

17(3)

AUTHOR:

Tayperovich, A. S.

SOV/20-122-6-33/49

TITLE:

Inactivation of Chemotrypsinogen by Nitrous Acid (Inaktivatsiya khimotripsinogena azotistoy kislotoy)

PERIODICAL:

Doklady Akademii nauk SSSR, 1958, Vol 122, Nr 6, pp 1073-1075 (USSR)

ABSTRACT:

The author found an extraordinarily strong effect of nitrous acid on chemotrypsinogen (ChTG). Even small quantities deprive the proferment of its potential activity and make it insoluble. The author carried out tests under conditions which at present can be regarded as the best ones for the deamination of proteins by nitrous acid. Already the first tests have shown that a turbidity is formed in a mixture containing NaNO_2 .

An insoluble protein is then gradually precipitated. The potential activity of ChTG is reduced with it. In table 1 the test results are given. It can be seen from them that the reaction takes place intensely even at a nitrite content of 0.005-0.008 M and that at 25° more than half the protein is coagulated after 3-4 days. The ChTG-precipitate that had been formed in the test mixture turned out to be insoluble in a

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Inactivation of Chemotrypsinogen by Nitrous Acid

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neutral reaction. Only when adding larger quantities of urea (800 mg/ml) it passes into the solution. By trypsin it could be split and dissolved (at pH 7.8 at 25°). Nitrous acid is a very intense and specific denaturing agent. The fact that a complete inactivation of chemotrypsinogen and a far-reaching variation of its solubility can be effected by one HNO_2 molecule only, is very important. The results obtained show that in the content of the protein molecule there are special functional groups, the so-called "easily vulnerable" ones which are extremely sensitive to certain kinds of influence and are probably of special importance to the stability and other properties. The modifiable group obviously enters a certain relation which exists for the resistance of the macromolecular structure as a whole. There is not much knowledge of such groups or bindings (relations) and they are undoubtedly very interesting. There are 2 figures, 1 table, and 11 references, 4 of which are Soviet.

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Inactivation of Chemotrypsinogen by Nitrous Acid

SOV/20-122-6-33/49

ASSOCIATION: Institut biokhimii Akademii nauk USSR (Institute of
Biochemistry, AS UkrSSR)

PRESENTED: June 19, 1958, by A. V. Palladin, Academician

SUBMITTED: June 14, 1958

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SOV/69-21-1-17/21

5(4)

AUTHOR: Tsyperovich, A.S.

TITLE: On the Nature of the "Denaturational Stabilization" of Globular Proteins. (O prirode "denaturatsionnoy stabilizatsii" globulyarnykh belkov).

PERIODICAL: Kolloidnyy zhurnal, 1959, Vol XXI, Nr 1, pp 119-125 (USSR)

ABSTRACT: The author describes the results of observations of pseudoequilibria phenomena in the denaturation of globular proteins and of "denaturational stabilization". He also describes the experiments carried out to test the validity of certain assumptions concerning the mechanism of denaturational stabilization. An explanation has been proposed for the nature of "denaturational stabilization" of globular proteins. This rests on the idea of a definite change in the structure of the molecules of native proteins in solutions of

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SOV/69-21-1-17/21

On the Nature of the "Denaturational Stabilization" of Globular Proteins.

denaturizing agents and the formation of an altered system of hydrogen and other linkages, of greater bond strength, formed under unfavorable conditions, which cement the globule while preserving the native type of its structure. There is 1 table and 1 graph and 17 references, 9 of which are Soviet, 6 are English and 2 American.

ASSOCIATION: Institut biokhimii AN UkrSSR (The Institute of Bio-chemistry of the AS UkrSSR)

SUBMITTED: June 14, 1957

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TSYPEROVICH, Aleksandr S6lomonovich

(Inst of Biochemistry of the Acad Sci USSR) - Academic degree of
Doctor of Biological Sciences, based on his defense, 10 December 1954,
in the Council of the Khar'kov State U imeni Gor'kiy, of his
dissertation entitled: "Research into the Denaturation and Stabilization
of Globular Albumens."

Academic degree and/or title: Doctor of Sciences

SO: Decisions of VAK, List no. 25, 10 Dec 55, Ryulleten' MVO SSSR,
Uncl. JFRS/NY 548

TSYPEROVICH, A.S.

TSYPEROVICH, A.S.

"Effect of sulfhydryl groups on the biological properties of tissue proteins" by B.I.Gol'dakhtin. Reviewed by O.S.TSyperovych, Ukr.
biokh.zhur. 28 no.4:515-519 '56. (MLRA 10:9)
(MERCAPTO GROUP) (PROTEIN METABOLISM)

TSYPEROVICH, G.

TSYPEROVICH, G.....Budushchee Petrograda. Ekonomicheskii ocherk s pred. G.
Zinov'eva. Petrograd, Gosizdat, 1922. 171 p. DLC: Unclass.
CSt-H ICU NN

SO: LC, Soviet Geography, Part II, 1951/Unclassified

TSYPEROVICH, GRIGORII VLADIMIROVICH

Avtomatizm. Moskva. Gos. izd-vo ekon. lit-ry, 1932. 140 p. illus.

Automatism.

DLC: TJ213.T8

SO: Manufacturing and Mechanical Engineering in the Soviet Union, Library of Congress, 1953.

PIROG, Petr Ivanovich; DYKLOP, E.P., retsenzent; IGNATENKO, P.L.,
retsenzent; TSYPERSON, A.L., red.; VOLKOVA, V.G., tekhn.
red.

[Principles of construction] Osnovy stroitel'nogo dela.
Moskva, Gostorgizdat, 1963. 199 p. (MIRA 16:8)
(Building)

TSYPIN, A. B.

"The Action of Ionizing Radiation on the Condition of Visual
Analysor of Rabbits," by A. B. Tsypin, Meditinskaya Radiologiya,
Vol 1, No 5, Sep-Oct 56, pp 22-30 ✓

Tests were run on two sets of rabbits which were subjected to either
total or local irradiation by 1,000 r.

Photomicrographs show histological changes in the layer of ganglion
cells of the retina after X-ray action, and electroretinograms and currents
of action of the visual radiation due to afferent impulses entering the
visual cortex show the effect of total and local radiation on rabbits.

The author concludes that not only in the cortex but also in the sub-
cortical visual centers inhibition may arise leading to the blocking of
impulses which are directed into the visual region of the cortex. This
is explained by the fact that a flash of light of great brilliance in a
number of cases is not accompanied by the flow of afferent impulses into
the visual region of the cortex.

Thus, it is assumed that in the pathological process of ionizing radia-
tion (in large doses) are involved all the links of the afferent system
starting with the receptor apparatus and ending in the cortex.

Sum 1258

Country : USSR
Category : Human and Animal Physiology.
Sensory Organs. Eyesight.
Abs. Jour. : Nov Zhuz-Biol., No 22, 1957, 116-114
Author : Isygin, I. A.
Institut. :
Title : The Effect of Blinding Brightness on the Retinal
Function in Frogs.
Orig Pub. : Biofizika, 1957, 2, No 6, 720-723
Abstract : ERG (electro-retinogram) changes were investi-
gated after an isolated eye of a frog was ex-
posed to a flash of light from a strong impulse
lamp (the distance from the eye is not indica-
ted). The retinal electric response was obser-
ved to become weaker and was restored 20-60
minutes later in a number of cases.

Card:

1/1

TSYPIN, A.B.; GRIGOR'YEV, Yu.G. (Moskva)

Quantitative characteristics of the sensitivity of the central nervous system to ionizing radiations. Biul. eksp. biol. i med. 49 no.1:26-30 Ja '60. (MIRA 13:7)

1. Nauchnyy rukovoditel' - prof. M.N. Livanov. Predstavlena deystv. chlenom AMN SSSR V.N. Chernigovskim.
(NERVOUS SYSTEM) (RADIATION--PHYSIOLOGICAL EFFECT)

TSYPIN, A.B.; GRIGOR'YEV, Yu.G.

Method for the exclusion of hearing and destruction of the vestibular apparatus in rabbits. Biol. eksp. biol. i med. no.2:114 P '61.
(MIRA 14:5)

1. Predstavlena deystvitel'nym chlenom AMN SSSR A.V.Lebedinskim.
(VESTIBULAR APPARATUS) (DEAFNESS)

POGOSYAN, R.I.; TRUNOVA, N.M.; TSYPIN, A.B.

Electric reaction of the retina to γ -rays of Co^{60} . Biul. eksp.
biol. i med. 52 no.12:50-53 D '61. (MIRA 14:12)

1. Nauchnyy rukovoditel' - deystvitel'nyy chlen AMN SSSR A.V.
Lebedinskiy. Predstavlena deystvitel'nyy chlen AMN SSSR A.V.
Lebedinskiy.

(RETINA) (GAMMA RAYS--PHYSIOLOGICAL EFFECT)
(ELECTROPHYSIOLOGY)

27.1220

39566

S/205/62/002/003/012/015

1021/1221

AUTHOR: Darenskaya, N. G. and Tsypin, A. B. _____

TITLE: On the relation between radiosensitivity of the nervous system and radiation sickness of animals

PERIODICAL: Radiobiologiya, v. 2, no. 3, 1962, 468-472

TEXT: Sensitivity of the nervous system of male rabbits was measured by means of early responses of biocurrents of the brain after irradiation of the head or the trunk. The animals were shielded with lead blocks 10 cm thick. The dose rate of irradiation of the head was 1.3 r/sec, of the trunk 0.13 r/sec and time of irradiation-5 min. Dose of irradiation of the head—390 r, of the trunk—39 r. Exposure of the animals to whole body irradiation was carried out 30 days after irradiation of head and trunk, the dose rate being 350-326 r/min, the total dose LD_{50/45}—500 r. In the majority of cases a depression in the biocurrents was noted as a reaction of the central nervous system to irradiation in some animals during the first 85 seconds in others after this time. No clinical signs of illness were noted after irradiation of head or trunk. Symptoms of radiation sickness appeared 3-5 days after whole body irradiation. It was found that rabbits with greater sensitivity of the nervous system were more resistant to total irradiation than the less sensitive. It is concluded that radiation sensitivity of the nervous system may be used as an indication of resistance to total irradiation. There are 2 figures and 1 table.

SUBMITTED: August 2, 1961

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DARENKAYA, N. G.; TSYPIN, A. B.

