

Effect of halogen ions upon the...

S/137/61/000/011/108/123
A060/A101

NaCl concentration agree with Langmuir's adsorption isotherm equation, and a deviation from it is observed at high (>4 g/liter) NaCl concentrations, corresponding to a very high (on the order of 0.95) degree of saturation of the metal surface. The increase in the protective action of NaCl as the temperature increases and its maximum protective effect at 70°C indicate the chemisorption mechanism of the inhibiting action of Cl⁻. The high value of activation energy of the dissolution process of steel 1Kh18N9T in 18% H₂SO₄, calculated from the experimental data, and its insignificant variation under addition of NaCl, testify to the presence of chemical polarization in both solutions. The chemosorptive mechanism of the inhibiting action of halogen ions upon the corrosion of steel 1Kh18N9T in 18% H₂SO₄ is confirmed by the coincidence in the arrangement of these ions as to their inhibiting action and adsorbability: J⁻ > Br⁻ > Cl⁻. The chlorides of bivalent cations (Mg²⁺, Sn²⁺) inhibit the corrosion of steel in 18% H₂SO₄ more effectively, and of trivalent ones (Al³⁺, Fe³⁺) less effectively than those of monovalent ions (Li⁺, Na⁺, K⁺). Electrochemical measurements have shown that the corrosion of steel 1Kh18N9T in 18% H₂SO₄ proceeds with mixed cathodic-anodic control (C_c:C_a ≈ 2:1), and the addition of NaCl inhibits the course of the cathodic and the anodic processes in approximately equal measure. The experimental data on the

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effect of halogen ions upon the corrosion and the electrochemical behavior of steel 1Kh18N9T in the course of sulfuric acid pickling agree with the chemisorption theory. There are 26 references.

Ye. Layner

[Abstracter's note: Complete translation]

Card 3/3

S/137/61/000/011/098/123
A060/A101

AUTHORS: Zhuk, N. P., Yemel'yanenko, L. P.

TITLE: Influence of carbon content upon the gas corrosion of carbon steels in air

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 11, 1961, 43, abstract 11I291 (V sb. "Korroziya i zashchita konstrukts. metallich. materialov", Moscow, Mashgiz, 1961, 40-52)

TEXT: A study was made of the influence of the carbon content (0.06 - 1.34 %) upon the gas corrosion of carbon steels from experimental heats in air at 500 - 1,100°C. The method was used of periodically weighing the specimens without extraction from the reaction zone of the furnace, the determination of the weight losses of the specimens after oxidation and scale removal, measuring the micro-hardness and studying metallographically the transverse sections of the specimens after oxidation. The scale growth on all steels at all the temperatures investigated proceeds according to the parabolic law $\Delta g^n = k \tau$, whose exponent n varies between rather wide limits (from 4 to 1.5) as function of the testing temperature. The law of variation of n as a function of the temperature for every steel is

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violated, as a rule, in the region of temperatures corresponding to changes occurring in the steel and in the adjacent scale layer: the formation of wustite in the scale, eutectoid, magnetic and allotropic transformations in the steel, strong dissociation of the oxide $\alpha = \text{Fe}_2\text{O}_3$. The temperature dependence of the oxidation rate K of steel in air has the shape of a broken straight line in the coordinates $\log K$ versus $1/T$, and the breaks in the straight line, accompanied by corresponding changes in the activation-energy Q of the activation process, take place in the region of temperatures corresponding to the abovementioned transformations: the appearance of wustite in the scale is accompanied by a rise of Q , eutectoid and magnetic transformations cause a rise of Q , an allotropic transformation causes a drop of Q . The depth of the apparent and the real decarbonization of carbon steels increases as the temperature rises, and decreases with an increase of the C content in the steel. The decarbonization process of carbon steels leads to a reduction of their oxidation rate in air. The oxidation rate of steels is lowered as their C content is raised, and this effect becomes more pronounced with increasing temperature.

V. Tarisova

[Abstracter's note: Complete translation]

Card 2/2

ZHUK, N. P.

Doc Chem Sci - (diss) "Studies on thermodynamics and kinetics of corrosion processes." Moscow, 1961. 39 pp; (Ministry of Higher and Secondary Specialist Education RSFSR, Moscow Order of Lenin Technological Chemistry Inst imeni D. I. Mendeleyev); 180 copies; free; list of author's works on pp 37-39 (34 entries); (KL, 10-61 sup, 206)

ZHUK, N.P.

p. 2, 3

PHASE I BOOK EXPLOITATION

SOV/5544

Tomashov, N. D., Doctor of Chemical Sciences, Professor, ed.

Korroziya i zashchita konstruktsionnykh metallicheskiikh materialov; sbornik statey (Corrosion and Protection of Constructional Metals; Collection of Articles) Moscow, Mashgiz, 1961. 258 p. Errata slip inserted. 10,000 copies printed.

Ed. of Publishing House: N.P. Yevstaf'yeva; Tech. Ed.: G.V. Smirnova;
Managing Ed. for Literature on Chemical and Textile Machine Building:
V.I. Rybakova, Engineer.

PURPOSE: This collection of articles is intended for scientific and technical personnel concerned with the corrosion and protection of metals.

COVERAGE: The collection deals with problems of the corrosion of constructional metals in various environments and conditions. Articles discuss new methods for the investigation and testing of corrosion and give results of recent research conducted on the corrosion and protection of metal constructions. The corrosion of some new alloys is also considered. The collection includes

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Corrosion and Protection (Cont.)

SOV/5544

articles generalizing the results of research conducted during the last 2-3 years in the Department for Corrosion of Metals of the Moskovskiy institut stali (Moscow Steel Institute). Some of the articles were written in cooperation with the laboratory staffs of the "Serp i molot" Plant and Khimicheskiy zavod im. M.I. Kalinina (Chemical Plant imeni M.I. Kalinin) and are based on investigations conducted at these plants. No personalities are mentioned. There are 219 references, Soviet and non-Soviet. References accompany each article.

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Corrosion and Protection (Cont.)

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PICKLING OF SOME METALS AND ALLOYS

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Corrosion and Protection (Cont.)

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CORROSION RESISTANCE OF CHROMIUM-NICKEL STEELS

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CORROSION RESISTANCE OF TITANIUM AND ITS ALLOYS

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Tomashov, N. D., and M. G. Mil'vidskiy [Engineer]. Pickling of Titanium in Acid Solutions and in Alkaline Melts 133

Tomashov, N. D., R. M. Al'tovskiy [Engineer], A. V. Prosvirin [Engineer], and R. D. Shamgunova [Candidate of Chemical Sciences]. Corrosion of Titanium and Its Alloys in Sulfuric Acid 151

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Corrosion and Protection (Cont.)

