KHLYBOV, B.M., kand.tekhn.nauk

Drawbacks of the consecutive layout of a distributing lead-in.
Vod.i san.tekh. no.2:6-10 F '63. (MIRA 16:2)
(Hot-water heating) (Hot-water supply)

LEVIN, Boris Isaakovich; SHUBIN, Yevsey Petrovich; KHLYBOV, B.M., kand. tekhn. nauk, red.

[Heat exchangers of heat supply systems] Teplootmennye apparaty sistem teplosnabzheniia. Moskva, Energiia, 1965. 256 p. (MIRA 18:5)

KHLYBOV, G.M.

Preparing the track for electrification. Put' i put'khoz. 8 no.8:23 '64. (MIRA 17:9)

1. Starshiy dorozhnyy master, stantsiya Zuyevka, Gor'kovskoy dorogi.

KHLYBOV, P.I. (Leningrad)

Therapeutic and prophylactic action of prolonged oxygen inhalation combined with narcotics and neuroplegic substances on the course of cerebral anemia. Pat.fiziol.eksp.terap. 4 no.1:59-61 Ja-F '60. (MIRA 13:5)

1. Iz kafedry patologicheskoy fiziologii (nachal'nik - chlen-korrespondent AMN SSSR prof. I.R. Pterov) Voyenno-meditsinskoy ordena Lenina akademii imeni S.M. Kirova.

(ANEMIA exper.)
(BRAIN blood supply)
(OXYGEN)
(BARBITURATES pharmacol.)
(HIBERNATION ARTIFICIAL)

GORBUSHIN, P.B.; GUREVICH, M.S.; NEBOL'SIN, I.S.; BUKSHTEYN, D.I.; VAYNTSVAYG, A.S.; LAZAREVICH, S.K.; KARTSEV, Yu.V.; KONTOROVICH, I.A.; KHLYBOVA, A.S.; TSIMBALYUK, A.F.; KUTSENOVA, A.A., red. izd-va; NAUMOVA, G.D., tekhn.red.; TEMKINA, Ye.L., tekhn.red.

[Long-range planning for the expansion and location of sources of supply of building materials and equipment for the construction industry in economic administrative regions; basic regulations] Perspektivnoe planirovanie razvitiia i razmeshchenila material'no-tekhnicheskoi bazy stroitel'stva v ekonomicheskikh administrativnykh raionakh; osnovnye polozheniia. Moskva, Gos.izd-vo lit-ry po stroit., arkhit. i stroit.materialam, 1960. 78 p. (MIRA 13:9)

1. Akademiya stroitel'stva i arkhitektury SSSR. Institut ekonomiki stroitel'stva. 2. Institut ekonomiki Akademii stroitel'stva i arkhitektury SSSR (for Nebol'sin, Bukshteyn, Vayntsvayg, Lazarevich, Kartsev). 3. Otdel ekonomiki i organizatsii Gosstroya SSSR (for Kontorovich, Khlybova, TSimbalyuk).
(Building materials industry) (Construction industry)

KHLYN' L.

POLAND / Forestry. Dendrology. K

Abs Jour: Ref Zhur-Biol., No 7, 1958, 29531.

Author : Khlyn', L.
Inst : Not given.
Title : The Hornbeams in the Kurnicki Arboretum in Poland. (Graby v Kurnitskom arboretume (Pol'sha).

Orig Pub: Arboretum korn., 1956, (1957), 2, 117-126.

Abstract: In systematic order a description is given of 7 species of hornbeam (the section Eucarpinus Sarg. i Distegocarpus Sarg.) raised from seeds in 1928-1938 which were obtained from different places in Europe, Asia and North America. Characterizing descriptions are given of growth, fruit-bearing and the frost resistance of each species. It is noted all the hornbeams with

Card 1/2

ABROSIMOV, G.S.; KATSNEL'SON, S.M.; KHLYNIN, M.N., [illegible]svarshchik; ABULADZE, M.A.

Letters to the editor. Put' i put.khoz. 9 no.8:[illegible] '65.
(MIRA 18:8)

1. Starshiy normirovshchik stantsii Serov-Sortirovochnyy, Sverdlovskoy dorogi (for Abrosimov). 2. Glavnyy spetsialist tekhnicheskogo otdela "Kavgiprotrans", Tbilisi (for Katsnel'son). 3. Stantsiya Kirovabad, Zakavkazskoy dorogi (for Khlynin). 4. Nachal'nik rel'sosvarochnogo poyezda, stantsiya Orsha, Belorusskoy dorogi (for Abuladze).

KHLYNIN, Yu.V.

Correlation of arterial pressure and diuresis in hypophysectomized dogs following a water intake. Nauch. trudy Riaz. med. inst. 15:153-156 '62.

Effect of ephedrine and caffeine on arterial pressure and diuresis in hypophysectomized dogs following a water intake. Ibid.:156-158

Effect of sodium nitrite and pituitrin on arterial pressure and diuresis in hypophysectomized dogs following a water intake. Ibid.:159-160

Effect of ephedrine on arterial pressure, diuresis and the composition of blood (quantity of water, chlorine and the hematocritic index) in dogs following a water and salt intake. Ibid.:161-164 (MIRA 17:5)

1. Kafedra patologicheskoy fiziologii (zav. kafedroy - prof. L.N.Karlik) Ryazanskogo meditsinskogo instituta imeni Pavlova.

KHLYNIN, YU. V.

KHLYNIN, YU. V.- "On Changes in the Perspiration Function in the Process of Adaptation of the Organism to Water Immersion." Ryazan' Med Inst imeni Academician I. P. Pavlov, Ryazan', 1955 (Dissertations for Degree of Candidate of Medical Sciences)

SO: Knizhnaya Letopis' No. 26, June 1955, Moscow

KHLYNOV, N.

Ways to increase the effectiveness of machine accounting and calculating work in the State Bank. Den. i kred. 18 no.9:25-34 S '60. (MIRA 13:8)

(Banks and banking--Accounting) (Machine accounting)

KHLYNOV, N.

Status and objectives of a bank's accounting operations. Den. i kred. 19 no.8:31-42 Ag '61. (MIRA 14:9)
(Banks and banking--Accounting)

KHLYNOV, N., polkovnik

Recommended literature for soldiers; booklets on military life and military education. Komm.Vooruzh.Sil 1 no.2:89-93 O '60.
(MIRA 14:8)
(Bibliography--Military discipline) (Bibliography--Military education)

KHLYNOV, N.

Reorganization of balance sheet and industrial branch reports.
Den. i kred. 20 no.12:23-31 D '62. (MIRA 16:1)

(Banks and banking--Accounting)
(Machine accounting)

KARDASHOV, Ivan Stepanovich, polkovnik, kand.filosof.nauk; KHLYNOV, M.M., red.; BEZDENEZHNYKH, P.T., red.; STREL'NIKOVA, M.A., tekhn.red.

[International obligation of the Soviet Armed Forces] Internatsional'nyi dolg Vooruzhennykh Sil SSSR. Moskva, Voen.izd-vo M-va obor.SSSR, 1960. 211 p. (MIRA 13:5)
(Russia--Army)

KHLYNOV, Nikolay Semenovich; ZAVERNYAYEVA, L., red.izd-va; LEBEDEV, A., tekhn.red.

[Organization of the accounting operations in the State Bank] Organizatsiia uchetno-operatsionnoi raboty v Gosbanke. Moskva, Gosfinizdat, 1959. 135 p. (MIRA 13:1)
(Banks and banking--Accounting)

1. KELYNOV, V.

2. USSR (600)

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7. How the steel workers live in Japan. V pom. profaktivu No. 1 1953.

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

KHLYNOV, V.

Life of Japanese coal miners. V pom.profaktivu 14 no.16:39-42 Ag '53.
(MLRA 6:7)

(Japan--Coal miners) (Coal miners--Japan)

KHLYNOV, V.

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SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 4 No. 5, May 1955, Uncl.

KHLYNOV, Vladimir Nikolayevich; GARSIYA, L., red.; POPOV, A., red.; MOSKVINA, R., tekhn.red.

[Position of the laboring class in Japan after the Second World War] Polozhenie rabochego klassa IAponii (posle Vtoroi Mirovoi voiny). Moskva, Izd-vo sotsial'no-ekon.lit-ry, 1958. 156 p. (MIRA 11:12)

(Japan--Labor and laboring classes)

KOSTOUSOV, A.I.; BRITSKO, K.M.; VOLODIN, Ye.I.; GRECHUKHIN, A.I.; DEGTYARENKO, N.S.; DOBROSKOK, A.N.; MARDANYAN, M.Ye.; NAYDENOV, I.A.; PROKOPOVICH, A.Ye.; TELYATNIKOV, L.P.; USPENSKIY, Ya.K.; KHLYNOV, V.N.; PERL'SHTEYN, Ye.A., nauchnyy red.; YEVSEVICHEV, V.I., red.; BUDOVA, L.G., tekhn.red.; NADEINSKAYA, A.A., tekhn.red.