Relation between the radiosensitivity of the nervous system and
the degree of radiation injury in animals. Radiobiologia 2
no.3:468-472 '62. (MIRA 15:7)

(RADIATION SICKNESS) . (NERVOUS SYSTEM)

TSYPIN, A.B.

Effect of ionizing radiation on the condition of the visual analyzer
in rabbits. Med.rad. 1 no.5:22-30 8-0 '56. (MIRA 9:12)

(RADIATIONS, eff.

ionizing, on visual analyzer in cerebral cortex in rabbits)

(CEREBRAL CORTEX, physiol. ionizing

eff. of total body irradiation on visual analyzer in
rabbits)

LIVANOV, M.N.; TSYPIN, A.B.; TRIGOR'YEV, Yu.G.; KHRUSHCHEV, V.G.;
STEPANOV, S.M.; ANAN'YEV, V.M. (Moskva)

Effect of an electromagnetic field on the bioelectric activity
of the cerebral cortex in rabbits. Biul. eksp. biol. i med.
49 no. 63-67 My '60. (MIRA 13:12)

1. Predstavlena deystvitel'nym chlenom AMN SSSR V.V. Parinym.
(ELECTRO MAGNETIC WAVES—PHYSIOLOGICAL EFFECT)
(CEREBRAL CORTEX)

TSYPIN, A.B.; KHOLODOV, Yu.A.

Development of conditioned reflex to ionizing radiation in
fish and rabbits. Radiobiologija 4 no.3:402-408 '67.

(MEM 17:11)

ACCESSION NR: AP3007358

S/0219/63/056/009/0034/0037

AUTHOR: Tsy*pin, A. B.

TITLE: Certain direct reactions of the nervous system to the action of ionizing radiation

SOURCE: Byul. eksper. biologii i meditsiny*, v. 56, no. 9, 1963, 34-37

TOPIC TAGS: depressor nerve, vagus nerve, sympathetic nerve, splachnic nerve, electric activity, gamma irradiation, pulsation changes, stimulating effect of radiation

ABSTRACT: Electric activity of the depressor nerve, vagus nerve, sympathetic nerve, and the intestinal branch of the splachnic nerve was studied in 63 rabbits during Co gamma radiation. Electrodes were placed directly on the nerves and a No. 5 Simens loop oscillograph recorded nerve pulsation which was amplified by a four-cascade amplifier. Background pulsation was recorded before radiation for 5-10 min. When the rabbits were exposed to total Co gamma irradiation (0.5-1.0 r/sec) of 150-300 r, nerve pulsation was recorded during the entire period. After irradiation, pulsation Card1/2

ACCESSION NR: AP3007358

changes were found in the vagus, depressor, sympathetic, and intestinal nerves of almost all the rabbits (57). These changes are expressed by an increase in amplitude and frequency of nerve pulsation and indicate that systems related to the nerves under study are stimulated. Also, pulsation becomes continuous for the half of the animals whose pulsation normally follows a pattern of group discharges. Pulsation intensity weakens after irradiation in some cases and is maintained for 5-20 min in other cases. The author discusses the possibility of ionizing radiation acting as a nerve stimulant. Orig. art. has: 3 figures.

ASSOCIATION: None

SUBMITTED: 17Oct62

DATE ACQ: 09Oct63

ENCL: 00

SUB CODE: AM

NO REF SOV: 008

OTHER: 011

Card 2/2

L 44157-66 EST(m) GD
ACC NR: AT6029626
SOURCE CODE: UR/0000/66/000/000/0103/0117
30
B+1

AUTHOR: Tsydin, A. B.

ORG: none

TITLE: The relationship between radiosensitivity and ¹⁹radioresistance of the nervous system

SOURCE: Voprosy obshchey radiobiologii (Problems of general radiobiology). Moscow, Atomizdat, 1966, 103-117

TOPIC TAGS: radiation biologic effect, gamma ray, ionizing radiation biologic effect, CNS radiation effect, radiobiology, rabbit, frog, biologic radiation damage, gamma irradiation, CNS, reactivity, radiosensitivity, radioresistance

ABSTRACT: Radiosensitivity (reactivity) is defined as a function of the minimum dose of radiation producing any distinct physiological reaction of any kind in an organ, system, tissue, or cell. Radioresistance is a function of the minimum dose causing dysfunction or damage in a cell, tissue, organ, or system. The two concepts are thus not identical. These experiments were undertaken to demonstrate that they are different, and to discover in what ways they might be related. The relationship between radiosensitivity of the organism and the radioresistance of the nervous system was studied in 35 male Chinchilla rabbits (2.5 to 3 kg). Nervous system radiosensitivity was determined by brain biocurrent reactions during γ -irradiation

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ACC NR: AT6029626

of either the head (series 1: 20 rabbits; 1.3 r/sec) or the thorax (series 2: 15 rabbits; 0.13 r/sec) for 5 min. It was found that the animals with the *greater* radiosensitivity (reactivity), in which a biocurrent reaction commenced within the first 100 sec of irradiation, had a much higher resistance (mortality 31.5%) than those in which the reaction appeared after 100 sec or not at all during irradiation. This was true of both series (head alone or thorax alone), though biocurrent reactions to irradiation were more clearly marked in series 2 (the thorax group). It should be noted that excessive reactivity apparently indicates the operation of some unfavorable factor, since 5 out of 8 rabbits reacting very early during irradiation (within the first 13 sec) succumbed. In the main it seems true that prompt biocurrent reactions signal the triggering of protective and compensatory mechanisms which increase radioresistance, and the absence of prompt biocurrent reactions indicates the failure of these protective mechanisms to come into play. Experiments were conducted on 80 frogs to compare the radiosensitivity (reactivity) of the retina to γ -radiation from a short-focus OKFO-1 Co⁶⁰ source with retinal radioresistance (resistance to injury). The criterion of reactivity was the immediate ERG (electroretinogram) reaction (increased activity during γ -irradiation). The criterion of damage was decreased reactivity (also ERG) to adequate light stimulation. Most frog retinas reacted to a γ -ray dose rate of 0.015 r/sec. The latent period of the reaction was about 0.45 sec, giving a total dose at the onset of the reaction of about 0.007 r. The most sensitive specimens reacted to γ -ray stimulation at a rate of 0.001 r/sec. The retina is thus seen to be highly sensitive (reactive) to ionizing radiation. These dose levels did not cause any radiation

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ACC NR: RT6029626

damage: determinations of the functional state of the retina (reactivity to adequate light stimulus) before and after irradiation showed no change. Much larger doses (1000 r or more) were required to cause radiation damage (decreased reactivity to light stimulation) in most cases. The difference in γ -ray dose levels stimulating ERG activity and those causing damage was 6 or 7 orders of magnitude. The activity of the lymphatic heart in frogs during γ -irradiation at 5 r/sec showed this organ to be highly reactive to radiation. A total dose of 5 to 10 r usually produced changes in the amplitude of contraction. At the same time, the dose required to suppress heart action was very high (of the order of 10,000 to 100,000 r). This experiment likewise indicates that there is little relationship between radiosensitivity and radioresistance. Small doses (10 r) of radiation affect the CNS much as any other adequate stimulus. The CNS can react to radiation dose rates of the order of 10^{-2} and 10^{-1} r/sec; normal background radiation is of the order of 0.0005 r/24 hr. The threshold of reactivity is thus 7 or 8 orders of magnitude above the background value. It is concluded that radiosensitivity and radioresistance are not only not identical, but reflect entirely different aspects of the effect of radiation on the CNS. Orig. art. has: 3 figures and 2 tables. [DP]

SUB CODE:06/ SUBM DATE: 23Apr66/ ORIG REF: 021/ OTH REF: 020/ ATD PRESS: 5073

Card 3/3

L 04239-67 EWT(m) GD/RD

ACC NR: AT6031235 SOURCE CODE: UR/0000/65/000/000/0001/0037

AUTHOR: Gorizontov, P. D. ; Darenskaya, N. G. ; Domshlak, M. P. ; 42
Tsy-pin, A. B. B+1

ORG: none

TITLE: General problems of the organism's radiation sensitivity 16

SOURCE: USSR. Gosudarstvennyy komitet po ispol'zovaniyu atomnoy energii. Doklady, 1965. K voprosu ob obshchikh problemakh radiochuvstvitel'nosti organizma, 1-37

TOPIC TAGS: radiation sensitivity, radiation biologic effect, radiation effect

ABSTRACT: The authors investigate the overall sensitivity of living organisms of radiation. The following topics are discussed: variations in sensitivity to radiation in different species, variations in sensitivity to radiation in different strains of the same species, age-related differences in sensitivity to radiation, sex-related differences in sensitivity to radiation, seasonal variations in sensitivity to radiation, and variations in individuals of the same species in sensitivity to radiation. Orig. art. has: 4 figures and 6 tables.

Card 1/1 SUB CODE: 06/SUBM DATE: none/ORIG REF: 134/OTH REF: 017/

• I. 10000-07 (1) (1)
ACC NR: AT6029625

SOURCE CODE: UR/0000/66/000/000/0063/0089

AUTHOR: Gorizontov, P. D.; Barenskaya, N. G.; Domshlak, M. P.; Tsypin, A. B.

ORG: none

TITLE: General radiosensitivity problems of an organism

SOURCE: Voprosy obshchey radiobiologii (Problems of general radiobiology). Moscow, Atomizdat, 1965, 63-69

TOPIC TAGS: radiation biologic effect, central nervous system, blood, biologic metabolism, cardiovascular system, biologic secretion

ABSTRACT: The work represents an extensive literature survey covering various aspects of radiosensitivity differences related to animal species, animal species strain or line, age, sex, time of year and individual radiosensitivity. Of these the latter is most complex and varies most widely. Individual radiosensitivity depends primarily on the functional state of the central nervous system, body metabolism, endocrine system, blood and other systems. Study data demonstrate a high correlation between radiosensitivity of an organism and its general state of reactivity at the time of irradiation. Animals displaying resistance to various harmful factors and physical strain by well expressed adaptive responses of the cardiovascular, respiratory, and nervous systems are generally also more radiosistant. The outlook for changing

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10477-57

ACC NR: AT6029625

radiosensitivity by finding ways to influence the reactivity of an organism appears promising. Orig. art. has: 6 tables and 3 figures. C

SUB CODE: 06/ SUBM DATE: 23Apr66/ ORIG REF: 135/ OTH REF: 017

Card 2/2

KAZARNOVSKIY, Ya.S.; SEMENOV, V.P.; OVCHARENKO, B.G.; TSYPIN, A.N.;
KOLODEYEV, I.P.; LITVINCHUK, V.A.