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- Tomashov, N. D., R. M. Al'tovskiy, and V. B. Vladimirov [Engineer].
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- Tomashov, N. D., R. M. Al'tovskiy, G.P. Chernova [Candidate of
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and N. D. Tomashov. The Corrosion of Tantalum, Niobium, and Their Alloys
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- Tomashov, N. D., and P. V. Strekalov [Engineer]. Investigating the
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80V/5544

Titov, V. A., I. M. Balandin [Engineer], and N. D. Tomashov, Investigating the Effectiveness of Various Metal-Protection Methods in Solutions of Sulfuric and Phosphoric Acids at Elevated Temperatures 200

CORROSION ENDURANCE OF STEEL

Titov, V. A., and N. D. Tomashov. Investigating the Endurance of Card Wire 215

Titov, V. A., and Yu. M. Korovin [Engineer]. The Effect of Hydrogenation on the Endurance of Steel 223

Titov, V. A., and V. V. Belousova [Engineer]. Corrosion of Steel in Contact With Copper 230

CORROSION AND PROTECTION IN CERTAIN BRANCHES OF THE CHEMICAL INDUSTRY

Mil'vidskiy, M. G., Z. I. Ignatova [Engineer], M. A. Vedeneyeva, V. A. Titov, and V. A. Kikut [Engineer]. The Use of Urotrepine to Retard Corrosion of the Steel Apparatus Used in the Production of Ammonium Chloride 245
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Corrosion and Protection (Cont.)

SOV/5544

Titov, V. A., L. A. Markovich [Engineer], and A. V. Prosvirin.
Investigating the Corrosion Resistance of Certain Metals and
Alloys in Hexachloran Production

254

AVAILABLE: Library of Congress (TA462.T64)

Card 7/7

YK/wrc/mas
10-5-61

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CIA-RDP86-00513R002064910018-0"

L 360666 EWT(m)/EWP(t)/ETI IJP(c) JD/WB/JH

ACC NR. AP6014323

(A)

SOURCE CODE: UR/0314/65/000/012/0033/0035

AUTHORS: Kirkin, G. M. (Engineer); Zhuk, N. P. (Doctor of chemical sciences)

ORG: none

TITLE: Corrosion stability of aluminum alloy of titanium in solutions of orthophosphoric acid

SOURCE: Khimicheskoye i neftyanoye mashinostroyeniye, no. 12, 1965, 33-35

TOPIC TAGS: titanium base alloy, corrosion rate, chemical kinetics, *corrosion resistance,**titanium, aluminum containing alloy*ABSTRACT: Corrosion kinetics of titanium and titanium alloyed with aluminum (0.1--5.0%) in solutions of 5 to 80% H_3PO_4 was determined at 25 to 80C by measuring weight

loss of samples after 40-hour testing. Electrochemical behavior of the samples was studied by measuring equilibrium electrode potentials of metals and alloys and by plotting polarization curves using a potentiometric method. The destruction of the materials takes place in a uniform manner along the sample surface. The process is a function of H_3PO_4 concentration and may take place at constant, accelerated, and decelerated rates. Alloying of Ti with Al increases the corrosion rate, the maximum effect being observed at concentrations of 0.6 to 1.0% of Al. It is concluded that pure Ti, which is in a passive state in 20% H_3PO_4 at 25 and 40C, is converted to an active state when alloyed with 5% of Al. Orig. art. has: 6 figures.

SUB CODE: 07// SUBM DATE: none/ ORIG REF: 001/ OTH REF: 001

Card 1/1 45

UDC: 620.193.41:669.295.001.5

GRIGOR'YEVA, A.A.; ZHUK, N.P.; SERGEYEVA, G.G.

Gas corrosion of austenitic ferritic steels. Zashch. met. i no.5:
490-493 S-0 '65. (MIRA 18:9)

1. Moskovskiy institut stali i splavov.

KIRKIN, G.M.; ZHUK, N.P.

Effect of alloying with aluminum on the corrosion resistance
of titanium in acetic and nitric acid solutions. *Zashch.met.*
1 no.6:648-651 N-D '65. (MIRA 18:11)

SHREYDER, A.V., kand.tekhn.nauk; SHPARBER, I.S., inzh.; ZHUK, N.P., doktor
tekhn.nauk.

Corrosive exfoliation of metals of petroleum-refinery low
temperature equipment. Khim. i nef't. mashinostr. no.9:28-32
s '65.

(MIRA 18:10)

ZHUK, N.P.; OPARA, B.K.

Using the temperature-kinetic method to study the electrochemical corrosion of metals. Zashch. met. 2 no.1:95-100 Ja-F '66.

(MIRA 19:1)

1. Moskovskiy institut stali i splavov. Submitted April 29, 1965.

23892-66 ENT(m)/ENP(t) IJP(c) JD/WW/JW/NS/JH

ACC NR: AP6008620

SOURCE CODE: UR/0365/65/001/006/0648/0651

AUTHORS: Kirkin, G. M.; Zhuk, N. P.

53
B

ORG: none

TITLE: Effect of alloying titanium with aluminum upon the corrosion stability of titanium in acetic and nitric acid solutions

27 27 18

SOURCE: Zashchita metallov, v. 1, no. 6, 1965, 648-651

TOPIC TAGS: titanium base alloy, aluminum containing alloy, corrosion resistant alloy, aluminum, titanium, nitric acid, acetic acid

ABSTRACT: Behavior of Ti-Al alloys, containing 0.1, 0.3, 0.6, 1.0, 3.0, and 5.0% of Al, in solutions of acetic (from 5 to 80%) and nitric (from 5 to 50%) acids has been investigated at temperatures from 25 to 80C. Behavior of such alloys in sulfuric acid has been studied and reported upon earlier (G. M. Kirkin and N. P. Zhuk, Zashchita metallov, 1965, 1, 380). Degree of corrosion was determined gravimetrically after a 40-hour test. Electrochemical behavior of the metals and their alloys was studied by measuring stationary electrode potentials and by taking polarization curves by a potentiostatic method. It was established that Ti and its Al alloys are passivated in solutions of acetic and nitric acids. Ti, when alloyed with Al, loses some of its corrosion stability, as can be seen in Fig. 1. This can be due to the decrease in the protective properties of the passivating films on nonalloyed Ti.

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UDC: 669.018.8

L 23895-66

ACC NR: AP6008620

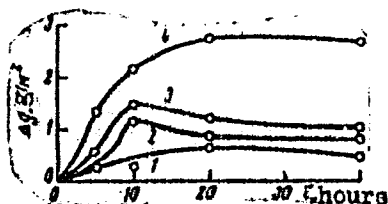


Fig. 1. Time-weight loss curves for titanium and its aluminum alloys in 56% nitric acid at 80C. 1 - Ti; 2 - Ti + 0.3% Al; 3 - Ti + 1.0% Al; 4 - Ti + 5% Al.

Orig. art. has: 1 table and 3 figures.