[Machine-tool manufacture in Japan] Iaponskoe stankostroenie. Pod obshchei red. A.E.Prokopovicha i M.E.Mardaniana. Moskva, Tsentr. biuro tekhn.informatsii, 1959. 461 p. (MIRA 13:9)

1. Moscow (Province) Oblastnoy sovet narodnogo khozyaystva. (Japan--Machine tool industry)

OKOTI, Kadzuo [Okochi, Kazuo], red.; SUMIYA, Mikio, red.; RAMZES, V.B., [translator]; KHLYNOV, V.N., red.; TUZMUKHAMEDOV, R., red.; ARTEMOVA, Ye., tekhn.red.

[Working class of Japan] Rabochii klass IAponii. Red. i vstup.stat'ia V.N.Khlynova. Moskva, Izd-vo inostr.lit-ry, 1959. 518 p. Translated from the Japanese. (MIRA 12:11)
(Japan--Labor and laboring classes)

LYUBIMOVA, V.V., doktor ekon. nauk; NOVIKOVA, O.G., kand. ekon. nauk; SERGEYEVA, A.G., kand. ekon. nauk; IVANOV, N.P., kand. istor. nauk; OBORINA, G.A., kand. ekon. nauk; KHLYNOV, V.N., kand. ekon. nauk; DANILEVICH, M.V., doktor ekon. nauk; POKATAYEVA, T.S., kand. ekon. nauk; USOV, G.A., kand. ist. nauk; SAL'KOVSKIY, O.V., kand. geogr. nauk. Prinimali uchastiye: PESCHANSKIY, V V., kand. ist. nauk; PIROGOVA, I.M.; PRONIN, S.V.; USVYATSOV, A.Ye.; MAKAROV, V., red.; DARONYAN, M., mladshiy red.; ULANOVA, L., tekhn. red.

[Real wages during the period of the general crisis of capitalism]Real'naia zarabotnaia plata v period obshchego krizisa kapitalizma. Moskva, Sotsekgiz, 1962. 558 p. (MIRA 16:3)

1. Akademiya nauk SSSR. Institut mirovoy ekonomiki i mezhdunarodnykh otnosheniy.
(Wages)

KHLYNOV, V.V.

KHLYNOV, V.V.; YESIN, O.A.

O snizh enii soderzhaniya korolykov ferrosplavov v shlakakh.

report submitted for the 5th Physical Chemical Conference on Steel Production.

MOSCOW _ 30 JUN 1959

YESIN, O.A.; SHIVALIN, I.T.; KHLYNOV, V.V.

Studying the properties of fusions $PbO--Na_2O--SiO_2$ by means of electromotive forces. Zhur. neorg. khim. 2 10:2429-2435 O '57. (MIRA 11:3)

1. Ural'skiy politekhnicheskiy institut im. S.M.Kirova.
(Fusion) (Oxides) (Electrolysis)

SOV/137-58-8-16387

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 8, p 23 (USSR)

AUTHORS: Sryvalin, I.T., Nikitin, Yu.P., Khlynov, V.V.

TITLE: Interphase Tension in Sulfide-slag Melts (Mezhfaznoye natyazheniye rasplavov sul'fid-shlak)

PERIODICAL: Tr. Ural'skogo politekhn. in-ta, 1957, Nr 67, pp 64-68

ABSTRACT: The interphase tension of sulfides on the boundary (B) with the slags (S) at 1200-1250°C was measured by means of X-ray photography of a drop. The Cu sulfide contained (here and further on in weight %) Cu 77.71, S 20.47, and Fe 1.82, while the Ni sulfide contained Ni 72.8 and S 25.7. The density of the sulfides and S was calculated approximately by the law of additivity from data relative to solid components. The calculation of σ was done graphically. The error in the measurements did not exceed 20%. The σ of Cu_2S on the B with S [CaO 12, Al_2O_3 15, the remainder ($FeO+SiO_2$)] decreases from 340 (FeO 0) to 150 erg/cm^2 (FeO 50); for Ni_3S_2 on the B with S [CaO 27, Al_2O_3 11, the remainder ($FeO+SiO_2$)] it varies from 450 (FeO 0) to 200 erg/cm^2 (FeO 35). The decrease of σ is explained by the approach of the nature of the

Card 1/2

Interphase Tension in Sulfide-slag Melts

sulfides toward that of the S in proportion to the increasing concentration of FeO in the latter. Upon the substitution of Cu_2S for Ni_3S_2 in the matte, the σ on the B with S (SiO_2 72, CaO 8, Al_2O_3 6, Na_2O 14) decreases from 470 (Ni_3S_2 100) to 300 erg/cm^2 (Cu_2S 100). The σ-vs.-composition curve is concave upward. The values for σ are close to those of the surface tension of sulfides measured earlier. The authors explain the decrease in the losses of sulfides in the slag by the increase of σ upon the decrease of FeO in S or Cu_2S in the matte.

S.P.

1. Metal sulfides--Surface tension 2. Slags--Properties 3. Mathematics

AUTHORS: Khlynov, V. V., Yesin, O. A. SOV/ 2o-12o-1-36/53

TITLE: Electrocapillary Motions in Melted Slags(Elektrokapillyarnyye dvizheniya v rasplavlennykh shlakakh)

PERIODICAL: Doklady Akademii nauk SSSR, 1958, Vol. 12o, Nr 1, pp. 134 - 136 (USSR)

ABSTRACT: At temperatures of 137o - 15oo°C the authors noticed a shift of the drops of Cu, Ni, Mn, Ag, Ni_3S_2 to a certain electrode on the surface of a slag containing 52% CaO, 41% Al_2O_3 and 7% SiO_2. The experiments as well as the arrangements for the measurements are discussed in short. In some of the experiments the authors could observe the simultaneous motion of a great amount (2o - 3o) of drops of different size (0,5 to 3 mm) in cases where liquid electrodes of Ni_3S_2 supplied from graphite feeders. In agreement with the theory such motions were not at all observed in the case of solidified metal drops and pieces of solid magnesium oxide. The results of the experiments in an oxidizing atmosphere (air) are compiled in a table. The same table contains the values of the specific movabilities. As the

Card 1/3

metals and nickel sulfide move in opposite direction the determination of the sulfur content corresponding to zero movability is of interest. The experiments carried out in the case of field gradients E = 5 - 6 show the following: a decrease of the sulfur contained in the alloy Ni-S from 26% (Ni_3S_2) to 0,4% is practically of no influence on the movability. This is probably dependent on the great capillary activity of sulfur. In the case of a small content of sulfur the surface of the Ni-S melts is positively charged, in the case of high and medium sulfur content, however, negatively. Various details are given. The dislocations observed and discussed by the authors are electrocapillary motions of the drops at the surface of the slag. This is also proved by a quantitative comparison of the theory of electrocapillary motions with the results of the present work. There are 1 table, and 17 references, 15 of which are Soviet.

ASSOCIATION: Ural'skiy politekhnicheskiy institut im.S.M.Kirova (Ural Polytechnical Institute imeni S.M.Kirov)

Electrocapillary Motions in Melted Slags SOV/20-120-1-36/63

PRESENTED: January 2, 1958, by A.N.Frumkin, Member, Academy of Sciences, USSR

SUBMITTED: October 15, 1957

1. Slags--Analysis 2. Slags--Test results 3. Slags--Temperature factors 4. Electrodes--Applications

Card 3/3

5(4)

AUTHORS: Khlynov, V. V., Yesin, O. A. SOV/20-123-2-31/50

TITLE: Extraction of Sulphide Inclusions From Molten Slags by Means of an Electric Field (Izvlecheniye sul'fidnykh vklyucheniy iz rasplavlennykh shlakov pri pomoshchi elektricheskogo polya)

PERIODICAL: Doklady Akademii nauk SSSR, 1958, Vol 123, Nr 2, pp 320-332 (USSR)

ABSTRACT: The present paper gives the results obtained by an investigation carried out by the authors of the use of the electrocapillary motion of liquid metal drops for the purpose of extracting sulphide inclusions from molten slags. Experiments were carried out at a temperature of $\sim 1400^{\circ}$ in boats of corundum or porcelain, which were filled with molten factory slags of the following composition (in %): CaO 15; Al_2O_3 10; SiO_2 43; Fe 20; MgO 10; Ni 0.1-0.2; Co 0.02; and S 0.15-0.2. A large part of nickel and cobalt was contained in these slags in form of matte inclusions of from 10^{-4} to 0.2 mm. Carborundum rods were used as current conveyers. In preliminary experiments, matte drops of large radius (r = 0.9 to 1.3 mm) were dipped into slags, and after 2 - 10 minutes a constant electric field with a field strength of from 5 to 7 v/cm was

Card 1/4

connected. The cell was then quickly cooled, and the path covered by the drops was determined. The inclusions move with velocities of $u = (7 \div 10)10^{-3}$ cm/sec in the direction of the cathode, and this corresponds to a mobility of $v = u/Er = (1.0 \div 1.5).10^{-2}$ cm/sec.v. The authors also investigated the influence exercised by the composition of the slags. The results obtained with Ni_3S_2 drops in iron-less slags of various compositions are given in a table; they show that the mobility of the drops is inversely proportional to the viscosity η of the slags. The data obtained for different iron oxide contents in the slags are given in the second table. The charge of the sulphide in iron-less slags is negative; it decreases after an addition of FeO, passes through zero, and then becomes positive. With increasing FeO concentration during the formation of the double layer, transition of the iron ions from the slags into the sulphide apparently begins to play an ever-increasing part: $Fe^{2+}_{(slags)} \rightarrow Fe_{(sulphide)} - 2e$ and not the inverse displacement of the nickel ions $Ni_{(sulphide)} \rightarrow Ni^{2+}_{(slags)} + 2e$. After 8 % FeO is attained, the process

$Fe^{2+}_{(slags)} \rightarrow Fe_{(sulphide)} - 2e$ begins to predominate. However, a further increase of FeO concentration reduces the mobility of the drops in spite of the fact that their positive charge increases and the viscosity of the slags is reduced. Conceptions on an ideally polarizable drop are absolutely out of place in the case under investigation. The equation determining mobility contains a depolarization coefficient. The reduction of drop polarizability is probably the main reason for the reduction of its mobility in the slags which contain iron oxides. An additional proof of the correctness of what has been just said is furnished by the results obtained by experiments carried out with constant FeO concentration (23 %) and a variable ratio between CaO and SiO_2 contents. Also in this case the mobility of drops hardly depends at all on the viscosity of the slags. The experiments discussed fully confirm the possibility of extracting valuable sulphide inclusions from molten slags by means of electrocapillary

motions. There are 1 figure, 3 tables, and 8 references, 7 of which are Soviet.

