

06506
SOV/141-58-4-22/26

AUTHOR:
TITLE:

Smirnova, A.S.

Propagation of a Wave of Mixed Type in a Layered
Structure (Rasprostraneniye volny smeshannogo tipa v
sloistoy strukture)

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Radiofizika,
1958, Nr 4, pp 162-164 (USSR)

ABSTRACT: A particular case considered here is the arrangement of Fig 1 in which two dielectric plates are inserted between two metal plates at right angles to the former and the wave is propagated along the direction of the dielectric. The eighteen expressions in Eq (1) describe the field conditions; the first six apply to region 1 within the dielectrics, while the second six apply to the regions outside the dielectric structure. If a wave is to be propagated then its propagation constant is defined by Eq (2), while the wavelength within the system is given by Eq (4). The attenuation coefficient is given at the bottom of p 163 and plotted in Fig 3; the independent variable is the plate thickness

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Propagation of a Wave of Mixed Type in a Layered Structure

5 references, 2 of which are Soviet, 2 German and
1 English.

ASSOCIATION: Moskovskiy pedagogicheskiy institut im V.I.Lenina
(Moscow Pedagogical Institute imeni V.I.Lenin)

SUBMITTED: 25th November 1957

Card 3/3

SOV/58-59-8-18586

Translated from: Referativnyy Zhurnal Fizika, 1959, Nr 8, p 222 (USSR)

AUTHOR: Smirnova, A.S.

TITLE: The Propagation of Compound Waves in a Laminated Structure

PERIODICAL: Uch. zap. Mosk. gos. ped. in-ta, 1958, Vol 138, pp 197-206

ABSTRACT: The propagation of a compound wave is investigated in a laminated structure consisting of two dielectric plates separated by an air gap and bounded by two metallic sheets. Analysis of the constant of propagation in the case of the fundamental wave indicates that the limits of variation of the phase velocity are equal to its values in rectangular waveguides (filled and unfilled with a dielectric) for the H_{01} waves. The attenuation coefficient, which is due to losses in the metal, is inversely proportional to the frequency. The measurement data concerning the phase velocity and the distribution of the electric field in relation to the thickness of the plates are found to be in close agreement with the estimates.

I.F. Dobrovolskiy

Card 1/1

FRISH, M.A.; SMIRNOVA, A.S.; DORZHIYEVA, M.N.

Effect of vacuum pressing on the properties of graphite electrodes.
TSvet. met. 36 no.9:54-58 S '63. (MIRA 16:10)

FRISH, M.A.; SMIRNOVA, A.S.; DORZHIYEV, M.N.

Study of the uniformity of graphitized electrodes using a
radioactive sulfur isotope. Zhur. prikl. khim. 38 no.3:
537-545 Mr '65. (MIRA 18:11)

1. Submitted January 5, 1963.

RYSS, M.A.; DMITRIYEVA, G.V.; SMIRNOVA, A.S.; Prinimali uchastive;
RUKAVISHNIKOVA, V.V.; KOTEL'NIKOVA, I.A.; ZHIVYKH, T.I.; BAZHFNOV, A.N.;
MEL'NIKOV, A.V.

Ways of improving the performance characteristics of electrodes
for steel smelting furnaces. Stal' 25 no.5:423-425 My '65.
(MIRA 18:6)

L 52300-65 EWG(j)/EWP(e)/EWT(m)/EPF(c)/EWP(i)/EWG(m)/EPR/I/EWP(b) Pr-4/Ps-4/Peb
DIAAP RWH/WW/WH S/0080/65/038/003/0537/0545
ACCESSION NR: AP5008807

AUTHOR: Frish, M. A.; Smirnova, A. S.; Dorzhiyev, M. N. /
B

32
B

TITLE: Examination of homogeneity in graphite electrodes using a radioactive sulfur isotope 14

SOURCE: Zhurnal prikladnoy khimii, v. 38, no. 3, 1965, 537-545

TOPIC TAGS: graphite electrode, tracer technique, sulfur, radioactive isotope

ABSTRACT: Radioactive isotope S³⁵ was used in a study of optimizing the process of production of graphite electrodes. Use of S³⁵ makes it possible to follow changes in the binder and other components of mold composition during the pressing and roasting operations. Pressing of graphite electrode molds on a piercing hydraulic press gives compact massive blocks. Such operation is most advantageous economically. However, it would be desirable to remove the scraps from the die after each charge. This requirement should be taken into account when considering modernization of the pressing operation. The piercing presses give molds with improved binder concentration within the 2-mm outer layer. Calcining in both open

Card 1/2

L 52300-65
ACCESSION NR: AP5008807

and closed furnaces causes binder redistribution which improves the mechanical strength of the lower mold portions and increases their apparent density. The upper mold portions exhibit the reverse behavior. An excessive binder redistribution is avoided effectively by using the optimal heating rate required for converting binder into semicoke. Orig. art. has: 2 figures and 5 tables.

ASSOCIATION: none

SUBMITTED:

NO REF SOV: 006

ENCL: 00

OTHER: 002

SUB CODE: GC, NP

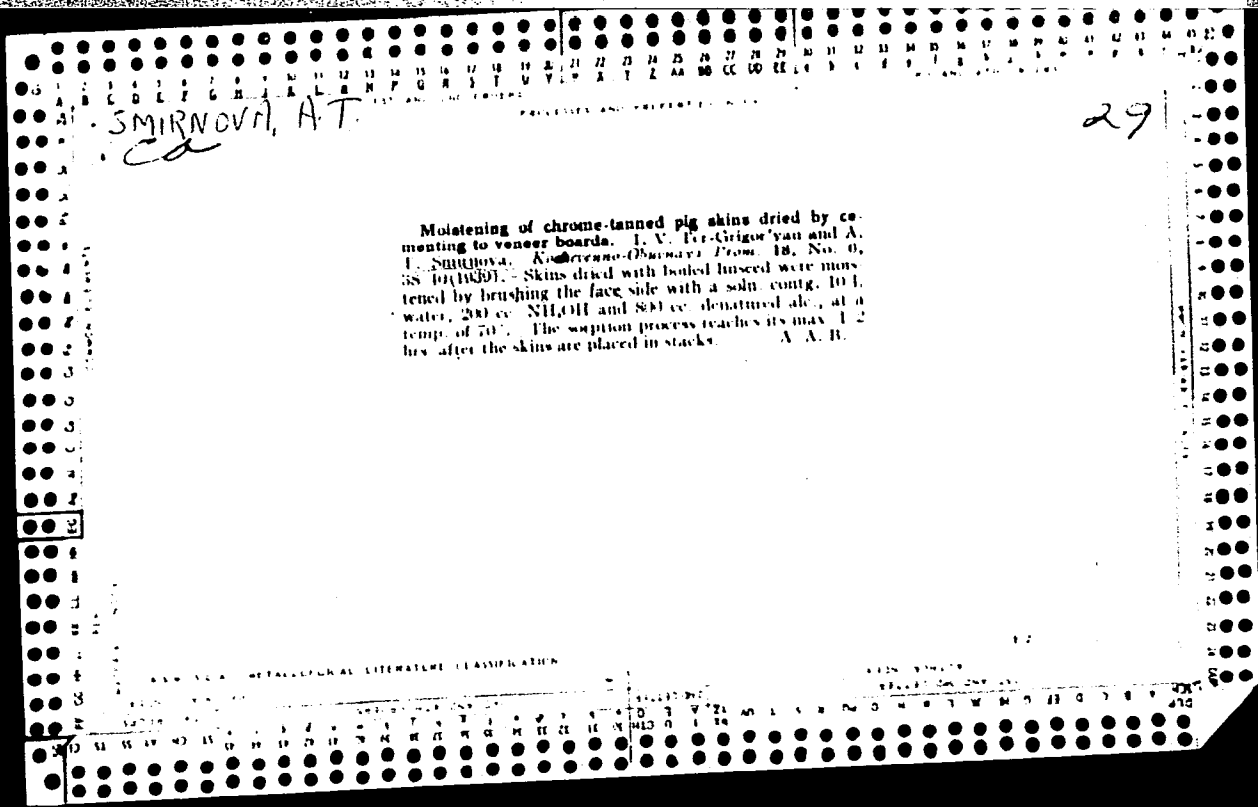
llc
Card 2/2

SMIRNOVA, A.S.; RYSS, M.A.; LAMCHAYENA, G.V.; RAZHENOV, N.A.