SUB CODE: 07/ SUBM DATE: 24Apr65/ ORIG REF: 005/ OTH REF: 001

Card 2/2dda

L 27473-66 EWT(m)/EWP(t) IJP(a) JD/HW/WB

ACC NR: AP6015286

(N)

SOURCE CODE: UR/0365/66/002/003/0312/0317

AUTHOR: Kravchenko, T. G.; Shelement'yeva, Ye. A.; Zhuk, N. P.; Karpman, G. M.

21
B

ORG: Moscow Institute of Steel and Alloys (Moskovskiy institut stali i splavov)

TITLE: Oxidation resistance of dispersion-strengthened nickel

SOURCE: Zashchita metallov, v. 2, no. 3, 1966, 312-317

18

27

TOPIC TAGS: nickel, nickel alloy, dispersion strengthened alloy, alloy oxidation, aluminum oxide containing alloy, chromium oxide containing alloy, titanium oxide containing alloy, zirconium oxide containing alloy

ABSTRACT: The oxidation behavior of dispersion-strengthened sintered nickel alloys containing up to 7% Al₂O₃, Cr₂O₃, TiO₂, or 5% ZrO₂ oxides has been investigated at 800-1200C in air with a test duration of 2 hr. It was found that oxidation of all the alloys tested follows a parabolic rate with the formation of NiO scale consisting of a porous inner layer and a dense outer layer of almost the same thickness. Both layers have a cubic lattice. The outer layer has equiaxial crystals and the inner has acicular crystals. The outer scale layer on alloys with Al₂O₃ and Cr₂O₃ peels off during cooling from 1000-1200C. The scale on alloys with ZrO₂ and TiO₂ is less susceptible to cracking. All the oxides tested increase the oxidation rate at all tested temperatures. However, TiO₂ and ZrO₂ accelerate the oxidation much less than do Al₂O₃ and Cr₂O₃. Orig. art. has: 4 figures and 4 tables.

[ND]

SUB CODE: 11/ SUBM DATE: 27Sep65/ ORIG REF: 008/ OTH REF: 007/ ATD PRESS: 42602

Card 1/1 13kg UDC: 620.193.5

ACC NR: AP6036111 (A) SOURCE CODE: UR/0365/66/002/006/0671/0677

AUTHOR: Kravchenko, T. G.; Zhuk, N. P.; Khodkin, V. I.; Belyayskaya, G. M.;
 Khovanskaya, L. L.

ORG: Moscow Institute of Steel and Alloys (Moskovskiy institut stali i splavov).

TITLE: Oxidation resistance of chromium and chromium-magnesium oxide alloys

SOURCE: Zashchita metallov, v. 2, no. 6, 1966, 671-677 21

TOPIC TAGS: chromium alloy, magnesium ~~oxide~~ ^{oxidation inhibition,} containing alloy, ~~dispersion strengthened alloy, chromium oxidation resistance, chromium alloy, oxidation resistance~~

ABSTRACT: Specimens of chromium and chromium-base alloys containing 5-9% magnesium oxide were prepared from VTU-1-54-grade chromium (99.9% pure) and pure magnesium oxide powders by cold compacting and sintering at 1500C in a hydrogen atmosphere for five hr. Nil-porosity specimens were obtained by additional hot compacting at about 1300C with a reduction of 80%. The specimens were then subjected to oxidation tests in an air atmosphere at 1200-1500C for ten hr. It was found that the scale formed on chromium specimens at 1200-1500C consisted of two layers, a thin, dense, inner layer of Cr₂N, and an outer layer of Cr₂O₃, which partially peeled off on cooling. Scale formed on chromium-magnesium oxide alloy specimens also consisted of two layers. The outer layer, in addition to Cr₃O₃, contained spinel MgCr₂O₄. At 1200C and 1500C, the oxidation rates of chromium and porous chromium-magnesium

Card 1/2 UDC: 669.26:620.193.5

ACC NR: AP6036111

oxide alloy were approximately equal. However, the oxidation rates of nil porosity specimens, containing 5% MgO tested at 1200C and 1300C were roughly 30 and 60% higher, respectively, than that of the nil-porosity, pure chromium. At 1400C and 1500C, magnesium oxide increased the oxidation rate in both porous and dense specimens. This can be explained by the fact that otherwise, the protective coating peels off easily in the case of chromium-magnesium oxide alloys. Orig. art. has: 3 figures and 5 tables.

SUB CODE: 11/ SUBM DATE: 03May65/ ORIG REF: 004/ OTH REF: 004/
ATD PRESS: 5106

Card 2/2

OEARA, B.K.; ZHUK, N.F.

Heat resistance of precipitation hardened tungsten and copper.
Izv.vys.ucheb.zav.; tsvet.met. 8 no.2:136-139 '65.

(MIRA 1981)

1. Kafedra korrozii metallov Moskovskogo instituta stali i
splavov. Submitted June 18, 1964.

ZHUK, N.S.

Repeated pregnancy in two women after surgery on the uterine tubes for the purpose of sterilization. Akush.i gin. no.5:118-119 '61.

(CONCEPTION--PREVENTION)
(FALLOPIAN TUBES--SURGERY)

(MIRA 15:1)

ZHUK, N.V., inzh.

Using caterpillar cranes in assembling gantry cranes. Nov.tekh.
mont. i spets. rab. v stroi. 21 no.1:31-32 Ja '59.

(MIRA 12:1)

(Cranes, derricks, etc.)

ZHUK, P.

After a new house has been built. Mast. ugl. 9 no. 6:23-24 Je '60.
(MIRA 13:7)

1. Starshiy inspektor zhilischchno-bytovogo otdela Vsesoyuznogo
tsentral'nogo soveta profsoyuzov.
(Housing) (Coal miners)

ZHUK, P.

There will be more new tenants. Zov. profsotruzy 1R no.20:45-46
0 '62. (MIRA 15:10)

1. Starshiy inspektor zhiqoshchno-bytsevego otdela Vsesoyuznogo
tsentral'nogo soveta professional'nykh soyuzov.
(Construction industry) (Housing, Cooperative)

ZHUK, P.

Moving pictures - News Films

Film strip newspaper. klub 2 no. 2, 1953

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

ZHUK, P.M.; SOSKIN, M.B.

Industrial centers in uninhabited zones of a city, Prom.stroi
42 no.2x13-16 '65. (MIRA 18:4)

ZHUK, P.M., inzh.; KRAMSKOY, V.A., arkhitektor

Standard plans for electrolysis sections of aluminum plants.
Prom. stroi. 38 no,2:18-20 '60. (MIRA 13:5)

1. Giprocalyuminiy (for Kramskoy).
(Aluminum industry)

S/137/61/000/011/099/123
A060/A101

AUTHORS: Abramov, O.V., Zhuk, P.P.