ASSOCIATION: Ural'skiy politekhnicheskiy institut im. S. M. Kirova (Ural Polytechnic Institute imeni S. M. Kirov)

PRESENTED: June 25, 1958, by I. P. Bardin, Academician

SUBMITTED: June 24, 1958

5(2), 24(3) SOV/156-59-1-10/54

AUTHORS: Nikitin, Yu. P., Yesin, O. A., Khlynov, V. V.

TITLE: On the Structure of the Electric Double Layer at the Boundary Between Liquid Sulfides and Silicates (O stroyenii dvoynogo elektricheskogo sloya na granitse mezhdu zhidkimi sul'fidami i silikatami)

PERIODICAL: Nauchnyye doklady vysshey shkoly. Khimiya i khimicheskaya tekhnologiya, 1959, Nr 1, pp 40 - 42 (USSR)

ABSTRACT: Electrocapillary measurements were carried out on boundary layers between copper and nickel sulfides on the one hand and silicate (glass) on the other hand. A double layer is formed the negative charge of which is on the sulfides whereas the positive charges are formed by the cations of silicate. It may be concluded from the charge density (Table 1) that the cation excess amounts to 10% at most; the remaining 90% of the surface are occupied by cations and anions neutralizing each other. The measurement of the exchange currents in a slag poor in metal in contact with nickel or copper sulfide at 1400° (Table 2) shows insignificant current intensities only in spite of high temperature. This is caused by the small

Card 1/4

copper and nickel ion content of the slag. It is these ions which are decisive for the potential rather than the concentration of calcium ions. Slags with a higher Cu or Ni content showed also stronger exchange currents (Table 3). The measurement of the capacity (Table 3) shows that the positive side of the double layer is formed mainly by silicate ions. The capacity is almost independent of the composition of the sulfide phases and (in the case of slags poor in metal) near the capacity of aqueous solutions, molten sulfides, perchlorates, and nitrates and of silicates which are in contact with cast iron, ferrosilicon or ferrophosphorus. With silicates, however, the dielectricity constant is lower, which is explained by the concentration of the electron shells of oxygen. The cations in the slag which have large electrostatic fields (Si^{4+}, Al^{3+}) unite the oxygen ions to complex anions. An FeO addition increases the capacity of the double layer. The sulfide is oxidized and SO_2 is formed. At the

 same time the double layer is formed in a different way.

On the Structure of the Electric Double Layer at the Boundary Between Liquid Sulfides and Silicates

SOV/156-59-1-10/34

The Fe cations pass from silicate to sulfide and charge it positively. The negative layer, therefore, now consists mainly of oxygen anions. The deformation of its cloud of electrons by a shift toward the positive layer decreases the size and increases the capacity of the double layer. This is also confirmed by the fact that with an increasing FeO-content in silicate the interphase voltage of the sulfides decreases considerably. These data are confirmed by the investigation of the electrocapillary motion of drops. In the electric field drops of copper and nickel sulfides in silicate move toward the anode. If about 7% FeO are introduced into the slag, the motion is reversed. The plotting of electrocapillary curves, the measurement of the exchange current and capacity, the observation of the electrocapillary motion of drops show a sufficiently detailed picture of the structure of the electric double layer at the boundary between liquid sulfide and molten silicate. There are 3 tables and 15 references, 14 of which are Soviet.

Card 3/4

On the Structure of the Electric Double Layer at the Boundary Between Liquid Sulfides and Silicates SOV/156-59-1-19/54

ASSOCIATION: Kafedra teorii metallurgicheskikh protsessov Ural'skogo politekhnicheskogo instituta (Chair of the Theory of Metallurgical Processes of the Ural Polytechnic Institute)

SUBMITTED: February 22, 1958

Card 4/4

S/081/62/000/002/015/107
B149/B102

AUTHOR: Khlynov, V. V.

TITLE: Structure of the sulfide-slag interface

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 2, 1962, 87, abstract 2B622 (Tr. Ural'skogo politekhn. in-ta, sb. 93, 1959, 80 - 83)

TEXT: The capacity C of the electric double layer at the sulfide-slag interphase boundary (IB) has been measured. C represents 14 - 16 $\mu f/cm^2$ in nonferrous slags and 100 - 105 $\mu f/cm^2$ in slags containing 5% FeO and 23.5% PbO (for technically pure Pb). The results obtained are correlated with the dependence of interphase tension at this IB on the composition of the slag. A qualitative picture of the IB structure is given. [Abstracter's note: Complete translation.]

Card 1/1

SOV/78-4-4-28/44

5(2)

AUTHORS: Sryvalin, I. T., Yesin, O. A., Khlynov, V. V.

TITLE: On the Deviations of Molten Silicates From Ideal Solutions (Ob otkloneniyakh rasplavlennykh silikatov ot ideal'nykh rastvorov)

PERIODICAL: Zhurnal neorganicheskoy khimii, 1959, Vol 4, Nr 4, pp 877-883 (USSR)

ABSTRACT: The deviations of molten silicates from ideal solutions as well as the activity coefficients were computed by the following semi-empirical equations:

$RT \ln \gamma_1 = (2Q-q)N_2^2 + (2q-2Q)N_2^3$, and

$RT \ln \gamma_2 = (2q-Q)N_1^2 - (2q-2Q)N_1^3$,

where T denotes the absolute temperature, R = gas constant, γ_1, γ_2 = mole fractions, Q,q = coefficients of certain physical importance and N_1, N_2 = number of the atoms A and B. The silicate melts of the systems $FeO-SiO_2$, $PbO-SiO_2$, $CaO-SiO_2$ and

Card 1/2

On the Deviations of Molten Silicates From Ideal Solutions

$MgO-SiO_2$ were investigated by means of these equations. The activity of SiO_2 and FeO at 1600° was calculated and is listed in table 1. The values agree well with publications. In the system $PbO-SiO_2$ the activity at 900° was calculated and is represented in figure 3. In this system the authors observed positive and negative deviations from the ideal solution with PbO, while they found only positive deviations in the case of SiO_2. The systems $CaO-SiO_2$ and $MgO-SiO_2$ were thermodynamically characterized by determinations of the activity of CaO and MgO at 1600° and 1700°. Figure 4 shows the negative deviation of the melt $CaO-SiO_2$ from the ideal solution at 1600°. For the system $MgO-SiO_2$ the authors computed Q and q according to the composition of the corresponding liquid phases at 1700°. The measurement results applied and the results of the computation of Q and q are contained in a table. There are 4 figures, 2 tables, and 14 references, 11 of which are Soviet.

SUBMITTED: January 17, 1958

Card 2/2

KHLYNOV, V.V., insh.; YESIN, O.A., prof.

Application of electrocapillary movements to reduce ferroalloy losses in slag. Izv.vys.ucheb.zav.; chern.met. 2 no.7:3-11 Jl '59. (MIRA 13:2)

1. Ural'skiy politekhnicheskiy institut. Rekomendovano kafedroy teorii metallurgicheskikh protsessov Ural'skogo politekhnicheskogo instituta.
(Electrocapillary phenomena)
(Iron alloys)

KHLYNOV, V. V., Cand Tech Sci (diss) -- "Electrocapillary movements and their use for extracting inclusions of valuable metals from melted slag". Sverdlovsk, 1960. 17 pp (Min Higher and Inter Spec Educ RSFSR, Ural Polytech Inst im S. M. Kirov), 150 copies (KL, No 10, 1960, 133)

KHLYNOV, V.V., assistent; YESIN, O.A., prof., doktor tekhn.nauk

Activity of lead oxide in PbO - Na_2O - SiO_2 melts determined by the electromotive force method. Trudy Ural. politekh.inst. no.91:117-127 '60. (MIRA 14:2)

(Lead oxide) (Activity coefficients)

KHLYNOV, V.V.; YESIN, O.A.; NIKITIN, Yu.P.

