

ACCESSION NR: AP4006629

S/0089/63/015/006/0481/0485

AUTHORS: Glaskov, Yu. Yu.; Dubovskiy, B. G.; Ilyasova, G. A.;
Kozlov, V. I.; Smelov, V. V.; Sharapov, V. N.

TITLE: Measuring slow-neutron spectra on a physical stand of the
reactor at the Beloyarsk State Regional Power Plant imeni
I. V. Kurchstov

SOURCE: Atomnaya energiya, v. 15, no. 6, 1963, 481-485

TOPIC TAGS: slow neutron, slow neutron spectrum, neutron flux
distribution, neutron spectrum, neutron flux, energy spectrum,
time of flight method

ABSTRACT: The flight time method has been used to measure the
energy spectra of slow neutrons on the boundary between cells and
on a hot channel surface. The lattice of the subcritical facility
in which the measurements have been made is similar to the reactor
lattice of the Beloyarsk atomic power plant. The facility under
study, measuring 100 x 100 x 100 cm, was placed in the center of the
stand-type uranium graphite reactor core. Channels containing 2%-

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enriched uranium were placed along the core perimeter, and the facility was filled with channels containing 1.2%-enriched uranium. The measurements were made for two different facilities, with and without water, in the central tubes and heat-releasing elements of the hot channels, and the spectra were measured by a mechanical selector. The time separation of the impulses took place in 128-channel analyzer, with each channel measuring 32 microseconds in width. A chamber made of stainless steel 1X18H9T and filled with He³ to a pressure of 18 Atms was used as a neutron detector. The energy distribution of the neutron flux found by processing the experimental data are shown in the enclosure, Fig. 3. The experimental spectra were compared with the rated spectra on the outer boundary of the cell and the spectra on the boundary between the graphite and uranium zones. The rated values were "cross linked" with the experimental ones in the moderation region on the boundary between the cells. The comparison thus included both the energy and spatial distribution, and the results appear to agree with the experimental data.

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"The authors express their gratitude to L. A. Matalin for the development and construction of the time analyzer, to P. S. Klemashev for designing the mechanical interrupter, and to V. V. Orlov and A. G. Novikov for their useful comments."

Orig. art. has: 3 Figures and 3 Formulas

SUBMITTED: 27Apr63

DATE ACQ: 07Jan64

ENCL: 02

SUB CODE: NS

NR RIF SOV: 005

OTHER: 002

ASSOCIATION: none

Card 3/53

KOZLOV, V.I.

Decompensated glaucoma from data of the eye clinic of the
Donets Medical Institute in an eleven-year period. Vestn.
oftal. 76 no.4:45-49 J1-Ag'63 (MIRA 17:1)

1. Kafedra glaznykh bolezney (zav. - prof. L.B.Zats) Donets-
kogo meditsinskogo instituta.

RODNIK, V.L. (Kurgan, ul. P. Myagotina, 42, korp.)

Материалы к программе. Vest. L'viv. Y' no. 43143-143 Ap 1941

1. Iz khirurgicheskogo otdeleniya (zav. - kand. med. nauk
Ya.D. Vitebskiy) Kurganskoy oblastnoy bol'nitsy (glavnyy
vrach - L.V. Protzenko).

KOZLOV, V.I., kandidat tekhnicheskikh nauk.

Steam power plants on large American tankers; from foreign
journals. Sudostroenie 22 no.7:41-44 J1 '56. (MLRA 9:10)

(United States--Tank vessels)

KOZLOV, V.I., kand.tekhn.nauk; BUMBARU, S., inzh.

Increasing the economy aspect of steam turbine plants on
seagoing cargo vessels. Sudostroenie 24 no.1:22-27 Ja '58.

(Steam turbines)

(MIRA 11:2)

KOZLOV, V.I., kand.tekhn.nauk

Investigating performance of automatic water mixers during
coagulation processes. Trudy GISI no.25:160-174 '56. (MIRA 11:5)
(Water--Purification)

KOZLOV, V.^I; kand.tekhn.nauk; MURATOV, S., kand.tekhn.nauk; MAMAYEV, V., inzh.

Use of internal combustion engine exhaust gases in the transportation
of petroleum and ship repairs. Rech. transp. 19 no.12:22-24 D '60.

(MIRA 13:12)

(Waste heat engines) (Petroleum--Transportation)

(Ships--Maintenance and repair)

VORONKOVSKAYA, A.P., inzh.; VORONKOVSKIY, V.P., kand.tekh.nauk;
KOZLOV, V.I., kand.tekh.nauk; TITOV, P.I., prof.; YUDITSKIY,
F.L., kand.tekh.nauk

Temperature of heated surfaces and livability conditions of
engine rooms in seagoing motorships. Sudostroenie 29 no.2:18-22
F '63. (MIRA 16:2)

(Ships—Heating and ventilation)
(Insulation (Heat))

L 43630-66 EWP(t)/ETI IJP(c) JD

ACC NR: AP6012808

SOURCE CODE: GE/0030/66/014/002/K101/K105

AUTHOR: Telesnin, R. V.; Kozlov, V. I.

50
B

ORG: Faculty of Physics, Lomonosov State University, Moscow

TITLE: Spin wave resonance in thin permalloy films

SOURCE: Physica status solidi, v. 14, no. 2, 1966, K101-K105 and appropriate insert following page 529

TOPIC TAGS: spin resonance, ferromagnetic resonance, magnetic thin film, permalloy

ABSTRACT: The spin wave spectra of films 180-3180 Å thick were measured for the case of parallel orientation of a 9400 Mc magnetic field modulated at a frequency of 1 Mc. Earlier experiments had dealt with thicker films. Oscillograms showing the resonance peaks for films of 6 different thicknesses are shown. The distances of additional peaks from the main peaks is graphed as a function of thickness. The position of the peaks has a near quadratic variation at thicknesses of 1700 Å but changes to a straight line variation for thicker films. Possible interpretations of the results are suggested. Orig. art. has: 5 figures.

SUB CODE: 20/ SUBM DATE: 17Jan66/ ORIG REF: 002/ OTH REF: 003

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L 38533-66 EWT(l)/EWT(m)/T/EWP(t)/ETI IJP(c) GG/JD

ACC NR: AP6007363

SOURCE CODE: UR/0126/66/021/002/0317/0318

AUTHORS: Telesnin, R. V.; Kozlov, V. I.

ORG: Moscow State University im. M. V. Lomonosov (Moskovskiy gosuniversitet)

TITLE: Determination of the coercive force of thin magnetic films having reversed magnetism by treatment with a UHF field

SOURCE: Fizika metallov i metallovedeniye, v. 21, no. 2, 1966, 317-318

TOPIC TAGS: magnetic thin film, permalloy, ferromagnetic film, UHF, magnetic modulation, magnetic anisotropy

ABSTRACT: Magnetic reversal taking place upon treatment with a UHF field has been investigated in a series of thin films of permalloy. The study was performed on an apparatus designed for the observation of ferromagnetic resonance in films at the frequency of 9400 Mhz. The application of high frequency modulation of the magnetic field was previously described by R. V. Telesnin and V. I. Kozlov (Izv. AN SSSR, ser. fiz., 1965, 29, No. 4, 568). Oscillograms obtained indicate the dependence of the shape of the curves on the rotation of the film with respect to the magnetic field. The magnitude of the field resulting in the change of sign of the derived absorption curve conforms to the values for coercive force as measured on these films by magneto-optical methods. In some cases the transition is stepwise,

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UDC: 539.216.2:538.248

L 38533-66

ACC NR: AP6007363

permitting evaluation of the magnetic reversal process in greater detail. The authors express their gratitude to Ye. N. Il'icheva for magneto-optic measurements of coercive force. Orig. art. has: 1 figure and 1 table.

SUB CODE: 20/ SUBM DATE: 15May65/ ORIG REF: 003/ OTH REF: 001

Card 2/2 *2/2*

L-15117-66 LWT(l)/LWP(e)/LWT(m)/T/EWP(t)/EWP(b) LWP(c) JD/CG
 ACC NR: AP6004484

SOURCE CODE: UR/0048/86/030/001/0116/0119

AUTHOR: Telesnin, R.V.; Kozlov, V.I.