Studying the dynamics of gas emanation and property changes during the baking of green electrodes made with media and high-temperature pitch. Tsvet. met. 38 no.11:90-93 N 195.
(MIRA 1955)

RYCS. M.A.; DMITRIYEVA, G.V.; SMIRNOVA, A.S.; Primalni uchastnye:
RUKAVISHNIKOVA, V.V.; KOTEL'NIKOVA, I.A.; ZHIVYKH, T.I.;
BAZHENOV, A.N.; MEL'NIKOV, A.V.

Ways of improving the performance characteristics of electrodes
for steel smelting furnaces. Stal' 25 no.5:423-425 My '65.
(MIRA 18:6)



SMIRNOVA, A.T.

LIMANSKIY, D.F.: SMIRNOVA, A.T.

Methods of processing chrome-tanned pigskin. Leg.prom. [16] no.11:30-31 N '56. (MLRA 10:1)

1. Direktor Rostovskogo-na-Donu zavoda no.9. (for Limanskiy). 2. Zaveduyushchiy laboratoriyey Rostovskogo-na-Donu zavoda no.9 (for Smirnova). (Hides and skins) (Tanning)

SMIRNOVA, A. V.: KRASHOVA, A. K.

"Elektronenfraktographie der Proben von gegossener Legierung EI-437 B,
die bei verschiedenen Temperaturen zerstört sind."

report submitted for 3rd European Regional Conf, Electron Microscopy,
Prague, 26 Aug-3 Sep 64.

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50

1ST AND 2ND ORDERS PROCESSES AND PROPERTIES INDEX 3RD AND 4TH ORDERS

SMIRNOVA, A.V. BC B-II-1

Rapid determination of completeness of oxidation in production of anthraquinone. G. CHALAN and A. SMIRNOVA (Zavod. Lab., 1936, 5, 677).— Completion of oxidation of $C_{10}H_8$ to anthraquinone (I) by $K_2Cr_2O_7$ in H_2SO_4 is tested as follows. A portion of reaction mixture is filtered, and 0.5 g. of the washed, dried residue is shaken with 2 ml. of $PbCl_2$ and 2 ml. of a saturated solution of picric acid in $PbCl_2$. The intensity of the red coloration given by a drop of the mixture on filter-paper is compared with that given by a series of standards of different $C_{10}H_8$ and (I) contents. R. T.

Common Elements MATERIALS INDEX OPEN COMMON VARIABLES INDEX

ASB.SLA METALLURGICAL LITERATURE CLASSIFICATION

1ST AND 2ND ORDERS 3RD AND 4TH ORDERS

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50

1ST AND 2ND ORDERS										3RD AND 4TH ORDERS									
SMIRNOVA, A.																			
PROCESSES AND PROPERTIES INDEX																			
<p>Comparative evaluation of methods for the determination of arsenic in drug mixtures. A. Smirnova, <i>Sovet. Farm. 3</i>, No. 7, 30-5(1934); <i>Chem. Zvest.</i> 1935, I, 1091. -- Checking of numerous methods indicated that the method of Andrews and Farr as modified by Weissmann and Babitsch (cf. <i>C. A.</i> 25, 377) did not, in general, give erroneous results. The method of Kölsch gave accurate values but is long and tedious. The colorimetric method of Heftl gives more accurate results but the solns. used as color standards are unstable and sufficiently pure Zn is not always available. In the absence of Fe the method of Klein-Strissniski-Schreiber gave the best results. Good results were obtained by the method of Reich and Schreiber and also by pptn. of the As with H₂S and subsequent detn. by the method of Schreiber (cf. <i>Ind. chim. Belg</i> [2], 2, 335-8(1931)).</p> <p style="text-align: right;">W. A. Moore</p>																			
A.S.A. S.L.A. METALLURGICAL LITERATURE CLASSIFICATION																			
1ST AND 2ND ORDERS										3RD AND 4TH ORDERS									
MATERIALS INDEX																			
ALPHABETIC INDEX																			
1ST AND 2ND ORDERS										3RD AND 4TH ORDERS									

IGNATOVICH, Z.A.; SMIRNOVA, A.V.

Pathogenesis of food toxoinfections caused by Salmonella.
Vop.pit. 14 no.6:16-21 N-D '55. (MLRA 9:1)

1. Iz Leningradskego nauchno-issledovatel'skogo sanitarno-
gigiyenicheskogo instituta.
(SALMONELLA INFECTIONS,
food pois.)

USSR/Microbiology - Microorganism Pathogenic to
Humans and Animals

F-3

Abs Jour: Ref Zhur - Biol., No 18, 1958, 81531

Author : Smirnova, A.V.

Inst : -

Title : Paragglutination of Intestinal Bacillus and
Its Diagnostic Significance.

Orig Pub: V sb.: Uslovno-patogen. mikroby i ikh rol' v
zabolevaniyakh alimentarn. proiskhozhdeniya.
L., Medgiz, 1955, 43-46

Abstract: Of 25 dysentery cases in which Flexner bacteria
were found, paragglutinating colonies of intes-
tinal bacilli were isolated in 19. In investi-
gation of 30 healthy persons paragglutinating
colonies of intestinal bacillus were found only

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SMIRNOVA, A. V.

"The Problem of the Sanitary and Epidemiological Importance of Findings of Bacteriophages in Reservoirs," paper presented at the Scientific Conference of the Leningrad Sanitation Institute, 8-10 May 1956.

U-3,054,017

SMIRNOVA, A.V.

Role of carbohydrate metabolism factors in the absorption, distribution,
and excretion of medicinal substances. *Farm. i toks.* 20 no.1:62-65
Ja-F '57. (MLRA 10:7)

1. Laboratoriya obshchey farmakologii (zav. - prof. G.A.Ponomarev)
Instituta farmakologii i eksperimental'noy khimioterapii AMN SSSR.

(BLOOD SUGAR,

eff. on sulfacetamide metab. (Rus))

(SULFONAMIDES, metabolism,

sulfacetamide, eff. of blood sugar concentration (Rus))

USSR / Pharmacology and Toxicology. General Problems.

V-1

Abs Jour : Ref Zhur - Biol., No 16, 1958, No 75662

Author : Smirnova, A. V.

Inst : Not given

Title : Influence of Hypo- and Hyperglycemic Conditions on the
Pharmacological Effect of Substances of the Sympathomimetic
Amines Group.

Orig Pub : Farmakol. i toksikologiya, 1957, 20, No. 4, 14-19

Abstract : The pressor reaction of adrenalin, nor adrenalin, mesoton and
ephedrine is potentialized and prolonged by the preliminary
introduction of small doses of insulin (0.18 units per kg
to dogs and 0.25 - 0.5 units per kg to rabbits and cats).
The preliminary introduction of glucose (1 ml of 40% sol-
ution per 1 kg weight) causes a decrease of the effect under
the influence of the substances mentioned both in magnitude
and in duration. -- S. T. Skorodelov.

Card 1/1

SMIRNOVA, A.V.

Activity of certain hormonal preparations following aminazine therapy
[with summary in English]. Probl.endok., i gorm. 4 no.3:22-27
My-Je '58 (MIRA 11:8)

1. Iz laboratorii obshchey farmakologii (zav. - prof. G.A. Ponomarev)
Instituta farmakologii i khimioterapii AMN SSSR.

(THYROIXIN, physiology,

eff. of chlorpromazine in animals (Rus))

(INSULIN, physiology,

same (Rus))

(EPINEPHRINE, effects

in chlorpromazine-treated animals (Rus))

(CHLORPROMAZINE, effects,

on insulin, epinephrine & thyroxin in animals (Rus))

SMIRNOVA, A.V.; RUDAKOVA, I.S.

Method for determining tissue permeability in intact and irradiated animals using sodium sulfacyl. Lab. delo 8 no.3:27-28 Mr '62.

(MIRA 15:5)

1. Laboratoriya obshchey farmakologii (zav. - prof. G.A.Ponomarev)
Instituta farmakologii i khimioterapii AMN SSSR, Moskva.

(RADIATION--PHYSIOLOGICAL EFFECT)

(TISSUES--PERMEABILITY)

(ACETAMIDE)

SMIRNOVA, A.V.; RUDAKOVA, I.S.

Research on effective compounds influencing the tissue permeability under conditions of radiation. Farm. i toks. 25 no.4:462-466 J1-Ag (MIRA 17:10) '62.

1. Laboratoriya obshchey farmakologii (zav. - prof. G.A. Ponomarev [deceased]) Instituta farmakologii i khimioterapii AMN SSSR.

VASHLYARIN, Ya.I.; GORAIN, V.F.; GRIBNEVA, L.I.; SMIRNOVA, A.V.