Certain problems of the layout of equipment for the oxidative
thermal pyrolysis of hydrocarbon gases. Khim.prom. no.1:11-15
Ja '61. (MIRA 14:1)

(Hydrocarbons)

(Oxidation)

(Pyrolysis)

S/064/61/000/001/002/011
B110/B215

2

AUTHORS: Kazarnovskiy, Ya. S., Semenov, V. P., Ovcharenko, B. G.,
Tsy-pin, A. N., Kolodeyev, I. P., Litvinchuk, V. A.

TITLE: Problems of apparatus design for the thermooxidative pyrolysis
of hydrocarbon gases

PERIODICAL: Khimicheskaya promyshlennost', no. 1, 1961, 11-15

TEXT: The pyrolysis of hydrocarbon gases for the production of C_2H_2 and
synthesis gas takes place at $1450-1500^{\circ}C$. Since the intermediate C_2H_2 must
not remain in the reaction zone for more than $0.003-0.01$ sec, short tongues
of flame must be used. As the traditional apparatus by Sachse and Bartho-
lomé with maximum production of C_2H_2 of 3500-5000 tons per year is no longer
sufficient, a new more efficient apparatus has to be designed. Highly turbu-
lent combustion increases the rate of flame propagation and shortens the
tongue considerably. The method of methane pyrolysis applied by B.S.Grinenko
yielded high C_2H_2 concentrations. Its industrial application, however, is

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Problems of apparatus design for...

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rendered difficult due to the almost critical velocity of the gas of 200-250 m/sec required for it, due to the high initial temperature (700-800°C) of the oxygen necessary for the combustion stabilization (7% of the total amount), and due to an increase in temperature of the reaction channel of up to 2000°C. A pilot plant for average gas velocities and efficiencies of approximately 160 Nm³/hr is described. The conical ring nozzle of the burner contained whirl blades. The CH₄/O₂ mixture flowed into the reaction channel at 400°C and approximately 150 m/sec. The oxygen used for stabilization was only 5% of the total O₂ content. Maximum temperature in the reaction zone was 1450°C; gas velocity: approximately 100 m/sec; its stay: 0.0025 sec. The acetylene yield was 8 to 8.4% of the reaction gases plus deposition of carbon black: 3 to 3.5 g/Nm³ of the initial mixture; ratio O₂ consumption = 0.62 to 0.64. According to the author, transition from pilot stage to industrial stage would be most suitable by increasing the number of burners. Fig. 1 shows the pilot plant of 1958. Coke oven gas of the ammonia unit compressed up to 0.36 atm by compressor (4), is purified in cloth filter (5),

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and conveyed to the preheating oven (3). Industrial oxygen compressed up to 0.38 atm by a ЧК -3 (ChK-3) compressor 1 is also conducted into the preheating oven via water separator (2) and filter (5). There, O_2 is heated to $350^{\circ}C$, and the coke oven gas to $450^{\circ}C$. From mixer (6), the mixture is at a temperature of $300^{\circ}C$ conducted into burner (7) and reaction vessel (8) from which the pyrolysis gases flow out at $80-90^{\circ}C$. After leaving scrubber (13) where the latter were purified from carbon black, they pass the water separator and filter before they are used for the production of acetylene. The triple burner of Fig. 3 which is used by the authors, has four spirals for producing whirls. Stabilizing O_2 is conducted through their axles. The following parameters have to be observed exactly to attain an optimum course of reaction: consumption of O_2 and hydrocarbon gas, temperature of preheating, ratios $[O_2] : [\sum C_1]^2$ in the initial mixture, and amounts of water. ✓

The following control and regulation apparatus were used: ДПМ -270 (DPM-270), ДП-410 (DP-410), ДП-280 (DP-280), МШ -ПР-54 (MSSH-Pr-54), ЭПН -09 (EPP-09), and 2РЛ:24В (2RL:24V) on АУС(AUS) blocks. The following average composition

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of the initial gas was determined: $C_2H_4 = 3\%$, $O_2 = 0.8\%$; $CO = 13.8\%$; $H_2 = 6.7\%$; $CH_4 = 62\%$; $N_2 = 13.7\%$. For stabilizing the flame, 3% of the total oxygen (79 to 98% of O_2) was required. The temperature of the reaction channel was approximately $1350^\circ C$, that of the reactor block $100^\circ C$. The total time of reaction was 5000 hr, ratios $[O_2] : [CH_4 + 2C_2H_4] = 0.62$ to 0.72 . Optimum yield of $C_2H_2 = 7.3\%$, its average = 6.9% ; total cracking = approximately 30%, effective cracking approximately 30%. The adiabatic temperatures of the reaction were lower than that of the hydrogen formation according to $CO + H_2O = CO_2 + H_2$. The temperature of preheating ($500^\circ C$) probably causes a reduction in O_2 consumption by 10%. The method is suited for supplementing the production of nitrogen fertilizers for which hydrogen is obtained from coke oven gases. A percentage of approximately 4 t of NH_3 per t of C_2H_2 was obtained. There are 3 figures, 2 tables, and 6 references: 4 Soviet-bloc and 2 non-Soviet-bloc.

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CHERTOK, V.T.; LEYBOVICH, R.Ye.; IVANOV, Ye.B.; SHEGGOLEV, S.V.;
FARTUSHNAYA, R.M.; MUCHNIK, D.A.; TSYPIN, A.Z.

Effect of coking time on the quality of coke. Koks i khim.
no.1:23-25 '64. (MIRA 17:2)

1. Pridneprovskiy sovet narodnogo khozyaystva (for Chertok).
2. Dnepropetrovskiy metallurgicheskiy institut (for Leybovich).
3. Krivorozhskiy metallurgicheskiy zavod (for Ivanov,
Shehgolev, Fartushnaya, Muchnik). 4. Koksokhimstantsiya
(for TSypin).

Sov/68-59-10-6/24

AUTHORS: Tsypin, A.Z., Finkel'berg, G.Ye., and Sklifus, M.A.

TITLE: An Investigation of the Possibility of Decreasing the Temperature at the Top of Coke Ovens

PERIODICAL: Koks i khimiya, 1959, Nr 10, pp 25-26 (USSR)

ABSTRACT: The dependence of the temperature of the under-roof space on the temperature of the top of the coke charge was investigated in order to determine the possibilities of decreasing the temperature of the under roof space to 750-820°C (to prevent excessive pyrolysis of volatile products) without affecting the degree of readiness of the coke in the top part of the oven (temp 900-950°C). For this purpose three ovens in a battery were selected, where the temperature along the height of ovens was controlled by changes in the coefficient of excess air (α - 1.15; 1.25 and 1.34). Mean heating conditions of the experimental ovens - table 1, temperature difference along the height of heating flues - table 2, the distribution of temperature along the height of the tar line plane - table 3, and the distribution of temperatures in the under roof

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An Investigation of the Possibility of Decreasing the Temperature at the Top of Coke Ovens

space - table 4. It was found that on increasing the coefficient of excess air from 1.15 to 1.34, the temperature between the top and bottom in the tar line plane (0.6m and 3.5m from the oven sole) increased by about 100°C. This considerably deteriorated the degree of readiness of the coke in the top part of the oven. At the same time the temperature of the under roof space decreased by only 28°C. It is concluded that in the ovens of the PK-2K type, a decrease in the temperature of the under roof space cannot be obtained without simultaneously lowering the temperature of the top of the coke charge, therefore the latter should be kept at a required minimum. There are 4 tables.

ASSOCIATIONS: Teplotekhstantsiya (A. Z. Tsypin)
Krivorozhskiy metallurgicheskiy zavod (Krivoy Rog
Metallurgical Works)

Card 2/2

AUTHOR: Tsy-pin, A.Z. (Teplotekhistantsiya). 157

TITLE: Methods of increasing the efficiency of recirculation through flues. (Puti uvelicheniya retsirkulyatsii cherez kornyury).

PERIODICAL: "Koks i Khimiya" (Coke and Chemistry), 1957, No.3, pp. 16 - 21 (U.S.S.R.)

ABSTRACT: In some coke oven works a partial recirculation of the combustion products in heating flues of coke oven was applied with some success. The proportion of the combustion product returned for recirculation is about 20-26%. This decreases the calorific value of the gas by 900-1100 kal/n.m³. Special injectors utilising the energy of coke oven gas are used for the recirculation. The author described for the recirculation the use of steam injectors proposed by Arkhipov and Litvinov (Kharkov Coke Oven Works). The steam injector described can produce any degree of recirculation depending on the steam pressure and steam nozzle. Steam consumption per battery (45 ovens) 1/ton/hr. A comparison of the temperature distribution along the tar line plane with operation without recirculation and with recirculation obtained with gas and steam injectors is given (Table 4). Best results were obtained with steam injectors. There are 4 tables and 6 diagrams.

AUTHOR: Tsyppin, A.Z.

SOV/68-58-9-5/21

TITLE: The Influence of Wind on the Heating Conditions of Coke Ovens (Vliyaniye vetra na rezhim obogreva koksovykh pechey)

PERIODICAL: Koks i Khimiya, 1958, Nr 9, pp 18-21 (USSR)

ABSTRACT: The influence of atmospheric conditions on the heating system of coke ovens is discussed. It is pointed out that the hydraulic conditions of the system are controlled on the basis of indications of instruments based on differential manometers, the free end of which is opened to atmospheric air in the control room where the pressure may differ from that in the air tunnel, therefore, to avoid wrong indications an installation of a pressure equalising communication (Fig 3) is recommended. There are 2 tables and 3 figures.