Electrocapillary motion of sulfides in oxide melts. Izv.vys.ucheb. zav.; khim.i khim.tekh. 4 no.1:53-56 '61. (MIRA 14:6)

1. Ural'skiy politekhnicheskiy institut imeni S.M.Kirova, kafedra teorii metallurgicheskikh protsessov.
(Sulfides) (Electrocapillary phenomena)

KHLYNOV, V.V.

Structure of the sulfide - slag boundary. Trudy Ural. politekh. inst. no.93:80-83 '59. (MIRA 15:3)
(Surface chemistry) (Sulfides--Metallurgy)

NIKITIN, Yu.P.; YESIN, O.A.; KHLYNOV, V.V.; SOTNIKOV, A.I.; KOROTCHENKOV, A.A.

Electrochemical investigation of the burning out of carbon. Izv. vys. ucheb. zav.; chern. met. 5 no.5:16-24 '62. (MIRA 15:6)

1. Ural'skiy politekhnicheskiy institut.
(Liquid metals)
(Electrochemical analysis)

KHLYNOV, V. V.; SOROKIN, Yu. V.; YESIN, O. A.; KHASIN, G. A.; VACHUGOV, G. A.

Character of the movement of steel drops in slag. Izv. vys.uchzab. zav.; chern.met.7 no. 5:22-25 '64. (MIRA 17:5)

1. Ural'skiy politekhnicheskiy institut i Zlatoustovskiy metallurgicheskiy zavod.

KHLYNOV, V.V.; YESIN, O.A.

Losses of ferrochromium resulting from its adhesion to carbon. Izv. vys. ucheb. zav.; chern. met. 7 no.8:9-14 '64. (MIRA 17:9)

1. Ural'skiy politekhnicheskiy institut.

ACCESSION NR: AP4029831 S/0279/64/000/002/0026/0030

AUTHOR: Khlynov, V. V. (Sverdlovsk-Zlatoust); Yesin, O. A. (Sverdlovsk-Zlatoust); Khasin, G. A. (Sverdlovsk-Zlatoust); Vachugov, G. A. (Sverdlovsk-Zlatoust); Sorokin, Yu. V. (Sverdlovsk-Zlatoust)

TITLE: On the mechanism of extracting nonmetallic impurities from steel drops in slag

SOURCE: AN SSSR. Izv. Metallurgiya i gornoye delo, no. 2, 1964, 26-30

TOPIC TAGS: ShKh-15 steel, ANF-6 slag, EI-736 steel, impurity, extraction

ABSTRACT: The authors investigated the passing of ShKh-15 steel drops through a layer of fused ANF-6 slag and its purification from non-metallic impurities. The amount of large impurities decreased during this process to a greater degree than did the fine impurities. Impurities larger than 10 μ, present in the initial metal, disappeared completely. This cannot be the result of flotation, since the metal of the mobile drop was intensely agitated. It was experimentally shown that the content of solid, non-metallic impurities in ShKh-15 and EI-736 steels decreased by passing drops through an ANF-6 slag layer. The content of the impurities decreased with an increase of the path length in accordance with the law of attenuation.

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722110008-0"

ACCESSION NR: AP4029831

Larger impurities were extracted faster than fine impurities. The higher the impurity concentration, the more rapidly they were eliminated from the metal. The impurity content in large drops fell slower than in fine drops. The obtained regularities were qualitatively and quantitatively clear, stemming from a definite mechanism impurity extraction. It was assumed that the internal eddy movements of the impurity delivers the drops to the surface layer which remained there without returning into the metal. Orig. art. has: 3 figures and 2 formulas.

ASSOCIATION: none

SUBMITTED: 18Oct63 DATE ACQ: 30Apr64 ENCL: 00

SUB CODE: ML NO REF SOV: 008 OTHER: 000

Card 2/2

L 45892 EWT(m)/EWP(w)/T/EWP(t)/ETI IJP(c) JD/JW
ACC NR: AP6026150 (A) SOURCE CODE: UR/0076/66/040/007/1598/1603

AUTHOR: Sorokin, Yu. V.; Khlynov, V. V.; Yesin, O. A.

ORG: Ural Polytechnic Institute (Ural'skiy politekhnicheskiy institut)

TITLE: Kinetics of spreading of a fluoride-oxide melt on solid oxides

SOURCE: Zhurnal fizicheskoy khimii, v. 40, no. 7, 1966, 1598-1603

TOPIC TAGS: calcium fluoride, aluminum oxide, fluid flow, surface tension, irreversible thermodynamics

ABSTRACT: The spreading of ANF-6 melt (70% CaF_2, 30% Al_2O_3) on plates of Al_2O_3, MgO, ZrO_2, SiO_2, and on a surface precoated with the same liquid was studied at 1480-1720°C with the aid of high-speed motion-picture photography (3000 frames per second). Two stages were observed in the spreading process. In the first stage, the liquid assumes an irregular shape with breaks in its surface. The rate v at which the plate becomes covered at this stage is independent of the surface tension of the drop, but depends on the temperature; the activation energy values indicate a viscous character of the resistance to the flow of the liquid. At a constant temperature, v depends on the plate material and decreases in the series Al_2O_3, MgO, ZrO_2, SiO_2 (on the precoated plate v is approximately the same as on SiO_2). The transition to the second stage is due to the action of the tension of the melt. In this stage, v is much lower than in

Card 1/2 UDC: 532.61

L 45892-66
ACC NR: AP6026150

the first. The observed behavior can be accounted for by formal relations of irreversible thermodynamics. Orig. art. has: 2 figures and 1 table.

SUB CODE: 07/ 20/ SUBM DATE: 21Jul65/ ORIG REF: 008/ OTH REF: 004

Card 2/2 LC

BISYARINA, V.P., dotsent; SAVCHENKO, V.A.; KHLYNOVA, Z.N.; FEDINA, Ye.A.; DVORTSOVA, Z.I.; GLADYSHEVA, A.M.

Treatment and prophylaxis of rickets in children by massive doses of vitamin D at a district medical center. Vop.okh.mat. i det. 4 no.6:64-67 N-D '59. (MIRA 13:4)

1. Iz kafedry detskikh bolezney Omskogo meditsinskogo instituta imeni M.I. Kalinina i Detskoy gorodskoy klinicheskoy bol'nitsy.
(VITAMINS--D) (RICKETS)

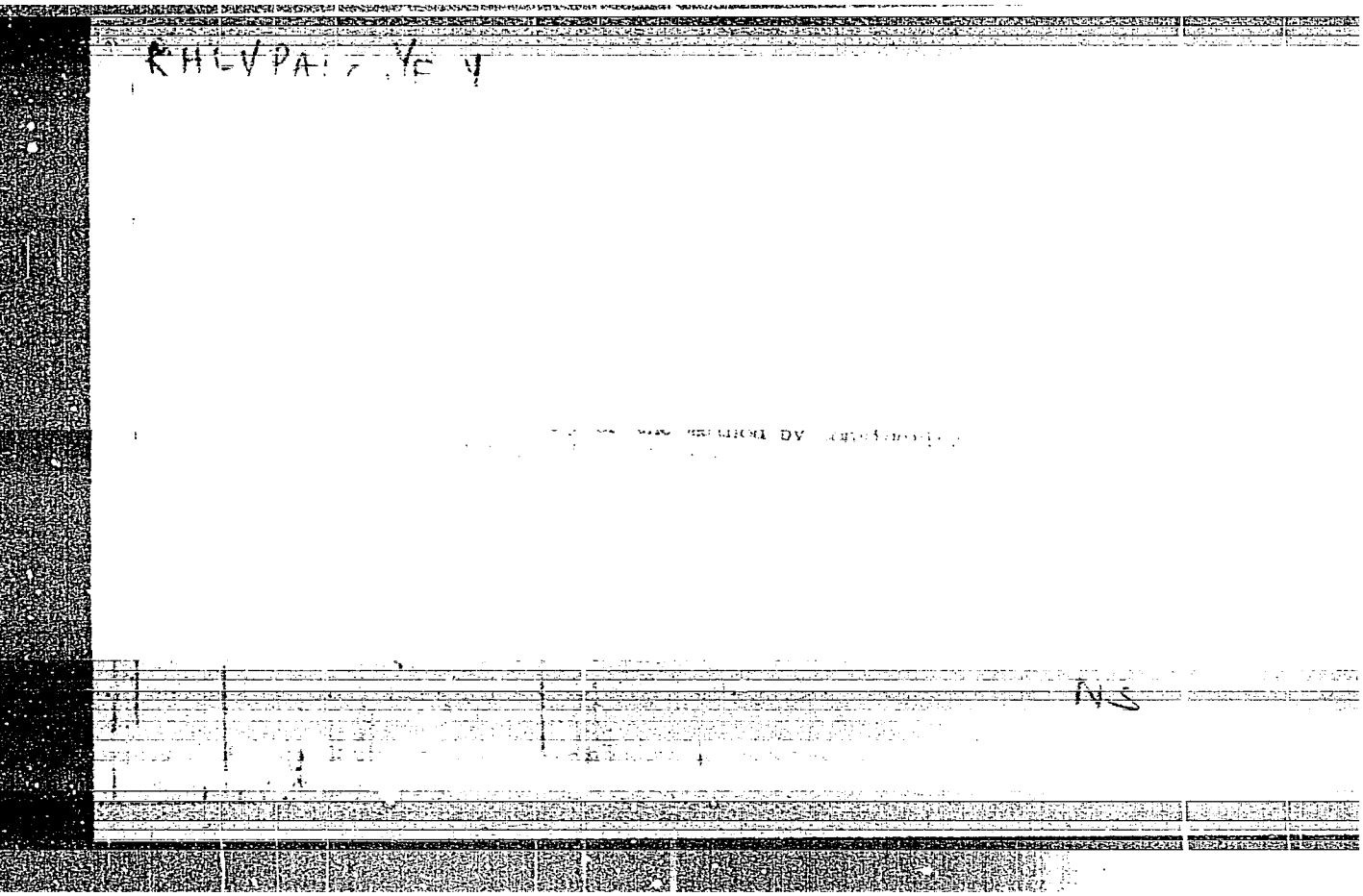
KHLYNOVSKAYA, N.I.