Effect of chlorazolin on the activity of mitochondrial monoamine oxidase. *Vop. med. khim.* 10 no.5:520-526 3-0 162. (MIRA 16:11).

1. Institut biologicheskoy i meditsinskokey khimii AMN SSSR i Institut farmakologii i khimioterapii AMN SSSR, Moskva.

TATARSKIY, V.V., kand.med.nauk; ANISHINA, Ye.D.; SMIRNOVA, A.V.; FEDOROVA, K.V.

Comparative evaluation of some biochemical indices in rheumatic fever.
Trudy LPMI 31 no.2:374-380 '63. (MIRA 17:10)

1. Iz Leningradskogo mezhrayonnogo kardio-revmatologicheskogo dispansera
i laboratorii Ob'yedinennoy bol'nitsy imeni Kuybysheva, Leningrad.

DLUGACH, L.S., professor; SMIRNOVA, A.V., dotsent; VOLKOV, V.F., inzhener,
kandidat tekhnicheskikh nauk.

Characteristics of relay contacts and an investigation of ceramic
metal contact materials. Sbor. nauch.trud. LETIIZHT no.6:233-268 '54.
(Electric relays) (MLRA 9:1)

SMIRNOVA, A.V., kand. tekhn. nauk, dots.

New mercury contactors for transmitter relays. Sbor. LIIZHT
no. 161:275-291 '58. (MIRA 11:12)
(Railroads--Electric equipment) (Electric contactors)

USSR/Chemistry - Sulfuric acid

FD-2731

Card 1/1

Pub. 50 - 12/20

Author

: Smirnova, A. V.

Title

: Automatic control of the concentration of sulfuric acid

Periodical

: Khim. prom. No 5, 296-297, Jul-Aug 1955

Abstract

: Describes a control arrangement which keeps constant and at the right level the concentration of the acid fed into absorbers in which sulfur trioxide is taken up by monohydrate at contact sulfuric acid plants. One figure.

SMIRNOVA, A. V. Cand Geol-Min Sci -- (diss) "Mineral waters of the
area ~~around~~ ^{of the} Nal'chik (Kabardin ASSR) ^{region."} Mos, 1957. 13 pp 20 cm.

(Mos Order of Lenin State Univ im M. V. Lomonosov). 100 copies.

(KL, 22-57, 105)

SMIRNOVA, A.V.

Mineral waters in Nal'chik District. Vest.Mosk.un.Ser.biol.,
pochv., geol., geog. 12 no.2:147-160 '57. (MIRA 10:10)

1.Kafedra gidrogeologii Moskovskogo universiteta.
(Nal'chik District--Mineral waters)

SMIRNOVA, A.V.

Currents near the lightship "Leningrad." Trudy GOIN no.73:106-119
'63. (MIRA 16:7)

(Kotlin Island region--Winds)

L 27770-65 EPF(n)-2/EPR/EWP(k)/EWT(m)/EW P(b)/EWA(d)/EWP(e)/EWP(t) Pf-4/Ps-4/
Pu-4 IJP(c) AT/WH/MJW/JD/HW/JG
ACCESSION NR: AT5003399 S/2776/64/000/038/0029/0041

55
74
BT

AUTHOR: Vinograd, M. I.; Gromova, G. P.; Smirnova, A. V.; Krasnova, A. K.

TITLE: A study of the reasons for the lowered plasticity in alloy EI437B at high temperatures

SOURCE: Moscow. Tsentral'nyy nauchno-issledovatel'skiy institut chernoy metal-lurgii. Sbornik trudov, no. 38, 1964. Novyye metody ispytaniy metallov; metal-lograficheskiye issledovaniya i mekhanicheskiye ispytaniya metallov (New methods in the analyses of metals; metallographic investigations and mechanical analyses of metals), 29-41

TOPIC TAGS: alloy plasticity, tensile test, alloy forgeability, metallographic examination, electronic microphotography, petrographic analysis, nonmetallic inclusion, vitreous inclusion, high temperature plasticity / alloy EI437B

ABSTRACT: The reasons for the lowered plasticity of alloy EI437B under the influence of hot working were investigated by forgeability, impact and tensile strength tests within the 1200 - 1250 C temperature range. Conventional methods were employed for macro- and microstructural examinations of nonmetallic inclusions and the fracture surface was studied under the electron microscope. Ti-

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ACCESSION NR: AT5003399

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tanium nitride inclusions were revealed by thermal etching in all specimens. Petrographic analysis showed the occurrence of coarse vitreous inclusions in the form of a film with a thickness reaching 0.1 mm in low-plasticity specimens. These inclusions were found to be primarily composed of SiO_2 , their shape and location along interaxial sections and crystal boundaries being indicative of their origin during crystallization when the excess silicon monoxide was separated from the solution. The crystal boundaries in these specimens were thick as a result of the separation of various phases made visible by thermal etching at 650 - 700 C, which also rendered dendritic segregation more conspicuous. The diffraction pattern showed the formation of Cr_5B_6 , Cr_3B_4 and TiNi_3 along the grain boundaries accompanied by the frequent occurrence of vitreous nonmetallic inclusions. The results of room temperature impact tests varied widely from those of tests carried out at 1250 C: in the cold, brittle intercrystalline fractures without any trace of plastic deformation were identified. At high temperatures, border phases predominate and plastic deformation occurs with the formation of wavy lines. Specimens with an adequate plasticity displayed appreciably fewer areas of deformation and, therefore, the plasticity of the metal was higher. The authors suggest that investigations be continued and the possibility of developing methods for the production of metals with a predetermined plasticity be explored. A more de-

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L 27770-65
ACCESSION NR: AT5003399

9

tailed analysis of the composition of plasticity-lowering inclusions is also recommended along with a comparative study of hot plasticity and oxidation resistance. "The petrographic analysis was carried out by A. G. Ryl'nikova and S. B. Lebedeva; the x-ray spectroscopy was carried out by T. V. Yegorshina and S. B. Maslenkov, thermal destruction was carried out in a device developed under the direction of B. M. Ovsyannikov (Bach. Tech. Sci.); I. V. Kikhnova, L. A. Volkova, and N. F. Poplavskaya also took part in the work." Orig. art. has: 23 figures and 1 table.

ASSOCIATION: Tsentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii, Moscow (Central ferrous metallurgy scientific research institute)

SUBMITTED: 00

ENCL: 00

SUB CODE: M4

NO REF SOV: 004

OTHER: 000

Card 3/3

SMIRNOVA, A.V.; KRASNOVA, A.K.; GROMOVA, G.P.; VINOGRAD, M.I.

Electron microscope study of fractures in the EI437B cast alloy. Zav. lab. 30 no.5:571-573 '64. (MIRA 17:5)

1. Tsentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii imeni I.P. Bardina.

SHAPIROVA, A.V.; KHASNOVA, A.R.

Standardization of the methods for the determination of grain
size in austenite steels. Standartizatsiya 28 no.8:55-56 Ag '64.
(MIRA 17:11)

L 34063-65 (A c)/EWT(m)/T/EWP(b)/EWA(d)/EWP(w)/EWP(t) Pad IJP(c) MJW/JD/HW

ACCESSION NR: AP5005095

S/0129/65/000/002/0002/0006

30
24
6

AUTHOR: Smirnova, A. V.; Sol'ts, V. A.

TITLE: Structural transformations in 36NKhTYu type alloys with molybdenum

SOURCE: Metallovedeniye i termicheskaya obrabotka metallov, no. 2, 1965, 2-6, and insert A and B between p. 24 and 25, and insert facing p. 40

TOPIC TAGS: microdiffraction analysis, molybdenum alloy, x-ray diffraction analysis, x-ray spectral analysis, alloy structure, alloy mechanical property, alloy heat treatment / 36NKhTYu alloy

ABSTRACT: Results are presented of a study of the mechanical and elastic properties and microstructure of 36NKhTYu type alloys additionally alloyed with molybdenum, in relation to heat treatment. The chemical composition of the alloys is given in tabular form. Heat treatment of the specimens consisted of quenching from 950-1200C and tempering at 600-850C for 4 hrs. and longer. The structure was investigated by electron-microscopy with microdiffraction, x-ray diffraction, x-ray spectral and phase analyses and by colored film etching. An analysis of the data on mechanical properties demonstrated that the addition of Mo to the 36NKhTYu alloy increased the strength and elasticity of the alloy after quenching and tem-

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L 34063-65

ACCESSION NR: AP5005095

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pering (aging)! Greatest hardening occurred at temperatures higher than those for the alloy alone. The Mo-containing alloys also had a greater relaxation resistance. It was also found that: in the 36NKhTYu alloys containing Mo, decomposition of the solid solution upon tempering (aging), with separation of the main hardening γ' -phase, occurs uniformly, unlike the situation in the alloy alone in which separation of the phase begins along the grain boundaries; alloying of the alloy with 5 and 8% Mo hardens the γ -solid solution as a result of the solution of about 4% Mo in it, increases the resistance of the main strengthening phase of the composition (Ni, Fe), (Ti, Al, Mo) to coagulation and its transformation to the hexagonal phase Ni_3Ti , and effects the formation of a second hardening phase of the type Fe_2Mo . The presence of Mo in the alloys after optimal heat treatment conditions (quenching and tempering) of the hardened solid solution and the two hardening phases (γ' -phase and Fe_2Mo type phase) gave high strength and elastic properties to the specimens. Orig. art. has: 4 tables and 4 figures.