ASSOCIATION: Teplotekhstantsiya

Card 1/1

145 AND 17M CODES

1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

20

Ca

Reinforced plaster plates. B. Toppin. *Stroud. Proc.* 19, No. 2, 20-4(1941); *Chem. Zentr.* 1942, II, 1830.
 Plates made from a gypsum-lime mixture, reinforced by wooden frames, contg. sawdust filling (1 part gypsum, 0.5 part lime paste 0.5 part sawdust, 0.7 part H₂O), can be formed for any shape and used for ceilings, walls, corners and cornices. They are light and can easily be nailed. The production process is described. J. M. Noy

COMMON ELEMENTS

COMMON VARIANTS

ASB-5LA METALLURGICAL LITERATURE CLASSIFICATION

FROM DOWN

1ST 2ND 3RD 4TH 5TH 6TH 7TH 8TH 9TH 10TH 11TH 12TH 13TH 14TH 15TH 16TH 17TH 18TH 19TH 20TH

21ST 22ND 23RD 24TH 25TH 26TH 27TH 28TH 29TH 30TH 31ST 32ND 33RD 34TH 35TH 36TH 37TH 38TH 39TH 40TH

41ST 42ND 43RD 44TH 45TH 46TH 47TH 48TH 49TH 50TH

KHARITONSKIY, M.; TSYPIN, I.

Sloping slat conveyer. Sov.torg. 33 no.6:72-73 Je '60.
(MIRA 13:7)

(Conveying machinery)

GONCHAROV, N.; TSYPIN, I.

Assembly line for processing potatoes. Sov.torg. 34, no.5:51-53
My '61. (MIRA 14:5)

1. Nachal'nik Tsentral'nogo konstruktorskogo byuro trgovogo
mashinostroyeniya (for Goncharov). 2. Glavnyy konstruktor Tsentral'-
nogo konstruktorskogo byuro trgovogo mashinostroyeniya (for
TSypin).
(Potatoes) (Food industry—Equipment and supplies)

KALYAZIN, G.A., inzh.; TSYPIN, I.M., inzh.

Mechanization of food-product processing in Hungary. M&h.1
avtom.proizv. 17 no.1:54-57 Ja '63. (MIRA 16:2)
(Hungary—Food industry)

AKULOV, L.S.; ACHIL'DIYEV, U.I.; VOLOSOV, G.D.; GORDON, L.I.; GRIN, G.V.;
GRIMOV, M.A.; KIRILLOV, A.Ya.; LIPSHITS, N.I.; MITROPOL'SKIY, A.V.;
RAYSKIY, I.D.; SMIRNOV, V.B.; PAYVUSOVICH, A.Kh.; FEDOROVA, I.Yu.;
TSYPIN, I.M.; CHEKHOVICH, D.I.; ISKOVA, A.K., red.; SUDAK, D.M.,
tekh.n.red.

[Handbook on equipment for commercial enterprises and public food
service] Spravochnik po oborudovaniyu dlia predpriatii torgovli
i obshchestvennogo pitaniia. Moskva, Gos.izd-vo torg.lit-ry,
1959. 322 p. (MIRA 12:12)

1. Inzhenerno-tekhnicheskiye rabotniki Upravleniya torgovogo
oborudovaniya i Tsentral'nogo konstruktorskogo byuro torgovogo
mashinostroyeniya (for all except Ishkova, Sudak).
(Business enterprises--Equipment and supplies)
(Restaurants, lunchrooms, etc.--Equipment and supplies)

AKULOV, L.S.; ACHIL'DIYEV, U.I.; VOLOSOV, G.D.; GORDON, L.I.; GRIN, G.V.;
GROMOV, M.A.; KIRILLOV, A.Ya.; LIFSHITS, N.I.; MITROPOL'SKIY, A.V.;
RAYSKIY, I.D.; SMIRNOV, V.B.; FAYVUSOVICH, A.Kh.; FEDOROVA, I.Yu.;
TSYPIN, L.M.; CHEKHOVICH, D.I.; ISHKOVA, A.I., red.; KISELEVA, A.A., tekh.red.

[Handbook on equipment for commercial enterprises and public food
service] Spravochnik po oborudovaniyu dlia predpriatii trgovli i
obshchestvennogo pitaniia. Izd.2., dop. Moskva, Gos. izd-vo torg.
lit-ry, 1960. 333 p. (MIRA 14:10)
(Restaurants, lunchrooms, etc.--Equipment and supplies)

CHURINOV, M.V.; TSYPINA, I.M.

Role of recent tectonic movements in the development of landslide
processes on the southern shore of the Crimea. Vop. gidrogeol.
i inzh. geol. no. 18:83-92 '59. (MIRA 14:5)
(Crimean Mountains --Geology, Structural)
(Crimean Mountains -Landslides)

GUTERMAN, V.M.; GARBER, M.Ye.; GAMOL'SKAYA, Z.M.; Prinsipali uchastiye: ZELIKMAN, I.D.; TSYPIN, I.I.; KOL'MANSON, V.I.; KISELEVA, V.S.; MIKHAYLOVSKAYA, S.S.; GRINEBERG, A.Ya.; MARKIN, I.S.

Raising the wear resistance of equipment parts operating in a hydraulic abrasive medium. Ugol' 39 no.9:61-63 S '64. (HIRA 17:10)

1. Vsesoyuznyy nauchno-issledovatel'skiy i proyektno-tekhnologicheskii institut ugol'nogo mashinostroyeniya.

7
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see

High-strength iron having spheroidal graphite. I. Prop-

erties of iron. "Central" Nauch-Issledovatel. Inst. Tekhnol.
I. Mashinostroeniya, Ministerstvo Tsvet. Mashinostroeniya
S.S.S.R. (Moscow) 55, (1973). Title: Section of paper.
comprises: Basic properties of high-strength iron with
spheroidal graphite and possibilities of its use in place of
steel in machine building. B. S. Mil'man, pp. 5-15; Cast-
ing properties of iron with spheroidal graphite. N. I.
Klochnev, pp. 16-36; Mechanical properties of iron with
spheroidal graphite. I. O. Tsygin, pp. 37-51; Effect of
thermal treatment on the structure and mechanical proper-
ties of iron with spheroidal graphite. N. M. Zarubin and
I. O. Tsygin, pp. 55-60; Wear resistance of iron with
spheroidal graphite in abrasive use. V. G. Timofeyev, pp.
70-85.
M
JJP

Tsypin, I. O.

MIL'MAN, B.S., laureat Stalinskey premii, kandidat tekhnicheskikh nauk;
TSYPIN, I.O., laureat Stalinskey premii, kandidat tekhnicheskikh
nauk; DUBASOV, P.I., kandidat tekhnicheskikh nauk.

Casting standards for high-strength spheroidal-graphite cast iron.
Standartizatsiia no.6:45-48 N-D '55. (MLRA 9:2)
(Cast iron--Standards)

✓ Antifrictional properties of nodulized iron. I. O. Tsypin, P. I. Durasov, and N. P. Verzhbitskii. *Voprosy Mashinostroyeniya* 33, No. 9, 56-61(1955).—A series of nodulized irons with C 2.60-3.31, Si 2.26-2.58, Mn 0.53-0.75, S 0.009, P 0.10-0.21, and Mg 0.058-0.093% contg. 5-45% ferrite was compared from the frictional standpoint with graphitic iron, malleable iron, 4.4% Sn-1.2 Zn-1.0 Pb bronze, and with 3.5 Fe-9.0 Al bronze. Sliding friction against a steel roll was employed at a speed of 0.42 m./sec. for dry and 1.1-3.5 m./sec. for oil lubricated tests at 14-50 kg./sq. cm. loads, the grading being done by weighting. In dry friction, nodulized Fe with less than 16% ferrite had the highest resistance of all which decreased with increasing ferrite. The highest coeff. of dry friction was that of graphitic iron and the lowest that of pearlitic nodulized iron from the iron group, while that of bronze was about half as large. A max. bearing capacity was shown by bronzes and by graphitic iron.

I. D. Gat

TSYPIN, Izrail' Osipovich, kand.tekhn.nauk; OKUNEVA, A.I., inzh., vedushchiy red.; TUCHINSKIY, N.V., inzh, red.; SIMAKOV, A.T., tekhn.red.

[Alloyed antifriction magnesium iron] Legirovannyi antifriktsionnyi magnievyi chugun. Moskva, Filial Vses.in-ta nauchnoi i tekhn. inform., 1956. 8 p. (Informatsiia o nauchno-issledovatel'skikh rabotakh. Tema 2, no.I-56-223) (MIRA 10:12)
(Iron-magnesium alloys)

AVRASIN, Ya.D., kandidat tekhnicheskikh nauk; BERG, P.P., professor, doktor tekhnicheskikh nauk, BERNSHTEYN, M.L., kandidat tekhnicheskikh nauk; GEMEROZOV, P.A., starshiy nauchnyy sotrudnik; GLINER, B.M., inzhener; DAVIDOVSKAYA, Ye.A., kandidat tekhnicheskikh nauk; YELCHIN, P.M., inzhener; YEREMIN, N.I., kandidat fiziko-matematicheskikh nauk; IVANOV, D.P., kandidat tekhnicheskikh nauk; KNOROZ, L.I., inzhener; KOBRIN, M.M., kandidat tekhnicheskikh nauk; KORITSKIY, V.G., dotsent; KROTKOV, D.V., inzhener; KUDRYAVTSEV, I.V., professor, doktor tekhnicheskikh nauk; KULIKOV, I.V., kandidat tekhnicheskikh nauk; LEPETOV, V.A., kandidat tekhnicheskikh nauk; LIKINA, A.F., inzhener; MATVEYEV, A.S., kandidat tekhnicheskikh nauk; MIL'MAN, B.S., kandidat tekhnicheskikh nauk; PAVLUSHKIN, N.M., kandidat tekhnicheskikh nauk; PTITSYN, V.I., inzhener [deceased]; RAKOVSKIY, V.S., kandidat tekhnicheskikh nauk, RAKHSHTADT, A.G., kandidat tekhnicheskikh nauk; RYABCHENKOV, A.V., professor, doktor khimicheskikh nauk; SIGOLAYEV, S.Ya., kandidat tekhnicheskikh nauk; SMIRYAGIN, A.P., kandidat tekhnicheskikh nauk, SUL'KIN, A.G., inzhener; TUTOV, I.Ye., kandidat tekhnicheskikh nauk, KHRUSHCHOV, M.M., professor, doktor tekhnicheskikh nauk; TSYPIN, I.O., kandidat tekhnicheskikh nauk; SHAROV, M.Ya., inzhener; SHERMAN, Ya.I., dotsent; SHMELEV, B.A., kandidat tekhnicheskikh nauk; YUGANOVA, S.A., kandidat fiziko-matematicheskikh nauk; SATEL', E.A., doktor tekhnicheskikh nauk, redaktor; SOKOLOVA, T.F., tekhnicheskii redaktor

[Machine builder's reference book] Spravochnik mashinostroitelia; v shesti tomakh. izd-vo mashinostroit. lit-ry. Vol.6. (Glav. red.toma E.A.Satel'. Izd. 2-oe, ispr. i dop.) 1956. 500 p. (MLBA 9:8)
(Machinery--Construction)

TSYPIN, I.O. kandidat tekhnicheskikh nauk; RATAYEVA, N.B., kandidat tekhnicheskikh nauk.