Effect of the diurnal variation of air temperature on the intensity of photosynthesis of the potato in the northern regions of the U.S.S.R. Meteor. i gidrol. no.10:44-46 O '65. (MIRA 18:9)

1. Kolymskoye upravleniye gidrometeorologicheskoy sluzhby.

RABINOVICH, L.A.; Prinimali uchastiye: SOKOLOV Ye.I.; SAPOZHNIKOV, V.M.; KHLYNTSEV, M.A.

Making forgings by pressing on horizontal forging machines. Kuz.-shtam. proizv. 3 no.8:8-13 Ag '61. (MIRA 14:8)
(Forging machinery)



KHLYPALO, Ye.I. (Leningrad)

Consideration of the dynamic nonlinearity of magnetic amplifiers in the design of automatic control systems. Avtom. i telem. 24 no.11:1533-1538 N '63. (MIRA 16:12)

SOV/24-58-10-2/34

AUTHOR: Khlypalo, Ye. I. (Leningrad)

TITLE: An Approximate Study of Transient Processes in Class Two Nonlinear Systems (Priblizhennoye issledovaniye perekhodnykh protsessov v nelineynykh sistemakh vtorogo klassa)

PERIODICAL: Izvestiya akademii nauk SSSR, Otdeleniye tekhnicheskikh nauk, 1958, Nr 10, pp 5-11 (USSR)

ABSTRACT: The 'second class' is one in which the nonlinear function depends on several variables and their derivatives; it is claimed that this is the first treatment of the problem. The approximation used is to represent the transient in the nonlinear section by a sine function of variable frequency and amplitude; the harmonic linearization method is applied to this function by assuming that the time-derivatives of the functions are small; Eq.(2) is applied, where x_1 is the variable and Eq.(3) defines the other symbols. Eq.(4) is the transfer function of the linear section (assumed to act as a filter); the problem in essence then reduces to solving the linear differential Eq.(5). The subsequent development is then straightforward; the results are given for second-, third- and fourth-order equations at the bottom of p 7. The results are found to be very similar to those for class one

Card 1/2

An Approximate Study of Transient Processes in Class Two Nonlinear Systems

systems, except that the condition that $\alpha + i\omega$ is not a root of (18) must be applied; this is always possible in practice. The servo of structural diagram as of Fig.2 is then considered at some length; the motor is assumed to be an asynchronous two-phase hollow-rotor one. The errors are shown to be acceptably small. The paper contains 8 figures and 3 Soviet references.

SUBMITTED: April 11, 1958.

16.8000

S/024/62/000/005/004/012
E140/E135

AUTHOR: Khlypalo, Ye.I. (Leningrad)

TITLE: Special aspects of the study of nonlinear systems with variable time constant

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Otdeleniye tekhnicheskikh nauk. Energetika i avtomatika, no.5, 1962, 89-95.

TEXT: The systems considered by the author are those in which the time constant for a rising transient is different from that of a descending transient. An example of a system with this characteristic is a magnetic amplifier with positive feedback. The method of solution is that of harmonic linearisation. In the equation obtained not only the time constant varies, but the amplification factor as well. However, these dependencies are on frequency only, not on amplitude as is the case for other types of nonlinear systems. Thus, self-oscillation in the usual sense may be absent from such nonlinear systems. Graphical methods are given for determining the limits of stability and

Card 1/2

V/B

Special aspects of the study of ... S/024/62/000/005/004/012
E140/E135

the transients in such systems.
There are 8 figures.

SUBMITTED: March 2, 1962

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B

Card 2/2

KHLYPALO, Ye.I. (Leningrad)

Special features in the study of nonlinear systems with variable inertness of the sections. Izv. AN SSSR. Otd. tekh. nauk. Energ. i avtom. no.5:89-95 S-O '62. (MIRA 15:11)
(Automatic control)

KHLYPALOV, M.G.,

Second conference of dermatovenereologists of Magadan Province.
Zdrav. Ros. Feder. 2 no.12:46 D'58 (MIRA 11:12)
(MAGADAN PROVINCE--DERMATOLOGY)

KANDROR, Iosif Solomonovich, prof., doktor biolog.nauk; KHLYPALOV, M.P., spetsred.; GELLERSHTEYN, V.I., red.; GUSSAKOVSKAYA, O.N., red.; FEDOROVA, V.V., tekhn.red.

[Man in the Far North] Chelovek na Severe. Magadan, Magadanskoe knizhnoe izd-vo, 1960. 55 p. (MIRA 14:4)

1. Institut obshchey i kommunal'noy gigiyeny AN SSSR (for Kandror).
(RUSSIA, NORTHERN--MAN--INFLUENCE OF CLIMATE)

KHLYPENKO, G.N., red.; ZHIVOTKOV, B.F., tekhn. red.

[Materials of the Scientific and Technical Conference of the Representatives of the Sugar Industry of Kazakhstan and Kirghizista, held in Frunze in 1961]Materialy Nauchno-tekhnicheskoi konferentsii rabotnikov sakharnoi promyshlennosti Kazakhstana i Kirgizii, Frunze, 1961. Frunze, In-t nauchno-tekhn. informatsii, 1961. 138 p. (MIRA 15:12)

1. Nauchno-tekhnicheskaya konferentsiya rabotnikov sakharnoy promyshlennosti Kazakhstana i Kirgizii, Frunze, 1961.
(Kazakhstan—Sugar research)
(Kirghizistan—Sugar research)

SHOYKHET, L.Ye.; KHLYPENKO, G.N., red.

[Mechanization of laboratory processes in making analyses of sugar beet samples; practices of the Karabalty Sugar Plant] Mekhanizatsiia laboratornykh protsessov pri proizvodstve analizov prob sakharnoi svekly; opyt Kara-Baltinskogo sakharnogo zavoda. Frunze, In-t nauchno-tekhn. informatsii, 1962. 18 p. (MIRA 18:1)

YUDENICH, Vladimir Petrovich; TOKARCHUK, Leonid Zakharovich; KHLYPENKO, Zh.N., red.

[A deserved fame; achievements of the N.I.Popkova communist labor brigade in the Frunze Bread Combine] Zasluzhennaia slava; dostizheniia brigady kommunisticheskogo truda N.I.Popovoi na Frunzenskom khlebkombinate. Frunze, Sovet narodnogo khoziaistva Kirgizskoi SSR, [n.d.] 10 p. (MIRA 17:5)

KHLYSOV, A.I.

KOZLOV, Vasiliy Nikolayevich; NIMVITSKIY, Anatoliy Avgustich; SUMAROKOV, V.P., redaktor; FEDOROV, B.N., redaktor; KHLYSOV, A.I., retsenzent; SLAVYANSKIY, A.K., retsenzent; KARASIK, N.P., tekhnicheskiy redaktor

[Technology of pyrogenic processingof wood] Tekhnologiia pirogeneticheskoi pererabotki drevesiny. Moskva, Gos.lesbumizdat, 1954. 619 p. (MLRA 8:11)

(Wood--Chemistry) (Pyrolysis)

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722110008-0"

ANDREYEV, V.P., polkovnik; BORISOV, D.S., polkovnik; ZHELEZNYKH, V.I., dotsent, kand.tekhn.nauk, general-leytenant inzhenernykh voysk v otstavke, otv.red.; NAZAROV, K.S., dotsent, general-polkovnik inzhenernykh voysk v otstavke, red.; KHRENOV, A.F., general-polkovnik inzhenernykh voysk, red.; SHOR, D.I., dotsent, kand. tekhn.nauk, inzhener-polkovnik zapasa, red.; ROSSAL, N.A., polkovnik, red.; KHLYSTALOV, S.I., polkovnik, red.; SOLOMONIK, R.L., tekhn.red.

[The Soviet military engineers, 1918-1940; collection of articles] Sovetskie inzhenernye voiska v 1918-1940 gg.; sbornik statei. Moskva, Voen.izd-vo M-va obor.SSSR, 1959. 141 p. (MIRA 13:4)
(Military engineering)

KHLYSTOV, A.I.

