in height of the turbidity maxima in the presence of electrolytes indicates that gelatin still adsorbs ions at the isoelec. point. Because of this effect it is considered inadmissable to measure the iselec. point in any significant concn. of electrolytes, *i. e.*, buffers.

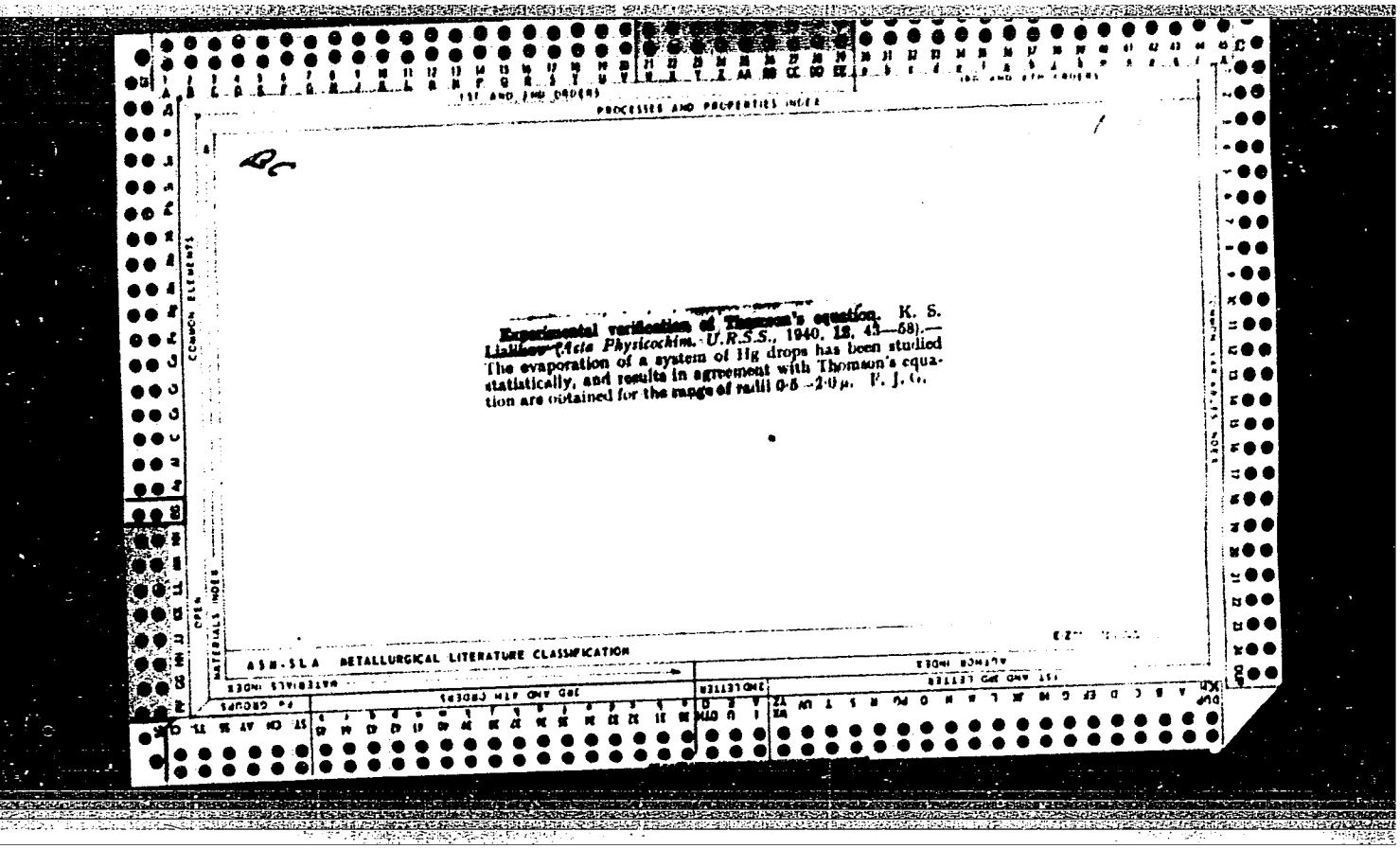
C. R. P. Jeffreys



Physicochemical investigation of photographic emulsions. K. S. Lyalikov and V. Piskunova. *Acta Physicochim. U. R. S. S.* 4, 325–40(1930).—The soly. of AgBr in various AgBr-KBr-NH_4OH-KNO_3-gelatin systems was detd. both gravimetrically and volumetrically, with good agreement between the equil. values obtained from both sides. An ultramicroscope was used to observe ppt. formation and disappearance. The solubilities of AgBr in dil. KBr solns. fall on an extension of Hellwig's curve (*Z. anorg. allgem. Chem.* 25, 183(1900)) obtained at high concns. Without NH_3, KBr addn. (beyond 0.01 *M*) immediately increases the soly. of AgBr but in the presence of 1 *M* NH_3 at 25°, 35° and 45° the soly. of AgBr and KBr decreases from 121, 134 and 222 × 10^{-6} in 0.01 *M* KBr to 52, 66 and 90 × 10^{-6} at 0.03 *M* and to 27, 33 and 58 × 10^{-6} in 0.1 *M* and then increases to 58, 69 and 81 × 10^{-6} at 0.8 *M* and to 237, 248 and 375 × 10^{-6} at 1.6 *M* KBr. Addn. of KNO_3 increases the soly. of AgBr, but gelatin (1%) seems to be without effect or to cause a somewhat decreased soly. The data cannot be satisfied by the assumption of an $Ag(NH_3)_2^+$ complex since the constant *k* for this complex ion falls considerably with increasing Br^- concn.