Antifriction cast iron. Standartizatsia no.2:62-63 Mr-Ap-'57.
(MIRA 10:6)

1. Tsentral'nyy nauchno-issledovatel'skiy institut tyazhelego mashinostroyeniya.

(Cast iron--Standards)

12/1/77, 1-2
GOROZHANKIN, Arseniy Nikolayevich; TSYPIN, I.O., kand.tekhn.nauk, red.;
MBZHOVA, V.A., red.izd-va; GERASIMOVA, Ye.S., tekhn.red.; MODEL',
B.I., tekhn.red.

[Improving the smelting of iron with liquid fuel] Usovershenstvo-
vanie plavki chuguna na zhidkom toplive. Moskva, Obs. nauchno-
tekhn. izd-vo mashinostroit. lit-ry, 1958. 76 p. (MIRA 11:4)
(Smelting)

Tsypin, I.O.

AUTHOR: Tsypin, I.O., Candidate of Technical Sciences 28-58-2-3/41

TITLE: Some Peculiarities of the Standardization of Structural Cast Iron (Nekotoryye osobennosti standartizatsii konstruktsionnogo chuguna)

PERIODICAL: Standartizatsiya, 1958, Nr 2, pp 12-13 (USSR)

ABSTRACT: The author considers the necessity that Soviet "GOST" standards for cast iron include recommendations for technological processes which determine the particular properties required for different specific applications. The properties of high-strength spherical-graphite cast iron, replacing steel in many applications, are not identical with the properties of steel, but designers do sometimes require this cast iron with exactly the same characteristics which were formerly required of steel. A photograph of several high-strength cast iron specimens bent in cold condition is given to illustrate the deformation capacity of this new metal. There is 1 photograph.

ASSOCIATION: TsNIIMASH

AVAILABLE: Library of Congress
Card 1/1

1. Cast iron-Standards 2. Standardization-USSR

BERG, P.P., doktor tekhn.nauk; BIDULYA, P.N., doktor tekhn.nauk; GRECHIN, V.P., kand.tekhn.nauk; DOVGALEVSKIY, Ya.M., kand.tekhn.nauk; ZHUKOV, A.A., inzh.; ZINOV'YEV, N.V., inzh.; KRYLOV, V.I., inzh.; KUDRYAVTSEV, I.V., doktor tekhn.nauk; LANDA, A.F., doktor tekhn.nauk; LEVI, L.I., kand.tekhn.nauk; MALAKHOVSKIY, G.V., inzh.; MIL'MAN, B.S., kand.tekhn.nauk; SOBOLEV, B.F., kand.tekhn.nauk [deceased]; SKOMOROKHOV, S.A., kand.tekhn.nauk; STEPIN, P.I., kand.tekhn.nauk; USHAEV, A.D., kand.tekhn.nauk; FRIDMAN, L.M., inzh.; KHRAPKOVSKIY, E.Ya., inzh.; TSYPIN, I.O., kand.tekhn.nauk; SHKOL'NIKOV, N.M., kand.tekhn.nauk; POGODIN-ALEKSEEV, G.I., prof., doktor tekhn.nauk, red.; BOLKHOVITINOV, N.F., prof., doktor tekhn.nauk, red.toma; LANDA, A.F., prof., doktor tekhn.nauk, red.toma; RYBAKOVA, V.I., inzh., red.izd-va; SOKOLOVA, T.F., tekhn.red.

[Handbook on materials used in the machinery industry] Spravochnik po mashinostroitel'nym materialam; v chetyrekh tomakh. Pod red. G.I.Pogodina-Alekseeva. Moskva, Gos.nauchno-tekhn.izd-vo mashinostroit.lit-ry. Vol.3. [Cast iron] Chugun. Red.toma N.F.Bolkhovitov i A.F.Landa. 1959. 359 p. (MIRA 13:1)
(Machinery industry) (Cast iron)

18(7)

SOV/128-59-3-4/31

AUTHOR: Tsy-pin, I.O., Candidate of Technical Sciences

TITLE: Some Aspects of the Structural Strength of Cast Iron

PERIODICAL: Liteynoye proizvodstvo, 1959, Nr 3, pp 7-10 (USSR)

ABSTRACT: Some of the criteria for the evaluation of the structural strength of cast-iron have become outdated and, while contradicting the recent theoretical and technological developments, hamper a wider use of cast-iron in important constructions. Because of the structural and chemical complexity of cast-iron, the usual criteria of mechanical properties do not reveal fully its specific characteristics and lead, in some cases, to erroneous conclusions. For instance, the low specific elongation of cast-iron has led many engineers to believe that cast-iron does practically not undergo plastic deformation, and this belief has prevented cast-iron from being used more widely in important constructions. The author proceeds to evaluating the mechanical properties of magnesium cast-iron and

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Some Aspects of the Structural Strength of Cast Iron

suggests the introduction of a new, important criterion for structural strength of materials: that of cyclic ductility. The fatigue strength of magnesium cast-iron can be favorably influenced by various kinds of surface treatment. The structure of cast-iron in general and the form in which graphite is present in it in particular influence, among other things, its ductility. By regulating the structure of cast-iron and, especially, the structure of its graphite content, durable, shock-resistant material can be obtained. However, the comparison of different kinds of cast-iron shows no connection between the ductility under impact and the resistance of cast-iron to impact loads that produce but moderate stresses in it. It appears that the absolute values of ductility under impact cannot serve for comparative evaluation of materials. Comparisons of that order should be based on an index characterizing the behavior of cast-iron under impact stressed similar to the stresses that actually

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Some Aspects of the Structural Strength of Cast Iron

occur in constructions. There are 8 tables and 19 references, 16 of which are Soviet, 2 English and 1 German.

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18 (5)

SOV/128-59-11-14/24

AUTHORS: Tsypin, I.O., Candidate of Technical Sciences, and
~~Sin, M.K.~~, Engineer

TITLE: Study of TsNIITMASH Cast Iron Melting Installation

PERIODICAL: Liteynoye proizvodstvo, 1959, Nr 11, pp 31-35 (USSR)

ABSTRACT: Existing cupolas do not meet the requirements made of cast iron melting installations, as they do not ensure a sufficient overheating of cast iron and do not permit regulating its chemical composition. The organization TsNIITMASH in co-operation with NIIST, Teploproyekt and GIPROGazochistka has developed a closed cupola (Fig 1) where all gases pass through a two-stage recuperator; the carbon monoxide contained in the cupola gases is burned up in a special chamber before entering the recuperator. The installation is equipped with registering devices permitting determination of the gas- and air temperature in different zones, consumption of cold and hot air, of pressure and of gas composition. A list of main controlling devices and their

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Study of TsNIITMASH Cast Iron Melting Installation

purpose is given in Table 1. The cupola shaft is 60 cm in diameter; number of tuyere rows - 2; number of tuyeres in a row - 4; distance between the first and the second row - 27 cm; closed top. Recuperator - two-stage, radiational with the air speed 11 m/sec; material of pipes - steel X251, length - 4.6 m. Extractor: Inside diameter - 89 cm; bunker capacity - 1.1 m³; gas inlet nipple size - 234 x 622 mm; gas outlet nipple size - 300 x 650 mm; exhaust pipe inside diameter - 520 mm. Scrubber: Centrifugal, Type VTI with a diameter of 950 mm; inside diameter - 850 mm; number of nozzles - 6; nozzle mouth diameter - 6.5 mm; inside section of the inlet nipple - 0.23 x 0.69 m. Blower: Efficiency - 5700 m³/hour; pressure - 1000 m of water column; rotor speed - 3930 rpm; power - 40 kw. Exhaust fan: Ventilator, Type VVD-11; rarefaction - 600 mm of water column; electromotor, Type AO-32-10; rotor speed - 1440 rpm; motor power - 40 kw. It was established that during the first stage of melting, the cupola

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Study of TsNIITMASH Cast Iron Melting Installation

gases contain little CO₂ and much CO; later on, CO₂ content increases and, after 1-1.5 hours, becomes practically stabilized. Table 2 gives pertinent figures showing the contents of CO₂ and O₂ at different moments from the beginning of the melting process. The maximum air temperature at the output from the radiational recuperator was: for the lower selection of cupola gases - 710°C; for the upper selection - 600°C. Repeated control has shown that cupola gases contained after passing the burning chamber 0.0 - 0.2% CO, which is quite tolerable. There are 4 graphs, 5 tables, 2 diagrams and 10 references, 7 of which are Soviet, 2 German and 1 English.

Card 3/3

TSYPIN, I.O., kand.tekhn.nauk

Criteria for the evaluation of engineering properties of high-
strength cast iron. Vest.mashinostr. 43 no.3:61-63 Mr '63.
(MIR^a 16:3)

(Cast iron—Testing)

TSYPIN, I.O.; MIL'MAN, B.S.

I.V.Kudriavtseva's, N.M.Savina's, A.F. Astashova's article "Fatigue strength of steel and cast iron power press crankshafts." Kuz.-shtam. proizv. 5 no.1:45 Ja '63. (MIRA 16:2)
(Cast iron—Fatigue)

MIL'MAN, B.S.; LYASS, A.M.; TSYPIN, I.O.; KRAPUKHIN, V.M.; VALISOVSKIY, I.V.;
KLOCHNEV, N.I.; AVERBUKH, N.M.; KADNITSOV, V.G.; LIPNITSKIY, A.M.;
RUSSIYAN, S.V.; SKOBNIKOV, K.M.

"Iron founding handbook" edited by [doktor tekhn.nauk, prof.] N.G.
Girshovich. Book review by B.S.Mil'man and others. Lit. proizv.
no.8:46-47 Ag '62. (MIRA 15:11)
(Iron founding--Handbooks, manuals, etc.)
(Girshovich, N.G.)

KLOCHNEV, Nikolay Ivanovich, kand. tekhn. nauk; Priginal uchastiye
TSYPIN, I.O., kand. tekhn. nauk; VASHCHENKO, K.I., doktor
tekhn. nauk, prof., retsenzent; CHERNYAK, O.V., inzh., red.
SMIRNOVA, G.V., tekhn. red.

