ZUBAREV, R. P.

Cand Med Sci - (diss) "Surgical treatment of valvular stenosis of the pulmonary artery by way of trans-gastric pulmonary valvulotomy." Moscow, 1961. 9 pp; (Ministry of Public Health RSFSR, Moscow Med Stomatological Inst); 250 copies; price not given; (KL, 7-61 sup, 259)

BEREZOV, Yu.Ye., doktor med.nauk; BUKHARIN, V.A.; ZUBAREV, R.P.

Second session of the Institute of Thoracic Surgery of the Academy of Medicine of the U.S.S.R. Sov.med. 23 no.6:147-151 Je '59. (MIRA 12:9)

(CHEST--SURGERY)

BAKULEV, A.N.; KOLESNIKOV, S.A.; BUKHARIN, V.A.; ZUBAREV, R.P.

First report on the clinical use of a large vasosutural apparatus for carrying out a cava-pulmonary anastomosis in tetralogy of Fallot. Grud.khir. 2 no.2: 3-6 Mr-Ap'60. (MIRA 16:7)

1. Iz Instituta grudnoy khirurgii AMN SSSR (dir.prof. A.A.Busalov, nauchnyy rukovoditel' - akademik A.N.Bakulev). Adres avtorov: Moskva, Leninskiy prosp., d.8, Institut grudnoy khirurgii AMN SSSR.

(PULMONARY ARTERY--SURGERY) (VENA CAVA--SURGERY)
(SURGICAL INSTRUMENTS AND APPARATUS) (TETRALOGY OF FALLOT)

BAKULEV, A.N.; RYBINSKIY, S.V.; SAVEL'YEV, V.S.; BUYANOV, V.M.; ZUBAREV, R.P.; KOMAROV, B.D.; KOSTENKO, I.G.; MOROZOV, Yu.I.

New method for extracorporeal blood circulation. Grud. khir. 2 no.4:3-5 Jl-Ag '60. (MIRA 15:6)

1. Iz kliniki fakul'tetskoy khirurgii imeni Spasokukotskogo (dir. - akademik A.N. Bakulev) II Moskovskogo meditsinskogo instituta imeni N.I. Pirogova. Adres avtorov: Moskva, Leninskiy prosp.,d.8, Institut grudnoy khirurgii.
(BLOOD--CIRCULATION, ARTIFICIAL)

SAVEL'YEV, V.S., kand.med.nauk; ZUBAREV, R.P.

Diagnosis of valvular stenosis of the pulmonary artery. Khirurgiia 35 no.6:118-123 Je '59. (MIRA 12:8)

1. Iz fakul'tetskoy khirurgicheskoy kliniki (dir. - prof.A.N. Bakulev) II Moskovskogo meditsinskogo instituta im.N.I.Pirogova i Instituta grudnoy khirurgii AMN SSSR (dir. - prof.A.A.Busalov).
(ARTERIES, PULMONARY, stenosis
valvular stenosis, diag. methods (Rus))

BAKULEV, A.N.; ZUBAREV, R.P.

Indications for pulmonary valvotomy. Grud. khir. 2 no.5:10-16 S-O '60. (MIRA 16:5)

1. Iz kafedry fakul'tetskoy khirurgii imeni S.I.Spasokukotskogo (dir. - akademik A.N.Bakulev) II Moskovskogo meditsinskogo instituta imeni N.I.Pirogova (dir. - dotsent M.G.Sirotkina) i Instituta grudnoy khirurgii (dir. - prof. S.A.Kolesnikov) AMN SSSR. Adres avtorov: Moskva, V-49, Leninskiy prospekt, 8, Institut grudnoy khirurgii AMN SSSR.

(PULMONARY STENOSIS) (HEART---SURGERY)

NECHAYEV, Mikhail Aleksandrovich. Prinimal uchastiye MITROFANOV, I.A., inzh.; ZUBAREV, S.A., retsenzent; LEVIN, A.M., retsenzent; SIGAL, I.Ya., retsenzeng; KOLYADA, I.A., retsenzent; STOLPNER, Ye.B., nauchnyy red.; FEDOTOVA, M.I., ved. red.; SAFRONOVA, I.M., tekhn. red.

[Safety measures in the transportation, distribution, and use of gas fuel] Tekhnika bezopasnosti pri transportirovke, raspredelenii i ispol'zovanii gazovogo topliva. Izd.3., perer. i dop. Leningrad, Gostoptekhizdat, 1962. 299 p.
(MIRA 15:4)

(Gas as fuel—Safety measures)

SHABANOV, A.N., prof., red.; ZUBAREV, R.F., red.

[Medical manual for feldshers] Meditsinskii spravochnik dlia fel'dsherov. Moskva, Meditsina, 1965. 693 p. (MIRA 18:10)

Flotation of Kounrad oxidized copper ore. B. N. Zubarev. *Tsvetnie Metal* 1931, 322–31.—The ore consists of cerussite flakes distributed through a mass of quartz grains. Chem. compn.: Cu 1.91, SiO_2 74.15, S 0.14, CaO 0.36, MgO 0.04, MnO 0.55, Fe_2O_3 1.62, Al_2O_3 13.95, CO_2 2.95%, Ag 11 g. per ton and As and Au traces. Expts showed that this ore can be concd. successfully by flotation. S. L. Madorsky

Flotation of oxidized arsenic ores. L. M. Alekseev and S. N. Zybarev. *Tsvetnye Metal.* 13, No. 11, 80–4 (1938)

The authors described previous work and original expts on extn. of As by flotation from oxidized As ores contg. scorodite ($FeO.As_2O_5.4H_2O$). Preliminary expts led to the conclusion that alk. pulp improves the flotation results. Quartz is effectively depressed with Na silicate and starch treated with a caustic alkali. Best collectors are fatty acids and Na oleate. Frothing is improved by adding small amts. of pine tar. B. N. Dumbadze

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

GRAZHDANTSEV, I. I., DERKACH, V. G., ZUBAREV, S. K. (Engineers)

Manganese Ores

Magnetic separation of manganese ores. Gor. zhur. no. 5, 1952.

Monthly List of Russian Accessions, Library of Congress, August, 1952, UNCLASSIFIED.

ZUBAREV, S.N.

127-58-5-17/30

AUTHORS: Zubarev, S.N., Bobrushkin, L.G., and Golovanov, G.A.