F. H. Rathmann





Experimental verification of Thomson's equation. K. S. Liublow. *Acta Physicochim. U.R.S.S.*, 1940, **12**, 43—68).—The evaporation of a system of Hg drops has been studied statistically, and results in agreement with Thomson's equation are obtained for the range of radii 0·5 –2·0 μ. F. J. G.

LIALIKOV, K. S.

Kinetics of recrystallisation [illegible]. K. S. Lialikov (Compt. rend. Acad. Sci. U.R.S.S., 1941, 33, [illegible]).—The applicability of Smoluchowsky's equation to recrystallisation under conditions eliminating coagulation has been investigated. Four series of NH_3 photographic emulsions were used, the recrystallisation of AgBr being determined for different solubilities, various concns. of KBr being present. Smoluchowsky's equation holds approx., the discrepancy being ascribed to the presence of different quantities of complex compounds.

A. J. M.

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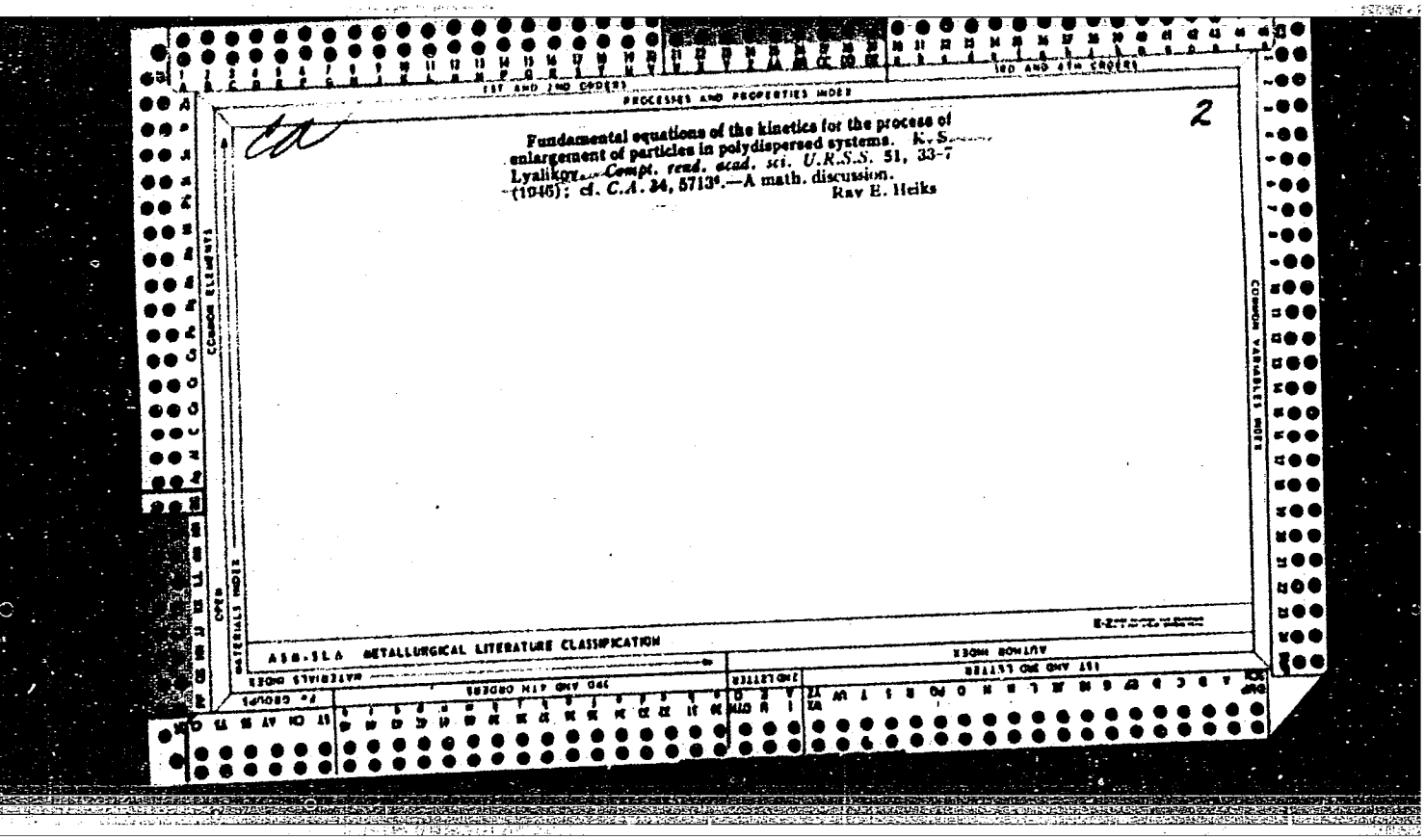
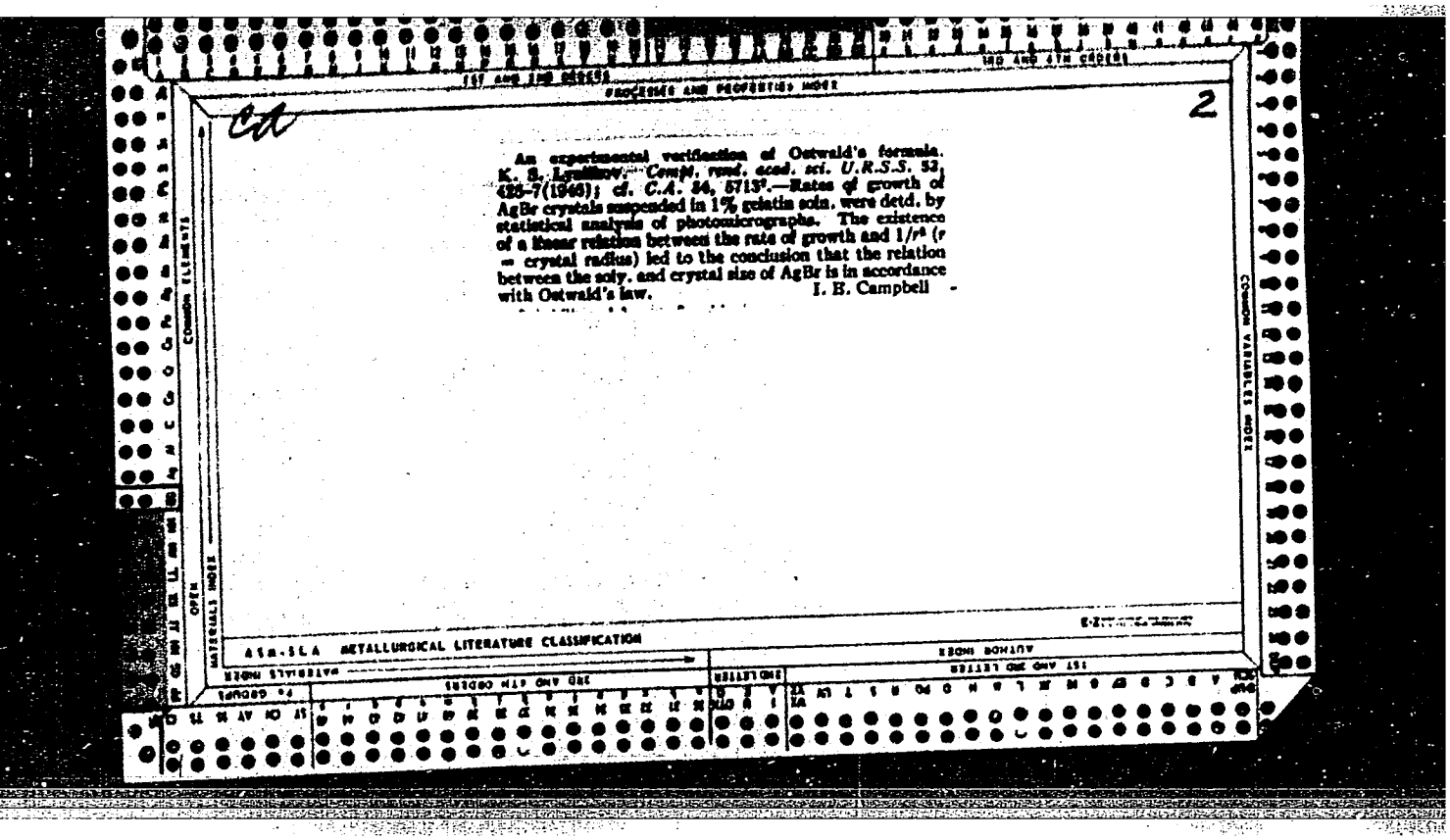