A heart wound. Khirurgiia no.8:71 Ag. '55. (MLRA 9:2)

1. Iz Osinnikovskoy gorodskoy bol'nitsy no.1 Kemerovskoy oblasti.
(HEART--SURGERY)

KHLYSTOV, A.I.

Surgical removal of a splinter from the anterior mediastinum.
Khirurgiia no.8:73 Ag. '55. (MLRA 9:2)

1. Iz Osinnikovskoy gorodskoy bol'nitsy no.1 Kemerovskoy oblasti.
(MEDIASTINUM--SURGERY)

KHLYSTOV, A.I.

Isolated wound of the pericardium and lung tissue. Khirurgiia. no.9:74 S '55. (MLRA 9:2)

1. Iz Osinnikovskoy gorodskoy bol'nitsy no.1 Kemerovskoy oblasti.
(PERICARDIUM--WOUNDS AND INJURIES)
(LUNGS--WOUNDS AND INJURIES)

KHLYSTOV, A.N., inzh.

Method for measuring tensile stresses in the crawler track of a tractor. Trakt. i sel'khozmash. no.6:18-20 Je '65. (MIRA 18:7)

1. Omskiy sel'skokhozyaystvennyy institut.

KHLYSTOV, A.S.; KOTYUKOV, Yu.N.

Ferromagnetic resonance in ferrite. Izv. vys. ucheb.zav.; Fiz. no.1:86-89 '58. (MIRA 11:6)

1.Sibirskiy fiziko-tekhnicheskiy institut pri Tomskom gosuniversitete imeni V.V. Kuybysheva.
(Ferrite--Magnetic properties)

S/139/59/000/05/018/026
E201/E191

AUTHOR: Khlystov, A.S.

TITLE: Design of Magnets for Magnetization of Ferrite Plates in Rectangular Waveguides

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Fizika, 1959, Nr 5, pp 109-118 (USSR)

ABSTRACT: Ferrite plates used to isolate (decouple) a magnetron from its load have to be magnetized uniformly to saturation in a constant field. These plates are located along either the narrow or the wide wall of a waveguide. The magnetic field is produced by an external source, i.e. by a permanent magnet or by an electromagnet outside the waveguide. The present paper describes design calculations of a toroidal electromagnet with a circular hollow-cylinder cross-section. The design formulae are obtained for a maximum uniform field produced with either wedge-shaped or rectangular pole-pieces. Non-uniform magnetization of ferrite plates and the use of Ferroxdur are discussed. Design calculations are reproduced for electromagnets with a coil of rectangular cross-section. The results given can be used in construction of both permanent magnets and of

Card 1/2

69167

S/139/59/000/06/026/034
E201/E191

24,7900

AUTHORS: Khlystov, A.S., Zhilyakov, S.M., and Petrakovskiy, G.A.

TITLE: Magnetic Properties of Nickel-Chromium Ferrites

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Fizika, 1959, Nr 6, pp 168-169 (USSR)

ABSTRACT: Nickel-chromium ferrites ($NiFe_{2-a}Cr_aO_4$) were prepared by the usual ceramic techniques from "ch" and "chda" oxides taken in stoichiometric ratios. The oxides were mixed in steel-ball mills for 24 hours (using ethyl alcohol). After drying, the mixtures were subjected to a preliminary 6-hour heating in a Silit electrical furnace at 1100 °C. Then the materials were quenched by rapid cooling in air. Powders obtained in this way were ground and pressed (2-3 tons/cm^2) into samples of required shape, using polyvinyl alcohol as a binder. Finally the samples were fired at 1300 °C for 12 hours and cooled at the rate of 60° per hour. The measured magnetic properties of the samples are given in Figs 1 and 2 and Table 1. Saturation magnetization, $4\pi M$, was measured at room temperature; it is given as a function of composition (a ranging from 0 to 1.0) in Fig 1 (upper

Card 1/4

Magnetic Properties of Nickel-Chromium Ferrites

curve) and Table 1 (column 2). The value of $4\pi M$ is reduced by introduction of chromium ions into the ferrite: it falls from 2300 gauss at $a = 0$ to practically zero at $a = 1.0$. This behaviour can be explained in terms of Neel's theory (Ref 1). Chromium ions which have the tendency to six-fold coordination (Ref 2) occupy octahedral compositions up to compositions with $a = 1$. Then the structural formula of the ferrite is:

$$Fe[NiFe_{1-a}Cr_a]O_4 \quad (1)$$

Magnetization at the absolute saturation of a ferrite with the structure given by Eq (1) is:

$$\{[2 + (1-a)5 + a\cdot 3] - 5\}\,\mu B = 2(1-a)\,\mu B \quad (2)$$

The above equation shows that magnetization of the ferrite passes through zero approximately at

$$a = 1 \quad (3)$$

which agrees qualitatively with the results obtained

Magnetic Properties of Nickel-Chromium Ferrites

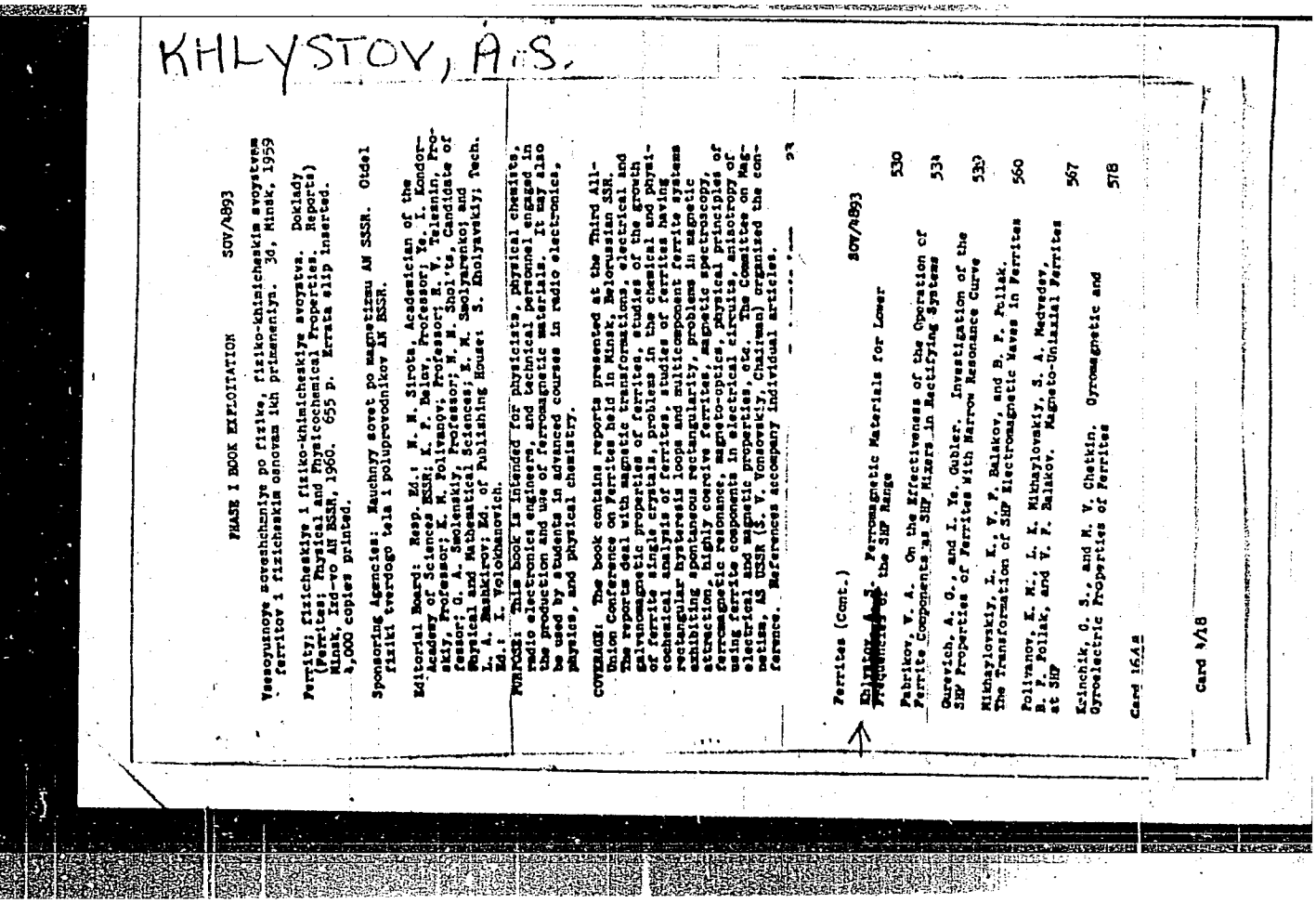
(Fig 1). The results obtained show that at concentrations $0.4 < a < 0.8$ the materials with a comparatively high Curie point (T_c = 480-200 °C) and low saturation magnetization can be obtained. This is of practical importance since the lower frequency limit of very-high-frequency ferrite devices is governed by the losses due to ferromagnetic resonance. This frequency limit is given by (Ref 3)

$$\frac{\omega}{\gamma} > 4\pi M + \frac{2|K_1|}{M} \qquad (4)$$

where K_1 is the first constant of magnetic anisotropy of a cubic crystal, ω is the angular frequency of e.m. waves and γ is the magneto-mechanical ratio. Fig 2 and column 5 of Table 1 show that the initial permittivity μ_o (at 100 c/s) falls sharply with increase of the chromium content. Values of the Curie point, coercive force (in Oe) and density (in g/cm^3) are listed in columns 3, 4 and 6 of Table 1.