[Technology of casting high-strength iron with spheroidal
graphite] Tekhnologiya proizvodstva otlivok iz vysokoprochnogo
chuguna s sharovidnym grafitom. Moskva, Mashgiz, 1962. 170 p.
(MIRA 15:6)

(Iron founding)

GORSHKOV, Andrey Andreyevich, doktor tekhn. nauk; VOLOSHCHENKO, Mikhail Vasil'yevich, kand. tekhn. nauk; DUBROV, Vasiliy Vladimirovich, kand. tekhn. nauk; KRAMARENKO, Oksana Yur'yevna, kand. tekhn. nauk; MIL'MAN, B.S., kand. tekhn. nauk, retsenzent; KLOCHNEV, N.I., kand. tekhn. nauk, retsenzent; TSYPIN, I.O., kand. tekhn. nauk, retsenzent; RIKBERG, D.B., red.; GORNOSTAYPOL'SKAYA, M.S., tekhn. red.

[Handbook on iron founding of high-strength pig iron] Spravochnik po izgotovleniu otlivok iz vysokoprochnogo chuguna. By A.A.Gorshkov i dr. Pod obshchei red. A.A.Gorshkova. Moskva, Mashgiz, 1961. 297 p. (MIRA 15:2)

1. Chlen-korrespondent Akademii nauk Ukrainskoy SSR (for Gorshkov).

(Iron founding)

GOROZHANKIN, A.N., kand.tekhn.nauk; NOVITSKIY, V.K., kand.tekhn.nauk;
 KRYANIN, I.R., doktor tekhn.nauk; IODKOVSKIY, S.A., kand.tekhn.
 nauk; LADYZHENSKIY, B.N., kand.tekhn.nauk; MIL'MAN, B.S., kand.tekhn.
 nauk; KLOCHNEV, H.I., kand.tekhn.nauk; TSYPIH, I.O., kand.tekhn.
 nauk; LEVIN, M.M., kand.tekhn.nauk; BALDOV, A.L., inzh.; LYASS,
 A.M., kand.tekhn.nauk; CHERNYAK, B.Z., kand.tekhn.nauk; ASTAF'YEV,
 A.A., kand.tekhn.nauk; YERMAKOV, K.A., inzh.; GRIBOYEDOV, Yu.N.,
 kand.tekhn.nauk; MYASOYEDOV, A.N., inzh.; BOGATYREV, Yu.M., kand.
 tekhn.nauk; UNKSOV, Ye.p., doktor.tekhn.nauk, prof.; SHOFMAN, L.A.,
 kand.tekhn.nauk; PERLIN, P.I., inzh.; MOSHNIN, Ye.N., kand.tekhn.
 nauk; PROZOROV, L.V., doktor tekhn.nauk; CHERNOVA, Z.I., tekhn.
 red.

[Some technological problems in the manufacture of heavy machinery]
 Nekotorye voprosy tekhnologii tiazhelogo mashinostroeniia. Moskva,
 Gos.nauchno-tekhn.izd-vo mashinostroit. lit-ry. Part 1, [Steel smelt-
 ing and casting; founding; heat treatment; shaping metals by pres-
 sure] Vyplavka i razlivka stali, tselince-proizvolstvo, termiche-
 skaya obrabotka, obrabotka metallov davleniem. 1960. 266 p. (Moscow.
 Tsentral'nyi nauchno-issledovatel'skii institut tekhnologii i mashi-
 nostroeniia. [Trudy] no. 98). (MIRA 13:7)

(Steel)

(Founding)

(Forging)

~~TSYPIN, I.O.~~

Saving metals in founding. Mashinostroitel' no.12:3-6 D '60.
(MIRA 13:12)

(Founding)

TSYPIN, I.O.

The TSNIMASH iron-melting unit. Biul.tekh.-ekon.inform.
no.1:13-15 '60. (MIRA 13:5)
(Cupola furnaces)

TSYPIN, G. S.
 ALFEROV, A. A.; ARTEMKIN, A. A.; ASHKENAZI, Ye. A.; VINOGRADOV, G. P.; GALEYEV, A. U.,
 GRIGOR'YEV, A. M.; D'YACHENKO, P. Ye.; ZALIT, N. N.; ZAKHAROV, P. M.;
 ZOBNIN, N. P.; IVANOV, I. I.; IL'IN, I. P.; KMETIK, P. I.; KUDRYASHOV, A. T.,
 LAPSHIN, F. A.; MELYARCHEUK, V. S.; PERTSOVSKIY, L. M.; POGODIN, A. M.;
 RUDOY, M. L.; SAVIN, K. D.; SIMONOV, K. S.; SITKOVSKIY, I. P.;
 SITNIK, M. D.; TETEREV, B. K.; TSETYRKIN, I. Ye.; TSUKANOV, P. P.;
 SHADIKYAN, V. S.; ADELUNG, N. N., retsenzent; AFANAS'YEV, I. Ye., retsenzent;
 VLASOV, V. I., retsenzent; VOROB'YEV, I. Ye., retsenzent; VORONOV, N. M.,
 retsenzent; GRITCHENKO, V. A., retsenzent; ZHEREBIN, M. M., retsenzent;
 IVLIYEV, I. V., retsenzent; KAPORTSEV, N. V., retsenzent; KOCHUROV, P. M.,
 retsenzent; KRIVORUCHKO, N. Z., retsenzent; KUCHKO, A. P., retsenzent;
 LOBANOV, V. V., retsenzent; MOROZOV, A. S., retsenzent; ORLOV, S. P.,
 retsenzent; PAVLUSHKOV, E. D., retsenzent; POPOV, A. N., retsenzent;
 PROKOF'YEV, P. F., retsenzent; RAKOV, V. A., retsenzent; SINEGUEOV, N. I.,
 retsenzent; TEREHIN, D. F., retsenzent; TIKHOMIROV, I. G., retsenzent;
 URBAN, V., retsenzent; FIALKOVSKIY, I. A., retsenzent; CHEPYZHIEV, B. F.,
 retsenzent; SHEBYAKIN, O. S., retsenzent, SHCHERBAKOV, P. D., retsenzent;
 GARNYK, V. A., redaktor; LOMAGIN, N. A., redaktor; MORDVINKIN, N. A.,
 redaktor; NAUMOV, A. N., redaktor; POBEDIN, V. F., redaktor; RYAZANTSEV, B. S.,
 redaktor; TVERSKOY, K. N., redaktor; CHEREVATYY, N. S., redaktor; ARSHIROV, I. M.,
 redaktor; BABELYAN, V. B., redaktor; BERNGARD, K. A., redaktor;
 VERSHINSKIY, S. V., redaktor; GAMBURG, Ye. U., redaktor; DERIBAS, A. T.,
 redaktor; DOMBROVSKIY, K. I., redaktor; KORNEYEV, A. I., redaktor; MIKHEYEV, A. P.,
 redaktor; MOSKVIN, G. H., redaktor; RUBINSHTEYN, S. A., redaktor; TSYPIN, G. S.,
 redaktor; CHERNYAVSKIY, V. Ye., redaktor; CHERNYSHEV, V. I., redaktor;
 CHERNYSHEV, M. A., redaktor; SHADUR, L. A., redaktor; SHISHKIN, K. A.,
 REDAKTOR.

... redaktor; BRODSKIY.
... izda-
...
... redaktor; BALANDIN, A.P., inzhener, redaktor izda-
; SHMEL'KINA, S.I., tekhnicheskiy redaktor
of cutting tools] Konstruirovaniye rezhushchego instrumenta.
G.I.Granovskogo. Moskva, Gos. nauchno-tekhn. izd-vo mashino-
lit-ry, 1956. 141 p.
(MLRA 9:9)

ALFEROV, A. A.----(continued) Card 2

(Railroad handbook) Spravochnaya knizhka zheleznodorozhnika. Izd
3-e, ispr. i dop. Pod obshchei red. V. A. Gornyka. Moskva. Gos.
transp. zhel-dor. izd-vo, 1956, 1103 p. (MLRA 9:10)

1. Nauchno-tekhnicheskoye obshchestvo zheleznodorozhnogo transporta.

(RailroadS)

TSYPKIN, I. L.

"In Commemoration of the 70th Anniversary of the Birth of Professor Sergey Romanovich Mirotvortsev," Khirurgiya, No.3, pp 76-77, 1949

Translation U-4792, 9 Oct 53

PA 63/49T61

TSYFKIN, I. L.

USSR/Medicine - Scientists
Medicine - Surgery

Mar 49

"In Honor of the Seventieth Birthday of Professor
Sergey Romanovich Mirotvortsev," I. L. Tsytkin,
1 3/4 pp

"Khirurgiya" No 3

Reviews achievements of Mirotvortsev, Hon Worker
of Sci and Active Mem, Acad Med Sci, born 16 (29) May
1878 in Ust'-Medveditskaya, Tsaritsynskaya Rayon,
Stalingrad Oblast, who is director of Saratov State
Sci Res Inst of Plastic Surg and Orthopedics.

FDD

63/49T61

TSYPKIN, I.S. (Moscow)

Clinical significance of inspecting the contents of the stomach.
Med. sestra no.6:18-23 Je '54. (MLRA 7:8)
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TSYPKIN, I.S. (Moskva)

Examination of the contents of the duodenum. Med. sestra 15 no.2:
22-25 F '56 (MIRA 9:4)

(INTESTINES--DISEASES) (GALL BLADDER--DISEASES) (DUODENUM)

TSYPKIN, I.S.
POGOZHEVA, L.N.; TSYPKIN, I.S.

Significance of microscopic examination of urine in the diagnosis of bladder neoplasms. Urologia, 22 no.1:27-31 Ja-F '57 (MLRA 10:5)

1. Iz urologicheskoy kliniki (zaveduyushchiy-professor A.P. Frumkin)
TSentral'nogo instituta usovershenstvovaniya vrachey i laboratorii
bol'nitsy imeni S.P. Botkina (zaveduysuchchiy-professor Ye.A. Kost)
(BLADDER, neoplasms
diag., cytol. exam. of urine)
(URINE
cytol. exam. in diag. of bladder cancer)

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After Repeated Operative Interferences." Sub 7 Oct 52, Acad Med Sci USSR
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stations. Transp.stroi. 9 no.3:43-45 Mr '59. (MIRA 12:4)
(Railroads--Stations)

LUGOVY, P.A., inzhener; GALKIN, N.V., inzhener; TSYPIN, L.G., inzhener.