Fundamental equations of the kinetics for the process of enlargement of particles in polydispersed systems. K. S. Lyalikov. *Compt. rend. acad. sci. U.R.S.S.* 51, 33-7 (1946); cf. *C.A.* 34, 5713⁹.—A math. discussion.
Rav E. Heiks

2

A58-51A METALLURGICAL LITERATURE CLASSIFICATION



An experimental verification of Ostwald's formula. K. S. Lyalikov. *Compt. rend. acad. sci. U.R.S.S.* 53 425-7(1946); *cf. C.A.* 34, 5713⁹.—Rates of growth of AgBr crystals suspended in 1% gelatin soln. were detd. by statistical analysis of photomicrographs. The existence of a linear relation between the rate of growth and $1/r^3$ (r = crystal radius) led to the conclusion that the relation between the soly. and crystal size of AgBr is in accordance with Ostwald's law. I. B. Campbell

Lyalikov, K. S.

2

Statistical study of photographic emulsions. K. S. Lyalikov. *Problemy Kinetiki i Kataliza 7, Statist. Voprosy* [illegible] *Sbornik, Akad. Nauk S.S.S.R.*, 174–202 (1949).—The applicability was established of the equation $n = n_0/(1 + knt)$ (where n is the no. of particles in a sol at any given time, t is the time elapsed, n_0 is the no. of particles at $t = 0$, and k is the const. for the rate of recrystn.) to the detn. of the change in the no. of grains in a photographic emulsion in phys. ripening. The equation given by Sheppard and Lambert (*C.A.* 23, 3840) was shown to be in error. The linear relation between the contrast coeff. and the time for the phys. ripening of an emulsion was established. An equation is given for the relation between the sensitivity and the contrast coeff. It was also shown that gelatins can be classified by their retardation capacity. J. Rovtar Leach

LYALIKOV, K. S.

PA 39/49T103

USSR/Physic
Silver Bromide
Photography

Mar 49

"Complex Bromides of Silver," K. S. Lyalikov, Leningrad Inst of Kinoengineers, 2 pp

"Dok Ak Nauk SSSR" Vol LXV, No 2

Substantial quantity of silver bromide may be dissolved in concentrated solutions of easily soluble bromides. Reason for this increase in solubility of silver bromide is obviously the formation of a complex compound. S. V. Gorbachev ascribed the formula $AgBr'$ to the complex ion; W. Erber, the formula Ag_2Br_6'''' to the complex [redacted]. 39/49T103

USSR/Physic (Contd) Mar 49

ion. Using different compound of cesium and ammonium, finds that the formulas are: $(NH_4)_2AgBr_3$; Cs_2AgBr_3; and $CsAgBr_2$. Submitted by Acad A. N. Terenin, 20 Jan 49.