ASSOCIATION: TsNIICherMET

SUBMITTED: 00

ENCL: 00

SUB CODE: MM,OP

NO REF SOV: 007

OTHER: 000

Cord 2/2

BORISOVA, A.G.; IL'IN, M.M.; KLOKOV, M.V.; LINCHEVSKIY, I.A.; POBEDIMOVA,
Ye.G.; SEMIDEL, G.L.; SOSKOV, Yu.D.; SOSNOVSKIY, D.I.;
TAMAMSHYAN, S.G.; KHARADZE, A.L.; TSVELEV, N.N.; CHEREPANOV, S.K.;
SHOSTAKOVSKIY, S.A.; BOBROV, Ye.G., doktor biol. nauk, prof.,
red. toma; SHISHKIN, B.K., red. izd. [deceased]; SMIRNOVA, A.V.,
tekhn. red.

[Tribes Cynareae and Mutisieae.] Kolena Cynareae i Mutisieae.
Moskva, 1963. 653 p. (Akademiia nauk SSSR. Botanicheskii institut.
Flora SSSR, vol.28). (MIRA 16:12)

Smirnova, A.V.

BYKOV, M.I., inzhener; SMIRNOVA, A.V., inzhener.

Cause of petroleum asphalt frothing during oxidation into bitumen.
Neftianik 2 no.1:13-15 Ja '57. (MLRA 10:2)

1.Ukhminskiy neftepererabatyvayushchiy zavod.
(Petroleum products)

SMIRNOVA, A. V.

2

Effect of moisture on the oxidation processes of coals.
A. V. Smirnova and A. K. Shubnikov. *Khim. i Tekhnol. Topliva i Masel* 1957, No. 5, 40-3. Brown coals and av. high-volatile coals which are not stable to oxidation, and fat boiler coals which are stable were investigated. S-shaped adsorption isotherms of water on some coals were detd. Oxygen was passed over a sample of coal under controlled conditions of temp. and humidity. Elementary analysis, peroxide value, content of functional groups, and change in ignition temp. were used to characterize the condition of coal after oxidation. It was found that moisture considerably accelerates oxidation of av. high-volatile coal, but has no appreciable effect on Kuznetsk fat boiler coal. B. D.

SMIRNOVA, A.V.

Effect of moisture on the sorption of oxygen by coal. Trudy IGI
12:37-42 '61. (MIRA 14:3)

(Coal) (Oxygen) (Moisture)

AUTHOR: Petrenko, A.G., Smirnova, A.V. and Kurtova, L.A. 133-5-18/27

TITLE: Plasticity of cold rolled transformer steel (Plastichnost' kholodnokatanoy transformatornoy stali)

PERIODICAL: "Stal'" (Steel) 1957, No.5, pp. 453 - 456 (U.S.S.R.)

ABSTRACT: An investigation of the microstructure of specimens of cold rolled transformer steel, produced in the Kuznetsk Works and rolled in the Novosibirsk Works, was carried out. It was found that along the grain boundaries and inside silicon-ferrite grains a carbide phase containing silicon was present. In specimens of unsatisfactory plasticity the separated carbide phase of a peculiar form is situated along grain boundaries and inside grains, while in specimens with satisfactory plasticity the carbide phase is separated in the form of globules, mainly inside the grains of silicon ferrite. Total proportion of the carbide phase in brittle specimens is higher than in non-brittle ones. Secondary heat treatment at 750 - 850 °C decreases the amount of carbide phase and increases the plasticity of steel. The microstructures of various specimens with an indication of the etching method used is shown in Figs. 1-6. There are 6 figures and 4 references, 2 of which are Slavic.

Card 1/2

Plasticity of cold rolled transformer steel. (Cont.)

ASSOCIATION: TsNIICChM

133-5-18/27

AVAILABLE:

Card 2/2

Smirnova, A.V., Kokorin, G.A.
AUTHORS: Smirnova, A.V., Kokorin, G.A.

32-12-22/71

TITLE: The Application of Carbon Prints for the Investigation of the Structure of Metals by Means of the Electron Microscope (Primeneniye ugol'nykh otpechatkov pri izuchenii struktury metallov na elektronnom mikroskope).

PERIODICAL: Zavodskaya Laboratoriya, 1957, Vol. 23, Nr 12, pp. 1446-1448 (USSR)

ABSTRACT: Investigations were carried out of samples of iron "y-8" and steel "20X1", which were subjected to different kinds of thermal treatment in order duly to be able to study the structural transformations. For the experiments spectral carbon bars with 6 mm diameter were used, which were pulverized under vacuum by means of a special device. The device, which is called "5Y11-1", consists of two massive contacts which are fastened on to a base plate by means of fixing screws. One of the contacts consists of a movable socket with spring, which makes it possible to press the carbon bar enclosed by it in the direction of the other contact, whereby this carbon bar is brought into constant contact with a similar carbon bar fastened to the first contact. One of these ends of contact is pointed, the other is flat. The samples are fastened in a position above the contacts by means of two vertical stands and 1 transversal bar (in a height of 40-50

Card 1/2

The Application of Carbon Prints for the Investigation of
the Structure of Metals by Means of the Electron Microscope

32-12-22/71

mm). In the "high vacuum" (which is not precisely defined) and with an amperage of 60-70 A the carbon bars are pulverized. On this occasion the carbon settles in the relief joints and in this way the contrast of the image is formed. In order to conserve the relief on the samples they are first ground and then etched. Of the samples treated with carbon in the vacuum (as described above) the prints were taken by a gelatin layer (10%) or electrolytically, and were then investigated on the electron microscope "EM-3". For photomicro-pictures the 6000 or 18000-fold enlargements (which are mentioned here) were used. The conclusions are drawn that in this manner various structural properties can be studied which cannot be determined by using other methods. There are 4 figures.

ASSOCIATION: Central Scientific Research Institute for Ferrous Metallurgy
(Tsentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii).

AVAILABLE: Library of Congress

Card 2/2 1. Steel-Heat treatment 2. Steel-Structural transformations
3. Metal structure determination-Electron microscope-Applications

LUPAL, Nikolay Vasil'yevich; BOSIN, Matvey Itskovich; PEREBOROV,
Aleksandr Sergeevich; SMIRNOVA, Appolinariya Vasil'yevna;
Myler, Aleksandr Aleksandrovich; TSUKANOV, T.T., kand.
tekh.nauk, retsenzent; SHUPOV, V.I., kand.tekh.nauk,
retsenzent; GLUZMAN, I.S., kand.tekh.nauk, red.;
USENKO, L.A., tekh.red.

[Theoretical principles of automatic and remote control]
Teoreticheskie osnovy avtomatiki i telemekhaniki. By N.V.
Lupal i dr. Moskva, Vses.izdatel'sko-poligr.ob"edinenie
M-va putei soobshchenia, 1961. 414 p.

(Automatic control)

(Remote control)

(MIRA 14:12)

S/129/61/000/003/004/011
E073/E335

AUTHORS: Smirnova, A.V., Engineer and Solov'yeva, N.A.,
Candidate of Technical Sciences

TITLE: Ageing of the Alloy НСЭК1 (N35KT)

PERIODICAL: Metallovedeniye i termicheskaya obrabotka
metallov, 1961, No. 3, pp. 18 - 22

TEXT: For the requirements of the instrument industry the Institut pretsizionnykh splavov TsNIICHM (Institute of Precision Alloys TsNIICHM) (Ref. 1) developed a dispersion-hardening alloy N35KT (0.01% C, 35% Ni, 5% Co, 2.3% Ti, 0.2% Cu, 0.4% Si, 0.6% Mn) which has a low coefficient of thermal expansion (2.7 to 3.5×10^{-6} per $^{\circ}\text{C}$) and an increased strength. In this paper the authors investigate the kinetics of hardening of the alloy, its microstructure at various stages of ageing, the nature of rejected phases from the solid solution and their distribution in the solid solution. (N.F. Poplavskaya and Ye.Ye. Levit-Gurevich participated in the experiments. X-ray analysis was carried out under the supervision of E.Z. Kaminskiy and S.B. Maslenkov). After quenching, the
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Ageing of ...