TITLE: Oxidation of certain alloys under conditions of heat-treatment in gas and electric furnaces

PERIODICAL: Referativnyy zhurnal. Metallurgiya, no. 11, 1961, 44, abstract 11I295 (V sb. "Korroziya i zashchita konstrukts. metallich. materialov", Moscow, Mashgiz, 1961, 19 - 39)

TEXT: In a set-up for the continuous observation of process kinetics, the oxidation of 9 heat-resistant alloys (ЭИ435, ЭИ652, ЭИ559, ВЖ 98, ЭИ 894, ЭИ 602, ЭИ 703, ЭИ 813, ЭИ 835 [EI435, EI652, EI559, VZh98, EI894, EI602, EI703, EI813, EI835]) was studied under conditions of heat-treatment in gas and electric furnaces: in the combustion products of "town" gas with excess air coefficient α 0.8-1.5, and in air at 900-1,200°C. The oxidation rate of all the alloys increases as the temperature is increased. The values of the activation energy of the oxidation process of the alloys investigated in each environment were calculated from the temperature dependence of the oxidation rates. The oxidation kinetics of alloys EI435, EI652, EI559, and EI835 is described, as a rule, by the

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Oxidation of certain alloys ...

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equation $\Delta g = k_3 \log \tau + k_4$, and that of the remaining alloys by the parabolic equation $\Delta g^n = k_2 \tau$, whose exponent n decreases as the temperature increases and is close to .2 in the majority of cases. A higher heat-resistance, particularly at high temperatures corresponds to the oxidation of the alloys according to the logarithmic law. An increase in the oxidizing power of the environment lowers the oxidation rate of alloys EI652, EI559, EI894, EI602 at all the temperatures investigated, and that of alloys EI435, and EI703 at 900°C; it raises the oxidation rate of alloys EI813, EI835 at all temperatures, and that of alloys EI435 and EI703 at 1,000 - 1,200°C; it affects little the oxidation rate of alloy VZh98. An increase in the heat-resistance as the oxidizing power of the environment increases is observed in alloys containing Al, whose strength and protective characteristics of the oxide layer increase as the α of the gaseous environment increases, and are particularly high in an air environment. The oxidation rate of alloys containing large quantities ($> 30\%$) of Fe decreases as the α decreases, i.e. as the aggressiveness of the gaseous environment decreases. The heat-treatment of alloys EI652, EI559, EI894, EI602 should be carried out in a strongly oxidizing air environment (in electric furnaces); the heat-treatment of alloys EI703, EI813, EI835 is more effectively carried out in the least oxidizing environment (in gaseous combustion products with $\alpha \sim 0.8$; the gas environment schedule

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in course of heat-treatment is not too important for alloy EI435, and even less so for alloy VZh98. The utilization of alloys EI703, EI813, EI835 instead of the scarcer and more expensive EI435, EI652, EI894, EI602 is possible in weakly oxidizing environments ($\alpha = 0.8 - 1.0$) and at temperatures not exceeding 1,000 - 1,050°C.

Ye. Layner

[Abstracter's note: Complete translation]

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ZHUK, S. and KIKODZE, B.

Moskva-Volga kanal. [The Moscow-Volga Canal]. (Bol. sov. ents., 1938, v. 40,
col. 404-415, illus., map). DLC: AE55.B6

SO: Soviet Transportation and Communications, A Bibliography, Library of Congress,
Reference Department, Washington, 1952, Unclassified.

F L

DEVELOPMENT OF PLANNED PROJECT OF KUIBYSHEV HYDRO-ELECTRIC STATION ON VOLGA. Zhuk, S.
Ya. (Gidrotekh. Stroit. (Hydrotech. Constructions), May 1951, 1-3).

ZHUK, S.

Volga-Don. (Pravda, Dec. 29, 1950).

SO: SOVIET TRANSPORTATION AND COMMUNICATIONS, A BIBLIOGRAPHY, Library of Congress
Reference Department, Washington, 1952, Unclassified.

ZHUK, S.I. (Primorskiy kray, poselok Razdol'noye)

Subcutaneous retroperitoneal rupture of the duodenum. Vest.khir.
82 no.2:97-98 F '59. (MIRA 12:2)

(DUODENUM, wds. & inj.

blunt inj. causing subcutaneous retroperitoneal
rupt. (Rus))

ZHUK, S. YA.

DECEASED 1957

see ILC

*Hydroelectric
Engineering*

FEDCHENKO, V.P.; GUBRENKO, D.V.; ZHUK, T.I.

Stylus for checking recorders. Energetik 4 no.6:21-22 Ja '56.

(MLRA 9:8)

(Recording instruments)

ZHUK, V.

"Mechanization of Maintenance Operations of Long-Distance Lines" Tr. from the Russian. p. 131.
Vol. 3, No. 4, Apr. 1953. Praha

SO: East European Accessions List, Vol. 3, No. 9, September 1954, Lib. of Congress

ZHUK, V.P., Cand Med Sci -- (diss) "Data for the comparative morphology of the connective tissue of the chorion in ^{human} ~~man~~ and certain mammals." Novosibirsk, 1958, 16 pp (Novosibirsk State Med. Inst) 200 copies (KL, 27-58, 117)

ZHUK, V.

Zhuk, V.; Sagalov, E.

Mechanization of maintenance operations of long-distance lines. Tr. form the
Russian. P. 131

SO: East European Accessions List, Vol. 3, No. 9, Sept. 1954, Lib. of Congress

ZHUK, V.

Vechnaia merzlota i vozdukhnye puti v Arktiku. [Permanently frozen ground and the air routes in the Arctic regions]. (Grazhdanskaia aviatsiia, 1936, no. 1, p.24-25, illus., map).

DLC: TL504G7

SO: Soviet Transportation and Communications, A Bibliography, Library of Congress, Reference Department, Washington, 1952, Unclassified.

MAKOGON, N.S.; ZHUK, V.A.

Preparation of fine coals in the U.S.A. Ugol.prom. no.5:90-
95 S-0 '62. (MIRA 15:11)
(United States--Coal preparation)

CHEKMAREV, A.P., akademik; GRUDEV, A.P., kand.tekhn.nauk; ZHUK, V.G., inzh.

Cold rolling of annealed cast iron sheet. Nauch. trudy DMI no.39;
231-242 '60. (MIRA 13:10)

1. AN USSR (for Chekmarev).
(Rolling (Metalwork)) (Cast iron)

S/137/61/000/006/037/092
A006/A101

AUTHORS: Osipov, A.P., Grudev, A.P., Zhuk, V.G.

TITLE: Cold rolling of annealed cast iron sheets

PERIODICAL: Referativnyy zhurnal. Metallurgiya, no. 6, 1961, 6, abstract 6D48
("Nauchn. tr. Dnepropetr. metallurg. in-t", 1960, no. 39, 231-242)

TEXT: Information is given on results of cold rolling of annealed cast iron sheets. The value ξ serves as a basic characteristic of the deformation degree. Specimens of roofing cast iron sheets were rolled at ξ from 0.1 to 53.5% per pass on a two high mill with rolls of 185 - 200 mm in diameter and 180 mm barrel length. Specimens with high reduction (relative widening up to 512%) were rolled on a four high mill with working rolls of 125 mm in diameter, backing rolls of 420 mm in diameter and 500 mm barrel length. As a result it was established that: 1) annealed cast iron sheets having the structure of ferrite wrought iron, are a sufficiently plastic material and can be rolled at room temperature; 2) when rolling cast iron sheets the mean specific pressure is

Card 1/2

Cold rolling of annealed cast iron sheets

S/137/61/000/006/037/092
A006/A101

higher than during rolling of carbon steel; 3) the use of greases (castor oil, machine oil and emulsion) reduces the metal pressure on the rolls.