TITLE: Ways of Improving the Concentration Process in the Olenegorsk Plant (Puti usovershenstvovaniya skhemy obogashcheniya na Olenegorskoy fabrike)

PERIODICAL: Gornyy Zhurnal, 1958, Nr 5, pp 55-59 (USSR)

ABSTRACT: Serious technological and constructional defects were discovered when the Olenegorsk Concentration Plant was opened. The iron content in the concentrate did not exceed 50 or 52%. As a result of additional investigations of the Mekhanobr Institute and practical experience of the Plant's specialists, the concentration process was rebuilt: an additional crushing of the ore down to 0.5 mm; a re-purifying of the magnetic concentrate, and an improvement of the dehydration cycle of the concentrate. The latter is now dehydrated in a special store-room by the natural drainage method. However, the process is still unsatisfactory. New improvements are suggested to attain 62% of iron content and 12 to 13% of silicon content in the concentrate; namely, development of a gravitational-magnetic

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Ways of Improving the Concentration Process in the Olenegorsk Plant

process and construction of a store-room, for averaging the content of ores, with a capacity of at least 100,000 tons. There are 3 diagrams, 5 tables, and 2 Soviet references.

ASSOCIATION: Gosudarstvennyy nauchno-tekhnicheskiy komitet Soveta Ministrov SSSR (State Scientific-Technical Committee of the USSR Council of Ministers). Olenegorskoye rudoupravleniye (Olenegorsk Mine Administration)

AVAILABLE: Library of Congress

 1. Ores-Processing 2. Mines

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065520007-4"

KOROBOV, P.I.; KHLEBNIKOV, V.B.; [illegible], A.F.; SKOCHINSKIY, A.A.; SHEVYAKOV, L.D.; [illegible], [illegible]; [illegible]ESHKIN, [illegible]; [illegible]AL'KOV, Ye.F.; POKROVSKIY, N.A.; [illegible], [illegible].P.; BOGOLYUBOV, B.P.; [illegible]UTYUNOV, N.B.; BOYKO, V.Ye.; [illegible]ZA, [illegible]; FEDOROV, V.F.; AGOSHKOV, [illegible].I.; [illegible]OHNIKOV, A.V.; VORONIN, L.N.; IPATOV, P.M.; NAZAROV, P.P.; [illegible], O.N.; CHERNENKO, N.B.; RABINOVICH, V.I.; [illegible]VSKIY, V.N.; TROITSKIY, A.V.; GOL'DIN, Ya.A.; DZHAPARIDZE, Ye.A.; [illegible]AVLEV, S.P.; KUZNETSOV, [illegible]; [illegible]LEVICH, [illegible].A.; MARIENKO, M.P.; [illegible]AYKOV, G.P.; [illegible]ATA[illegible], F.F.; PE[illegible]S[illegible]V, M.A.; KOSSMIT, A.F.; [illegible]YASHO[illegible] [illegible]; SOBOLEDOV, O.O.; VI[illegible]ADOV, V.S.; ZUBA[illegible]V, S.N.; SHAFAR[illegible]KO, I.P.

Nikolai Nikolaevich Patr[illegible]; an obituary. Gor.zhur. no.6:76 Je '60. (MIRA 14:2)

(Patrikeev, Nikolai Nikolaevich, 1890-1960)

NIKOLAYENKO, Viktor Pavlovich; ZUBAREV, S.N., otv. red.; TSUKERMAN, S.Ya., red. izd-va; BOLDYREVA, Z.A., tekhn. red.

[Operator of magnetic separators] Mashinist magnitnykh separatorov. Moskva, Gos. nauchno-tekhn. izd-vo lit-ry po gornomu delu, 1961. 75 p. (MIRA 14:11)

(Magnetic separation of ores)

LYUBARETS, Ivan Mikhaylovich; ZUBAREV, S.N., otv. red.; TSUKERMAN, S.Ya., red. izd-va; BOLDYREVA, Z.A., tekhn. red.

[Tig operator] Mashinist otsadochnykh mashin. Moskva, Gos. nauchno-tekhn. izd-vo lit-ry po gornomu delu, 1961. 54 p. (MIRA 14:11)
(Ore dressing--Equipment and supplies)

ZUBAREV, S.N., gornyy inzh.

Mechanization of repair work in the crushing department of the Silver Bay Ore-dressing Plant. Gor. zhur. no.3:54-55 Mr '61. (MIRA 14:3)

1. Gosudarstvennyy nauchno-tekhnicheskiy komitet SSSR.
(Silver Bay, Minn.—Crushing machinery—Maintenance and repair)

LYUBARETS, Ivan Mikhaylovich; SWERDEL', Leonid Isaakovich; ZUBAREV, S.N., otv. red.; KACHALKINA, Z.I., red. izd-va. MESHCHANKINA, I.S., tekhn.red.; MAKSIMOVA, V.V., tekhn.red.

[Launder operator]Mashinist promyvochnoi mashiny. Moskva, Gosgortekhizdat, 1962. 36 p. (MIRA 15:12)

(Ore dressing--Equipment and supplies)

VINOGRADOV, V.S., inzh.; AL'TSHULER, M.A., kand. tekhn. nauk; POLYAKOV, V.G., inzh.; KUROCHKIN, A.N., inzh.; KARMAZIN, V.I., doktor tekhn. nauk; ZAIKIN, S.A., inzh.; OSTROVSKIY, G.P., inzh.[deceased]; NAUMENKO, P.I., inzh.; BOBRUSHKIN, L.G., inzh.; KUSTANOV, I.I., inzh.; SHIFRIN, I.I., inzh.; GOLOVANOV, G.A., inzh.; KRASOVSKIY, L.A., inzh.; TSIMBALENKO, L.N., inzh.; RAVIKOVICH, I.M., inzh.; BAZILEVICH, S.V., kand. tekhn.nauk; ZORIN, I.P., inzh.; ZUBAREV, S.N., inzh.; TIKHOVIDOV, A.F., inzh.; SHITOV, I.S., inzh.; GAMAYUROV, A.I., inzh.; KUSEMBAYEV, Kh.N., inzh.; DEKHTYAREV, S.I., inzh.; VORONOV, I.S., inzh.; BURMIN, G.M., inzh.; BARYSHEV, V.M., inzh.; GOLOVIN, Yu.P., inzh.; MARCHENKO, K.F., inzh.; RYCHKOV, L.F., inzh.; NESTERENKO, A.M., inzh.; KABANOV, V.F., inzh.; PATRIKEYEV, N.N., inzh.[deceased]; ROSSMIT, A.F., inzh.; SOSEDOV, O.O., inzh.; POKROVSKIY, M.A., inzh., retsenzent: POLOTSK, S.M., red.; GOL'DIN, Ya.A., glav. red.; GOLUBYATNIKOVA, G.S., red. izd-va; BOLDYREVA, Z.A., tekhn. red.