Determining the length of locomotive runs in using electric
and diesel traction. Zhel. dor. transp 38 no.8:8-15 Ag 156.
(MLRA 9:10)

(Railroads--Management)

LUGOVOY, P.A., inzh.; TSYPIN, L.G., inzh.; GIBSHMAN, A.Ye., prof.,
doktor tekhn. nauk, retsenzent; USHAKOV, S.S., doktor
tekhn. nauk, retsenzent; KRISHTAL', L.I., red.;
VOROTNIKOVA, L.F., takhn. red.

[Technical and economic calculations in the reorganiza-
tion of railroads] Tekhniko-ekonomicheskie raschety pri
rekonstruktsii zheleznykh dorog. Moskva, Transzheldorizdat,
1963. 246 p. (MIRA 16:4)

(Railroad engineering)

BLINOVA, L.I.; TSYPIN, L.M.; SHEYNBERG, A.I.

Content of riboflavin and ascorbic acid in the cornea in burns
of the eye. Vest.oft. no.6:48-53 '61. (MIRA 14:12)

1. Kafedra glaznykh bolezney (zav. - prof. A.B. Katsnel'son)
Chelyabinskogo meditsinskogo instituta i glaznoye otdeleniye
oblastnoy klinicheskoy bol'nitsy.
(~~EYE~~-WOUNDS AND INJURIES) (CORNEA)
(RIBOFLAVIN) (ASCORBIC ACID)

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APPROVED FOR RELEASE: 08/31/2001

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Tsypin, M.A.
FAYZULLIN, F.F.; TSYPIN, M.A.

Reply to the remark of V.IA. Anosov regarding our article
"Physicochemical analysis of the system tribromo phosphorus
tribromide-benzaldehyde in benzene." Uch. zap. Kaz. un. 113
no.8:129-130 '53. (MLRA 10:5)
(Phosphorus bromides) (Benzaldehyde) (Anosov, V.IA.)

SIDOROV, N.; STUDNICHKA, Yu.; ARTEM'YEV, P.; YAL'YMOV, P.; BOYKO, N.;
SEKUNOV, S.; TSYPIN, M.

Effectiveness of the centralization the accounting and tabulating
machines. Den. i kred. 17 no. 5:53-59 My '59. (MIRA 12:10)

1. Nachal'nik Gorupravleniya Chernigovskoy oblastnoy kontory Gosbanka (for Sidorov).
 2. Glavnyy bukhgalter Gorupravleniya Chernigovskoy obl. kontory Gosbanka (for Studnichka).
 3. Glavnyy bukhgalter Kamensk-Ural'skogo otdeleniya Gosbanka Sverdlovskoy oblasti (for Artem'yev).
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 5. Glavnyy bukhgalter Arzamasskogo otdeleniya Gosbanka Gor'kovskoy oblasti (for Boyko).
 6. Glavnyy bukhgalter Georgiyevskogo otdeleniya Gosbanka Stavropol'skogo kraya (for Sekunov).
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- (Machine accounting)

TSYPIN, M.; KOSOV, A.; KOLBASOV, Ya.; GABRILOVICH, I.; GERTSOVSKIY, Ye.

Issuing credit on payment documents in transit certified by economic
organs. Den. i kred. 16 no.5:41-45 My '58. (MIRA 11:6)

1. Glavnyy bukhgalter Samarkandskoy oblastnoy kontory (for TSypin).
2. Glavnyy bukhgalter Zhitnyanskogo spirto-sovkhokombinata Bryanskoy oblasti (for Kosov).
3. Starshiy kreditnyy inspektor Azerbaydzhanskoy respublikanskoy kontory Gosbanka (for Kolbasov).
4. Glavnyy bukhgalter Belorusskoy respublikanskoy kontory Gosbanka (for Gabrilovich).
5. Glavnyy bukhgalter gorupravleniya Belorusskoy respublikanskoy kontory Gosbanka (for Gertsovskiy).
(Samarkand Province--Credit)

Handwritten: 2/24/56
Handwritten: B.S.S.L.
Name: TSYPKIN, Al'ter L'vovich

Dissertation: Constitutional right of defense in
Soviet criminal lawsuits

Degree: Doc Juridical Sci

Affiliation: Saratov Law Inst

Defense Date, Place: 13 May 55, Council of Inst of Law
imeni Vyshinskiy

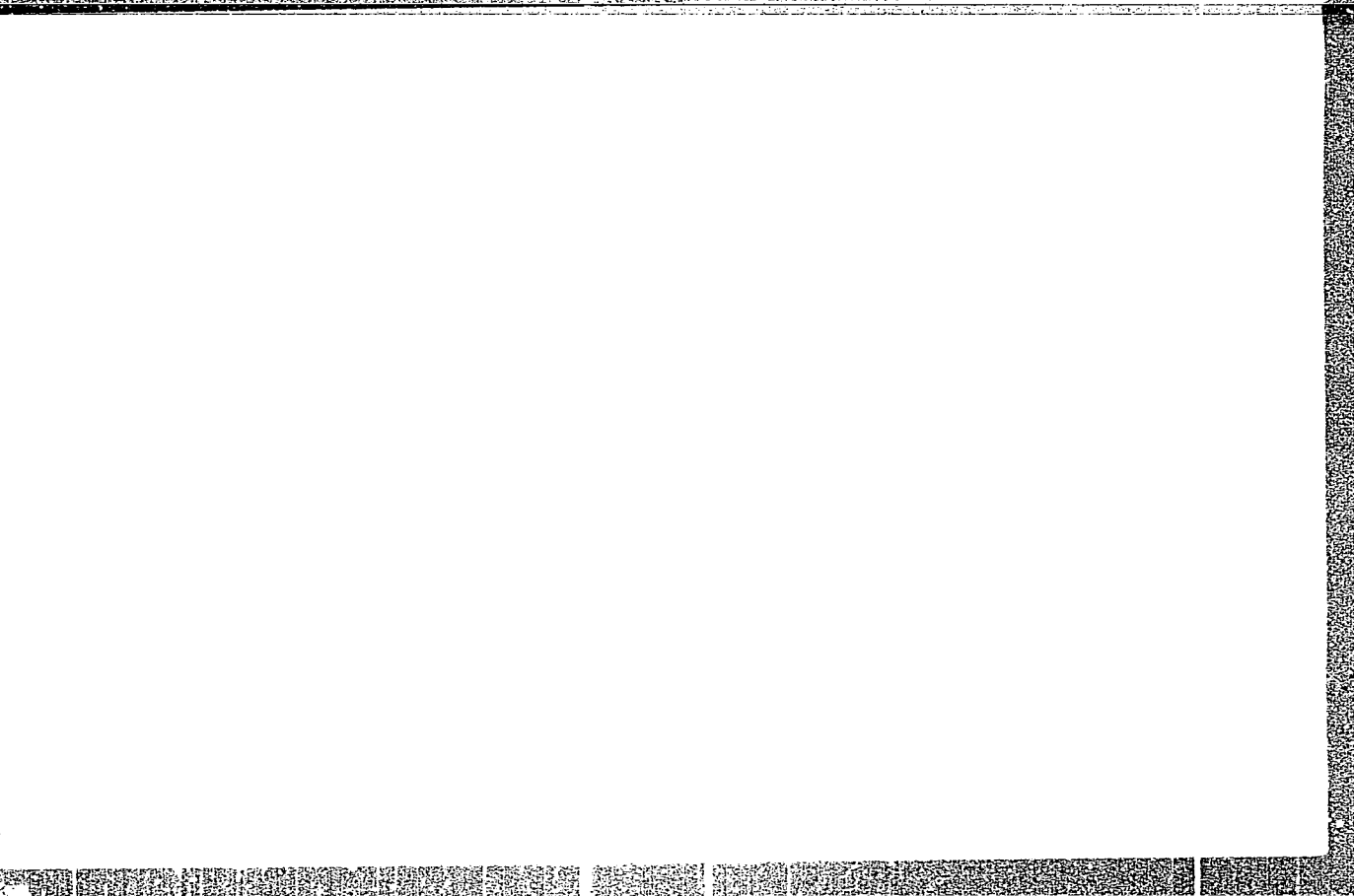
Certification Date: 26 May 56

Source: BMVO 4/57

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APPROVED FOR RELEASE: 08/31/2001

CIA-RDP86-00513R001757320004-2"

USSR/ Chemistry - Physical chemistry

Card 1/1 Pub. 22 - 38/56

Authors : Mal'tsev, M. V.; Chistyakov, Yu. D.; Tsypin, M. I.