V. Pozpekhov

[Abstracter's note: Complete translation]

Card 2/2

18.5100

1496 1413 1454

32794
S/137/62/000/012/078/149
A006/A101

AUTHORS: Grudev, A. P., Zil'berg, Yu. V., Zhuk, V. G., Stepanova, L. D.,
Tarshinov, V. I.

TITLE: Peculiarities of cold rolling of cast iron sheets

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 12, 1961, 7, abstract 12D43
(V sb. "Polucheniye izdeliy iz zhidk. met. s uskoren. kristallizat-
siyey", Moscow-Kiyev, Mashgiz, 1961, 211-223)

TEXT: Investigations were made with specimens and sheets of conventional
cast-iron containing in %: C 3 - 3.4; Si 1.4 - 1.7; Mn 0.4 - 0.7; S 0.1,
P about 0.1. It was established that the optimum degree of deformation in cold
rolling of sheets which assures the highest indices of strength and ductility,
is 25 - 30%. The properties of sheets depend mainly on total deformation; the
effect of the factor of deformation divisibility during rolling was very small.
High-quality longitudinal rolling of sheets is achieved in rolls with concave
outline, i.e. when the shape of the slit between the rolls corresponds to the
cross sectional shape of the sheet supplied for rolling. It is also required
that the sheets be free of slag trails. The use of spindle oil as a technological

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S/137/61/000/012/078/149

A006/A101

Peculiarities of cold rolling of cast iron sheets

grease makes it possible to obtain 7 - 11% drawing in one pass without overloading the mill. The following distribution of drawings over the passes is recommended: 1st pass 6 to 8%; 2 - 8 to 10%; 3 - 5 to 7%. To reduce the possibility of hollow formation, H_{sh} of the roll barrel should be ≥ 100 units. The sheets should be straightened after recrystallization annealing. Mills for the cold rolling of cast-iron sheets should be equipped with 4-roll stands; the roll diameter must be 350 - 400 mm (working rolls) and 900 - 1,100 mm (backing rolls) at a length of the roll barrel $L = b_{max} + 100$ mm, where b_{max} is the maximum width of the sheets to be rolled. The mill motor should have a power of about 350 - 400 kw.

V. D'yakov

[Abstracter's note: Complete translation]

Card 2/2

8/137/61/000/012/079/149
A006/A101

AUTHORS: Grudev, A. P., San'ko, N. M., Zil'berg, Yu. V., Zhuk, V. G.

TITLE: Hot rolling of white iron sheets and its effect on the structure and properties of the metal

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 12, 1961, 7, abstract 12D44 (V sb. "Polucheniye izdeliy iz zhidk. met. s uskoren. kristallizatsiyey", Moscow-Kiyev, Mashgiz, 1961, 224-235)

TEXT: Experimental hot rolling was carried out with conventional, low-silicon and low-carbon white iron sheets, and specimens with an S content raised to 0.14%. The initial thickness was 0.6 - 2 mm; width 100 mm, and length 200 - 300 mm. The specimens were cut with the aid of a fine emery wheel out of full-dimensional white iron sheets selected immediately after forming. Hot rolling was performed on a two-high mill with polished quenched steel rolls of 185-200mm in diameter, 180 mm barrel length and 0.3 m/sec rolling speed. Independent of the chemical composition the white iron sheets possessed considerable ductility at 750 - 1,050°C. δ per pass was 1 - 10% and more. When rolling the specimens individually at 950 - 1,000°C, δ as high as 15 - 34% was attained. Industrial

Card 1/2

Hot rolling of white iron sheets ...

S/137/61/000/012/079/0149
A006/A101

tests confirmed the possibility of hot rolling of white cast-iron sheets. Rolling affects considerably the structure of white iron sheets; the amount of graphite impurities is sharply raised; their size is reduced; the graphitization rate is raised and a number of other structural changes take place. It is recommended to design a mill for the hot rolling of white iron sheets as a four-high type with roll diameters of 250 - 300 mm (working rolls) and 600 - 800 mm (backing rolls), and a barrel length $L_{max} = b_{max} + 100$ mm, where b_{max} is the greatest width of the white iron sheets to be rolled. The possibility of regulating the revolution of the rolls must be provided for. Maximum rolling speed can be assumed to be about 3 m/sec. Gas torches should be mounted along the barrel of the rolls to heat the rolls and to regulate their profile. ✓

V. D'yakov

[Abstracter's note: Complete translation]

Card 2/2

ZHUK, V. G.

(15)

PHASE I BOOK EXPIRATION 307/3611

Dnepropetrovsk Metallurgicheskii Institut

Osvetbna metalloy davielnyem (Metal Forging) Dnar'kov, Metallurg-izdat, 1960. 326 p. (Series: Ita; Mauchnyye trudy, vyp. 39) 2,100 copies printed.

Ed.: A. P. Chokmarov; Ed. of Publishing House: S. A. Malina; Tech. Ed.: S. P. Amireyev.

FORWORD: This collection of articles is intended for technical and scientific personnel in metallurgy and in mechanical engineering. It will also be of interest to designers of rolling equipment.

COVERPAGE: This collection of articles treats the theory of rolling. It discusses such factors as the total and the unit pressures of the work on rolls, moments of rolling, forward slip, spread, etc. It also includes results obtained from investigation of roll quality, rolling of cast iron sheets, and other problems. No personalities are mentioned. References follow each article.

Chokmarov, A. P., and M. I. Chesnokov [Candidate of Technical Sciences]. Deformation of Metal in the Manufacture of Pipe 173
The authors present a method for determination of local (layer) deformations for any element of pipe in the focus of deformation, at various manufacturing processes (rolling, drawing, rotary rolling) in order to determine the most suitable process for given conditions.

Chokmarov, A. P., Ye. S. Pankel'shtern [Candidate of Technical Sciences], and I. M. Linderkii [Engineer]. Kinematics of the Process of Helical Rolling 191

The authors try to explain in a new way a number of phenomena occurring during helical rolling, the kinematics of the process magnitude and direction of forces in the contact area, slip of metal, and the ways of intensification of the process of helical rolling.

Galenin, M. P. [Candidate of Technical Sciences]. Effect of Size and Shape of Triaxial Roll Passes on the Quality of Rails 221
The article deals with experiments undertaken by the author in order to determine the effect of the conditions of deformation at rolling on elimination of defects in rails. The practical recommendations concerning the shape passes and magnitude of drafts are presented.