[Iron mining and ore dressing industry] Zhelezorudnaia promyshlennost'. Moskva, Gosgortekhizdat, 1962. 439 p. (MIRA 15:12)

1. Moscow. TSentral'nyy institut informatsii chernoy metallurgii. (Iron mines and mining) (Ore dressing)

KARMAZIN, Vitaliy Ivanovich, doktor tekhn. nauk, prof. Prinimali uchastiye: KRUTIY, V.V.; SANZHAROVSKIY, P.A.; GUBIN, G.V.; ZUBAREV, S.N., otv. red.; ARZAMASOV, N.A., red.izd-va; BOLDYREV, Z.A., tekhn. red.

[Modern methods of magnetic separation of ferrous metal ores] Sovremennye metody magnitnogo obogashcheniia rud chernykh metallov. Moskva, Gos. nauchno-tekhn. izd-vo lit-ry po gornomu delu, 1962. 658 p. (MIRA 15:3)
(Magnetic separation of ores) Iron ores)

ZUBAREV, S.N., gornyy inzh.

Barker mill (from foreign literature). Gor.zhur. no.1:74-75 Ja '63. (MIRA 16:1)

(Australia--Milling machinery)

ZUBAREV, S.N., gornyy inzh.

Iron ore dressing plants in the U.S.A. and Canada. Gor. zhur. no.9:70-74 S '63. (MIRA 16:10)

IZRAITEL', S.A., otv. red.; SKURAT, V.K., otv. red.; ZUBAREV, S.M., otv. red.; MOISEYEV, S.L., otv. red.; ASTAF'YEVA, A.V., kand. tekhn. nauk, red.; VAS'KOVSKIY, Ye.L., red.; VISHNEVSKIY, Ye.L., red.; KRIVTSOV, B.S., red.; KOROTKIN, I.N., red.; MITROFANOV, S.I., doktor tekhn. nauk, red.; NORKIN, V.V., kand. tekhn. nauk, red.; NIKITIN, A.A., red.; RUDNEV, A.P., red.; SLASTUNOV, V.G., red.; TKACHEV, F.A., red.; RAUKHVARGER, Ye.L., kand. tekhn. nauk, red.; FEOKTISTOV, A.T.[deceased], red.; ZAYTSEV, A.P., red.

[Safety regulations for the dressing and sintering of ferrous and nonferrous metal ores] Pravila bezopasnosti pri obogashchenii i aglomeratsii rud tsvetnykh i chernykh metallov. Moskva, Nedra, 1964. 106 p. (MIRA 18:4)

1. Russia (1917- R.S.F.S.R.) Gosudarstvennyy komitet po nadzoru za bezopasnym vedeniyem v promyshlennosti i gornomu nadzoru.

ZUBAREV, S.V.; ZAKHARENKOVA, V.I.; KOZOLEV, A.S.; KALITEYANAYA, I.N.

Kinetics of phenol orientation. Koks. prom. 41 no.2:569-570 Ag '65. (MIRA 18:9)

KOVALEVSKIY, P.M., prof.; PUTYATIN, V.M., dotsent; SKALINA, Ye.P., dotsent; ZUBAREV, T.A., vrach

Late results of surgical treatment of chronic coronary insufficiency by bilateral ligation of internal thoracic arteries. Uch. zap. Stavr. gos. med. inst. 12:223-224 '63. (MIRA 17:9)

1. Kafedra gospital'noy khirurgii (zav. prof. P.M. Kovalevskiy), kafedra gospital'noy terapii (zav. prof. I.N. Sergiyenko) Stavropol'skogo gosudarstvennogo meditsinskogo instituta i kabinet funktsional'noy diagnostiki Stavropol'skoy krayevoy klinicheskoy bol'nitsy (zav. vrach T.A. Zubarev).

KARASHUROV, Ye.S., kand. med. nauk; ZUBAREV, T.A.

Comparative data on electrocardiography and ballistocardiography in bronchial asthma before and after the removal of the carotid gland. Uch. zap. Stavr. gos. med. inst. 12:254-255 '63. (MIRA 17:9)

1. Kafedra obshchey khirurgii (zav. prof. Yu.S. Gilevich), kafedra normal'noy fiziologii (zav. zasluzhennyy deyatel' nauki, prof. V.G. Budylin) Stavropol'skogo gosudarstvennogo meditsinskogo instituta i kabinet funktsional'noy diagnostiki (zav. T.A. Zubarev) Stavropol'skoy krayevoy klinicheskoy bol'nitsy.

21(9)

AUTHOR: Zubarev, T. N.

SOV/89-5-6-1/25

TITLE: A Pulsed Reactor (Migayushchiy reaktor)

PERIODICAL: Atomnaya energiya, 1958, Vol 5, Nr 6, pp 605-617 (USSR)

ABSTRACT: This reactor, which was developed between 1954 and 1955, uses enriched uranium salt, which is dissolved in water, as active material. At a certain time, the core of the reactor (a spherical vessel) is filled with the uranium solution and the bottom of the condenser is covered by it.
If the mobile reflector is not in the reactor, the reactor is in its suboritical state. If the reflector has however been driven into the reactor, in which case it covers the active zone entirely, the reactor is in its supercritical state. Driving in of the reflector takes place at a time in which the uranium solution finds practically no time to heat up in the active zone. In the further course of events intense heat transfer takes place in the core, and the specific volume of the solution increases. As a result, part of the solution reaches the condenser through certain channels. In this case, pressure in the core of the reactor is greater than the saturation pressure, and no vapor can form in the