S/129/61/000/003/004/011
E073/E335

specimens were cold-drawn with total reductions of 30, 50 and 70%. This was followed by heat-treatment in evacuated ampules, as follows: 1) quenching from 950 °C, 2) ageing after deformation at 575, 600, 625, 650, 700, 750, 800, 850 and 900 °C for durations of 4, 12 and 24 hours and at some of these temperatures for 100 hours. The structure was studied on an electron microscope at a magnification of 6000X, using single-stage carbon replicas and carbon replicas containing the phase particles. Fig. 1 shows the change in hardness of the material as a function of the ageing temperature for an ageing duration of 4 hours (Curve 1 - 30% reduction, Curve 2 - in the undeformed state). The hardening and softening of the alloy was determined from the changes in the lattice parameter of the solid solution. The results of X-ray and phase analyses indicate that the lattice parameter of the solid solution changes in accordance with the weight of the precipitate, an increase in weight corresponding to a decrease in the lattice period. The specimens aged at 575, 600, 625 and 650 °C for 4 hrs gave equal electron-diffraction pictures. It was

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Ageing of ...

S/129/61/000/003/004/011
E073/E335

established that the fine disperse phase is metastable and has a lattice which is isomorphous with the lattice of the solid solution. The lamellar phase has a hexagonal lattice in the same way as Ni_3Ti compounds. The following conclusions

were arrived at: 1) the mechanism of decomposition of the solid solution during ageing of preliminarily deformed specimens of N35KT alloy is similar to the mechanism of decomposition of the solid solution in the alloys of the system Ni-Ti and Ni-Cr-Ti and proceeds in two stages: redistribution of atoms of Ti, Ni and other elements in the solid solution, which leads to rejection of disperse particles of the metastable phase with a cubic lattice with the parameter 3.60 \AA ; the second stage consists of transformation of the lattices of the cubic phase into a hexagonal one. 2) Transformation of the cubic lattice into a hexagonal one is accompanied by diffusion of iron atoms from the lattice of the secondary phase into the lattice of the solid solution and substitution of the vacant nodes with nickel atoms. Transformation of the lattices at the early stages of ageing

Card 3/6

Ageing of

S/129/61/000/003/004/011
E073/E335

(575 - 625 °C) begins from the boundaries of grains or twins and, at higher temperatures, proceeds to develop in the grain.
3) The strength of the alloy depends on the nature of the hardening phase, its dimensions, the nature of the distribution and the relative quantity of the individual phases in the structure. Separation of finely disperse particles in the cubic phase and growth of these particles to 450 - 500 Å lead to a hardening of the alloy during ageing. The microstructure of an alloy which has been hardened to the maximum extent consists of a solid solution, a disperse cubic phase and a slight quantity of a thin lamellar hexagonal phase.
4) Softening of the alloy is associated with transformation of the lattice of the cubic phase into a hexagonal one and coagulation. There are 1 figure, 1 table and 7 Soviet references.

ASSOCIATION: TsNi1ChM

Card 4/6

DMITRIYEV, S.A.; KARAVAYEV, N.M.; SMIRNOVA, A.V.

Synthesis of surface active agents based on ω -chlorocarboxylic acids. Izv.AN SSSR,Otd.khim.nauk no.10:1800-1803 0 '61.
(MIRA 14:10)

1. Institut goryuchikh iskopayemykh AN SSSR.
(Surface active agents) (Acids, Organic)

KUBANIN, Yu.Z., inzh.; SAZONOV, G.G., inzh.; MIKHAHYLOV, N.A., tekhnik;
SMIRNOVA, A.V.; tekhnik; SYCHEV, G.A., tekhnik

Automation of the removal and quenching of cinders from "fluidized
bed" process furnaces. Mekh. i avtom. proizvod. 15 no.3:14-17 Mr '61.
(MIRA 14:3)

(Automation) (Metallurgical furnaces)

55330
18 9100

21395
S/032/61/027/012/008/015
B104/B108

AUTHORS: Smirnova, A. V., and Kokorin, G. A.

TITLE: Use of the electron microscope for investigating nonmetallic inclusions in steel

PERIODICAL: Zavodskaya laboratoriya, v. 27, no. 12, 1961, 1502 - 1504

TEXT: The authors studied the proper choice of the conditions for preparing polished steel sections used in investigating nonmetallic inclusions. Single-layer carbon replicas were used, in which fine and coarse inclusions from the polished steel sections are retained after a suitable etching process. Cast Nichrome 80, iron, and iron-nickel alloys containing zirconium and niobium were investigated. The invisible inclusions at the grain boundaries in the Nichrome specimens and the irregular inclusions in the iron-nickel specimens were studied. The investigation of coarse non-metallic inclusions with triple mechanical polishing of the specimens without and with etching (10% HNO₃; current density, 0.1 a/cm², 10 sec), produced better results than electrolytic polishing. Electrolytic polishing (75% HNO₃, 25% CH₃COOH, 5 - 6 a/cm², -10°C) furnished the best
Card 1/3

21395

S/032/61/027/012/008/015

B104/B108

Use of the electron microscope ...

results in the investigation of irregular, disperse inclusions. Electrolytic etching was carried out with a 10% HNO_3 solution in ethyl alcohol (1 - 2 sec). Carbon replicas were applied to the polished sections and then taken off by electrolytic treatment in a 10% HNO_3 solution in CH_3OH (voltage at the electrolyte trough, 6 v; 15-20 min). Inclusions of different sizes remained on the replicas which were studied by micro-diffraction methods. The inclusions were examined under a УЭМ-100 (UEM-100) electron microscope (6000x). The microdiffraction studies were conducted with a УЭМБ-100 (UEMB-100) microscope. The places of interest on the nichrome specimens were first selected with a light microscope and later examined under the electron microscope (magnification: 1000 and 6000). Chains of lenticular inclusions, 0.7 - 1.0 μ long and 0.20 - 0.25 μ wide, and round inclusions, 0.50 - 0.7 μ , were found at the grain boundaries. These inclusions were identified as being $\alpha\text{-Al}_2\text{O}_3$. The inclusions became much smaller after annealing at 1350°C. In iron with zirconium additions two types of inclusions were found: (1) oblong inclusions and (2) irregular quadrangles and hexagons. Investigations with an ЭГ-1 (EG-1) electron-diffraction instrument showed that the former in-

X

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21395

S/032/61/027/012/008/015
B104/B108

Use of the electron microscope ...

clusions were Zr_4S_3 . The inclusions mentioned under 2, were zirconium dioxide, and the inclusions in alloys with niobium were $\beta-Nb_2O_5$. There are 5 figures and 3 Soviet references.

ASSOCIATION: Tsentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii im. I. P. Bardina (Central Scientific Research Institute of Ferrous Metallurgy imeni I. P. Bardin)

4

Card 3/3

SMIRNOVA, A.V.; POPLAVSKAYA, N.F.

Use of coal replicas to investigate the structure of patented
carbon steel wire. Sbor. trud. TSNIICHM no.24:236-245 '62.

(MIRA 15:6)

(Steel--Metallography) (Wire)

SMIRNOVA, A.V.; FAYVILEVICH, G.A.; PANFILOVA, E.V.

Using methods of electron microscopy and color metallography to investigate the structure of chromium-nickel-molybdenum steel.

Sbor. trud. TSNIICHM no.24:246-253 '62. (MIRA 15:6)

(Chromium-nickel steel--Metallography) (Electron microscopy)

VINOGRAD, M.I.; GROMOVA, G.P.; RYL'NIKOVA, A.G.; SMIRNOVA, A.V.

Methods of investigating inclusions in smelting baths with varying plasticity at high temperatures. Sbor. trud. TSNIICHM no.24: 261-278 '62. (MIRA 15:6)
(Steel—Inclusions) (Metals at high temperatures)

S/032/62/028/007/002/011
B104/B102

AUTHORS: Smirnova, A. V., Fayvilevich, G. A., and Panfilova, E. V.