Card 3/4

There are 2 figures, 1 table and 3 references, of which 1 is Soviet, 1 French and 1 English.



KHLYSTOV, A.S.

PHASE I BOOK EXPLOITATION SOV/4893

Vsesoyuznoye soveshchaniye po fizike, fiziko-khimicheskim svoystvam ferritov i fizicheskim osnovam ikh primeneniya. 3d, Minsk, 1959

Ferrity; fizicheskiye i fiziko-khimicheskiye svoystva. Doklady (Ferrites; Physical and Physicochemical Properties. Reports) Minsk, Izd-vo AN BSSR, 1960. 655 p. Errata slip inserted. 4,000 copies printed.

Sponsoring Agencies: Nauchnyy sovet po magnetizmu AN SSSR. Otdel fiziki tverdogo tela i poluprovodnikov AN BSSR.

Editorial Board: Resp. Ed.: N. N. Sirota, Academician of the Academy of Sciences BSSR; K. P. Belov, Professor; Ye. I. Kondorskiy, Professor; E. M. Poltsanov; Professor; E. V. Telesnin, Professor; N. N. Sholts, Candidate of Physical and Mathematical Sciences; K. M. Zaslavskiy; Professor; G. A. Smolenskiy; Sciences; K. M. Zaslavskiy; and Physical and Mathematical Sciences; K. M. Zaslavskiy; Tech. Ed.: I. Yelokhanovich.

PURPOSE: This book is intended for physicists, physical chemists, radio electronics engineers, and technical personnel engaged in the production and use of ferromagnetic materials. It may also be used by students in advanced courses in radio electronics, physics, and physical chemistry.

COVERAGE: The book contains reports presented at the Third All-Union Conference on Ferrites held in Minsk, Belorussian SSR. The reports deal with magnetic transformations, electrical and galvanomagnetic properties of ferrites, studies of the growth of ferrite single crystals, problems in the chemical and physicochemical analysis of ferrites, studies of ferrites having rectangular hysteresis loops and multicomponent ferrite systems exhibiting spontaneous rectangularity, problems in magnetic attraction, highly coercive ferrites, magnetic spectroscopy, ferromagnetic resonance, magneto-optics, physical principles of using ferrite components in electrical circuits, anisotropy of electrical and magnetic properties, etc. The Committee on Magnetism, AS USSR (S. V. Vonsovskiy, Chairman) organized the conference. References accompany individual articles.

Table of Contents: 23

Ferrites (Cont.) SOV/4893

Khlystov, A. S. Ferromagnetic Materials for Lower Frequencies and the SHF Range 530

Fabrikov, V. A. On the Effectiveness of the Operation of Ferrite Components as SHF Mixers in Rectifying Systems 534

Gurevich, A. G., and I. Ye. Gubler. Investigation of the SHF Properties of Ferrites With Narrow Resonance Curve 539

Mikhaylovskiy, I. K., V. F. Balakov, and B. F. Pollak. The Transformation of SHF Electromagnetic Waves in Ferrites 560

Poliyanov, K. N., L. K. Mikhaylovskiy, S. A. Medvedev, B. F. Pollak, and V. F. Balakov. Magneto-Uniaxial Ferrites at SHF 567

Krinchik, G. S., and M. V. Chetkin. Gyromagnetic and Gyroelectric Properties of Ferrites 578

Card 16/18

24,7900

S/139/60/000/01/037/041
E310/E391

AUTHORS: Khlystov, A.S. and Petrakovskiy, G.A.

TITLE: The Effect of Copper and Cobalt Additions on the Properties of Nickel-chromium Ferrites

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Fizika, 1960, Nr 1, pp 222 - 227 (USSR)

ABSTRACT: The authors studied nickel-chromium ferrites with additions of cobalt and copper to determine the optimum compositions and technology of manufacturing temperature-resistant ferrites for 10 cm range resonance rectifiers. Optimum amounts of copper and cobalt additions were found to produce ferrites capable of operating at higher temperatures, maintaining a minimum width of their ferromagnetic-resonance curves. The Curie point of the ferrites is in the vicinity of 400 °C. The initial ferrite powders were compacted under pressure of 2 t/cm²; initial roasting temperature for ferrites with copper additions was 900 °C for 6 hours; for ferrites with cobalt additions it was 1 100 °C for 8 hours. The roasted compacts were ground in a vibromill. The components were pressed at 2 t/cm². Eight percent by weight of a 10%

Card1/3

The Effect of Copper and Cobalt Additions on the Properties of Nickel-chromium Ferrites

water solution of polyvinyl alcohol was introduced as a binder. The final roasting temperature was 1 150 °C for 20 hours (copper added) and 1 350 °C for 12 hours (cobalt added). Measurements of finished specimens show that the width of the ferromagnetic resonance curve is $\Delta H = 500$ Oe for $Ni_{0.985}Co_{0.015}Cr_{0.7}Fe_{1.3}O_4$ and $Ni_{0.980}Co_{0.020}Cr_{0.7}Fe_{1.3}O_4$ ferrites (Figure 3). This makes it possible to use them in the lower UHF range. Rectifiers made from these ferrites and placed on the wider waveguide wall in the optimum position produced a forward loss of 0.5 db and a backward loss of 17 db at 2 980 Mc/s; the standing-wave ratio did not exceed 1.1.
There are 4 figures and 15 references, 4 of which are Soviet, 9 English, 1 French and 1 translation from English into Russian.

69459

S/139/60/000/01/037/041
E310/E391

The Effect of Copper and Cobalt Additions on the Properties of Nickel-chromium Ferrites

ASSOCIATION: Sibirskiy fiziko-tekhnicheskiy institut pri Tomskom gosuniversitete imeni V.V. Kuybysheva (Siberian Physico-technical Institute of Tomsk State University imeni V.V. Kuybyshev)

SUBMITTED: April 10, 1959

Card 3/3

KHLYSTOV, A.S.; ZHILYAKOV, S.N.

Magnetic characteristics of lithium-aluminum ferrites. Izv.vys. ucheb.zav.;fiz. no.2:151-153 '60. (MIRA 13:8)

1. Sibirskiy fiziko-tekhnicheskiy institut pri Tomskom gosuniversitete im. V.V.Kuybysheva.
(Ferrates--Magnetic properties)

KHLYSTOV, A.S.; SMOKOTIN, E.M.

Magnesium-chromium-copper ferrites for use in lower part of the UHF range. Izv.vys.ucheb.zav.;fiz. no.2:157-160 '60. (MIRA 13:8)

1. Sibirskiy fiziko-tekhnicheskiy institut pri Tomskom gosuniversitete im. V.V.Kuybysheva.
(Ferrates) (Microwaves)

L 8597-66 EWT(d)/FSS-2
ACCESSION NR: AP5021166 UR/0139/65/000/004/0046/0049

AUTHOR: Khlystov, A. S.; Zhilyakov, S. M.

TITLE: The problem of preparing thermally stable materials for the decimeter band

SOURCE: IVUZ. Fizika, no. 4, 1965, 46-49

TOPIC TAGS: ferrite, decimeter wave, thermal stability, waveguide antenna, aluminum containing alloy, saturation magnetization

ABSTRACT: Requirements are discussed for the parameters of ferrite materials in connection with the thermal stability essential for ferrites used in antenna-waveguide systems in the decimeter band. The temperature dependence of the saturation magnetization was investigated for ferrites with the formula $Li_{0.5}Fe_{2.5-a}Al_aO_4$ for a = 0, 0.1, 0.2, 0.4, 0.45, 0.50, 0.55, 0.60, and 0.70. The ferrites were prepared from oxides by the usual ceramic method under a pressure of 1200 atm. The temperature dependence of the saturation magnetization of the ferrite spheres was measured with a vibrational magnetometer in a field of 6000 Oe. The sample was heated by high-frequency currents and cooled by liquid-nitrogen vapor. It was found that the saturation magnetization changes with aluminum ion content. For a ferrite with a = 0.70 the saturation magnetization did not change by more than 10% in the range from 0 to 270C; for ferrites with a = 0.60

Card 1/2

L 8597-66
ACCESSION NR: AP5021166 2

and 0.55 it remains constant at least between -150 to 275 and 220C respectively. This indicates that thermally stable lithium aluminum ferrites for the decimeter range can be obtained. Orig. art. has: 2 formulas and 2 figures.

ASSOCIATION: Sibirskiy fiziko-tekhnicheskiy institut imeni V. D. Kuznetsova (Siberian Physicotechnical Institute) 44

SUBMITTED: 29Dec63 ENCL: 00 SUB CODE: EC, EM

NR REF SOV: 003 OTHER: 006

jw
Card 2/2

KHLYSTOV, A.S.