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condenser. In other cases no sufficiently effective ignition of neutrons can be attained when the solution boils.
If 5-10 % of the solution reaches the condenser from the core, the reactor again becomes subcritical and the neutron flux decreases exponentially. At the same time, pressure in the core drops considerably.
At the end of the neutron burst, the core of the reactor is filled with an overheated liquid, which expands practically adiabatically when entering the condenser. Wet vapor is formed. The vapor condenses and reaches the bottom of the condenser, from where it is conveyed through channels back to the core of the reactor. The cycle can then begin afresh.
The mobile reactor consists of two parts. Each of them is fastened to the rim of a wheel moving with constant velocity. The size of one of the sectors of the mobile reflector is arranged in such a manner that, when the reflector is conveyed past the core, the latter remains in the subcritical state. If both sectors are conveyed past the core simultaneously, the reactor becomes critical.
For a 5 MW-reactor the following parameters were calculated:
Card 2/4 Volume of core ~15 l; 1 kg U^{235} in the active section;

cooling surface of the condenser ~18 m^2; volume of the condenser ~200 l; diameter of the wheel ~1 m; angle velocity of the wheel ~850 revolutions per minute. Average thermal neutron flux in the core ~10^{14} n/cm^2.sec . Maximum neutron flux ~10^{17} n/cm^2.sec (at the time of neutron burst). If several pulsed reactors, the neutron bursts of which are shifted with respect to time, are connected with one another in an aggregate, the average neutron flux can, in proportion to the number of reactors, be raised up to a value of $\leq 10^{17}$ n/cm^2.sec . A pulsed reactor can be used both for the generation of energy and as an atomic piston motor.
The following parameters of the pulsed reactor are dealt with in detail:

a) Degree of efficiency of the thermodynamic cycle.
b) Selection of the proper working temperature of the uranium solution.
c) Density, temperature of the solution and neutron density in the active section.
d) Pressure in the active section.

In conclusion, the author thanks I. V. Kurchatov, Academician, for the interest he displayed in this work, Yu. N. Zankov for discussing results, and A. K. Sokolov for assisting in a number of calculations. There are 14 figures and 4 Soviet references.

SUBMITTED: August 7, 1958

21(9) SOV/89-6-5-10/33

AUTHORS: Zubarev, T. N., Sokolov, A. K.

TITLE: On the Calculation of Heat Generation in a Shut-down Reactor (K raschetu teplovydeleniya v ostanovlennom reaktore)

PERIODICAL: Atomnaya energiya, 1959, Vol 6, Nr 5, pp 564-565 (USSR)

ABSTRACT: Owing to the presence of delayed neutrons heat continues to be generated also in a shut-off reactor. In order to determine this heat generation, it is necessary to solve the non-steady neutron diffusion equation. The dependence of the neutron flux ϕ in the shut-off reactor upon the time t is of very complicated character and numerical solution is difficult. A simplified formula is given, which describes heat generation very well:

$$\frac{\phi(t)}{\phi_0} \approx \frac{\varrho}{\varrho + \beta} \exp\left(-\frac{\varrho + \beta}{T} t\right) + \sum_{i=1}^{m} \frac{\beta_i}{\varrho + \beta} \exp\left(-\frac{\varrho}{\varrho + \beta} \lambda_i t\right)$$

$$\beta = \sum_{i=1}^{m} \beta_i$$

where $\phi(t)$ = neutron flux as function of the time t,

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On the Calculation of Heat Generation in a Shut-down Reactor

Φ_o = neutron flux at the time of shutting off the reactor,

ϱ = reactivity of the time of shutting off,

β = total yield of delayed neutrons,

β_i = fraction of delayed neutrons of the i-th group,

T = life-time of neutrons in the reactor,

λ_i = decay constant of the nuclear fragments of the i-th group,

m = number of groups of delayed neutrons.

Calculation by means of the formula given is comparatively simple. The values for heat development are obtained with sufficient accuracy for all negative reactivities. In the case of negative reactivity $|\varrho| > 0.03$ calculation results obtained by using the non-steady neutron diffusion equation practically coincide with those obtained by the above simplified method. There are 1 figure and 1 reference.

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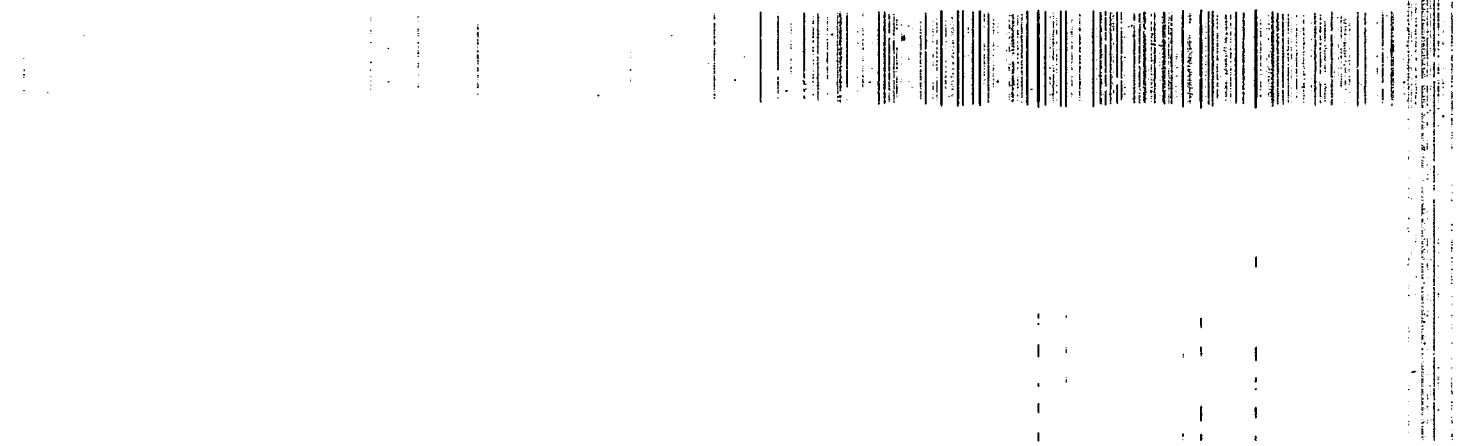