ORG: Physics Department, Moscow State University im. M.V. Lomonosov (Fizicheskiy fakul'tet Moskovskogo gosudarstvennogo universiteta)

TITLE: Quasistatic switching of thin ferromagnetic films under the action of microwave frequency fields *21, 44, 55* *6, 44, 55*
 Transactions of the Second All-Union Symposium on the Physics of Thin Ferromagnetic Films held at Irkutsk 10 July to 15 July, 1964

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v.30, no. 1, 1966, 116-119

TOPIC TAGS: ferromagnetic film, magnetic thin film, magnetic coercive force, magnetic anisotropy, superhigh frequency, ferromagnetic resonance, medium frequency,

ABSTRACT: With a ferromagnetic resonance apparatus described elsewhere by the authors (Izv. AN SSSR. Ser. fiz., 29, No. 4, 568 (1965)) the 9.4 kHz microwave absorption of thin ferromagnetic films of undisclosed composition has been investigated with the quasi-static magnetic field in the plane of the film and modulated at 1 MHz with an amplitude of 0.05 Oe. An automatic frequency control system kept the microwave oscillator tuned to the resonant frequency of the cavity, so that the phase sensitive detector responded only to the imaginary part of the susceptibility. In addition to the usual spin wave resonance, which occurred at 80 Oe in a 510 Å film, there was observed absorption at very low values of the magnetic field. When the magnetic field was directed along the hard axis there was observed a single absorption peak at zero field

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I 1517-66

ACC NR: AP6004484

with a half-width roughly twice the coercive force of the film at least in the one case for which the oscillogram is shown; the data obtained with the field parallel to the hard axis are not discussed in detail). When the magnetic field was directed along the easy axis the oscillogram obtained with a phase sensitive detector that responded to the derivative of the absorption was reminiscent of a nearly square hysteresis loop: the signal gradually rose as zero field was approached and rather suddenly changed sign at a negative field equal to the coercive force of the film. The equivalence of the field at which the absorption signal changed sign to the coercive force of the film is illustrated by a tabular comparison of the coercive forces, measured with a magneto-optical technique and by the present method, of 12 films of thickness from 230 to 3100 Å and having coercive forces from 3.5 to 1.0 Oe. When the direction of the quasistatic field was altered by 90° so that it became perpendicular both to the microwave magnetic field in the resonator and to the 1 MHz modulation field, the signals became very similar to those observed by A.G.Lesnik and G.I.Levin (Izn. AN SSSR, Ser. fiz., 29 No.4, 560 (1965)) and T.E.Hasty and L.J.Boudreaux (J.Appl. Phys., 32, No. 10,1807 (1966)). In this case when the field was parallel to the hard axis the peaks on the oscillogram occurred at fields very nearly equal to the anisotropy field of the film. It is suggested that the possibility of observing low frequency resonances by a microwave technique may be due to a coupling between the low frequency and high frequency parameters of the sample. Orig. art. has: 3 figures and 1 table.

SUB CODE: 20 SUBM DATE: 00 ORIG. REF: 004 OTH REF: 001

TS
Card 2/2

L 15418-66 EWT(l)/EWP(e)/EWT(m)/EWA(d)/T/EWP(t)/EWP(a)/EWP(h) LJP(c)
ACC NR: AP6004483 JD/CG UR/0048/66/030/001/0112/0115

AUTHOR: Kozlov, V.I.

ORG: Physics Department, Moscow State University im. M.V.Lomonosov (Fizicheskiy fakul'tet Moskovskogo gosudarstvennogo universiteta)

TITLE: Ferromagnetic resonance in thin magnetic films under parallel magnetization
Transactions of the Second All-Union Symposium on the Physics of Thin Ferromagnetic
Films held at Irkutsk 10 July, 1964/

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v. 30, no. 1, 1966, 112-115

TOPIC TAGS: ferromagnetic film, magnetic thin film, permalloy, ferromagnetic resonance, spin wave spectrum

ABSTRACT: Ferromagnetic resonance spectra at 9.4 MHz of Permalloy films from 180 to 3180 Å thick were recorded with the magnetizing field in the plane of the film in order to investigate the secondary peaks due to spin wave resonance that appear under these conditions. The films were vacuum evaporated at 10⁻⁵ mm Hg in a 200 Oe magnetic field onto glass substrates heated to 200°C. The width of the main resonance increased monotonically with increasing film thickness from 25 Oe for a 200 Å film to 70 Oe for a 3000 Å film. The first secondary resonance was observed in a 510 Å film; it occurred at 80 Oe and was 40 Oe wide. With increasing film thickness further secondary resonances appeared at low field strength and moved with further increase of

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ACC NR: AP6004483

thickness toward the main resonance. In a 2835 Å film there were observed a main peak at 1030 Oe and four secondary peaks at 900, 810, 660, and 420 Oe. The widths of the five peaks were 58, 34, 26, 22, and 54 Oe, respectively, and their relative intensities were 1, 0.02, 0.15, 0.03 and 0.006. In films less than 1700 Å thick the resonances were quadratically spaced; in thicker films the resonances, especially those near the main resonance, were approximately linearly spaced. The anisotropy fields determined from the shift in the positions of the different resonances on changing the magnetization direction from the easy to the hard axis differed from each other for the same film; no regularity was detected in these variations. The effective saturation magnetization of all the films was close to 9.8 kilogauss. For the films in the thickness range in which the quadratic dispersion law was valid, the value $A = 0.9 \times 10^{-6}$ erg/cm was derived for the exchange constant by assuming that the main resonance corresponds to uniform precession with the index $n = 0$ and that the first secondary peak corresponds to a spin wave with index $n = 1$. The resonance lines of films deposited on 320° and on approximately room temperature substrates were distorted. Spin wave spectra were also observed in cathode sputtered films. Orig. art. has: 3 figures.

SUB CODE: 20

SUBM DATE: 00

ORIG REF: 001

OTH REF: 006

TS
Card 2/2

KOZLOV, V.I. (Moskva, D-100, Mantulinskaya ul. 24, kv. 70)

Conductive pathways of nerves. Arkh. anat., gist. i embr. 47
no. 11:76-82 N '64 (MIRA 19:1)

1. Kafedra normal'noy anatomii (zav. - prof. V.V. Kupriyanov)
II Moskovskogo gosudarstvennogo meditsinskogo instituta imeni
Pirogova. Submitted April 23, 1963.

KOZLOV, V.I., mladshiy nauchnyy sotrudnik

Practices in mass collection of the egg eater *Telemeus gracilis* for the biological control of the tent caterpillar *Dendrolimus sibiricus*. Trudy VSNIP Lesdrev no. 8: (6-7) '63.

(MIRA 18:11)

1. Laboratoriya zashchity lesa Vostochno-Sibirskogo nauchno-issledovatel'skogo instituta lesnyy i derevobrabatывayushchey promyshlennosti.

KOZLOV, V.I.

Ferromagnetic resonance in thin magnetic films in the case of parallel magnetization. Izv. AN SSSR. Ser.fiz. 30 no.1:112-115
Ja '66. (MIRA 19:1)

1. Fizicheskiy fakul'tet Moskovskogo gosudarstvennogo universiteta.

TELESNIN, R.V.; KONLOV, V.I.

quasi-static magnetic reversal in thin ferromagnetic films
under the action of a superhigh-frequency field. Izv. II
SSSR. Ser.fiz. 30 no.1:116-119 Ja '66.

(MIRA 19:1)

I. Fizicheskii fakul'tet Moskenskogo gosudarstvennogo
universiteta.

KOZLOV, V. I.

"Etnicheskiy aspekt demograficheskikh protsessov v nekotorykh stranakh Yugo-Vostochnoy Evropy."

report submitted for 7th Intl Cong, Anthropological & Ethnological Sciences, Moscow, 3-10 Aug 64.

ACC NR: AP6031708

(V)

SOURCE CODE: UR/0319/88/000/007/0041/0042

AUTHOR: Frumkin, I. A. (Engineer); Kozlov, V. I. (Engineer); Kuznetsova, A. V. (Engineer); Ostanin, V. G. (Engineer)

ORG: none

TITLE: Attempt to construct a high-pressure reactor for operation at high temperatures

SOURCE: Khimicheskoye i neftyanoye mashinostroyeniye, no. 7, 1966, 41-42

TOPIC TAGS: metal heat treatment, thermal fatigue, pressure vessel, metallurgic process, chemical reactor / 25Kh2MF steel, 25Kh3MF steel

ABSTRACT: The design of a reactor for operation at 1500 atm and 400°C (for the production of synthetic minerals) is described. The reactor (autoclave) body was made of 25Kh2MF steel and the cover was made of 25Kh3MF steel. After forging, both pieces were subjected to lengthy, multi-stage thermal treatment at 150-1010°C and 4-56 hr duration. After this treatment, both the reactor body and the cover had higher mechanical properties than those required for operation at 1500 atm and 400°C. The assembled reactor passed the 1875 atm test. Orig. art. has: 3 figures, 2 tables.

SUB CODE: 18, 13 SUBM DATE: none/ ORIG REF: 001

UDC: 66.023.7-987.002.2

Card 1/1

1. KOZLOV, V. I.
2. USSR (600)
4. Dogs - Gorkiy Province
7. Contribution to the study of the biology of the raccoon-like dog
(*Nyctoreutes procyonoides* Gray) in the Gorkiy Province.
Zool. zhurn. 31. No. 5. 1952

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

PUZANOV, Ivan Ivanovich; KOZLOV, Vladimir Ivanovich; KIPARISOV, Gleb
Petrovich. [deceased]; GABANINA, L.F., redaktor; ZAKHAROV, K.A.,
tekhnicheskii redaktor

[Animals of Gorkiy Province; vertebrates] Zhivotnyi mir Gor'kovskoi
oblasti; pozvonochnye. Izd. 2-oe, dop. [Gor'kii] Gor'kovskoe kn-vo
1955. 585 p. (MIRA 9:10)
(Gorkiy Province--Vertebrates)

KOZLOV, V.I.; KUZNETSOV, N.I.