TITLE: Combined use of electron microscopy, color metallography, and magnetic metallography for structural analyses of high-alloy steels

PERIODICAL: Zavodskaya laboratoriya, v. 28, no. 7, 1962, 817 - 818

TEXT: Valve steel (0.42% C, 0.48% Si, 1.1% Mn, 20.57% Cr, 4.74% Ni, 2.4% Mo) hardened at 1000, 1050, and 1125°C and subsequently aged at 800°C for 10 hrs was subjected to phase analysis by electron microscopy, color metallography, and magnetic metallography. Phase analysis could not be carried out with an optical microscope. Magnetometallographic examination revealed a magnetic (δ -ferrite) phase and a non-magnetic (austenite) phase. Electron diffraction studies showed that the carbides established by etching with ferrocyanide had the composition $Me_{23}C_6$ with a lattice parameter $a = 10.5 \text{ \AA}$. The electron microscope revealed particles with a size of 0.1μ at the grain boundaries of the hardened

Card 1/2

Combined use of electron microscopy...

S/032/62/028/007/002/011
B104/B102

steel. The growth of these particles after aging and their distribution were investigated. They were subjected to thermal etching and identified as the σ -phase. During the aging process the austenite decomposes according to the kinetics of martensite. There are 2 figures.

ASSOCIATION: Tsentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii im. I. P. Bardina (Central Scientific Research Institute of Ferrous Metallurgy imeni I. P. Bardin)

Card 2/2

POPILOV, Lev Yakovlevich; ZAYTSEVA, Lidiya Pavlovna; VINOGRAD, M.I.,
doktor tekhn. nauk, retsenzent; SMIRNOVA, A.V., kand. tekhn.
nauk, retsenzent; FOMIN, N.V., red.; GORDON, L.M., red. izd-
va; ISLENT'YEVA, P.G., tekhn. red.

[Electrolytic polishing and pickling of metallographic
sections] Elektropolirovanie i elektrotravlenie metallogra-
ficheskikh shlifov. 2., perer. izd. Moskva, Metallurgizdat,
1963. 410 p. (MIRA 16:5)

(Metallography--Equipment and supplies)

(Electrolytic polishing)

(Metals--Pickling)

SMIRNOVA, A.V.

Electron microscopy of structural transformation in the N36KhTIU alloy. Metalloved. i term. obr. met. no.11:4-8 N '63.
(MIRA 16:11)

1. Tsentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii.

YAKOVLEVA, Ye.F.; SMIRNOVA, A.V.; KOSTONOGOV, V.G.

Phase analysis of Fe-Ni-Cr and Fe-Ni-Cr-Mo alloys. Sbor.trud.
TSNIICHM no.31:121-128 '63. (MIRA 16:7)
(Iron-nickel-chromium alloys—Metallography)
(Electrochemical analysis)
(Phase rule and equilibrium)

SMIRNOVA, A.V.

Method of studying disperse phases by electron microscopy. Sbor.
trud. TSNIICHM no.32:25-35 '63. (MIRA 16:12)

KRASNOVA, A.K.; SMIRNOVA, A.V.; VOLKOVA, L.A.

Methods of revealing the actual austenite grain in steel. Sbor.
trud. TSNIICHM no.32:51-55 '63. (MIRA 16:12)

SMIRNOVA, A.V.; KRASNOVA, A.K.; VOLKOVA, L.A.; MAKAROVA, V.N.

Methods for the exposure and determination of the grain size
of austenite in steel. Standartizatsiia 27 no.5:23-28 My '63.
(MIRA 16:6)

(Austenite--Metallography)

S. IRKOVA, A.V.

Electron microscope study of the structure of dispersion hardened alloys based on Fe-Ni-Cr. Zav.lab. 29 no.8:948-952 '63.

(MIRA 16:9)

1. Tsentral'nyy nauchno-issledovatel'skiy institut chernoy metal-lurgii imeni I.P.Bardina.

(Iron-nickel-chromium alloys—Metallography)

(Electron microscopy)

KRASNOVA, A.K.; SMIRNOVA, A.V.

Reagent for detecting austenite grains. Zav. lab. 29 no.10:
1204-1205 '63. (MIRA 16:12)

1. Tsentral'nyy nauchno-issledovatel'skiy institut chernoy
metallurgii imeni I.P. Bardina.

L 7036-65 EWT(m)/EWP(q)/EWP(h) Pad AFWL/ASD(m)-3/SSD/RAEM(t) MJW/JD/HW/JG

S/0032/64/000/005/0571/0573

ACCESSION NR: AP4035088

AUTHORS: Smirnova, A. V.; Krasnova, A. K.; Gromova, G. P.; Vinograd, M. I.

TITLE: Electron microscopic investigation of cracks in cast alloy EI437B

SOURCE: Zavodskaya laboratoriya, no. 5, 1964, 571-573

TOPIC TAGS: EI437B cast alloy, KhN77TYuR alloy, phase structure, fractography, surface property, metal grain structure

ABSTRACT: The method used by the authors permits simultaneous study of relief on fractures and the phase composition of particles disposed on the fracture surface. This method, furnishing a single-stage carbon print or film, was described in a previous paper by A. V. Smirnova and G. A. Kokorin (Zavodskaya laboratoriya, XXIV, 12, 1446, 1957). The prints were separated from the cracks by an electrolytic solution of a layer of metal in 10% solution of nitric acid in methyl alcohol, at low current density. This permitted relatively large pieces of the film to be removed, carrying with them segregated particles of the different phases. To remove the particles themselves, the film was washed in 10% H₂SO₄, which dissolved the oxide film as well. The surface structure of the cracks was studied with no additional etching. Samples were broken by the blow of a hammer at room temperature

Card 1/2

L 7036-65

ACCESSION NR: AP4035088

(and also at 1250C) and placed immediately in a vacuum device for plating with the carbon film. For comparison the surface was then etched and studied again. It was found that segregations of chromium boride³⁾ accumulated at crystal boundaries, especially between dendrite axes. Particles of γ' -phase Ni₃(Ti,Al) were much less common at the crystal boundaries. Small centers of fracturing were observed about the finely disseminated γ' -phase, and large, greatly extended edges were found in places where single or grouped inclusions of the boride phase were found, or where nonmetallic inclusions were present. Where the primary foci of fracturing were small, the lines of deformation were more nearly rectilinear than where the primary foci were coarse. The nature of the fracturing depends on the nature, size, number, and distribution of excess phases in the alloy. Orig. art. has: 3 figures and 1 table.

ASSOCIATION: Tsentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii im. I. P. Bardina (Central Scientific Research Institute of Ferrous Metallurgy)

SUBMITTED: OO

ENCL: OO

SUB CODE: MM

NO REF SOV: 004

OTHER: 000

Card 2/2

L 15758-65 EWT(m)/EWA(d)/T/EWP(t)/EWP(b) JU
ACCESSION NR: AP4049254

s/0028/64/000/008/0055/0056

AUTHORS: Smirnova, A. V.; Krasnova, A. K.

TITLE: Standardization of methods for determining grain size in austenitic steels ¹³

SOURCE: Standartizatsiya, no. 8, 1964, 55-56 ¹⁶

TOPIC TAGS: steel

ABSTRACT: Years of using the standard GOST 5639-51 ¹⁶ (Steel: the method of determining grain size) have shown a number of deficiencies. The Tsentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii im. I. P. Bardina (Central Scientific-Research Institute for Ferrous Metallurgy) has developed a new standard (Steel: methods of investigation and determination of grain size) to replace GOST 5639-51. The new standard results from a study of extensive literature from nations all over the world as well as from actual work in the laboratories of the Central Metallurgical Institute. It provides for the metallographic method of determining grain size for all kinds of steel. The method of investigation has been refined and extended. An improved method of treating and preparing thin sections is proposed. The new standard calls for qualitative evaluation of grain

Card 1/2

L 15758-65
ACCESSION NR: AP4049254

size by computing the average number of grains in a square millimeter of the thin section or by measuring either the average grain diameter or the average number of grains per square millimeter. Revised tables are included, giving only parameters necessary for determining grain size by quantitative methods. These parameters are grain size in mm^2 , number of grains per mm^2 , number of grains per mm^3 , and average diameter of grains in millimeters. Various scales, based on the best existing dimensional standards, are provided to permit proper measurements over a wide range in grain size through comparative examination. A graph is given for determining true grain size and for supplying the value of the correction factor.