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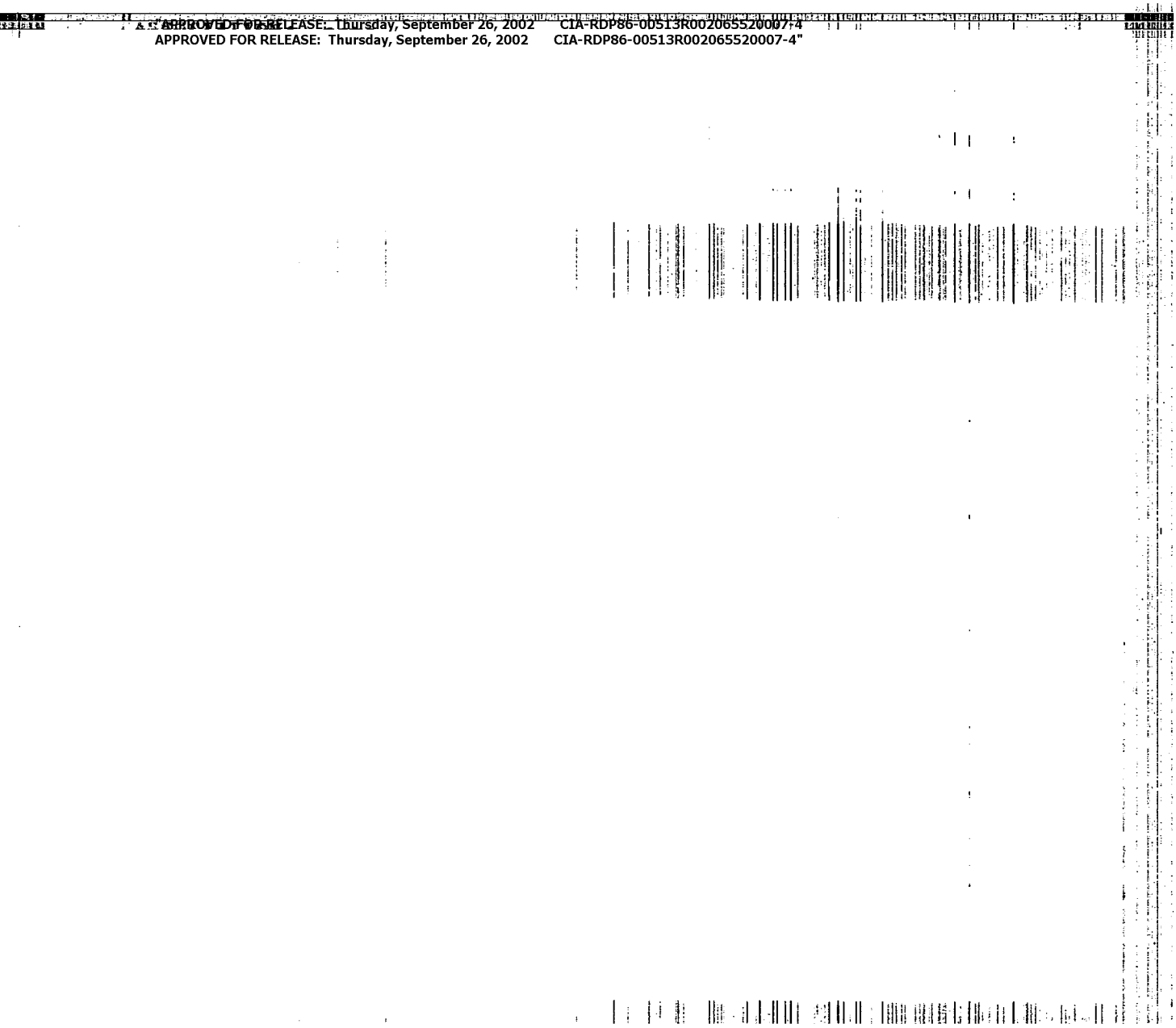

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ZUBAREV, V., polkovnik

Ideological gangsters. Komm. Vooruzh. Sil 4 no.1:87-91 Ja '64.
(MIRA 17:9)

ZUBAREV, V. (Leningrad)

"Leti-55" remote control projector. Sov.foto 20 no.2:34 F '60. (MIRA 13:7)
(Motion-picture projectors)

ZLOBIN, Pavel Iosifovich; ZUBAREV, V., red.; KONDRAT'YEVA, A., red.; TELEGINA, T., tekhn.red.

[Accounting for capital construction] Bukhgalterskii uchet kapital'nogo stroitel'stva. Izd.2., perer. Moskva, Gosfinizdat, 1960. 455 p. (MIRA 13:8)
(Construction industry--Accounting)

ZUBAREV, V.

The flourishing Soviet economy. Voen.znan. 37 no.7:5-6 Jl '61.
(MIRA 14:6)

(Russia—Economic conditions)

ZUBAREV, V.A.; SIDOROV, P.A.; ARISTOV, A.D., polkovnik, red.; ANIKINA, R.F., tekhn.red.

[Manual for officers studying Marxist-Leninist theory; a collection of articles] V pomoshch' ofitseram, izuchaiushchim marksistsko-leninskuiu teoriiu; sbornik statei. Moskva, Voen.izd-vo M-va obor. SSSR. 1959. 413 p. (MIRA 12:4)
(Military art and science)

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065520007-4"

ZUBAREV, V.A.

Gluing nap on parts in electrostatic fields. Biul.tekh.-ekon. inform. no.6:42-43 '58. (MIRA 11:8)
(Protective coatings)

ZUBAREV, V.A., assistent

Certain aspects of hospital construction. Gig. i san. 24 no.9:59-61 S '59. (MIRA 13:1)

1. Iz kafedry kommunal'noy gigiyeny Omskogo meditsinskogo instituta imeni M.I. Kalinina.
(HOSPITAL, PLANNING AND CONSTRUCTION)

ZUBAREV, V.E.; KHLESTOV, V.M.

Effect of zirconium on the tempering of alloyed structural steel. Izv. vys. ucheb. zav.; chern. met. 6 no.6:143-147 '63.
(MIRA 16:3)

1. Zhdanovskiy metallurgicheskiy institut.
(Steel, Structural--Metallurgy) (Tempering)

CA

9

The decomposition of cementite in thick-walled castings during the production of malleable iron V. I. Zaharov *Liteinoe Delo* **1939**, No. 1, 11-14; *Khim. Referat. Zhur.* **1939**, No. 8, 73. A summary of several existing conceptions of the decompn. of cementite during the production of malleable iron. On the basis of the application of van't Hoff-Le Chatelier principles the factors which influence the decompn. process of cementite (temp., pressure) are discussed. The effect of graphitization of cast iron from a too rapid heating and the character of the distribution of these segns. of C (caused by the heating) are also discussed.

W. R. Henn

ASM SLA METALLURGICAL LITERATURE CLASSIFICATION

ZUBAREV, V. F.

"Increase in the Strength of Wall Joints," Stal', No. 4, 1948. Cand. Technical Sci. Mor., Siberia Metallurgical Inst., c-1948-.

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ZUBAREV, V. F.

YU. V. G[illegible], L. L. [illegible]VICH, [illegible], [illegible], [illegible],
P. A. SOKOLOV, V. F. ZUBAREV, [illegible]:
In a Russian Symposium of Papers entitled "Heat Treatment of Rails", edited by I. I. [illegible]in and published by the Soviet Academy of Science, Moscow 1950, The following articles appeared: Methods of prevention of flake formation.

SO: 886103

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065520007-4"

ZUBAREV, V. F.