Chokmarov, A. P., A. P. Gubkov [Candidate of Technical Sciences], and V. D. Khuzh [Engineer]. Cold Rolling of Annealed Cast Iron Sheets either by hot or by cold rolling 231

The authors describe process of removing defects on cast iron sheets either by hot or by cold rolling.
Mikhalchenko, Ye. O. [Engineer], S. I. Yitenson [Candidate of Technical Sciences], and L. D. Stepanov [Engineer]. Effect of Cold Deformation on the Properties of Cast Iron Sheets 243
Effect of cold channeled rolling on the number of passes, the amount of drafts on the ductility and strength of cast iron sheets is discussed.

Vatkin, Ye. L. [Candidate of Technical Sciences], I. D. Kronfel'd, S. V. Kozhich, and I. A. Chokmarov [Engineers]. Investigation of Pressure on Rolls, and Power Consumption at Rolling Pipe in Continuous Rolling Mill with Long Mandrel 253
The authors discuss the distribution of pressure on rolls, the effect of wall thickness and amount of additional alloy in steel on the pressure of the rolls. They give formulas for determining the draft and cast roll pressure, and for power consumption in continuous rolling.

Chokmarov, A. P., and L. Ye. Kopturov. Experimental Investigation of Unit Pressures in Hot Rolling 278
The authors conducted a laboratory investigation in the Dnepropetrovsk Metallurgical Institute on determination of magnitude and distribution pattern of the unit pressure in the contact area at rolling of steel and of various thickness and with various drafts.

SOSNOVSKIY, P. [Sosnowski, Piotr], inzh.; ZHUK V.I. [translator]; ORLOVA, Ye.P., otv. red.; GADZHINSKAYA, A.M., red. izd-va; SHKLYAR, S.Ya., tekhn. red.

[Mine water sumps] Shakhtnye vodootstoiniki. Moskva, Gos. nauchno-tekhn. izd-vo lit-ry po gornomu delu, 1961. 171 p. Translated from the Polish. (MIRA 14:9)

(Poland—Hydraulic mining—Equipment and supplies)

S/194/62/000/004/011/105
D222/D309

AUTHOR: Zhuk, V. I.

TITLE: Relaymatrix decoding circuits

PERIODICAL: Referativnyy zhurnal, Avtomatika i radioelektronika,
no. 4, 1962, abstract 4-2-8b (Tr. Tsent. n.-i. in-ta
mekhaniz. i energ. lezn. prom-sti, 1961, 25, 59-77)

TEXT: Methods of constructing relay-contact circuits with bridge connections are described. The points considered are: The voltage distribution in complete matrices, methods of eliminating false connections and increasing the reliability of complete matrices, the transformation of incomplete matrices, the economy obtained by the method of relay matrices, and matrix decoders using pulse characteristics. It is stated in conclusion that this recommended method of constructing decoding circuits enables the number of contacts to be reduced markedly in circuits which do not use diodes. 8 figures, 2 tables. 10 references. [Abstracter's note: Complete translation.]

Card 1/1

S/185/61/006/006/015/030
D299/D304

AUTHORS: Lebedyev, M.A., and Zhuk, V.K.

TITLE: Changes in fluorescence yield during photochemical sensitized reactions

PERIODICAL: Ukrayins'kyy fizychnyy zhurnal, v. 6, no. 6, 1961,
789 - 792

TEXT: The dependence was studied of the fluorescence yield of aqueous- and alcoholic solutions of eosin (in the presence of thiourea, sodium sulfate, diphenylamine and trioxybenzol), on the wavelength of the exciting light and on the duration of the irradiation. A table lists the values of the critical wavelength λ_{exc} of the maximum λ_m of the absorption spectrum of the solutions, and of the fluorescence yield B. If the eosin solutions are irradiated by light in the presence of thiourea, three independent photochemical reactions take place: Sensitized oxidation, discoloration of eosin and formation of a new photoproduct. A change in thiourea concentration does not affect the dependence of the fluorescence yield on

Card 1/3

Changes in fluorescence yield ...

S/185/61/006/006/015/030
D299/D304

the time of irradiation. The fluorescence yield decreases with increasing concentration. The presence of alcohol increases the yield. The sensitized oxidation of trioxybenzol and of diphenylamine differs from the reaction involving alcohol. In the process of trioxybenzol oxidation, the eosin absorption spectrum changes, the absorption maximum being shifted towards the longwave side, whereas the shortwave side of the spectrum is broadened. Oxidation of diphenylamine in the presence of eosin causes a broadening of the absorption spectrum; diphenylamine reduces the fluorescence yield. The changes in the fluorescence yield during irradiation of trioxybenzol and diphenylamine are due to the formation of reaction products which absorb the fluorescence light. The above examples of sensitized photochemical reactions show that the critical value λ_{exc} , at which the fluorescence yield drops sharply, is a true measure of the changes in the sensitizer. Thus, in reactions which do not involve changes in the sensitizer, λ_{exc} remains constant, whereas if the sensitizer undergoes changes, λ_{exc} is shifted. There are 2 figures, 1 table and 9 references: 7 Soviet-bloc and 2 non-Soviet

✓

Card 2/3

Changes in fluorescence yield ...

S/185/61/006/006/015/030
D299/D304

-bloc.

ASSOCIATION: Kryms'kyy pedahohichnyy instytut im. M.F. Frunze (Cri-
mean Pedagogical Institute im. M.F. Frunze), Simfero-
pol'

✓

Card 3/3

LEBEDEV, N.A. [Lebediev, M.A.]; ZHUK, V.K.

Changes in the fluorescent yield in photochemical sensitized reactions. *Ukr. fiz. zhur.* 6 no.6:789-792 N-D '61. (MIRA 16:5)

1. Krymskiy pedagogicheskiy institut im. Frunze, Simferopol'.
(Photochemistry) (Fluorescence)

MAKAREVICH, L.F.; ZHUK, V.L.; Balyura, V.I.; MEKHEDA, V.P.; YAKOVENKO, A.G.

Work of separation plants. Sakh.prom. no.4:17-20 Ap '60.
(MIRA 13:8)

1. Chernovitskiy sakhsveklotrest (for Makarevich, Zhuk, Balyura).
2. Stanislavskiy sovnarkhoz (for Mekheda).
3. Boyshhevskiy sakharnyy zavod (for Yakovenko).
(Sugar industry)

8(3)

SOV/112-59-4-6854

Translation from: Referativnyy zhurnal. Elektrotehnika, 1959, Nr 4, p 64 (USSR)

AUTHOR: Zhuk, V. M.

TITLE: Using High Voltage for Rural Electrification

PERIODICAL: Za tekhn. progress (Sovnarkhoz Gor'kovsk. ekon. adm. r-na),
1958, Nr 4, pp 7-8

ABSTRACT: Bibliographic entry.