Dismountable cage for keeping small animals. Biol. v shkole 6:
80-81 N-D '58. (MIRA 11:11)

1. Gor'kovskiy gosudarstvennyy universitet.
(Nature study--Equipment and supplies)

KOZLOV, V.I.; KUZNETSOV, N.I.

Apparatus for registering the diurnal activities of birds nesting in the hollows of trees and small burrowing animals [with summary in English]. Zool. zhur. 37 no.8:1264-1267 Ag '58. (MIRA 11:9)

1.Gor'kovskiy gosudarstvennyy universitet.
(Scientific apparatus and instruments) (Zoology--Field work)

KUZNETSOV, N.I., KOZLOV, V.I.

Wintering place of bats in the Central Urals. Biol.MOIP. Otd.
biol. 63 no.4:131-132 Jl-Ag '58 (MIRA 11:11)
(VOSKRESENSK REGION (SVERDLOVSK PROVINCE)--BATS)
(ANIMALS, HABITATIONS OF)

OYKS, G.N., doktor tekhn. nauk, prof.; USHAKOV, Ye.N., inzh.; KOZLOV,
V.I., inzh.

Using molten iron-calcium slag for converting high-phosphorus pig
iron. Izv. vys. ucheb. zav.; chern. met. no.12:3-8 D '58.
(MIRA 12:3)

1. Moskovskiy institut stali.

(Slag)

(Cast iron--Metallurgy)

S/148/60/000/009/005/025
A161/A030

AUTHORS: Kozlov, V.I., and Yavoyskiy, V.I.

TITLE: The role of bottom fritting in oxidizing processes in steel-melting

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Chernaya metallurgiya, no. 9, 1960, 35-42

TEXT: The influence of the bottom fritting in basic open hearth furnaces on oxidizing processes has been investigated in 250 ton furnaces melting mainly low-carbon steel. References are made to thirteen works (Ref.1-13) in which the alternating oxidizing and reducing in the fritting during the heat was considered from the angle of the effect on the furnace bottom, with only few exceptions (Ref.1,6) where the effect on the melting process was considered as well. Fritting samples were taken with a simple device consisting of a rod and a shell taking core samples. The top of the cores about 15 mm deep was taken for investigations. The composition of this surface layer changed very considerably during one heat. The lowest iron oxide content in the surface of fritting was observed towards the end

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of heat (contrary to conclusions in (Ref.6)). Apparently, silicon and manganese have the major effect on reducing of the oxides in fritting during melting, and the temperature during the melting period is not sufficient for oxidizing of carbon by the oxides of iron and bottom. In deeper layers the content of iron oxides remained high during the melting and evened out through the fritting depth at an higher temperature. (The same had been stated in (Ref.7)). Floating of low-melting fritting components into slag makes the fritting surface more refractory and rough (Ref.10), and this assists the formation of CO bubbles on the bottom and development of the "bottom" reaction of carbon oxidizing. The iron oxide content in the fritting surface diminishes, and the earlier it is free from low-melting layers with high content of calcium, silicon and aluminum oxides, the faster starts the intensive CO bubbles formation on the bottom and the lower will be the oxygen content in the metal bath. This explains also the higher content of hyper-equilibrium oxygen in metal after melting. The absolute quantity of carbon oxidized by the iron oxides from the fritting is not high (0.05-0.06% C was determined in one heat), but it is important for the development of bottom boiling. Increased content of CaO and SiO₂ was observed in all heats during

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higher temperature period. This indicates the opposite concentration gradient (compared with the start of heat) of these components in the fritting depth and the appearance of high-melting calcium silicates at this time. Microscopic investigation confirmed this. After the carbon content in the bath reaches about 0.10%, and decarbonization in the fritting becomes slow, the iron oxide content in it begins to grow from the higher oxygen content in liquid metal, and this lasts apparently until the moment when the bath is deoxidized. During the deoxidation of metal the sense of chemical interaction of fritting and bath changes again. During tapping, the surface of fritting becomes saturated in iron oxide from the slag as well as from the oxidizing atmosphere in the furnace and oxidation of metal beads on the bottom. The concentration of FeO and CaO in the fritting and in the final slags is completely different, and this indicates the selective absorption of iron oxide from slag by the fritting, though, I.P. Bas'yas and A.M. Lezesa (Ref. 7) came to a different conclusion (but did not state the time of taking samples). Petrographic analysis of fritting samples revealed that iron oxides were present in the fritting during the heat end in the form of ferrous silicates and solid solution of wustite in periclase ("periklaz"). Magnesium ferrite starts appearing at about 0.10% C in metal. At the charging

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The role of bottom fritting ...

end a high quantity of calcium ferrite, magnesium ferrite and RO were revealed. Metal beads were absent in these samples. Conclusions: 1) The variation of iron oxide content in the fritting of the basic open hearth bottom during the heat has been studied. 2) It has been proven that iron oxides in the fritting take an active part in oxidization processes in the steel-making process. Part of the silicon and manganese in pig iron is oxidized by these oxides during the melting period. 3) The observations confirmed the opinion of some investigators that the "bottom" reaction of carbon oxidization gradually grows during the second half of the heat process. The time during which the oxidization of carbon is taken over by the furnace bottom can be different. The rate of the rise in temperature has a considerable effect on this. Iron oxides contained in the fritting on the furnace bottom take some part in oxidization of carbon. There are 5 figures and 13 references: 12 Soviet-bloc and 1 non-Soviet-bloc.

ASSOCIATION: Moskovskiy institut stali (Moscow Steel Institute)

SUBMITTED: 16 May 1960

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KOZLOV, V. I.

PHASE I BOOK EXPLOITATION

SOV/5556

85

Moscow. Institut stali.

Novoye v teorii i praktike proizvodstva martenovskoy stali (New [Developments] in the Theory and Practice of Open-Hearth Steelmaking) Moscow, Metallurgizdat, 1961. 439 p. (Series: Trudy Mezhdvuzovskogo nauchnogo soveshchaniya) 2,150 copies printed.

Sponsoring Agency: Ministerstvo vysshego i srednego spetsial'nogo obrazovaniya RSFSR. Moskovskiy institut stali imeni I. V. Stalina.

Eds.: M. A. Glinkov, Professor, Doctor of Technical Sciences, V. V. Kondakov, Professor, Doctor of Technical Sciences, V. A. Kudrin, Docent, Candidate of Technical Sciences, G. N. Oyks, Professor, Doctor of Technical Sciences, and V. I. Yavoyaskiy, Professor, Doctor of Technical Sciences; Ed.: Ye. A. Borko; Ed. of Publishing House: N. D. Gromov; Tech. Ed.: A. I. Karasev.

PURPOSE: This collection of articles is intended for members of scientific institutions, faculty members of schools of higher education, engineers concerned with metallurgical processes and physical chemistry, and students specializing in these fields.

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New [Developments] in the Theory (Cont.)

85
BOV/5556

COVERAGE: The collection contains papers reviewing the development of open-hearth steelmaking theory and practice. The papers, written by staff members of schools of higher education, scientific research institutes, and main laboratories of metallurgical plants, were presented and discussed at the Scientific Conference of Schools of Higher Education. The following topics are considered: the kinetics and mechanism of carbon oxidation; the process of slag formation in open-hearth furnaces using in the charge either ore-lime briquets or composite flux (the product of calcining the mixture of lime with bauxite); the behavior of hydrogen in the open-hearth bath; metal desulfurization processes; the control of the open-hearth thermal melting regime and its automation; heat-engineering problems in large-capacity furnaces; aerodynamic properties of fuel gases and their flow in the furnace combustion chamber; and the improvement of high-alloy steel quality through the utilization of vacuum and natural gases. The following persons took part in the discussion of the papers at the Conference: S.I. Filippov, V.A. Kudrin, M.A. Glinkov, B.P. Nam, V.I. Yavovskiy, G.N. Oyks and Ye. V. Chelishchev (Moscow Steel Institute); Ye. A. Kazachkov and A. S. Kharitonov (Zhdanov Metallurgical Institute); N.S. Mikhaylots (Institute of Chemical Metallurgy of the Siberian Branch of the Academy of Sciences USSR); A.I. Stroganov and D. Ye. Povolotskiy (Chelyabinsk Polytechnic Institute); P.V. Umrikhin (Ural Polytechnic Institute); I.I. Fomin (the Moscow "Serp i molot" Metallurgical Plant); V.A. Fuklev (Central Asian Polytechnic Institute)

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New [Developments] in the Theory (Cont.)

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and M.I. Beylinov (Night School of the Dneprodzerzhinsk Metallurgical Institute).
References follow some of the articles. There are 268 references, mostly Soviet.

TABLE OF CONTENTS:

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Yavoykiy, V. I. [Moskovskiy institut stali - Moscow Steel Institute]. Principal Trends in the Development of Scientific Research in Steel Manufacturing	7
Filippov, S. I. [Professor, Doctor of Technical Sciences, Moscow Steel Institute]. Regularity Patterns of the Kinetics of Carbon Oxidation in Metals With Low Carbon Content [V. I. Antonenko participated in the experiments]	15
Levin, S. L. [Professor, Doctor of Technical Sciences, Dnepropetrovskiy metallurgicheskiy institut - Dnepropetrovsk Metallurgical Institute].	