Cast Iron

Theoretical bases for speedier methods of malleabilizing in the production of malleable cast iron. Lit. proizv. No. 2, 1953.

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

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065520007-4"

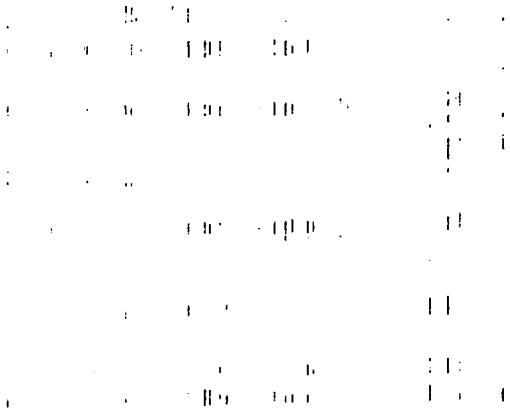
ZIBAREV, Vladimir Fedorovich, doktor tekhnicheskikh nauk, professor; LANDA, A.F., doktor tekhnicheskikh nauk professor, retsenzent; KUNYAVSKIY, M.N., kandidat tekhnicheskikh nauk, redaktor [deceased]; BALANDIN, A.F., redaktor izdatel'stva; TIKHANOV, A.Ya., tekhnicheskiy redaktor

[Theoretical principles of the graphitization of white iron and steel] Teoreticheskie osnovy grafitizatsii belogo chuguna i stali. Moskva, Gos. nauchno-tekhn. izd-vo mashinostroit. lit-ry, 1957. 222 p. (MLRA 10:6)
(Iron--Metallurgy) (Steel--Metallurgy)

ZUBAIEV, V.F., doktor tekhn. nauk; KHAZOV, V. .

Properties of structural steel [illegible] additionally alloyed with [illegible]. Vest. mash. no. [illegible].

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065520007-4"



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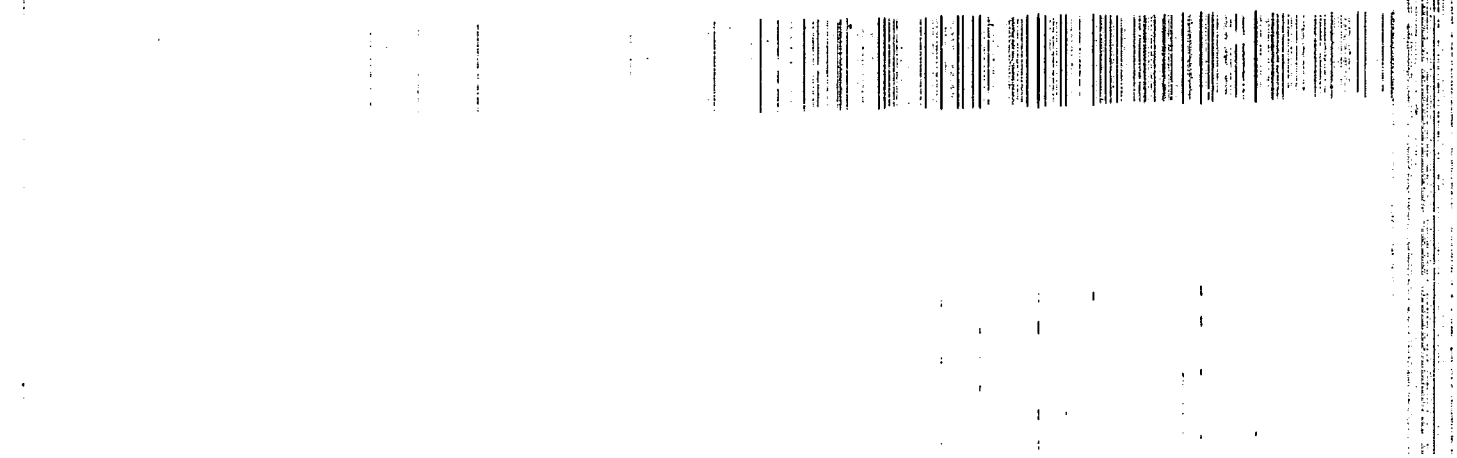

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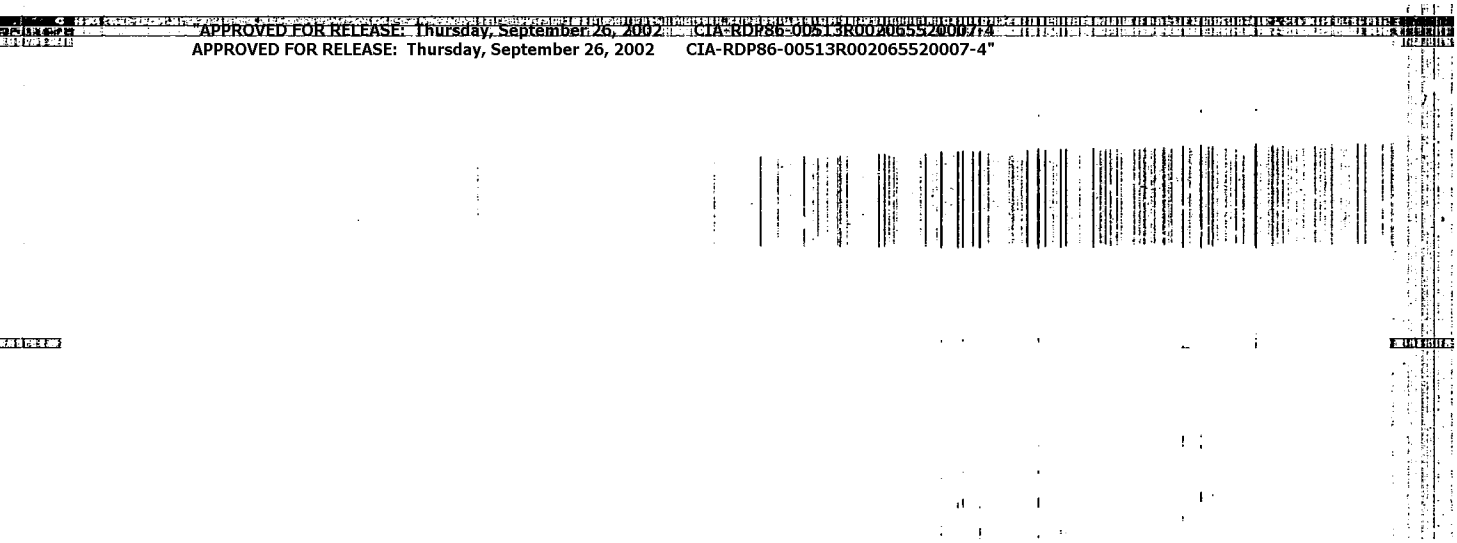

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065520007-4"

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065520007-4"

ACCESSION NR: AR4036263 S/0131/64/000/003/I051/I053

SOURCE: Referativnyy zhurnal. Metallurgiya, Abs. 3I313

AUTHOR: Zubarev, V. F.; Khlestov, V. M.