Card 1/1

ZHUK, V. M.

Subject : USSR/Electricity AID P - 2912
Card 1/1 Pub. 26 - 9/32
Authors : Gustov, L. D. and V. M. Zhuk, Engs.
Title : Feeding mechanism the switchgear
Periodical : Elek.sta, 7, 32-34, J1 1955
Abstract : The authors discuss difficulties with solenoids for 110 and 220 kv oil circuit breakers at substations. Some suggestions on improving the operations are made. Two tables showing data on the storage battery SK-8 for the circuit breakers MKP-110M and the SK-18 for the MKP-220 are given. Three diagrams, 1 Russian reference, 1953.
Institution : None
Submitted : No date

SOV/19-58-6-217/685

AUTHORS: Stavitskiy, A.I., and Zhuk, V.N.

TITLE: An Electron Ray Tube with a Figure Anode
(Elektronno-luchevaya lampa s figurnym anodom)

PERIODICAL: Byulleten' izobreteniy, 1958, Nr 6, p 51
(USSR)

ABSTRACT: Class 2lg, 13₀₁. Nr 113634 (563401 of 10 Dec 1956). Submitted to the Committee for Inventions and Discoveries at the Ministers Council of USSR. An electron ray tube with a figure anode making it possible to obtain a $I_a=f(I_p)$ characteristic in any shape; including correcting electrodes under negative potential placed along the path of the ray; these correcting electrodes make it possible to change the characteristic with a

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SOV/19-58-6-217/685

An Electron Ray Tube with a Figure Anode

high frequency during the process of operation.

Card 2/2

USSR / General Biology. Individual Development.
Embryonic Development.

B-4

Abs Jour: Ref Zhur-Biol., No 18, 1958, 81026.

Author : Zhuk, V. P.

Inst : Not given.

Title : The Development of the Connective-Tissue Stroma in
the Infantile Section of the Placenta in the Human
Being.

Orig Pub: Byul. eksperim. biol. i meditsiny, 1957, 43, No 3,
102-107.

Abstract: The development of the connective tissue and the
fibrous chorion in the human being from the fifth
up to the 16th week of pregnancy and the structure
of that tissue in the mature placenta was investig-
ated. It was demonstrated that the stroma of the
fibers in the basal section and on the terminal
ramifications has a different structure. In the

Card 1/3

ZHUK, V.P.

Development of connective tissue in the fetal placenta in man [with
summary in man [with summary in English]. Biul. eksp. biol. i med. 43
no.3:102-107 Mr '57. (MLRA 10:7)

1. Iz kafedry gistologii i embriologii (zav. M.Ya.Subbotin) Novo-
sibirskogo meditsinskogo instituta. Predstavlena deystvitel'ny
chlenom AMN SSS V.N.Ternovskim.

(CHORION

develop. of connective tissue in (Rus))

(CONNECTIVE TISSUE, embryol.

develop. in chorion (Rus))

ZHUK, V.P.

Connective tissue stroma in the placenta of white rats. Dokl. AN SSSR
106 no.6:1093-1095 P '56. (MLRA 9:7)

1. Predstavleno akademikom N.N. Anichkovym.
(PLACENTA)

ZHUK, V.P.

On the hematopoietic function of the chorion connective tissue in
sheep. Dokl. AN SSSR 107 no.1:167-170 Mr '56. (MLRA 9:7)

1. Novosibirskiy gosudarstvennyy meditsinskiy institut. Predstavleno
akademikom N.N. Anichkovym.
(CHORION) (SHEEP--ANATOMY) (EMBRYOLOGY--MAMMALS)

ZHUK, V.P.

Morphological and histochemical changes in the connective tissue of the skin of newborn white rats in dysfunction of the mother's pancreas. Biul.eksp.biol.i med. 54 no.11:92-95 N '62.

(MIRA 15:12)

1. Iz kafedry gistologii i embriologii (zav. - prof. M.Ya. Subbotin) Novosibirskogo meditsinskogo instituta. Predstavlena deyatvitel'nym chlenom AMN SSSR N.A.Krayevskim.

(CONNECTIVE TISSUES) (PANCREAS--DISEASES)

ZHUK, V.V.

Strong and intensified representability of a 2π -periodic function
by a singular integral. Vest. IGU 20 no.19:24-31 '65.

(MIRA 18:10)

ZHUK, V.V.

Absolute convergence of Fourier series. Dokl. AN SSSR 160 no.3:
519-522 Ja '65. (MIRA 18:3)

1. Leningradskiy gosudarstvennyy universitet im. A.A. Zhdanova.
Submitted July 15, 1964.

ZHUK, V.V.

Some modifications of the concept of smoothness modulus and their applications. Dokl. AN SSSR 162 no.1:19-22 My '65. (MIRA 18:5)

1. Leningradskiy gosudarstvennyy universitet im. A.A.Zhdanova.
Submitted November 23, 1964.

ZHUK, V.V.

A modification of the concept of smoothness modulus and its use
in evaluating Fourier coefficients. Dokl. AN SSSR 160 no.4:758-
761 F '65. (MIRA 18:2)

1. Leningradskiy gosudarstvennyy universitet im. A.A. Zhdanova.
Submitted July 15, 1964.

VASCENKO, K.I. [Vashchenko, K.I.]; ZUK, V.J. [Zuk, V. Ya.]

Toothed wheels from nodular cast iron. Slava: enstvi 12 no.2s
45-49 F'64

ZHUK, V.Ya., kand. tekhn. nauk; KOSYANU, K.K., inzh.

Winning various brands of cast iron from the same initial
charge. Mashinostroenie no.5:63-67 S-O '65.

(MIRA 18:9)

S/137/62/000/002/069/11
A006/A101

AUTHOR: Zhuk, V. Ya.

TITLE: Investigating contact endurance of magnesium cast-iron

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 2, 1962, 30, abstract 21177
("Sb. nauchn. tr. aspirantov Kiyevsk. politekhn. in-ta", Kiyev, 1961
212 - 229)

TEXT: A method is suggested of determining the criterion of fatigue break-off. This method makes it possible to carry out comparative contact endurance tests of Mg-cast iron. When testing the contact endurance of Mg cast-irons no marked changes in respect to structural constituents in the surface layer were observed. Fatigue cracks run over graphite inclusions and the ferrite constituent of the matrix and are located at 100 - 500 μ depth from the specimen surface, depending on the load which causes the formation of cracks. Mg-perlite cast-iron can be a fully equivalent substitute of medium-carbon steels in the rolling friction points. The resistance of Mg-cast iron against break-off increases with a higher perlite amount in the structure of the metal matrix. The failure of the cast-iron surface resembles that of a steel surface. The fatigue

Card 1/2

Investigating contact endurance of magnesium cast-iron S/137/62/000/002/069/144
A006/A101

break-off limit of perlite cast-iron is by 3.5 times higher than that of ferrite, if the ultimate specific loads are compared. For parts operating under contact loads Mg-perlite cast-iron with $\leq 15\%$ ferrite can be used instead of steel. Homogenization of cast-iron raises its contact endurance. The hardness of cast iron can be used as an indirect but insufficient criterion for estimating the contact endurance. There are 11 references.