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Kleyn, A.L., and P.V. Umrikhin [Ural Polytechnic Institute]. Slag Formation When Using Composite Flux Produced by Calcination of Lime-Bauxite Mixture		117
Ushakov, Ye. N. [Candidate of Technical Sciences], Ye. V. Abrosimov, [Docent, Candidate of Technical Sciences], V.I. Kozlov, V.A. Shcherbakov [Engineers], A.G. Kotin [Candidate of Technical Sciences], and M.P. Sabiyev [Engineer], [Moscow Steel Institute, Ukrainskiy nauchno-issledovatel'skiy institut metallov - Ukrainian Scientific Research Institute of Metals, Alchevskiy metallurgicheskiy zavod - Alchevsk Metallurgical Plant]. Improving the Steelmaking Process in Large-Capacity Open-Hearth Furnaces		125
Voloshina, N.M. [Engineer]. Using Ore-Lime Briquets Instead of Ore and Lime in the Open-Hearth Process [D.I. Sapiro, P.I. Kovalev, S.I. Zhmak, G. Ye. Kravtsov, Engineers, and I.M. Tkachenko, A.P. Poletayev, Technicians participated in the research work]		133
Ofengenden, A.M. [Engineer]. Accelerating the Slag Formation and Desulfurization in the Open-Hearth Process		140
Card 6/14		

S/137/61/000/011/024/123
A060/A101

AUTHORS: Ushakov, Ye. N., Abrosimov, Ye. V., Kozlov, V. I., Shcherbakov,
V. A., Kotin, A. G., Sabiyev, M. P.

TITLE: Improvement of steel-smelting technology in high-capacity open-
hearth furnaces

PERIODICAL: Referativnyy zhurnal. Metallurgiya, no. 11, 1961, 38, abstract
11V227 (V sb.: "Novoye v teorii i praktike proizv. martenovsk.
stali", Moscow, Metallurgizdat, 1961, 125 - 132. Discuss. 193 - 201)

TEXT: The authors describe the results of the investigations of the condi-
tions of slag formation and their effect upon the productivity of high-capacity
open hearth furnaces under the conditions of replacing ore and limestone in the
charge by ore-limestone briquets or a premixed ore-limestone mixture. The ar-
ticle also describes the investigation of various variants of metal reduction. ✓
In order to exclude the influence of the thermal schedule, the experimental and
ordinary smeltings were carried out at practically the same thermal loads: 35 -
38 million kcal during the charging and 25 - 27 million kcal during the finishing.
The ore-limestone briquets from the Krivorozh'ye plant had the following composi-

Card 1/3

S/137/61/000/011/024/123

A060/A101

Improvement of steel-smelting technology in...

tion: Fe 47 - 52%, SiO₂ 5.4 - 6.9%, CaO 10.1 - 14.1%; basicity 1.8 - 2.2. To raise the basicity of the slag, limestone (~1.3% of the weight of the metallic charge) was added to the charge after the melting. The main indices of the experimental and control smeltings with the use of briquets are cited, from which it follows that with practically the same composition of the metallic charge the quantity of loose materials in operating with briquets is less by 13.5 tons (2.8% by weight of the metallic charge and 12.3% of the total weight of ore and limestone). In smelting with briquets as compared with ordinary control smeltings the mean charging duration is reduced by 15 min, and that of the smelting by 1 hr 24 min. The basicity of the slag in smelting with briquets is somewhat higher than that in ordinary smeltings due to the lower SiO₂ content in the charge. Despite the fact that with the use of briquets the lapping duration is increased on account of the higher C content after the melting (by 0.11%), the total smelting duration is then still 1 hr 15 min less than that of ordinary heats. This corresponds to an increase of 9% in the hourly productivity of the furnace. The effectiveness of using lump materials in the charge is noted. The ore-limestone mixture was prepared earlier in the charge yard at ore to limestone weight-ratios of 2:1 to 1:1. The results of experimental heats with ore-lime-

Card 2/3

Improvement of steel-smelting technology in...

S/137/61/000/011/024/123
A060/A101

stone mixture are cited. As result of reducing the smelting time the total duration of the heat was reduced by 15 min on the average. Liquid slags with floating pieces of limestone were noted during the smelting period. The mean slag basicity after the melting turned out to be considerably lower than in ordinary heats, which deteriorated the conditions of metal desulfuration. The finishing of the experimental heats, on account of the higher S content at a low C content (during smelting in the presence of high acidity slag much more C was burned out than in ordinary heats) is made more difficult and requires the addition of large quantities of limestone, and in special heats, also of Fe-Mn. The inefficiency of the use of ore-limestone mixture is noted, since a very small effect is achieved by it. The main indices of heats with the reduction in ladles and in the furnace are cited. Reduction in the furnace lowers the duration of the finishing, reduces the Mn burn-off (by 30% on the average) and the saving of about 3 kg of Fe-Mn per ton of steel is effected. Despite a somewhat greater complexity of the technological process the method of reducing the smelt in the ladle while smelting in high-capacity furnaces is recommended for large-scale production.

I. Polyak

[Abstracter's note: Complete translation]

Card 3/3

S/148/61/000/011/002/018
E071/E180

AUTHORS: Kozlov, V.I., Vishkarev, A.F., Zil'berman, A.G.,
and Yavoyskiy, V.I.

TITLE: Diffusion of carbon and oxygen in liquid steel

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy,
Chernaya metallurgiya, no.11, 1961, 38-44

TEXT: In order to establish the relative rates of diffusion of carbon and oxygen in liquid steel (which are important in explaining the mechanism of oxidation of carbon) the authors made an attempt to measure the diffusion coefficients of these two elements in molten iron. The diffusion coefficient of carbon was determined using C^{14} by the method of orthoradiography. Since capillaries of 5-6 mm in diameter were used the influence of convection was not eliminated and out of numerous experiments only 11 results could be used for the determination of the coefficient. This was found to be equal to 4×10^{-5} - 1.92×10^{-4} cm²/sec, which is close to published data. The diffusion coefficient for oxygen was determined by the method of semi-
Card 1/2

Diffusion of carbon and oxygen ... S/148/61/000/011/002/018
E071/E180

infinite rod with a constant source of oxygen (blowing of oxygen on the surface of iron for one minute at a rate of 0.5 $\frac{g}{min}$). It was found that the diffusion coefficient for oxygen is higher than that of carbon by about two orders, namely $(3.0 - 7.8) \times 10^{-3} \text{ cm}^2/\text{sec}$. The results invalidated the generally held view that the diffusion of oxygen is slower than carbon. Bearing in mind possible experimental inaccuracies, it can be stated that the diffusion of carbon in molten iron is not faster than that of oxygen. S.Z. Bokshteyn, I.S. Kulikov and A.A. Zhukhovitskiy are mentioned in the article. There are 4 figures, 2 tables and 12 references; 9 Soviet-bloc and 3 non-Soviet-bloc. The English language reference reads: Ref.4: D.W. Morgan, J.A. Kitchener. Transactions of the Faraday Society, v.50, no.1, 1954.

ASSOCIATION: Moskovskiy institut stali (Moscow Steel Institute)

SUBMITTED: June 24, 1961

Card 2/2

KOZLOV, V.I.; YAVOYSKIY, V.I.

Investigating the oxidation reaction of carbon in 500-ton
open-hearth furnaces. Izv. vys. ucheb. zav.; Chern. met.
no. 1:46-55 '61. (MIRA 14:2)

1. Moskovskiy institut stali.
(Open-hearth furnaces--Combustion) (Oxidation)

SHCHEKBAKOV, V.A.; ABROSIMOV, Ye.V.; Prinimali uchastiye: USHAKOV, Ye.N.;
KOZLOV, V.I.; KOTIN, A.G.; SABIYEV, M.P.

Slag conditions during melting in high-capacity open-hearth
furnaces. Izv. vys. ucheb. zav.; chern. met. 6 no.7:59-64
'63. (MIRA 16:9)

1. Moskovskiy institut stali i splavov.
(Open-hearth process) (Slag)

KOZLOV, V.I.; PAPAZOV, N.F.

Using plastic supports for the MK-54 and MK-56 machine tools. *Biul. tekhn.-ekon.inform.Ces.nauch.-issl.inst.nauch.i tekhn.inform*, 18
no.5:44-45 My '65. (MIRA 18:6)

U 50970-65 DMT(1)/ISA(a)-2/DMT(a)/DMA(c)/DMA(d)/T/SWP(c)/SWP(x)/SWP(b) PC-1/1-1

ACCESSION NR: AP601143Z 14/10 10/00 UR/0048/88/029/004/0868/0570

AUTHOR: Teleshin, R.V.; Koslov, V.I.