TITLE: Effect of zirconium on the properties of structural alloy steel

CITED SOURCE: Sb. nauchn. tr. Zhdanovsk. metallurg. in-t, vyp. 11, 1963, 171-176

TOPIC TAGS: zirconium steel, boron steel, zirconium structural steel

TRANSLATION: A study was made of the effect of Zr (up to 0.58%) on the structure, mechanical properties, hardenability, and brittleness at negative temperatures of the steels 35KhG, 35KhGR, 35KhGV, and 35KhGVR. The steel was melted in an electric arc furnace; after deoxidizing with aluminum Zr was introduced in the form of briquets prepared from powders of Fe and Zr. When Zr is introduced into the steel, a considerable refinement of sulfides is observed. No zirconium inclusions were observed in experimental industrial melts containing 0.03% Zr, and the steels were very pure with respect to nonmetallic inclusions. An appreciable increase in the

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ACCESSION NR: AR4036263

hardenability of these steels was observed after introduction of small amounts of Zr. Combined alloying with boron (up to 0.0019%) and zirconium (up to 0.1%) increases the hardenability still more. In specimens 18 mm in diameter, Zr has no appreciable effect on the microstructure and mechanical properties. Zr raises the plasticity in steels containing B. In its mechanical properties, 35KhGVTa steel (C 0.37%, Mn 0.98%, Cr 0.95%, W 0.45%, Zr 0.03%) is not inferior to 40KhNM steel. An appreciable increase in a_k is observed in steel with Zr at -70°. N. Kalinkina.

DATE ACQ: 17Apr64 SUB CODE: ML ENCL: 00

Card 2/2

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065520007-4"

KHLESTOV, V.M.; ZUBAREV, V.F.; LEONT'YEV, B.A.

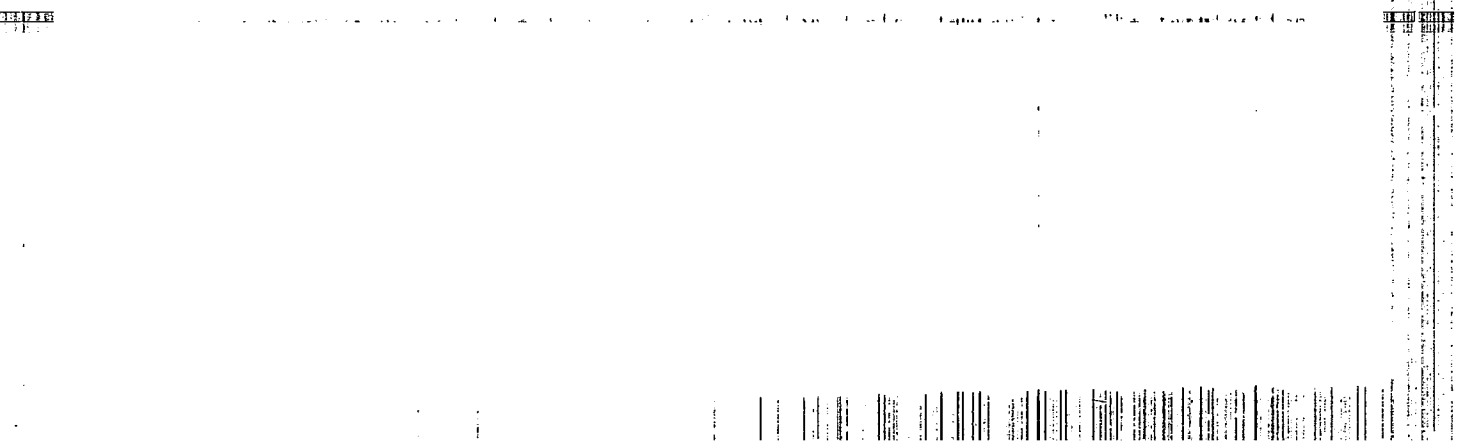
Effect of zirconium on the stability of austenite and the hardenability of 35KhG, 35KhGR and 35KhGB steels. Izv. vys. ucheb. zav.; chern. met. 6 no.10:113-119 '63. (MIRA 16:12)

1. Zhdanovskiy metallurgicheskiy institut.

TKACHENKO, F.K.; ZUBAREV, V.F.

Distribution of silicon between the phases of Fe-Si-C alloys.
Lit. proizv. no.8:31-32 Ag '62. (MIRA 15:11)
(Iron-silicon-carbon alloys--Metallography)
(Phase rule and equilibrium)

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065520007-4"



LEONT'YEV, B.A.; ZUBAREV, V.F.

New conditions for the heat treatment of large forgings of alloyed steel. Izv. vys. ucheb. zav.; chern. met. 5 no.8:135-142 '62.
(MIRA 15:9)

1. Zhdanovskiy metallurgicheskiy institut.
(Steel forgings—Heat treatment)

ZUBAREV, V.F.; KHLESTOV, V.M.

Effect of zirconium on the size of an austenite grain during the heating of alloyed structural steel. Izv. vys. ucheb. zav.; chern. met. 6 no.12:141-146 '63. (MIRA 17:1)

1. Zhdanovskiy metallurgicheskiy institut.

ZANNES, A.N.; SAPELKINA, O.R.; ZUBAREV, V.F.; DEMAKOVA, A.V.; PEREVERZEVA, Ye.G.

Effect of conditions of self-tempering and furnace tempering on the mechanical properties of rails hardened along their entire length by heating with high frequency currents. Izv. vys. ucheb. zav.; chern. met. 7 no.2:118-123 '64.
(MIRA 17:3)

1. Zavod "Azovstal'" i Zhdanovskiy metallurgicheskiy institut.

TKACHENKO, F.K., kand.tekhn.nauk; ZUBAREV, V.F., doktor tekhn.nauk; KUDRYAVTSEVA, L.N., inzh.