[redacted]

39/49T103

LYALIKOV, K. S.

168T82

USSR/Physics - Photography Jul 50

"Conference on the Scientific and Technical Uses of Photography and Cinematography," K. S. Lyalikov

"Uspekh Fiz Nauk" Vol XLI, No 3, pp 413-419

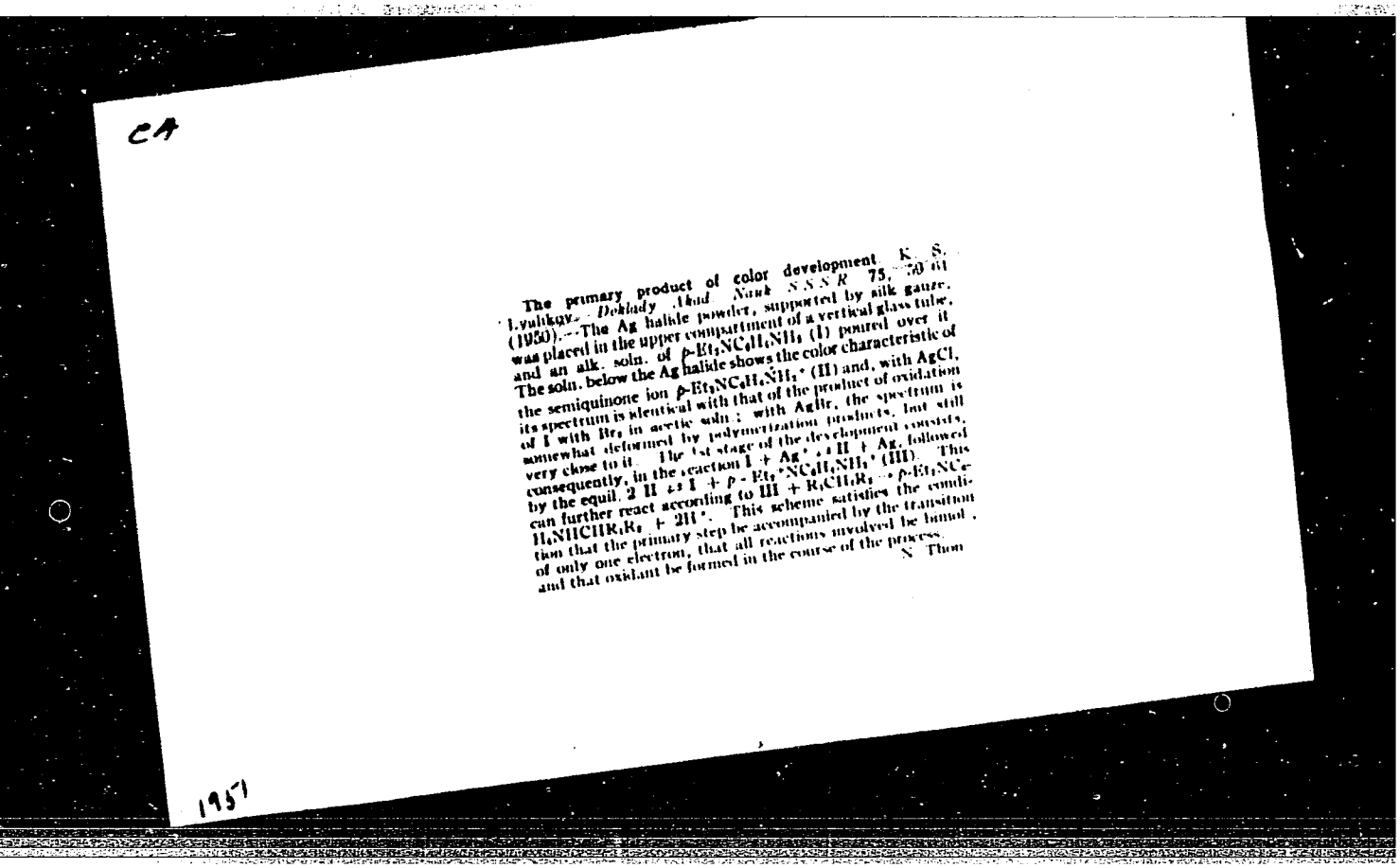
Conference held in Moscow 14-16 Dec 49; called by Commission of Sci Photog and Cinematog, Acad Sci USSR. Separate sessions on astrophotography and spectrophotography, high-speed photography and cinematography, electron photography and microphotography. A. A. Mikhaylov, Dir, Pulkovo Obs, discussed photography in astronomy. V. N. Vertsner, Cand Physicomath Sci, reported that

168T82

USSR/Physics - Photography (Contd) Jul 50

electron microscopes, now series-produced in USSR have resolving power up to 20 Å and useful magnification up to 100,000.

168T82



CA

The primary product of color development. K. S. Lyalikov. *Doklady Akad. Nauk S.S.S.R.* 75, 79–81 (1950).—The Ag halide powder, supported by silk gauze, was placed in the upper compartment of a vertical glass tube, and an alk. soln. of *p*-$Et_2NC_6H_4NH_2$ (I) poured over it. The soln. below the Ag halide shows the color characteristic of the semiquinone ion *p*-$Et_2NC_6H_4NH_2^+$ (II) and, with AgCl, its spectrum is identical with that of the product of oxidation of I with Br_2 in acetic soln.; with AgBr, the spectrum is somewhat deformed by polymerization products, but still very close to it. The 1st stage of the development consists, consequently, in the reaction I + Ag^+ ⇄ II + Ag, followed by the equil. 2 II ⇄ I + *p*-$Et_2NC_6H_4NH_2^+$ (III). This can further react according to III + R_1CHR_2 → *p*-$Et_2NC_6H_4NHCHR_1R_2$ + $2H^+$. This scheme satisfies the condition that the primary step be accompanied by the transition of only one electron, that all reactions involved be bimol., and that oxidant be formed in the course of the process. S. Thom

1951

LYALIKOV, K. S.