A. Savel'yeva

[Abstracter's note: Complete translation]

Card 2/2

ZHUK, V.Ya., aspirant

Contact strength of magnesium cast iron. Izv.vys.ucheb.zav.;
mashinostr. no.4:106-110 '62. (MIRA 15:7)

1. Kiyevskiy politekhnicheskoy institut.
(Cast iron—Testing)

DRAYGOR, D.A. [Draihor, D.A.]; ZHUK, V.Ya.

Mechanism of the crumbling of contacting surfaces of magnesium
cast iron in friction rolling. Dop. AN URSR no.3:374-377 '62.
(MIRA 15:5)

1. Institut mekhaniki AN USSR. Predstavleno akademikom AN USSR
F.P.Belyankinym [Bieliankin, F.P.].
(Strength of materials) (Friction)

ZHUK, V.Ya. aspirant

Selecting the criterion of fatigue crumbling-out for contact-strength testing of magnesium cast iron. Izv.vys.ucheb.zav.; mashinostr. no.7:83-88 '61. (MIRA 14:9)

1. Kiyevskiy politekhnicheskoy institut.
(Cast iron--Testing)

VASHCHENKO, K.I.; ZHUK, V.Ya.

Effect of graphite on the contact endurance of cast iron. Lit.
proizv. no.11:24-25 N '61. (MIRA 14:10)
(Cast iron--Fatigue)

3 (5)

AUTHORS: Zhuk-Pochekutov, K. A., Maslov, V. P. SOV/20-130-1-40/69TITLE: Problems Regarding Graphite From the Botogol'skiy Mountain
(East Sayan)

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol 130, Nr 1, pp 140-142 (USSR)

ABSTRACT: Considerable deposits of high-quality graphite are known to occur in the alkaline Botogol'skiy massif. Graphite occurs almost in all rocks, but the bulk of large graphite bodies is concentrated in the northern part of the massif and is bound to leucocrate-nepheline-syenites and to alkaline and nepheline-pyroxene-syenites. Large individual granite bodies are bedded in limestones or in their contact areas. Graphite either is dispersed in rocks or forms little pockets and roundish or lens-shaped bodies of different size respectively. Larger deposits (bodies to 50 times 35 m in diameter) are ellipsoidal or roundish. Of this deposit, A. N. Labuntsov (Ref 1) classified the following graphite varieties: 1) massive, solid-crystalline, 2) arborescent, 3) drop-shaped ("somatoid") and concentric-spheroidal, and 4) imbricating graphite. The first variety is the most frequent one. The genesis of Botogol'skiy graphite has not been completely explained. The age of the Botogol'skaya

Card 1/4

Problems Regarding Graphite From the Botogol'skiy
Mountain (East Sayan)

SOV/20-130-1-40/69

intrusion is determined to be Lower or Middle Devonian. Most researchers agree that limestones are the source of carbon. Opinions, however, differ as to the formation conditions and the sedimentation age of graphite. According to B. M. Kupletskiy (Ref 2), besides organic remains of limestones, carbonic acid which was released during the CaCO_3 dissociation, also took part in the graphite development. Hydrocarbons were able to liberate carbon with CO_2 separated from the limestones during the interaction of gas-saturated magma. N. A. Florensov and V. S. Sobolev agree as to the source of carbon. However, they hold the opinion that graphite was developed by the CO decomposition (reaction of Boudoir) in the obligatory presence of bitumen. Graphite sedimentation set in already during the magmatic stage. Its bulk, however, was deposited by post-magmatic hydrothermal solutions. According to V. P. Solonenko the transformation process of limestones into syenite favored the carbon concentration. The hydrothermally deposited graphite is said to be of organic origin. Finally the authors

Card 2/4

Problems Regarding Graphite From the Botogol'skiy Mountain (East Sayan)

SOV/20-130-1-40/69

describe a new tubelike variety of graphite from the Botogol'skiy massif (Fig 1). It forms groups of parallel tubes with an intermediate space of 1-2 mm, a length of 20 mm and walls 0.1-0.3 mm thick. The middle part of the tubes is filled by zoned minerals in the sequence: calcite, pyroxene, microcline, nepheline (from outside). Thick tubes dichotomize in a sharp angle. The authors arrived at the conclusion that in this case graphite was separated earlier than minerals of the syenite part. The latter are of metasomatic origin. Graphite tubes originally may have been composed of organic carbon compounds. In their embedding they remained hard and became graphite without considerable mechanical deformations. If this assumption is true, this problem is to have a name: Botogolia saianensis gen. et sp.n. These "Organisms" (as a working hypothesis) probably belong to algae of the species Phaeophyceae. Finally the authors are of the opinion that it is much simpler to explain the formation of graphite by this theory than by the assumption of a complicated carbon concentration by metasomatic processes. The authors also mention S. V. Obruchev. There are 1 figure and 4 Soviet

Card 3/4

Problems Regarding Graphite From the Botogol'skiy
Mountain (East Sayan)

SOV/20-130-1-40/69

references.

ASSOCIATION: Geologicheskii institut Akademii nauk SSSR (Institute of
Geology of the Academy of Sciences, USSR) ✓

PRESENTED: July 5, 1958, by N. S. Shatskiy, Academician

SUBMITTED: July 3, 1958

Card 4/4

ZHUK, YA., PAVLOVSKIY, G., ZHIYANOV, I.

Grain

Mechanization of the grain cleaning work., MTS, 12, no. 1, 1952.

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

2

ZHUK, Ya.A.

Technical measures at the Tiraspol "1st of May" canning factory. Kons.1
ov.prom. 15 no.8:17-19 Ag '60. (MIRA 13:8)
(Tiraspol--Canning industry)

ZHUK, Ya.A.

Conference of industry innovators. Kons.i ov.prom. 16 no.4:43-44 Ap '61.
(MIRA 14:3)

(Meat industry—Congresses)

ZHUK, Ya.A.

Manufacturing dried fruits in Moldavia. Kens. 1 ov. prem. 14
no.3:25-26 Mr '59. (MIRA 12:3)

1. Upravleniye konservnoy promyshlennosti Moldavskoy SSR.
(Moldavia--Fruit, Dried)

ZHUK, Ya.A.
ZHUK, Ya.A.

~~From a home industry to a leading branch of industry in the republic.~~
Kons. 1 ov. prom. 12 no.10:22-26 0 '57. (MIRA 11:1)

1. Sovet narodnogo khozyaystva Moldavskoy SSR.
(Moldavia--Canning industry--History)

ZHUK, Ya.M., kand. tekhn. nauk.

Some results of a study of combining grain in two stages. Sel'-
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