TITLE: Localized investigation of thin ferromagnetic films by means of ferromagnetic resonance /Report, Second All-Union Symposium on the Physics of Thin Ferromagnetic Films held in Irkutsk, 10-18 July 1984/

SOURCE: AN SSSR. Izvestiya, Seriya fizicheskaya, v. 29, no. 4, 1985, 568-570

TOPIC TAGS: ferromagnetic thin film, ferromagnetic resonance, magnetic properties

ABSTRACT: In view of the fact that, owing to diverse factors, the magnetic parameters of ferromagnetic thin films may vary over the area of a single film, it is of interest to have means for local determination of such parameters. This can be realized by the method of ferromagnetic resonance, first employed to this end by Z. Frait and his coworkers (Czech. Jour. Phys., B10, 618, 1960). For the purpose of local investigation of thin films the present authors designed the resonance equipment diagrammed in the Enclosure. The setup operates in the 3 cm microwave range. The microwave power from the klystron enters the double-T bridge, where part of the power is branched to the cavity and part to the arm with an attenuator and a short-circuiting piston. The cavity is of the rectangular H₁₀₁ type with an intrinsic

Card 1/3

L 50970-65

ACCESSION NR: AP6011432

frequency of 9415 Mc and a loaded Q of about 2000. The sample is mounted over an opening in the back wall of the cavity at the point of an antinode of the magnetic component of the microwave field. The sample film mount has provision for lateral displacement of the film and for rotation of it to any angle in its plane. The investigated area of the film is about 0.01 cm^2 (0.3-0.5 mm diameter section). Owing to the small area involved, the signal taken off is very weak; hence to enhance the sensitivity the apparatus employs double modulation of the magnetic field (A.G. Semenova, *Prohory i tekhnika eksperimenta*, No. 5, 5, 1962) an expedient commonly used in paramagnetic spectroscopy. The film is backed by the coil that provides the high-frequency (1 Mc) modulating field. By way of illustration of the results obtainable with the setup there are reproduced in the text an H_{res} versus angle curve for a 1000 Å thick Permalloy film and curves of H_{res} and $4\pi M_{eff}$ versus distance across the diameter of a Permalloy film of unspecified thickness, deposited onto a substrate heated to 2000C. Orig. art. has: 2 formulas and 3 figures.

ASSOCIATION: None

SUBMITTED: 00

ENCL: 01

SUB CODE: EM, EC

NR REF SOV: 002

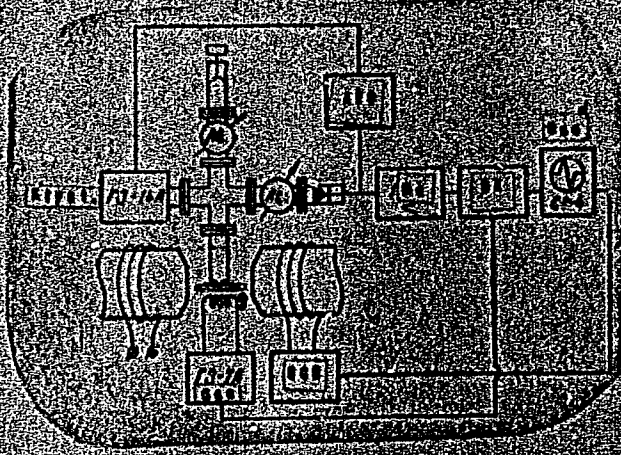
OTHER: 005

Card 2/3

U 50970-65

ACCESSION NR: AP5011432

ENCLOSURE: 01



Block diagram of the equipment for local ferromagnetic resonance measurements: APC - automatic frequency control, A - attenuator, ACG - sawtooth current generator, DA - detector assembly, S - film sample.

Card 3/3

KOZLOV, V.I.

Structure of the intracerebral portion of the oculomotor nerve. Arkh.
anat., gist. i embr. 48 no.6:69-74 Je '65. (MIRA 18:7)

1. Kafedra normal'noy anatomii (zav. - prof V.V.Kupriyanov) II
Moskovskogo meditsinskogo instituta imeni Pirogova.

TATARINTSEV, A.S.; KOZIOV, V.I.

Effect of quantitative correlation of the components of
mixed pollen on the pollination selectivity. Agrobiologia
no.2:300 Mr-Apr '64. (MIRA 17:6)

1. Plodoovoshchnoy institut imeni I.V. Michurina, g. Michurinsk.

ХИТИЦА, В.И.; ПИКО, Н.М.; СИДЕНСКОВА, Л.С.

Some statistical characteristics of fluctuations of the wind velocity
in the troposphere. Izv. AN SSSR no. 63:67-75 1955.

(MIRA 12:2)

KOZLOV V. K.

Karakul Sheep

Progressive breeding of karakul sheep on the Molotov Collective Farm. Sots. zhiv.
14 No. 6, 1952.

9. Monthly List of Russian Accessions, Library of Congress, August 19~~52~~² Uncl.

DERING, A.B., glav. red.; TUROV, M.G., zam. glav. red.; BERZON, E.M., red.; BUGHKIN, N.A., red.; KOZLOV, V.K., red.; NAYMARK, I.I., red.; NIKOLAYEV, K.N., red.; SUSHCHEV, N.N., red.; TERESHCHENKO, Ye.I., red.; YUNMEYSTER, A.B., red.; PUL'KINA, Ye.A., otv. za vyp.

[Reports on the technical level of the manufacture of reinforced concrete products] Sbornik dokladov ob urovne tekhniki proizvodstva zhelezobetonnykh izdelii; informatsionnyi material. Leningrad, Otdel tekhn. informatsii. No.3. 1959. 81 p. (MIRA 16:11)

1. Leningrad. Vsesoyuznyy nauchno-issledovatel'skiy institut po mashinam dlya promyshlennosti stroitel'nykh materialov.

(Reinforced concrete products)

KOZLOV, V. K.

KOZLOV, V. K. -- "Study of the Immunobiological Properties of a
Hemose Protein in Heterotransplantation." Vol. 13, No. 13, *Journal of
Sci, USSR*. (Dissertation for the degree of Candidate in Biological
Sciences).

50: Yechernaya Nauka January-December 1961

KOZLOV, V. K.

KOZLOV, V.K.

Modification of certain biological properties of mouse tumor during heterotransplantation. Biul. eksp. biol. i med. 37 no.4: 56-59 Ap '54. (MLRA 7:7)

1. Iz laboratorii nasledstvennosti (sav. kandidat biol. nauk L.A.Kalinichenko) Instituta eksperimental'noy biologii (dir. prof. I.N.Mayskiy) AMN SSSR, Moskva.

(NEOPLASMS, experimental,

*transpl., heterogenic, in mouse, eff. on biol. changes)

KOZLOV, V. K.

KOZLOV, V.K.

Investigation of antigenic properties of mouse tumor in heterotransplantation. Biul. eksp. biol. i med. 37 no.5: 55-57 My '54. (MLRA 7:7)

1. Iz laboratorii nasledstvennosti (zav. L.A.Kalinichenko) Instituta eksperimental'noy biologii (dir. prof. I.N.Mayskiy) AMN SSSR, Moskva.

(NEOPLASMS, experimental,

*antigenic properties of tumor in mouse in heterotranspl.)

KOZLOV, V.K.

Problems of antigens of cancer cell [with summary in English]. Biul.
eksp.biol. i med. 44 no.12:86-89 D '57. (MIRA 11:4)

1. Iz otdela immunologii (zav. - deystvitel'nyy chlen AMN SSSR
N.N.Zhukov-Verezhnikov) Instituta eksperimental'noy biologii (dir. -
prof. I.N.Mayskiy) AMN SSSR, Moskva. Prestavlena deystvitel'nyy
chlenom AMN SSSR N.N.Zhukovym-Verezhnikovym.

(NEOPLASMS, immunology,
Ehrlich tumor, antigens (Rus))

← KOZIOV, V.K.

Utilization of anaphylaxis method combined desensitization in the study of antigenic properties of tumors in heterologous transplantation. Biul. eksp. biol. i med. 46 no.11:78-84 N '58. (MIRA 12:1)

1. Iz otdela immunologii (zav. - prof. N.N. Zhukov-Verezhnikov) Instituta eksperimental'noy biologii (dir. - prof. I.N. Mayskiy) AMN SSSR, Moskva. Predstavlena deystvitel'nym chlenom AMN SSSR N.N. Zhukovym-Verezhnikovym.

(NEOPLASMS, transpl.

determ. of antigenic properties by anaphylaxis with desensitization in heterologous transpl. in mice (Rus))

(ALLERGY,

anaphylaxis with desensitization in determ. antigenic properties of transpl. tumors (Rus))

KOZLOV, V.K.; KALASHNIKOVA, Z.S.

Dynamics of change in the titer of complement in guinea pigs in anaphylactic shock and in conditions of shock inhibition with dimedrol. Biul. eksp. biol. i med. 51 no.1:68-70 Ja '61.

(MIRA 14:5)

1. Iz otdela immunologii (prev. - deystvitel'nyy chlen AMN SSSR N.N.Zhukov-Verezchnikov) Instituta eksperimental'noy biologii (dir. - prof. I.N.Mayskiy) AMN SSSR, Moskva. Predstavlena deystvitel'nymi chlenom AMN SSSR N.N.Zhukovym-Verezchnikovym.