Photographic Chemistry

Study of physical maturation of photographic emulsions. Usp.nauch.fot., No. 1, 1951.

Monthly List of Russian Accessions, Library of Congress, June 1952. Unclassified.

LYALIKOV, K. S.

Photographic Chemistry

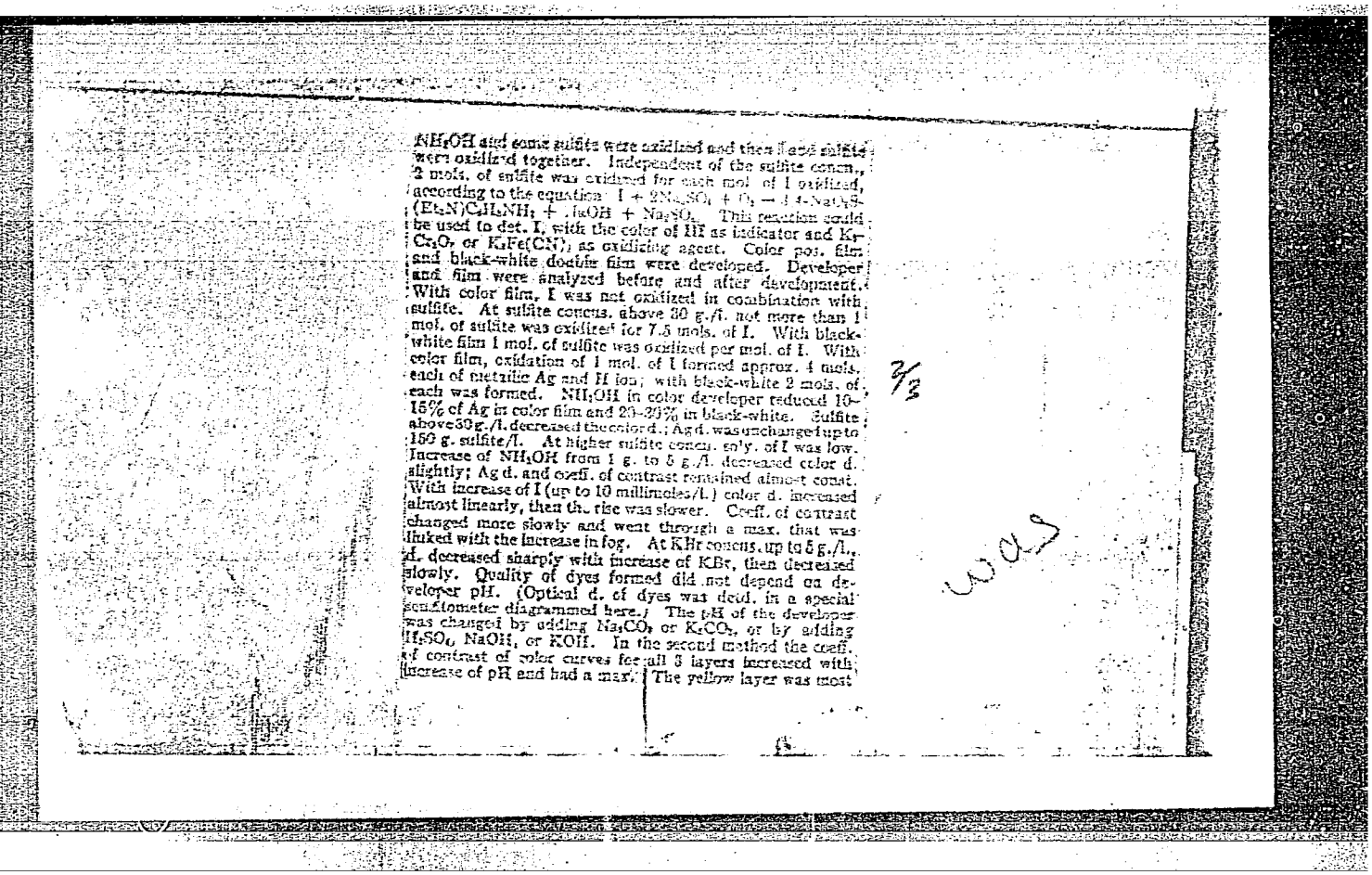
Method of measuring the thickness of emulsion grains. Usp.nauch.fot., No. 1, 1951.

Monthly List of Russian Accessions, Library of Congress, June 1952. Unclassified.