ASSOCIATION: none

SUBMITTED: 00

ENCL: 00

SUB CODE: MM

NO REF SOV: 000

OTHER: 000

Card 2/2

Investigating the causes of reduced plasticity of the alloy

Investigating the causes of reduced plasticity of the alloy
alloy at high temperatures. Sbor. trad. ISNICHM no. 38:29-31
164. (MIRA 2:3)

L 27765-65 EPF(n)-2/EPR/EPA(s)-2/EWT(m)/EPA(bb)-2/EWP(b)/T/EWP(e)/
EWP(t) Ps-4/Pt-10/Pu-4 IJP(c) WW/JG/JD

ACCESSION NR: AT5003400

S/2776/64/000/038/0051/0065

AUTHOR: Chernyak, G. S.; Smirnova, A. V.; Kostogonov, V. G.; Kokorin, G. A.;
Romashov, V. M.; Grishina, N. S.; ~~Smirnova~~ Dubrovina, A. N.; Pegova, T. G.

63
59
B+

TITLE: Effect of titanium, aluminum, carbon and boron on the structure and phase
composition of Ni base alloys

SOURCE: Moscow. Tsentral'nyy nauchno-issledovatel'skiy institut chernoy metal-
lurgii. Sbornik trudov, no. 38, 1964. Novyye metody ispytaniy metallov; metal-
lograficheskiye issledovaniya i mekhanicheskiye ispythaniya metallov (New methods
in the analyses of metals; metallographic investigations and mechanical analyses
of metals), 51-65

TOPIC TAGS: eutectic, carbide, alloy structure, alloy phase composition, nickel
base alloy, titanium alloy, aluminum alloy, boron alloy, carbon content

ABSTRACT: Ni-alloy specimens with different contents of C, Ti, Al and B were in-
vestigated with respect to structure and phase composition. The excess phases
were studied by metallographic methods including film etching, microdiffraction,
electron microscopy and X-rays, as well as by phase analysis of the precipitated
residues. An increased addition of Al up to 8% in specimens with 1.5% Ti, 0.02%

Card 1/2

I. 27765-65
ACCESSION NR: AT5003400

6
C and 0.02% B led to an increase in the parameters of γ - and γ' -phase lattices and to an intensive growth of γ' -phase particles which were distributed on certain crystallographic planes after hardening and prolonged aging. At the same time, a second solid solution based on an NiAl compound had formed. The same pattern was observed in cast, and hardened and aged specimens containing 5% Ti. An addition of 0.02% C to specimens with 3% Ti brought about the formation of considerable amounts of differently shaped primary carbides such as $Me_{23}C_6$, Me_6C and cubic TiC . In specimens without Ti, coagulation of the γ' -phase particles was inhibited and a carbide eutectic phase formed. With up to 0.4% B, 0.20% C, 1.5% Ti and 4.2% Al the character of the primary carbides was greatly affected but the size of the γ' -phase particles remained unchanged; in these amounts, B additions enhanced the formation of a eutectic phase which lowered the alloyability of the solid solution and of the γ' -phase. "G. M. Romashova, N. F. Poplavskaya, V. N. Makarova, Z. I. Galkina and M. I. Vlaskina also took part in the work." Orig. art. has: 16 figures and 1 table.

ASSOCIATION: Tsentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii, Moscow (Central ferrous metallurgy scientific research institute)

SUBMITTED: 00

ENCL: 00

SUB CODE: MM

NO REF SOV: 005

OTHER: 000

Card 2/2

SMIRNOVA, A.V.; SOL'TS, V.A.

Structural changes in 36NKhT10 type alloys with molybdenum.
Metalloved. i term. obr. met. no. 2:2-6 F '65. (NIRA 18:12)

1. Tsentral'nyy nauchno-issledovatel'skiy institut chernoy
metallurgii imeni Bardina.

10450-67 EWT(M)/EWT(W)/EWT(T)/BTI IJR(c) JB/JG
ACC NRI AP6022509 SOURCE CODE: UR/0133/66/000/004/0355/0358

AUTHORS: Vinograd, M. I.; Gnuchev, S. M.; Gromova, G. P.; Smirnova, A. V.; Ryl'nikova, A. G.; Osnovin, V. A.; Krasnova, A. K.; Likhnova, I. V.; Yegorshina, T. V.

ORG: none

TITLE: Nonmetallic inclusions in melts of steel 08Kh20N10G6 exhibiting different hot technological plasticity

SOURCE: Stal', no. 4, 1966, 355-358

TOPIC TAGS: alloy steel, metallurgic research, aluminum, cerium / 08Kh20N10G6 alloy steel

ABSTRACT: The effect of aluminum and rare earth elements (mainly cerium) on the technological plasticity of steel 08Kh20N10G6 was investigated. The investigation supplements the results of V. A. Osnovin and S. M. Gnuchev (Byulleten' TsIINChM, 1964, No. 6). The microstructure and twisting strength of the specimens was determined as a function of the temperature and nature of the reducing agent (see Fig. 1). It was found that addition of 1.5--2.0 kg/ton of Al and rare earth metals (0.15--2.0% on the basis of Ce) to steel 08Kh20N10G6 leads to a considerable increase in the high temperature plasticity of the latter. S. B. Lebedeva, I. A. Prokof'yeva, and L. I. Volkova participated in the experimental work.

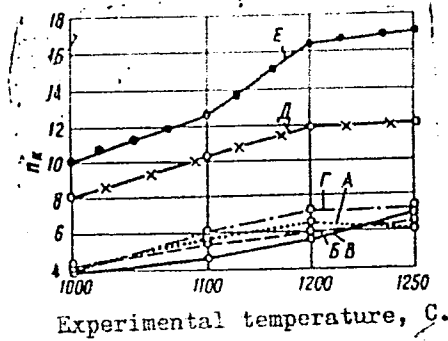
Card 1/2

UDC: 669.15:658.562

L 10450-57

ACC NR: AP6022509

2



15

Fig. 1. Results of torsion tests at high temperatures (n_k - number of revolutions at which failure occurred) of different melts A - E. Specimen A reduced in the usual way. All others reduced as described above.

Orig. art. has: 1 graph and 6 photographs.

SUB CODE: 11/ SUBM DATE: none/ ORIG REF: 009

6/10

PIT'YEVA, K. Ye.; SMIRNOVA, A. Ya.

Hydrogeological conditions of the Pechenga ore deposits and some results of hydrochemical prospecting. Vest.Mosk.un.Ser.biol., pochv., geol., geog. 14 no.4:149-159 '59. (MIRA 13:6)

1. Kafedra gidrogeologii Moskovskogo universiteta.
(Pechengskiy District--Water, Underground)
(Geochemical prospecting)

SMIRNOVA B. A.

16

PHASE I BOOK EXPLOITATION

SOV/6177

Akademiya nauk SSSR. Institut neftekhimicheskogo sinteza
Radioliz uglevodorodov; nekotoryye fiziko-khimicheskiye problemy
(Radiolysis of Hydrocarbons; Some Physicochemical Problems)
Moscow, Izd-vo AN SSSR, 1962. 207 p. Errata slip inserted.
5000 copies printed.

Resp. Eds.: A. V. Topchiyev, Academician, and I. S. Polak,
Doctor of Physics and Mathematics; Ed.: L. T. Bugayenko;
Tech Ed.: Ch. A. Zentsel'skaya.

PURPOSE: This book is intended for physical and industrial chemists
interested in the properties and behavior of irradiated hydro-
carbons.

COVERAGE: The book gives a systematic presentation of the results
of research on the radiolysis of hydrocarbons carried out from
1957 through 1961 at the Laboratory of Radiation Chemistry,
Institut neftekhimicheskogo sinteza AN SSSR (Institute of Petro-

Card 1/4

16

Radiolysis of Hydrocarbons (Cont.)

SOV/6177

chemical Synthesis, Academy of Sciences USSR). Although the results were obtained for individual compounds, they may be generalized and applied to other members of the same homologous series. The following persons participated in making the experiments and in writing the text: V. G. Beryezkin, V. E. Glushnev, Yu. A. Kolbanovskiy, I. M. Kustanovich, V. D. Popov, A. Ya. Temkin, V. D. Timofeyev, N. Ya. Chernyak, V. A. Shalchray, E. B. Shlikhter, A. S. Shcherbakova, B. N. Negodov, A. Z. Peryshkina, N. M. Rytova, T. A. Tegin, Yu. B. Emin, A. M. Brodskiy, V. V. Voyevodskiy, P. Ya. Glazunov, B. A. Smirnova, and Yu. L. Khait. References, mainly Soviet and English, follow individual chapters.