(ALLERGY)

(COMPLEMENTS (IMMUNOLOGY))

(DIPHENHYDRAMINE)

BELYY, Vasilii Dmitriyevich; LYSAK, Georgiy Dmitriyevich; izobretatel';
PETRAKOV, Aleksandr Ivanovich, izobretatel', laureat Stalinskoy
premi; KOZLOV, Y.K., otv.red.; D'YAKOVA, G.B., red.izd-va;
PROZOROVSKAYA, V.L., tekhn.red.; BOLDYREVA, Z.A., tekhn.red.

[Mine parachutes] Shakhtnye parashiuty. Moskva, Gos.nauchno-
tekhn.izd-vo lit-ry po gornomu delu, 1960. 316 p.

(MIRA 14:4)

(Mine hoisting--Safety appliances)

KORNILOV, Vasiliy Denisovich; KIRICHOK, Yuriy Grigor'yevich; KOZLOV, V.K.,
otv. red.; D'YAKOVA, G.B., red. izd-va; LOMILINA, L.N., tekhn.
red.

[Principles of the safe and highly productive operation of hoists
in ferrous and nonferrous metal mines] Osnovy bezopasnoi i vysoko-
produktivnoi raboty podzemnykh ustanovok na rudnikakh (chernoi
i tsvetnoi metallurgii). Moskva, Gos. nauchno-tekhn. izd-vo lit-ry
po gornomu delu. 1961. 162 p. (MIRA 14:10)
(Mine hoisting)

KOZLOV, V.

Lifting device. Sov.shakht. 10 no.4:27 Ap '61. (MIRA 14:9)

1. Shakhta "Magunak" kombinata Kuzbassugol'.
(Hoisting machinery--Maintenance and repair)

KOZLOV, V.

Simplified brushon. Sov.shtakht. 10 no.4:27 Ap '61.
(MIRA 14:9)

(Excavating machinery)

ГОДИН, В.К., инж., научн. сот.; БИТЛОВИЦКАЯ, Н.А., ред.

[improving the engineering standards and lowering the cost
of building dams and river hydroelectric power stations]
Povysheniye tekhnicheskogo urovnya i snizheniye stoimosti
stroitel'stva plotin i rechnykh gidroelektr. Moskva, Stroi-
izdat, 1974. 158 p. (MIRA 17:11)

1. Nauchno-tekhnicheskoye obshchestvo stroitel'noy industrii
S.S.S.R.

L 1654-66 (A) EWT(m)

ACCESSION NR: AP5021610

UR/0286/65/000/013/0078/0078

AUTHOR: Kozlov, V. K. *KK*

13B 15.14

TITLE: Device for central and off-center compression testing of reinforced concrete construction. Class 42, No. 172522

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 13, 1965, 78

TOPIC TAGS: reinforced concrete, test method, structure stability

ABSTRACT: This Author Certificate presents a device for central and off-center compression testing of reinforced concrete construction. It is made in the form of two crosspieces between which is placed the investigated construction (see Fig. 1 on the Enclosure). To increase the accuracy of measurement and to decrease the metal content of the device, the apparatus is provided with a cable looped with the crosspieces and a yoke, fastened to the tension mechanism and dynamometer. Orig. art. has: 1 diagram.

ASSOCIATION: none

SUBMITTED: 21Apr62

ENCL: 01

SUB CODE: MT

NO REF SOV: 000
Card 1/2

OTHER: 000

L. 1651-66
ACCESSION NR: AP5021610

ENCLOSURE: 01

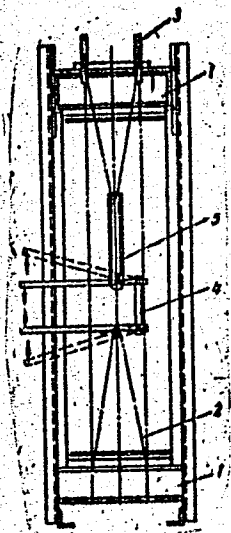


Fig. 1. 1- crosspieces; 2- cable; 3- yoke;
4- tension mechanism; 5- dynamometer

Card 2/2 *RP*

KOZLOV, V.K.

Refractory concrete for heating furnaces. Ogneupory 30 no.3:45-46
'65. (MIRA 18:5)

1. Metallurgicheskiy zavod Im. Petrovskogo.

ACC NR: APT002559 (A,N) SOURCE CODE: UR/0413/66/000/023/0040/0040

INVENTOR: Gak, I.I.; Kozlov, V.K.

ORG: none

TITLE: Tunable multicavity waveguide filter. Class 21, No. 189043

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 23, 1966, 40

TOPIC TAGS: waveguide filter, filter, microwave filter

ABSTRACT:

An Author Certificate has been issued for a tunable waveguide filter containing several resonant cavities. To simplify the tuning processes, the tuning element is made in the form of a cylindrical rod with two longitudinal facets (see Fig. 1). The rods of all cavities are synchronously moved along

Card 1/2

UDC: 621.372.852.1

ACC NR: AP7002559

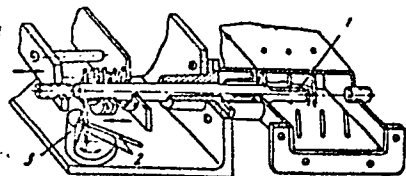


Fig. 1. Waveguide filter

- 1 - Cylindrical rod with facet; 2 - pins;
- 3 - bores.

their axes by a common cam or other mechanism. Each rod turns independently, and automatically, as shown in Fig. 1 (parts 1 and 2). [WP]

UDC: 621.372.852.1

SUB CODE: 09/ SUBM DATE: 05Aug65/ ATD PRESS: 5113

ACC NR: AP6035859

SOURCE CODE: UR/0413/66/000/020/0064/0064

INVENTOR: Andreyev, D. P.; Gak, I. I.; Kozlov, V. K.

ORG: none

TITLE: Waveguide filter ²⁵ Class 21, No. 187110

SOURCE: Izobreteniya, promyshlennyye tovarnyye znaki, no. 20, 1966, 64

TOPIC TAGS: waveguide filter, electronic component

ABSTRACT: An Author Certificate has been issued for a waveguide filter containing a rectangular waveguide which is bounded by capacitive and inductive windows and a tuning stub (see Fig. 1). To retune the filter while pressing a constant transmission

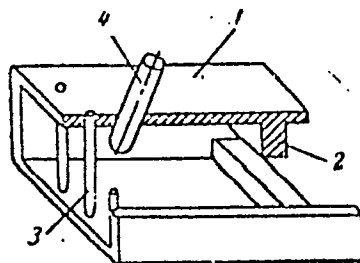


Fig. 1. Waveguide Filter

1 - Waveguide; 2 - capacitive window; 4 - stub.

Card 1/2

UDC: 621.372.852.15

ACC NR: AP6035859

band, the stub is displaced from the center toward the inductive window and is inclined in such a way that its end approaches the inductive window during the insertion into the filter. Orig. art. has: 1 figure.

SUB CODE: 09/ SUBM DATE: 05Aug65/ ATD PRESS: 5106

Card 2/2

KOZLOV, V.K.

Repair of back walls and corners of open-hearth furnaces by
means of guniting. Metallurg 10 no.5:22 My '65.

1. Zavod imeni Petrovskogo.

(MIRA 18:6)

KOZLOV, V.M.; GUSEVA, N.S.; FIRFAROVA, I.B.

Anomalous behavior of iron-titanium concentrates in the course of their
solid-phase reduction. Zhur. prikl. khim. 38 no.7:1436-1443 J1 '65.

(MIRA 18:7)

1. Vsesoyuznyy alyuminiyevy-magniyevyy institut.

USVYATSOV, A.A.; KOZLOV, V.M.

Automatic thermoregulating apparatus. Med. prom. 15 no.8:52-53 Ag '61.
(MIRA 14:12)

1. Mediko-instrumental'nyy zavod "Krasnogvardeyets".
(TEMPERATURE REGULATORS)

PHASE I BOOK EXPLOITATION

SOV/6075

Kozlov, Valentin Mikhaylovich, and Valentin Dmitriyevich Turovskiy

Berilliy; toksikologiya, klinika porazheniy, gigiyena truda (Beryllium; Toxicology, Clinical Treatment of Diseases, and Industrial Hygiene) Moscow, Atomizdat, 1962. 117 p. 2300 copies printed.

Ed. (Title page): A. I. Burnazyan; Ed.: T. P. Kalyuzhnaya; Tech. Ed.: Ye. I. Mazel'.

PURPOSE: This booklet is intended for medical specialists, technical personnel, technical inspectors of trade unions, and workers in beryllium enterprises.

COVERAGE: The booklet deals with the toxicology of beryllium, clinical treatment of diseases caused by beryllium, industrial hygiene in beryllium production, and the protection of external media from contamination by beryllium waste products. The author has worked out the necessary sanitation and hygiene requirements for planning working areas, for different types of plant

Card 1/4 2

Beryllium; Toxicology, Clinical Treatment of Diseases (Cont.) SOV/6075

equipment currently in use, and for industrial ventilation systems. The major portion of the text on sanitation and hygiene requirements applies to the production of beryllium and beryllium articles and to plants which produce beryllium-rich alloys. It does not apply to production processes for alloys containing trace amounts of beryllium or to the manufacture of articles from such alloys. No personalities are mentioned. There are 85 references, all Soviet.