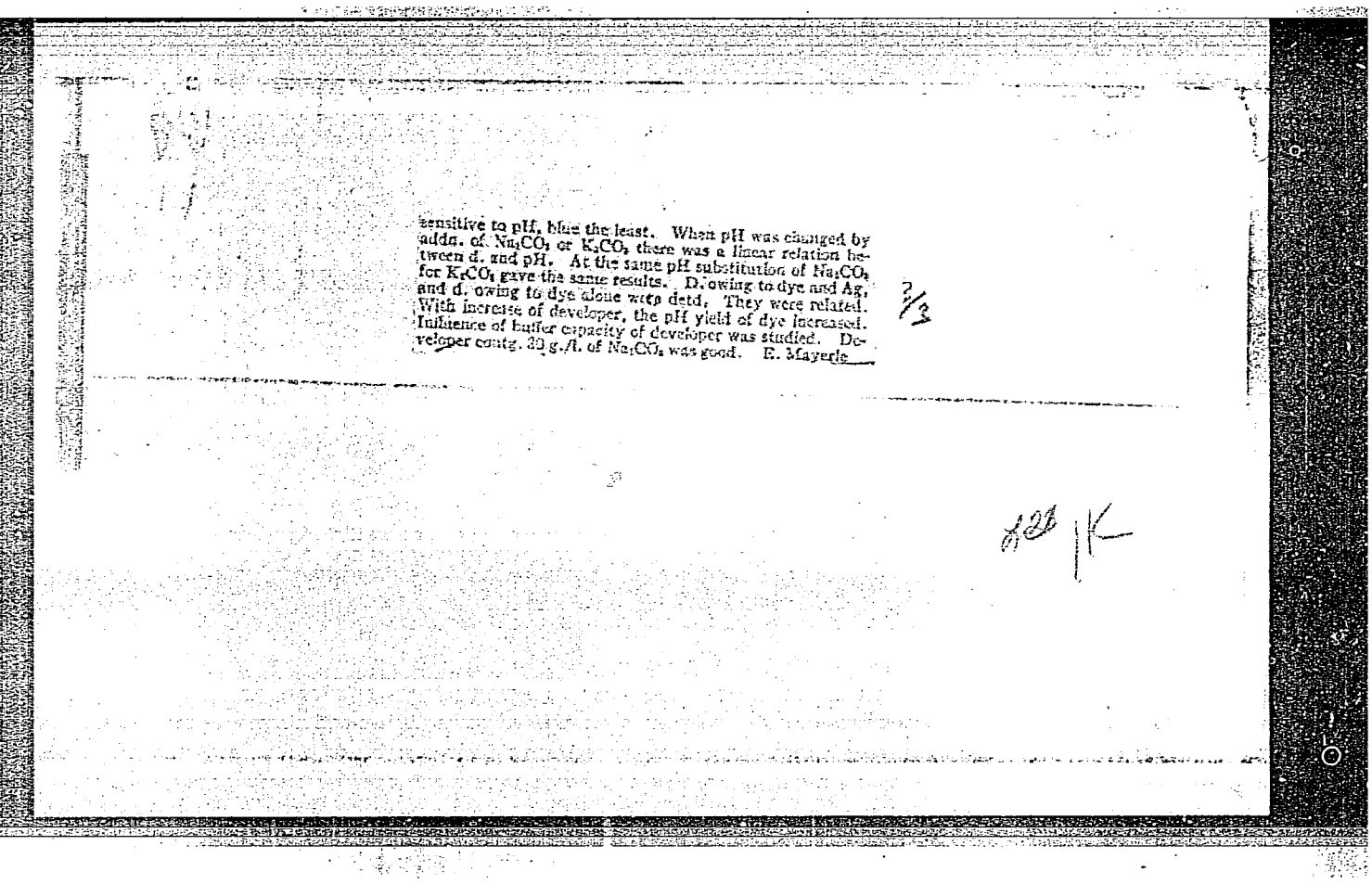
Lyalikov, K. S.

USSR.

Color development. K. S. Lyalikov, B. A. Tsarev, Ya.
L. Lelov, and Y. N. Shindin. Uchenye Nauk. Fiz.
Akad. Nauk S.S.S.R., Otdel. Khim. Nauk 2, 35-47(1954).—
The authors studied oxidation-reduction potentials of p-
$Et_2NC_6H_4NH_2$ (I) and p-[Et(HOCH$_2$CH$_2$)N]$C_6H_4NH_2$ (II),
mechanism of oxidation in color developer, and influence of
the compn. of the color developer. At a pH corresponding
to the normal concn. of K_2CO_3 in color developers, the normal
potentials were detd. for I (−109.6 mv.) and II (−65.6
mv.). App. for collecting the primary oxidation product
of I was a silk screen between the ends of 2 glass tubes 1 cm.
in diam. The glass tubes were held tightly together by a
rubber tube. Powd. AgCl was put on the silk and washed
until no particles passed through. Alk. soln. of I was
poured through. Purple color of the semiquinone (III)
disappeared 2-3 cm. below the filter. III was identical
with that obtained by the usual oxidation of I with Br in
AcOH. When 1-naphtholsulfonic acid (IV) was introduced
by a side tube into the colored zone of III a blue dye formed.
Introduction of IV where the color had disappeared formed
no dye. Below pH 0.45 III did not polymerize. At pH
0.45-8.0, III changed but did not ppt. A stream of air was
blown through a alk. soln. of sulfite and NH_2OH. Film was
developed in another sample. At intervals the solns. were
analyzed. There was a linear relation of NH_2OH and sul-
fite concns. to time. Oxidation rate did not depend on
concn. of the reducing agent. Oxidation rate of I depended
on pH. In NH_2OH-sulfite mixt. oxidation rates of the com-
ponents did not change when they were mixed. In I-sulfite
mixt., oxidation rates of both were lower than their separate
rates. In I-NH_2OH mixt., I was oxidized only after almost
all NH_2OH was oxidized. In sulfite-NH_2OH-I mixt. all the