Effect of magnetic crystallographic anisotropy on the form of the tensor of the permeability of ferrites. Izv. vys. ucheb. zav.; fiz. 8 no.4:50-54 '65. (MIRA 18:12)

1. Sibirskiy fiziko-tekhnicheskiy institut imeni V.D. Kuznetsova. Submitted December 29, 1963.

L 15551-66 EWT(1)/EWA(h)

ACC NR: AP6002088 SOURCE CODE: UR/0139/65/000/006/0098/0106

AUTHORS: Khlystov, A. S.; Nesmelov, N S. 39 23

ORG: Siberian Physicotechnical Institute im. V. D. Kuznetsov (Sibirskiy fiziko-tekhnicheskiy institut)

TITLE: Ferrite resonant gates with coaxial, rectangular, and strip wave guides containing dielectrics. I. Theoretical design of resonant ferrite gates

SOURCE: IVUZ. Fizika, no. 6, 1965, 98-106

TOPIC TAGS: ferrite switch, rectification, waveguide element, ferromagnetic resonance

ABSTRACT: The authors consider a plane-parallel analog of a coaxial line, a rectangular waveguide, and a strip waveguide with ferrite and dielectric plate inserts located in the E plane. Trancendental equations are derived for the propagation constants of the electromagnetic wave in these systems. An approximate solution of these equations is presented for ferrite plates of small thickness. Analytic

Card 1/2

L 15551-66
ACC NR: AP6002088

expressions are obtained for the rectification ratio in this system. It is shown analytically that in all cases the maximum rectification ratio occurs for resonant values of the magnetic field. For each system there is obtained an analytic expression for the optimal value of the ferrite magnetization, at which maximum rectification ratio should be observed. The optimal magnetization depends on the frequency and on the dielectric constant of the dielectric employed in the system, and on the geometry of the system. The maximum possible rectification ratio is the same for all three devices. Orig. art. has: 3 figures and 58 formulas.

SUB CODE: 20/ SUBM DATE: 15Apr64/ ORIG REF: 003/ OTH REF: 003

Card 2/2

ACC NR: AP6033832 SOURCE CODE: UR/0139/66/000/005/0007/0012

AUTHOR: Khlystov, A. S.; Nesmelov, N. S.

ORG: Siberian Physico-Technical Institute imeni V. D. Kuznetsov (Sibirskiy fiziko-tekhnicheskiy institut)

TITLE: Coaxial, band, and rectangular waveguides containing a dielectric as ferrite resonance gates

SOURCE: IVUZ. Fizika, no. 5, 1966, 7-12

TOPIC TAGS: waveguide, dielectric layer waveguide, rectangular waveguide, ferrite

ABSTRACT: Graphs of the characteristics of various types of waveguides are presented based on computer calculations using formulas derived in an earlier paper by the authors [*Izv. vuzov SSSR, Fizika* No 6, 1965]. The effects of the thickness of the dielectric layer, the dielectric constant (permittivity), the bandwidth of the ferromagnetic resonance as well as the effects of some other parameters on the wideband properties of the devices and the optimum magnetization intensity were examined. For a coaxial resonance gate, there is an elliptical polarization of the magnetic field of superhigh frequency. The elliptical polarization is closest to circular when the occupation angle $t/z = 3/8$ at the dielectric-air boundary. In band waveguides, the optimum magnetization intensity asymptotically approaches zero with increasing thickness of the dielec-

Card 1/2

ACC NR: AP6033832

tric plate. In rectangular waveguides, the configuration of the superhigh frequency of the magnetization field varies at different points as a result of the influence of the lateral metal walls. The optimum magnetization intensity depends on the position of the dielectric plate. Dielectric losses were not taken into account in the calculations. Orig. art. has: 14 figures.

SUB CODE: 20/ SUBM DATE: 05Jan65/ ORIG REF: 002

Card 2/2

ACC NR: AP6033836 SOURCE CODE: UR/0139/66/000/005/0051/0055

AUTHOR: Khlystov, A. S.; Sablina, K. A.

ORG: Siberian Physico-Technical Institute im. V. D. Kuznetsov (Sibirskiy fiziko-tekhnicheskiy institut)

TITLE: Relationship between phase shift and the temperature in ferrite phase shifters

SOURCE: IVUZ. Fizika, no. 5, 1966, 51-55

TOPIC TAGS: phase shift, phase shift analysis, phase shifter, ferrite, magnetic permeability, Curie point, dielectric permeability

ABSTRACT: Conventionally prepared Mg-Cu ferrite-chromite specimens were used to verify the assumption that the thermal instability of a ferrite phase shifter is determined by the relationship between the microwave magnetic permeability and temperature. Superimposition of the magnetization curves obtained at various temperatures indicates that the relationship between the phase shift and the temperature is especially pronounced in the range of weak bias fields, and reaches a maximum when the field is zero. An installation was designed to measure the thermal relationship of the phase shift in a vanishing (fade-out) field. The phase shift was measured by comparing the phase of the investigated signal with the phase of the reference signal; the magnetic (μ) and dielectric (ε) permeabilities of ferrite were measured by open-circuit current. The

Card 1/2

ACC NR: AP6033836

experimentally determined phase shift caused by a temperature variation in the 25--100°C range is 220°C. The dielectric constant goes up slightly with increasing temperature. The magnetic permeability goes up from 0.69 at 29°, to 0.93 at 100°C, and approaches unity somewhere in the Curie point range. An equation defining the wave propagation rate in a ferrite specimen in waveguides was constructed. The calculated phase shift was $\Delta\phi$ = 212°C. The authors thank Engineer G. I. Yudin who made data on phase shift measurement with relation to the field at various temperatures available. Orig. art. has: 6 figures.

SUB CODE: 09/ SUBM DATE: 29Jan65/ ORIG REF: 003/ OTH REF: 003

Card 2/2

ACC NR: AP7005623 (N) SOURCE CODE: UR/0413/67/000/002/0068/0068

INVENTOR: Khlystov, A. S.; Zhilyakov, S. M.

ORG: None

TITLE: A ferrite material. Class 21, No. 190501

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 2, 1967, 68

TOPIC TAGS: ferrite, thermal stability, saturation magnetization

ABSTRACT: This Author's Certificate introduces a ferrite material which contains oxides of iron, aluminum and lithium with the composition $Li_{0.5(1-\alpha)}Fe_{1.9+0.1\alpha}Al_{0.6(1-\alpha)}Co_{\alpha}O_4$, where α=0.004-0.010. The material is designed for thermally stable saturation magnetization in the temperature range from -150 to +285°C.

SUB CODE: 11/ SUBM DATE: 29Nov65

Card 1/1 UDC: 621.318.124

1. KHLYSTOV, F.
2. USSR (600)
4. Housing
7. From the experience of public committees cooperating in housing administration, Zhil. -kom. khox. 2 No. 12, 1952

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

KHLYSTOV, I.

KHLYSTOV, I.

More aid to primary trade-union organizations. Sov. profsoiuzy 2 no.6:24-28 Je '54. (MLRA 7:7)

1. Predsedatel' Moskovskogo obkoma profsoyuza rabochikh mashinostroyeniya.
(Trade unions) (Machinery industry)

GUROV, S.; ALEKSANDROV, A.; TRAKCHUK, R. (Minsk); KHLYSTOV, I.; YUN'YEV, I.; ALEKSANDROV, S.; GIRUTSKAYA, A.; KURBANOV, G. (Baku)

Letters to the editors. Sov.profsoiuzy 16 no.10:50-54 '60. (MIRA 13:6)

1. Zamestitel' predsedatelya zavkoma Dneprodzerzhinskogo metallurgicheskogo zavoda imeni Dzerzhinskogo (for Gurov). 2. Deystvitel'nyy chlen Vsesoyuznogo geograficheskogo obshchestva pri AN SSSR (for Yun'yev). 3. Tekhnicheskiy inspektor Estonskogo soveta profsoyuzov, Tallinn (for Girutskaya).
(Efficiency, Industrial) (Labor and laboring classes)

YANOVSKIY, A.G., inzh.; VOLPYAN, G.A., inzh.; YEVINA, Ye.I., inzh.; SEGEDINOV, A.A., inzh.; SKRITSKAYA, I.M., inzh.; KHEGA, A.I., inzh. KHLYSTOV, I.I., inzh.

Municipal engineering facilities. Gor. khoz. Mosk. 35 no. 3:31-41 Mr '61. (MIRA 14:5)

(Moscow--Municipal services)

SERYY, Yu.I., kand. ist. nauk, otv. red.; IVANOV, L.M., doktor ist. nauk, red.; KIR'YANOV, Yu.I., kand. ist. nauk, red.; KUZNETSOV, V.I., kand. ist. nauk, red.; KHLYSTOV, I.P., kand. ist. nauk, red.

[Papers at the October 1963 academic session in Rostov-On-Don devoted to the history of the working class in Russia during the period of capitalism] Doklady na nauchnoi sessii, posviashchennoi istorii rabochego klassa Rossii v period kapitalizma Rostov-na-Donu, 1963 g. Rostov-na-Donu, AN SSSR, 1963. 106 p. (MIRA 17:5)

1. Nauchnaya sessiya, posvyashchennaya istorii rabochego klassa Rossii v period kapitalizma, Rostov-on-Don, 1963. 2. Institut istorii AN SSSR (for Ivanov). 3. Rostovskiy gosudarstvennyy universitet (for Seryy).