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CHERNYAVSKIY, G.A., kandidat meditsinskikh nauk; SMIRNOVA, D.N.

Certain negative factors in antibiotic aerosol therapy. Vest.
oto-rin. 16 no.1:17-19 Ja-F '54. (MLRA 7:3)

1. Iz bol'nitsy No.2 Ministerstva zdravookhraneniya SSSR (nauchnyy
rukovoditel' - deystvitel'nyy chlen Akademii meditsinskikh nauk
SSSR professor B.S.Preobrazhenskiy i professor M.N.Yegorov).
(Aerosols) (Penicillin) (Streptomycin)

SMIRNOVA, D.N. (Moscow)

Aerosol therapy with antibiotics in the internal disease clinic.
Klin.med. 32 no.2:38-42 F '54. (MLRA 7:5)
(Antibiotics) (Aerosols)

SMIRNOVA, D.N. (Moskva)

Acute lupus erythematosus (erythematosus chromiosepsis).
Klin.med.33 no.7:33-38 J1 '55. (MLRA 8:12)

1. Iz Bol'nitsy Ministerstva zdravookhraneniya SSSR
(glavnyy vrach F.G.Morshchagin)
(LUPUS ERYTHEMATOUS,
acute)

SMIRNOVA, D.N. (Moskva)

Intracutaneous test for supersensitivity to penicillin.
Klin.med. 34 no.8:75 Ag '56. (MIRA 12:8)

1. Iz bol'nitsy 4-go upravleniya Ministerstva zdravookhraneniya
SSSR (glavnyy vrach- F.K.Morshchagin, nauchnyy rukovoditel' -
prof. G.K.Lavskiy).

(PENICILLIN, eff.

supersensitivity determ. by skin test)

SMIRNOVA, D.N.; POLETAYEV, P.A.; LEVITSKYA, G.D.

Case of membranous subacute septic endocarditis in a patient
with aneurysm of the left ventricle. Klin.med. 38 no.6:143-
144 Je '60. (MIRA 13:12)

(ENDOCARDITIS)

(ANEURYSM)

LAVSKIY, G.K.; SMIRNOVA, D.N.

Electrophoresis of dionine in the region of the reflexogenic cardiac zone of Zakhar'ina-Geda in chronic coronary insufficiency. Vop. kur., fizioter i lech. fiz. kul't. 26 no.1:62-64 '61. (MIRA 14:5)

1. Iz bol'nitsy chetvertogo glavnogo upravleniya Ministerstva zdavookhraneniya SSSR.

(ELECTROPHORESIS) (DIONINE)
(CORONARY HEART DISEASE)

SLASTIKHIN, V.V.; KUZNETSOV, I.A., st. nauchn. sotr., retsenzent;
LISITSYNA, Ye.A., red.; SMIRNOVA, E., red.

[Problems in the melioration of slopes in Moldavia] Voprosy melioratsii sklonov Moldavii. Kishinev, "Kartia moldoveniaske," 1964. 211 p. (MIRA 17:8)

1. Sovet po problemam vodnogo khozyaystva AN SSSR (for Kuznetsov).

MAKSIMOVA, I.L.; SMIRNOVA, E., red.

[Experience in the use of Moldavian walnuts in gastric diseases] Opyt primeneniia moldavskikh gretskikh orekhov pri zabolevaniiax zheludka. Kishinev, Kartia moldove-niaske, 1964. 97 p. (NIRA 17:10)

L 16317-65 EWG(j)/EWP(e)/EWT(m)/EPF(c)/EPR/EWP(j)/T-2/EWP(b) Pc-4/Pr-4/
Ps-4 WW/RM/WH
ACCESSION NR: AR5000761 S/0058/64/000/009/E066/E066

SOURCE: Ref. zh. Fizika, Abs. 9E479

AUTHORS: Shulepov, S. V.; Smirnova, E. A.; Plechev, V. N. B

TITLE: Effect of processing emperature on the moduli of elasticity of carbon containing materials

CITED SOURCE: Tr. Chelyab. gos. ped. in-t, v. 2, 1964, 145-152

TOPIC TAGS: carbon, coke, graphitization, modulus of elasticity

TRANSLATION: The authors investigated the Young and shear moduli of samples of tar, cracking, pyrolysis, and sulfurous oil cokes heat-treated in the temperature interval 1273--2773K. It is observed that the moduli of elasticity of all of the investigated materials decrease with processing temperature and reach a minimum at 2273K. Further graphitization of the material at higher temperatures leads to an increase in the

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ACCESSION NR: AR5000761

moduli. It is established that the specific features of the initial raw material used for the samples come into play up to the highest investigated graphitization temperatures. The decrease in the moduli of elasticity is attributed to destruction of the "bridge" bonds between the grids of the atoms, pore formation, and defects of all kinds. The increases in these moduli at processing temperatures above 2273K is connected with the occurrence and development of the ordered structure of graphite. 15

SUB CODE: MT

ENCL: 00

Card 2/2

MEIRHOVA, E.E.; MIKHAILOV, S.V.

Thermal expansion of coke-pitch materials under different heat treatment in the low and high temperature ranges. Trudy Khim. gos. ped. inst. 2:153-158 '64. (MIRA 18:9)

SHVETSOVA, S.H., MAKAYA, K.D., kand.khim. nauk. SMIRNOVA, E.I., kand.khim. nauk;
KELINOV, N.N., prof.

Chemical means for controlling warble flies. Zhur. VKHO 8 no.6:659-668
163. (MIRA 17:2)

MIKHAYLOVA, Ye.A.; SMIRNOVA, E.N.; PETUKHOVA, V.A.; KAZANSKIY, B.A. (Moscow)

Effect of the chemical structure of alkyl benzenes on their
adsorbability on silica gel. Zhur. fiz. khim. 34 no.4:824-832
Ap '60. (MIRA 14:5)

(Benzene)

(Adsorption)

(Silica)

ALEKSANYAN, V.T.; STERIN, Kh.Ye.; UKHOLIN, S.A.; BRAGIN, O.V.;
LIBERMAN, A.L.; MIKHAYLOVA, Ye.A.; SMIRNOVA, E.N.; TYUN'KINA, N.I.
KAZANSKIY, B.A.

Raman spectra of certain hydrocarbons of the benzene series
having one or two side chains. Izv. AN SSSR. Otd.khim.nauk
no.8:1437-1443 Ag '61. (MIRA 14:8)

1. Komissiya po spektroskopii AN SSSR i institut organicheskoy
khimii im. N.D. Zelinskogo AN SSSR.
(Hydrocarbons—Spectra)

STERIN, Kh.Ye.; ALEKSANYAN, V.T.; UKHOLIN, S.A.; BRAGIN, O.V.;
GAVRILOVA, A.Ye.; ZOTOVA, S.V.; LIEBMAN, A.L.; MIKHAYLOVA, Ye.A.
SMIRNOVA, E.N.; STERLIGOV, O.D.; KAZANSKIY, B.A.

Raman spectra of some tri- and tetraalkylbenzenes and condensed
aromatic hydrocarbons. Izv. AN SSSR. Otd.khim.nauk no.8:1444-
1450 Ag '61. (MIRA 14:8)

1. Komissiya po spektroskopii AN SSSR i Institut organicheskoy
khimii im. N.D. Zelinskogo AN SSSR.
(Benzene--Spectra)
(Hydrocarbons--Spectra)

SMIRNOVA, F.D.

Perfume and cologne. Zdorov'ie 4 no.11:31 N '58. (MIRA 11:11)
PERFUMES)

KHRANILOV, P.I.; RAGOZINA, N.M.; SMIRNOVA, F.K.

Drying of fabrics under longitudinal blowing by the drying agent
at high velocities. Izv.vys.ucheb.zav.; tekhn.tekst.prom. no.1:
134-138 '62. (MIRA 15:3)

1. Ivanovskiy tekstil'nyy institut im. M.V.Frunze.
(Textile fabrics--Drying)

FINKEL'SHTEYN, I.I., dotsent; MAKAROVA, T.A.; BABURKIN, I.A.; ~~SMIRNOVA,~~
F.P., inzhener laboratorii.

New method of double roving. Tekst.prom. 16 no.6:33-37 Je '56.
(MLRA 9:8)

1. Ivanovskiy tekstil'nogo institut (for Finkel'shteyn); 2. Zane-
stitel' zaveduyushchego pryadil'nykh proizvodstvov fabriki "Shuyskiy
proletariy" (for Makarova).
(Spinning)