NH_2OH and some sulfite were oxidized and then these sulfite were oxidized together. Independent of the sulfite concn., 2 mols. of sulfite was oxidized for each mol. of I oxidized, according to the equation: $I + 2Na_2SO_3 + O_2 \rightarrow (Et_2N)C_6H_2NH_2 + NaOH + Na_2SO_4$. This reaction could be used to det. I, with the color of III as indicator and $K_2Cr_2O_7$ or $K_3Fe(CN)_6$ as oxidizing agent. Color pos. film and black-white double film were developed. Developer and film were analyzed before and after development. With color film, I was not oxidized in combination with sulfite. At sulfite concns. above 30 g./l. not more than 1 mol. of sulfite was oxidized for 7.5 mols. of I. With black-white film 1 mol. of sulfite was oxidized per mol. of I. With color film, oxidation of 1 mol. of I formed approx. 4 mols. each of metallic Ag and H ion; with black-white 2 mols. of each was formed. NH_2OH in color developer reduced 10–15% of Ag in color film and 20–30% in black-white. Sulfite above 30 g./l. decreased the color d.; Ag d. was unchanged up to 150 g. sulfite/l. At higher sulfite concn. only of I was low. Increase of NH_2OH from 1 g. to 5 g./l. decreased color d. slightly; Ag d. and coeff. of contrast remained almost const. With increase of I (up to 10 millimoles/l.) color d. increased almost linearly, then the rise was slower. Coeff. of contrast changed more slowly and went through a max. that was linked with the increase in fog. At KBr concns. up to 5 g./l., d. decreased sharply with increase of KBr, then decreased slowly. Quality of dyes formed did not depend on developer pH. (Optical d. of dyes was detd. in a special sensitometer diagrammed here.) The pH of the developer was changed by adding Na_2CO_3 or K_2CO_3, or by adding H_2SO_4, NaOH, or KOH. In the second method the coeff. of contrast of color curves for all 3 layers increased with increase of pH and had a max. The yellow layer was most



sensitive to pH, blue the least. When pH was changed by addn. of Na_2CO_3 or K_2CO_3 there was a linear relation between d. and pH. At the same pH substitution of Na_2CO_3 for K_2CO_3 gave the same results. D. owing to dye and Ag, and d. owing to dye alone were detd. They were related. With increase of developer, the pH yield of dye increased. Influence of buffer capacity of developer was studied. Developer contg. 30 g./l. of Na_2CO_3 was good. E. Mayerle

LYALIKOV, K.S.

S.O.Maksimovich, a pioneer of color cinematography in Russia.
Usp.nauch.fot. 2:239-244 '54. (MLRA 7:5)
(Maksimovich, Sergei Olimpievich, 1876-1941)

LYALIKOV, K.S.

USSR/Chemistry

Card 1/1 Pub. 147 - 18/26

Authors : Lyalikov, K. S., and Piskunova, V. N.

Title : Formation of complex silver bromides in solutions

Periodical : Zhur. fiz khim. 28/1, 127-134, Jan 1954

Abstract : The composition of a complex $AgBr_3$" ion, which forms preferably during the solution of AgBr in NH_4Br and KBr solutions was investigated to determine the activity coefficients of complex bromides in solutions. The equilibrium constants in the equations describing the formation of complex silver bromides (K_2AgBr_3 and $(NH_4)_2AgBr_3$), were determined. The solubility of AgBr in bromide solutions of one and the same concentration but containing different amounts of $NaNO_3$ due to which their ion force is different, was investigated and the results are tabulated. Five references : 3-USSR and 2-German (1900-1949). Tables; graphs.

Institution : .....

Submitted : April 4, 1953

LYALIKOV, K. S.
USSR/Chemistry - Solubility

Card 1/1

Authors : Lyalikov, K. S., and Piskunova, V. N.

Title : An Equation for Calculating the Solubility of Silver Bromide in Ammonia.

Periodical : Zhur. Fiz. Khim. Vol. 28, Ed. 4, 595-600, Apr 1954

Abstract : The activity of $Ag(NH_3)_2$ coefficients in the presence of potassium Bromide concentrations, and solubility of bromide silver in ammonia in the presence of various concentrations of potassium bromide, is calcualted. Nine references; tables; graphs.

Institution : .....

Submitted : April 4, 1953

4 LYALIKOV, K. S.

Photo Chem.

Photomicrographic study of the process of development. K. S. Lyalikov and V. N. Piskunova. *Uspekhi Nauch. Fot., Akad. Nauk S.S.S.R., Otdel. Khim. Nauk* 3, 168-73 (1955).—An electron-microscope method was developed to study the speed of growth of separate Ag crystals during development. At the start of development they grow rapidly, then more slowly. In a developer contg. much sulfite the emulsion does not dissolve markedly. The character of the destruction of emulsion grains does not depend on the sulfite in the developer. Eurilla Mayerle

GA

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LYALIKOV, K.S.; SMIRNOV, Ya. A.

Sensitometric study of color materials. Trudy Lab.aerofot. 4. 61-71 '55. (MLRA 9:2)
(Photographic sensitometry)

Lyalikov, K. S.

Theory of physical ripening of photographic emulsions. K. S. Lyalikov (... Leningrad). Z. ... 27 ... (1956). — The soly. of AgBr in ... M NH_3 ... concn. range of 0–1.5M from the ... complexes. Agreement with $Ag(NH_3)_2^+$ and $AgBr_2^-$ expt. values is good. Size frequency curves are given for various ripening times of an NH_3-type emulsion (I) and a neutral-type emulsion (II). The curves for the emulsions at the moment of pptn. are sym. and Gaussian in form, but become unsym. during ripening. Under most conditions ... the mean grain size, ... increased linearly with ...

LYALIKOV, K. S.