Title : Structure of oxide films on liquid aluminum and its alloys

Periodical : Dok. AN SSSR 99/5, 813-814, Dec 11, 1954

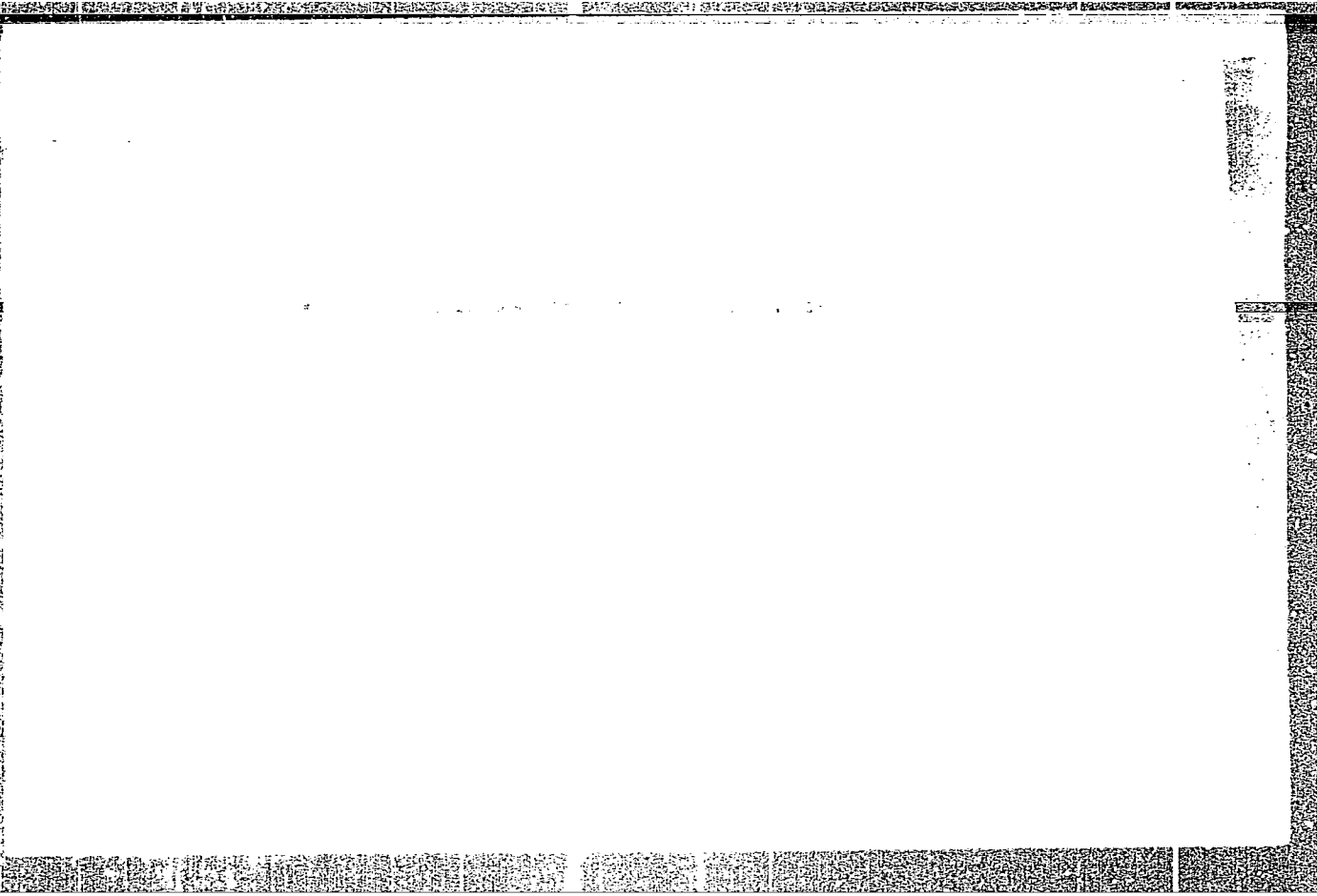
Abstract : The structure of oxide films forming at different temperatures on melted Al, its binary Al - Mg, Al - Cu, Al - Zn, Al - Fe alloys and certain more complex industrial alloys, e.g., AMg, AMg5, AMg7, AMz, duralumin and certain cast alloys, was investigated. Results show that an oxide film formed on pure Al at a temperature of 690 - 700° has an amorphous structure; at 700 - 710° the amorphous state changes into crystalline. The oxide film, formed on the surface of melted binary Al-alloys, was found to consist of pure gamma-Al₂O₃. The tendency of oxide layers to form thin Al-dendrites, with a specific orientation, is explained by the crystallo-chemical and the dimensional characteristics of the crystalline lattice of the Al and its oxide. Five references: 3-USSR and 2-USA (1934-1953). Illustrations.

Institution: The M. I. Kalinin Institute of Non-Ferrous Metals and Gold, Moscow

Presented by: Academician A. A. Bochvar, June 18, 1954

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TSYPIN, M. I.

622

AUTHOR: Tsy-pin, M. I., Ing. (Balkhash Non-Ferrous Metal Works).

TITLE: On applying structural electron diffraction analysis in metallurgy. (O primeneniya strukturnogo elektronograficheskogo analiza v metallovedenii).

PERIODICAL: "Metallovedenie i Obrabotka Metallov" (Metallurgy and Metal Treatment), 1957, No.5, pp.62-64 (U.S.S.R.)

ABSTRACT: The author deals mainly with the study of the structure of oxide films on metals and alloys. The oxidation of the Al-Mg system of alloys was studied. It was found that with increasing Mg content the oxide film first consists of a solid solution of MgO in $\gamma\text{-Al}_2\text{O}_3$, for Mg contents up to 0.03%; for higher contents the film consists of a mixture of this solid solution with Mg oxide and, finally, for contents exceeding 1.5% Mg the oxide film consists exclusively of MgO. On introducing a third, more active element the oxide film on such a liquid alloy will consist in the case of 0.05% Be of a mixture of Mg and Be oxide and in the 0.5% Be it will consist solely of Be oxide (Fig.3). These results are given to illustrate the wide range of applicability of electron diffraction methods of investigation of metals and alloys. 3 figures, including two series of electron diffraction patterns. 9 references, 4 of which are Russian.

Card 1/2

ACC NR: AP6036114

(N)

SOURCE CODE: UR/0365/66/002/006/0692/0699

AUTHOR: Layner, L. I.; Slesareva, Ye. N.; Tsypin, M. I.; Bay, A. S.

ORG: Scientific Research Institute for Alloys and the Working of Nonferrous Metals
(Nauchno-issledovatel'skiy institut splavov i obrabotki tsvetnykh metallov)

TITLE: Oxidation mechanism of titanium alloys containing up to 11% aluminum

SOURCE: Zashchita metallov, v. 2, no. 6, 1966, 692-699

TOPIC TAGS: titanium containing alloy, metal oxidation, aluminum

ABSTRACT: A study was made of binary titanium-aluminum alloys containing 0.01, 0.87, 2.85, 5.05, and 11.20 weight percent aluminum. The alloys were twice melted in an arc furnace with consumable electrodes, and then forged, rolled, annealed, and planed to eliminate the oxygen-saturated layer. The polished samples had dimensions of 1.2 x 1.2 x 1.5 cm, with an opening 2 mm in diameter. A day before the experiment, the samples were degreased in benzene and stored in a desiccator. The samples were charged into a resistance furnace with a working chamber 150 x 400 mm, heated to the given temperature. Temperature variations in the furnace did not exceed $\pm 5\%$. In some of the experiments steam was supplied at a temperature of 600° . In this case, the atmosphere of the furnace contained 60-70% water vapor. The rate of oxidation was determined by the gravimetric method. The effect of alloying on heat resistance was evaluated from the

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UDC: 620.193.5

ACC NR: AP6036114

relative change in weight of the samples. Phase analysis of the scale and of the layers beneath the scale was done on a Type URS-501 diffractometer. The experimental results with respect to the relative weight change of the alloys as a function of temperature, holding time, and composition of the gas medium are shown in a series of curves and tables. Based on the experimental data it is concluded that two basic mechanisms play a role in the process of the oxidation of titanium-aluminum alloys: 1) acceleration of diffusion through the scale due to a shift of the ionic equilibrium as a result of the entrance of trivalent aluminum ions into the titanium dioxide lattice; 2) slowing down of the oxidation when the amount of aluminum oxide in the scale increases to such an extent that there is formed a more or less thick layer of Al_2O_3 which hinders the diffusion of the titanium ions. Orig. art. has: 2 figures and 4 tables.

SUB CODE: 11/ SUBM DATE: 21Dec65/ ORIG REF: 015/ OTH REF: 012

Card 2/2

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CIA-RDP86-00513R001757320004-2"

LAYNER, D.I.; TSYPIN, M.I.; BAY, A.S.

Microdiffraction study of the low temperature oxidation of polycrystalline materials. Zav. lab. 29 no.9:1093-1095 '63. (MIRA 17:1)

1. Gosudarstvennyy nauchno-issledovatel'skiy i proyektnyy institut splavov i obrabotki tsvetnykh metallov.

LAYNER, D.I.; TSYPIN, M.I.

Scale formation on metals. Fiz. met. i metalloved. 13 no.4:561-566
Ap '62. (MIRA 16:5)

1. Gosudarstvennyy nauchno-issledovatel'skiy i proyektnyy institut
obrabotki tsvetnykh metallov.
(Corrosion and anticorrosives) (Electron microscopy)

LAYNER, D.I.; TSYPIN, M.I.; BAY, A.S.

Structural correspondence between a metal and an oxide during
the oxidation of titanium. Kristallografia 8 no.3:477-478
My-Je '63. (MIRA 16:11)

1. Gosudarstvennyy nauchno-issledovatel'skiy i proyektnyy in-
stitut splavov i obrabotki tsvetnykh metallov.

L 12788-63 EWP(q)/EWT(m)/BDS AFFTC/ASD JD

ACCESSION NR: AP3000790

S/0070/63/008/003/0477/0478

57
56

AUTHOR: Layner, D. I.; Tsy*pin, M. I.; Bay, A. S.

TITLE: Structural relation between metal and oxide during oxidation of titanium

SOURCE: Kristallografiya, v. 8, no. 3, 1963, 477-478

fb 27

TOPIC TAGS: martensite transformation, reciprocal lattice, electron microscope, Ti, rutile, microdiffraction

ABSTRACT: This study was undertaken because of disagreement relative to the existence and nature of interconnection between structures in metals and the coating of secondary products formed by chemical reaction. Previous work by two of the authors (Layner, D. I.; Tsy*pin, M. I. Izv. AN SSSR. Otd. tekhn. n. Metallurgiya i toplivo, 5, 131-132, 1959) was unsatisfactory because of the impossibility of systematic study of these reaction films. This difficulty has now disappeared through application of microdiffraction technique with the aid of an electron microscope. The orientation of individual grains in the polycrystalline metal was ascertained by electron-optical representation of surface relief by means of an oxide replica, and the microdiffraction picture obtained from individual segments of the oxide film was then compared with the orientations of the oxides and the original metal. The authors discovered well-defined martensite structure in their

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ACCESSION NR: AP3000790

investigation. The experimental data obtained indicate that the oxidation film formed by low-temperature oxidation of titanium in air and water vapor is on the order of 10 sup -6 cm thick and consists of rutile crystals, the orientation of which defines the orientation of original metal grains and is uniform within this grain. Orientations on neighboring grains are unrelated. Orig. art. has: 1 figure and refers to two others.

ASSOCIATION: Gosudarstvennyy nauchno-issledovatel'skiy i proyektnyy institut splavov i obrabotki tsvetnykh metallov (State Scientific Research and Planning Institute for Alloys and the Treatment of Nonferrous Metals)

SUBMITTED: 17May62

DATE ACQ: 21Jun63

ENCL: 00

SUB CODE: 00

NO REF SOV: 005

OTHER: 003

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