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Ch. I. Beryllium: Properties and Application	3
Ch. II. The Technology of Beryllium Production in Brief	11
Ch. III. Experimental Toxicology of Beryllium and Its Compounds	19
Ch. IV. Clinical Treatment and Diagnosis of Diseases Caused by Beryllium and Its Compounds	32

Card 2/2 2

TKACHENKO, V.A.; KOZLOV, V.M.; GUSEVA, N.S.

Investigating certain regularities in the reduction of iron-titanium concentrates in the solid phase. Titan i ego splavy no.9:70-81 '63.

(Titanium--Electrometallurgy)

(MIRA 16:9)

TKACHENKO, V.A.; KUZLOV, V.M.; GUSEVA, N.S.; Prinsipali uchastiye: ~~RAPOPORT~~,
M.B.; MIKHAYLOV, E.S.

Making high-titanium slags of iron-titanium concentrates from coastal placers. Titan i ego splavy no.9:86-95 '63. (MIRA 16:9)
(Titanium—Electrometallurgy)

ARTYUKHOVA, N.N.; BREMER, L.F.; GRIGORENKO, A.S.; IFATOVA, M.S.;
KARBY SHEVA, T.D.; KOZLOV, V.M. · KOLYSHEVA, L.I.;
KUCHUMOVA, N.A.; MAKAROVA, M Ye.; PUCHKOVA, N.A.;
SEKIRINA, Ye.T.; SOKOLOVA, T.S.; STATIYEVA, V.F.;
TYUNYAYEVA, V.V.; KHRAMTSOVA, A.A.; CHURAYEVA, V.V.;
FOKIN, D.F., red.

[Foreign trade of the U.S.S.R. for 1959-1963; a statistical
abstract] Vneshniaia trgovlia Soiuza SSR za 1959-1963 go-
dy; statisticheskiy sbornik. Moskva, Vneshtorgizdat, 1965.
483 p. (MIRA 18:7)

1. Russia (1923- U.S.S.R.) Ministerstvo vneshney trgovli.
Planovo-ekonomicheskoye upravleniye. 2. Nachal'nik Planovo-
ekonomicheskogo upravleniya Ministerstva vneshney trgovli
SSSR (for Fokin).

KOZLOV, V.M.

Effect of small doses of gamma-irradiation on the mitotic activity
of human fibroblasts in the tissue culture. Radiobiologia 4
no.5:726-730, '64. (MIRA 18:4)

1. Institut biologicheskoy fiziki AN SSSR, Moskva.

KOZLOV, V.M.

Nuclear changes in the culture of human embryo cells after gamma irradiation with doses of 5-20 r. Radiobiologia 4 no.6:840-842 '64.
(MIRA 18:7)

1. Institut biologicheskoy fiziki AN SSSR, Moskva.

KOZLOV, V.K.

Effect of γ irradiation with 25-50 r doses on nuclear structures
of human cells in a tissue culture. Radiobiologia 5 no.4:
543-546 '65. (MIRA 18:9)

1. Institut biologicheskoy fiziki AN SSSR, Moskva.

Translation from: Referativnyy zhurnal. Metallurgiya, 1958, Nr 12, p 37 (USSR) SOV/137-58-12-24183

AUTHORS: Sevast'yanov, N. S., Vasil'yev, N. F., Kozlov, V. M., Paygin, G. D.

TITLE: Determining Steel Quality in Open-hearth Furnaces During a Heat
(Opredeleniye kachestva stali v martenovskikh pechakh v protsesse
vedeniya plavki)

PERIODICAL: Tr. Omskogo mashinostroit. in-ta, 1958, Nr 2, pp 127-137

ABSTRACT: The results of determinations of the a_k (resilience) of a metal (Me) by the course of heats of 32Kh06 steel in basic 25-t open-hearth furnaces are presented. a_k rises with diminution in [C], attaining a maximum in the pure boil period, at an average C removal rate of 0.21% per hour and a slag basicity of 2.1-2.5. Predeoxidation (P) by blast-furnace Fe-Si and Fe-Mn lessens a_k . Presumptive conclusions are as follows: Removal of nonmetallic inclusions due to boil promotes completion of Al deoxidation, with formation of solid disperse Al_2O_3 particles exercising no significant influence upon a_k . With P, this reaction does not go to completion, and the fluxing of Al_2O_3 by added oxides is performed. Large inclusions of the resultant Fe aluminate reduce a_k considerably.

A. D.

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REZNICHENKO, V.A.; TKACHENKO, V.A.; SIRYAPOV, G.V.; KOZLOV, V.M.;
SIDORENKO, G.D.

Reduction of ilmenite concentrates in a fluidized bed. Titan
i ego splavy no.5:60-64 '61. (MIRA 15:2)
(Titanium--Metallurgy)
(Fluidization)

18.3100

1521

26862
8/080/61/034/004/003/012
A057/A129AUTHORS: Rapoport, M. B., Kozlov, V. M.

TITLE: Reduction of iron-titanium concentrates in the solid phase without melting (I. Communication)

PERIODICAL: Zhurnal prikladnoy khimii, v. 34, no. 4, 1961, 734 - 743

TEXT: Reduction kinetics of iron oxides and titanium dioxide in iron-titanium concentrates were investigated in the solid phase at 1,000 - 1,300°C, i.e., until slag formation. This study was carried out since in literature there is no uniform idea on reduction kinetics in iron-titanium concentrates. The latter contain usually ilmenite ($\text{FeO} \cdot \text{TiO}_2$), arizonite ($\text{Fe}_2\text{O}_3 \cdot 3\text{TiO}_2$) and perovskite ($\text{CaO}_2 \cdot \text{TiO}_2$). The reduction process of ilmenite was studied frequently, but different opinions were expressed. Thus Ye. N. Snopova and N. I. Rotkov (Ref. 1: Sovetskaya metall., 12, 11 - 19, 1936) and E. V. Britske et al. (Ref. 2: DAN SSSR, OTN, 2, 9, 1941) assumed that decomposition to FeO and TiO_2 occurs before iron suboxide reduction. Contrary to this opinion V.K. Antonov (Ref. 3: Khimiya i tekhnologiya redkikh elementov (Chemistry and technology of rare elements) Ural'skiy filial AN SSSR, Sverdlovsk, 81 - 94, 1958), G. I. Chu-

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Reduction of iron-titanium concentrates

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X

farov et al. (Ref. 4: Tr. inst. metall. AN SSSR, Ural'skiy filial, 2, 9 - 40, 1958) and A. S. Tumarev (Ref. 8: Sb. "Problemy metallurgii" ("Metallurgical problems"), Izd. AN SSSR, M., 23 - 28, 1959) estimated that reduction of complex oxides occurs without preceding decomposition. Another problem is the question if reduction of oxides occurs more intensively in liquid or solid state, and if the reduction rate of ferrous oxide is considerably higher in liquid than in solid slag. Therefore in the present work the interaction between solid carbon (anthracite) with iron and titanium oxides was investigated in three iron-titanium ore concentrates from deposits in Kusinsk, Irshinsk and Samotkansk (Tab. 1,2). The latter contains Fe_2O_3 and no FeO , while the other two contain mainly ilmenite. The test sample was prepared, in general, by mixing 100 parts of concentrate with 13 parts of anthracite (or 9.5 parts for the Samotkansk concentrate), using sulfite liquor as binder for the subsequent briquetting. The briquettes were tested in a silite oven at 1,000, 1,100, 1,200, and 1,300°C by heating the latter by means of an PHO-250-10 (RNO-250-10) autotransformer. In the product Fe_{total} , Ti_{total} and lower titanium oxides ($Ti^{2+} + Ti^{3+}$) were determined. The sum of di- and tri-valent titanium was determined by the improved method described by L. I. Veselago (Ref. 9: ZhAKh, 13, 5, 562 - 566, 1958). From the ob-

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Reduction of iron-titanium concentrates

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tained results the degree of reduction of iron- and titanium oxides was estimated. The highest reduction rate of FeO has the Kusinsk concentrate containing less TiO_2 and more iron oxides and admixtures (CaO, and MgO) than the other concentrates. The lowest reduction rate shows the Irshinsk concentrate, having bigger grains and less admixtures than the other two. Curves showing the effect of duration of a constant 1,000°C temperature have two segments; until 0.5-0.8 hours the kinetic range of the reduction process and above 0.5-0.8 hours the diffusion range. The change from kinetic to the diffusion process is due to the decrease in contact surface between the ore and anthracite. Tests with bigger charges, using anthracite and petroleum coke were carried out and the advantage of briquetting was demonstrated (Table 3). According to experiments on the effect of exhaust gases on reduction the effect of CO evolved from the briquet should be considered. Thus experiments carried out in the present institute and IMET AN SSSR (Institute of Metallurgy imeni A.A. Baykova) indicated that about 20 % of the total reduction is effected by CO. Considering that reduction occurred in the present experiments in the solid phase to 85 - 90% (10 - 15 % are reduced in liquid phase) and taking into account the results obtained for 1,300°C, the advantage of a reduction in solid phase is evident. Thus statements indicating that the main reduction of iron oxides occurs in the liquid phase are