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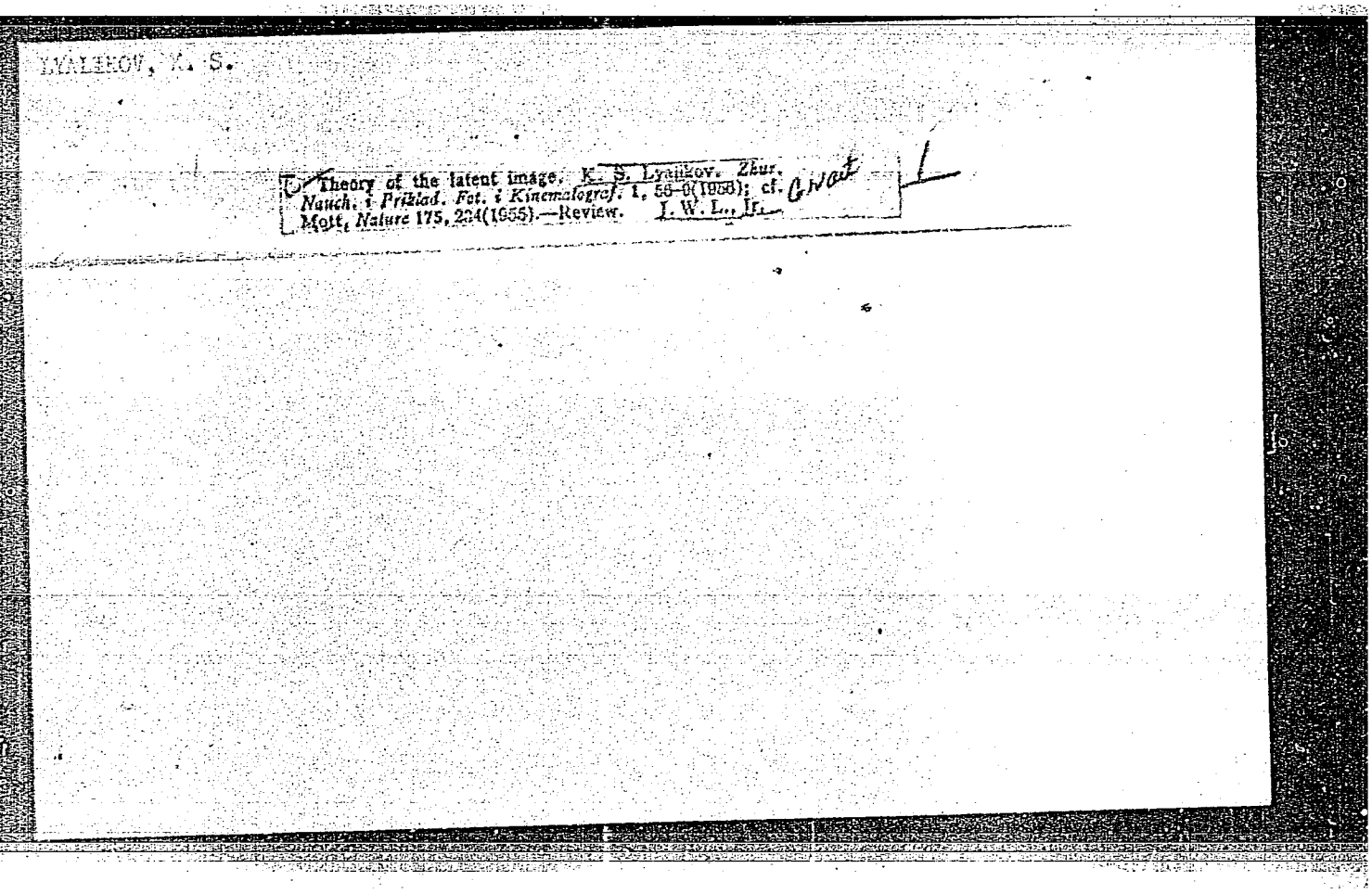
Dual Mechanism of Photographic Development. K. S. Lyalikov and G. M. Dreyer. *Dokl. Akad. Nauk. SSSR*, 1955, 105, 507-509.—Electron microscope observation during development with *o*-quinol shows that silver crystals grow rapidly in length during the first 7-8 min., without much increase in thickness. Elongation then ceases, but is followed by rapid thickening during the next 8 min.; the results suggest that growth takes place linearly from an active centre into a silver bromide crystallite, with capture of lattice ions and eventual breakdown of the lattice. Further growth then takes place at the expense of silver ions in solution. *J. Appl. Chem.*

LYALIKOV, K. S. and DREKHER, G. M.

"Electronmicroscopical Investigation of the Developing Process," paper given at the International Scientific Photography Conference, Cologne, 24-27 Sep 1956

E,3,068,138



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Theory of the latent image. K. S. Lyalekov. Zhur. Nauch. i Prikład. Fot. i Kinematograf. 1, 56-9(1956); cf. Mott, Nature 175, 224(1955).—Review. L. W. L., Jr.

LYALIKOV, K.S.

Category : USSR/Optics - Scientific photography K-11

Abs Jour : Ref Zhur - Fizika, No 1, 1957 No 2646

Author : Lyalikov, K.S.
Title : Xerography (Electric Photography)

Orig Pub : Zh. nauch. i prikl. fotogr. i kinematogr., 1956, 1, No 2, 136-139

Abstract : Popular Article

Card : 1/1

Lyalikov, K. S.

USSR/Optics - Scientific Photography, K-11

Abst Journal: Referat Zhur - Fizika, No 12, 1956, 35964

Author: Lyalikov, K. S.

Institution: None

Title: Development of Xerography (Electro-Photography)

Original Periodical: Zh. nauch. i prikl. fotogr. i kinematogr., 1956, 1, No 2, 226-230

Abstract: Survey article

Card 1/1