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Reduction of iron-titanium concentrates

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erroneous. Results of the experiments on reduction of TiO_2 demonstrate (Figures 5,6, Table 4) that simultaneously with the reduction of iron oxides a considerable reduction of TiO_2 to the oxides Ti_3O_5 and Ti_2O_3 takes place. Contrary to Ref. 3, and 4 the present authors observed that TiO_2 reduction starts already in presence of still considerable amounts of iron oxides. In connection with data given by Zh. L. Vert and M. V. Kamentsev (Ref. 10: ZhNKh, IV, 1, 17, 1959), and V.A. Reznichenko and F. B. Khalimov (Ref. 11: Sb. "Titan i yego splayv" (Titanium and alloys), 11 - 15, 1959) the influence of admixtures on the reduction of TiO_2 in artificial mixtures of the type of the investigated concentrates was studied. The results (Table 5) demonstrate that the reduction degree of TiO_2 is lower than in natural iron-titanium concentrates. The present authors assume that in reduction of natural concentrates, by destruction of a complex chemical compound TiO_2 is more active than the free TiO_2 molecule. There are 7 figures, 5 tables and 11 Soviet-bloc references.

ASSOCIATION: Vsesoyuznyy alyuminiyevo-magniyevyy institut (All-Union Scientific Research Institute of Aluminum and Magnesium)

SUBMITTED: July 13, 1960

Card 4/9

KISELEV, V.P.; KOZLOV, V.M.

Conference on the problem of the over-all utilization of
highly ferrous bauxites and high alumina iron ores. TSvet.
met. 34 no.8:85 Ag '61. (MIRA 14:9)
(Bauxite) (Iron ores)

REZNICHENKO, V.A.; TKACHENKO, V.A.; MIKELADZE, G.Sh.; KARYAZIN, I.A.;
KOZLOV, V.M.; NADIRADZE, Ye.M.; SOLOV'YEV, V.I.; GOGORISHVILI,
B.P.; Primali uchastiye: PKHAKADZE, Sh.S.; METREVELI, A.I.;
CHIKASHUA, D.S.; KHROMOVA, N.V.; KAVETSKIY, G.D.; TSKHVEDIANI,
R.N.; ARABIDZE, T.V.

Making titanium slag in an electric closed reduction furnace.
Titan i ego splavy no.8:28-40 '62. (MIRA 16:1)
(Titanium--Electrometallurgy)

GRIGOR'YEV, A.V.; KOZLOV, V.M.; FLORINSKIY, I.B.; SHEVCHENKO, N.S.

Automatic control of the uniformity of the heating of the coke
cake. Koks i khim. no.12:14-19 '63. (MIRA 17:1)

1. Magnitogorskiy metallurgicheskiy kombinat.

SEBENYEV, Viktor Vasil'yevich; GALITSKIY, Nikolay Vladimirovich;
KISELEV, Vasilii Pavlovich. Prinsipal uchastnye KOZLOV,
V.M.; GUS'KOV, V.M., red.

[Metallurgy of titanium] Metallurgiya titana. Moskva, izd-
vo Metallurgiya, 1964. 207 p. (MIRA 17:7)

L 38531-66 EWT(m)/EWP(j) WW/JW/RM

ACC NR: AP 6019941

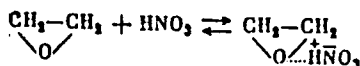
SOURCE CODE: UR/0366/66/002/002/0261/0265

AUTHOR: Lebedev, N. N.; Kozlov, V. M.ORG: Moscow Chemical Engineering Institute im. D. M. Mendeleev (Moskovskiy khimiko-tekhnologicheskii institut)TITLE: Kinetics and mechanism of the reaction of ethylene oxide with acids

SOURCE: Zhurnal organicheskoy khimii, v. 2, no. 2, 1966, 261-265

TOPIC TAGS: ethylene oxide, nitric acid, chemical reaction kinetics, reaction mechanism

ABSTRACT: The kinetics of the reaction of ethylene oxide with nitric acid were studied in dioxane solution. The reaction rate was measured manometrically in the presence of excess acid and titrimetrically in the presence of excess oxide. The reaction order was found to change from first (excess C_2H_4O) to second (excess HNO_3). An appreciable range exists where the reaction orders are intermediate with respect to the acid and where the process takes place via both mechanisms. The first stage of the reaction is the formation of a complex by a reversible acid-base interaction:



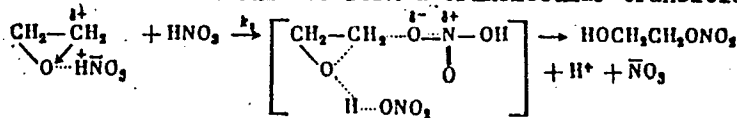
Card 1/2

UDC: 547.215

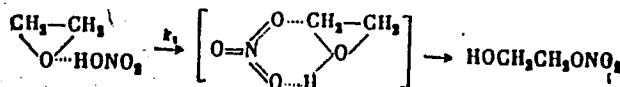
L 38531-66

ACC NR: AP 6019941

In the reaction which is second order with respect to the acid, the complex is attacked by a second acid molecule to form a trimolecular transition state:



If there is not enough acid, the formation of a cyclic complex is thought to occur:



Two kinetic equations are proposed for the reaction:

$$\frac{dx}{dt} = k_3 K_p \left[\begin{array}{c} \text{CH}_2-\text{CH}_2 \\ \diagup \quad \diagdown \\ \text{O} \end{array} \right] [\text{HNO}_3]^2$$

$$\frac{dx}{dt} = k_2 K_p \left[\begin{array}{c} \text{CH}_2-\text{CH}_2 \\ \diagup \quad \diagdown \\ \text{O} \end{array} \right] [\text{HNO}_3]$$

Orig. art. has: 1 figure and 5 tables.

SUB CODE: 07 / SUEM DATE: 31Mar65 / ORIG REF: 005 / OTH REF: 004

Card 2/2AN

PRINTS, Ya.I.; KOZLOV, V.M., mladshiy nauchnyy sotrudnik; SLONOVSKIY, I.F.,
mladshiy nauchnyy sotrudnik

Hexachlorobutadiene in controlling Phylloxera. Zashch. rast.
ot vred. i bol. 8 no.5:25-27 My '63. (MIRA 16:9)

1. Deystvitel'nyy chlen AN Moldavskoy SSR (for Prints).
(Moldavia--Phylloxera--Extermination) (Insecticides)

KARPOV, Fedor Fedorovich; KOZLOV, Valer'yan Nikolayevich [deceased];
RAMINSKIY, Ye.A., red.

[Handbook on wire and cable calculations] Spravochnik po
raschetu provodov i kabelei. Izd.2. Moskva, Izd-vo
"Energia," 1964. 222 p. (MIRA 17:7)

S/196/61/000/009/051/052
E194/E155


AUTHOR: Kozlov, V.N.

TITLE: A semi-graphical method of constructing volt-ampere characteristics

PERIODICAL: Referativnyy zhurnal, Elektrotehnika i energetika, no.9, 1961, 11, abstract 9L 56. (Sb. nauchn. tr. Tomskiy elektromekhan. in-t irzh. zh-d. transp. 31, 1960, 104-111)

TEXT: Processes that occur in a brush contact have a vital influence on commutation. The condition of contact may be assessed from volt-ampere characteristics that allow for contact temperatures. In analysing the temperature condition of brush gear it is advisable to construct the volt-ampere characteristics in logarithmic coordinates. Such characteristics give the relationship between the voltage drop and the current for coordinates $\log \Delta U$ and $\log j$, likewise the resistance and power loss in the brush contact for coordinates $\log R$ and $\log \Delta W$. A procedure is given for the analytical construction

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A semi-graphical method of ...

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E194/E155

of volt-ampere characteristics at various temperatures on the basis of volt-ampere and temperature characteristics determined in the laboratory. Graphs of the volt-ampere characteristics for brushes grades Г-3 (G-3) and ЭГ-4 (EG-4) show that the experimental and calculated characteristics coincide well. 5 figures, 2 literature references.

[Abstractor's note: Complete translation.]

Card 2/2

KOZLOV, V.N. (Leningrad)

Variant of tympanoplasty with attached flap. Zhur. ush., nos. 1
gorl. bol. 19 no.5:65-68 S-0 '59. (MIRA 14:10)

1. Leningradskogo okružhnogo voyennogo gospitalya (nauchnyy
rukovoditel' - zaslužhennyy deyatel' nauki prof. K.L.Khilov).
(EAR---SURGERY)

KOZLOV, V.N., kand.med.nauk

Work and health of agricultural machinery operators. Zdorov'e 8 no.6:
6-8 Je '62. (MIRA 15:5)
(AGRICULTURAL WORKERS--DISEASES AND HYGIENE)