Mechanism of the formation of graphitization nuclei in prehardened white cast iron. Mashinostroenie no.1:50-53 Ja-F '62. (MIRA 15:2)

(Cast iron--Metallography)

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065520007-4"

S/137/62/000/003/162/191
A160/A101

12300

AUTHORS: Zubarev, V. F.; Pereverzeva, Ye. G., Demakova, A. V.; Tarasova, L. P.

TITLE: The effect of arsenic on the mechanical properties of welded joints of the St3 (MSt.3) steel

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 3, 1962, 6 - 7, abstract 3E39. (Sb. nauchn. tr. Zhdanovsk. metallurg. in-t, 1960, vyp. 6, 213 - 225)

TEXT: Investigations were conducted on the heterogeneity and mechanical properties of a welded joint of the MSt.3 arsenic steel. The investigations were carried out with metal cut out from different ingot parts, such as the upper, middle and lower part at a concentration of 0.14 - 0.26 % As and 0.14 - 0.22 % C. The tests yielded the following results: (1) The built-up metal of the welded joint considerably differs from the base metal as to its chemical composition. The content of Mn and Si in the built-up Me of the St3 killed steel increases in relation to the base metal 1.5 - 2 times, the content of C and As decreases 1.5 - - 2 times. (2) The content of Mn and Si in the built-up metal and in the killed

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APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065520007-4"

The effect of arsenic on ....

and rimmed steels corresponds to the equilibrium concentrations between the liquid flux and metal at weld-bath temperatures of 2000 and 1575°C. (3) A liquation of impurities is appearing in the base and built-up Me along the length of the ingot bloom. The upper, and to a lesser degree the middle section of the ingot bloom are enriched with S, P, C and As. (4) An effect of the As on the macrostructure is not detected, and an effect on the macrohardness of the main zones of the welded joint is clearly detected: an increase in the content of As by 0.01 % causes an increase of R_B by 1.0. An increase of C would similarly affect the hardness. (5) The mechanical properties along the length of the ingot bloom are heterogenous. When passing from the upper to the bottom part of the ingot, the strength properties decrease, the plasticity properties and a_k increase. (6) An increase of the content C and As improve the strength properties and decrease the plasticity properties. An increase of the C content by 0.01 % increases - in the killed and rimmed steels - the σ_B by 0.7 kg/mm^2 and decreases δ by 1.2 %. The effect of As~ is 2 times weaker. (7) When containing 0.14 - 0.26 % As, the a_k of a welded joint of the St3 arsenic steel has a high level (9 - 30 kgm/cm^2), i.e., a higher one than in a St3 non-arsenic steel. (8) The Me of a welded joint

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The effect of arsenic on ....

S/137/62/000/003/162/191
A160/A101

of the MSt.3 steel with 0.26 % As possesses satisfactory mechanical properties.

V. Tarisova

[Abstracter's note: Complete translation]

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TKACHENKO, F.K.; ZUBAREV, V.F.

Effect of low-temperature treatment on the graphitization of commercial white cast iron. Lit. proizv. no. 5:25-27 My '61. (MIRA 14:5)

(Cast iron--Heat treatment)

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065520007-4"

ZUBAREV, V.F.

Letter to the editors. Lit. proizv. no.6:48 Je '61. (MIRA 14:6)

(Cast iron--Metallography)

Nauchno-tekhnicheskoye obshchestvo mashinostroitel'noy promyshlennosti. Kiyevskoye oblastnoye pravleniye.

Metallovedeniye i termicheskaya obrabotka (Physical Metallurgy and Heat Treatment of Metals) Moscow, Mashgiz, 1961. 359 p. Errata slip inserted. 5,000 copies printed.

Sponsoring Agency: Gosudarstvennyy nauchno-tekhnicheskiy komitet Soveta Ministrov UkrSSR. Nauchno-tekhnicheskoye obshchestvo mashinostroitel'noy promyshlennosti. Kiyevskoye oblastnoye pravleniye.

Editorial Board: M. P. Braun, Doctor of Technical Sciences, I. Ya. Dekhtyar, Doctor of Technical Sciences, D. A. Drayger, Doctor of Technical Sciences, I. S. Kamenichnyye, Engineer, Ye. A. Markovskiy, Candidate of Technical Sciences, V. G. Permyakov, Doctor of Technical Sciences, and A. V. Chernovol, Candidate of Technical Sciences; Ed.: M. S. Sorokа; Tech. Ed.: M. S. Gorustaypol'skaya; Chief Ed., Mashgiz (Southern Dept.): V. K. Serdyuk, Engineer.

Card 1/10

PURPOSE: This collection of articles is intended for scientific workers and technical personnel of research institutes, plants, and schools of higher technical education.

COVERAGE: The collection contains papers presented at a convention held in Kiyev on problems of physical metallurgy and methods of the heat treatment of metals applied in the machine industry. Phase transformations in metals and alloys are discussed, and results of investigations conducted to ascertain the effect of heat treatment on the quality of metal are analyzed. The possibility of obtaining metals with given mechanical properties is discussed, as are problems of steel brittleness. The collection includes papers dealing with kinetics of transformation, heat treatment, and properties of cast iron. No personalities are mentioned. Articles are accompanied by references, mostly Soviet.

TABLE OF CONTENTS:

Card 3/10

ZUBAREV, V.P. (Zhdanov), TKACHENKO, F.K. (Zhdanov)

Effect of preliminary heat treatment on the graphitization of white cast iron. Izv. AN SSSR. Otd. tekh. nauk. Met. i topl. no.6: 19-24 N - D '60. (MIRA 13:12)

(Cast iron--Metallography)

ZUBAREV, V.F. (Zhdanov); TKACHENKO, F.K. (Zhdanov)

Effect of transition stress in pig iron during passage through the eutectoid point. Izv. AN SSSR. Otd. tekh. nauk Met. i topl. no.2:113-155 Mr-Ap '59. (MIRA 12:6)
(Cast iron--Metallography)
(Phase rule and equilibrium)

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065520007-4"

SOV/180-59-2-21/34

AUTHORS: Zubarev, V.F., and Tkachenko, F.K. (Zhdanov)

TITLE: The Influence of Inter-Phase Stress on Cast Iron in the Transition over the Eutectoidal Point (O vliyanii mezhdufazovykh napryazheniy v chugune pri perekhode cherez evtektoidnuyu tochku)

PERIODICAL: Izvestiya akademii nauk SSSR, Otdeleniye tekhnicheskikh nauk, Metallurgiya i toplivo, 1959, Nr 2, pp 113-115 (USSR)

ABSTRACT: It has been considered (Refs 1, 2) that tensile stresses arising in cementite affect its stability, increasing the graphitization rate. Graphitization is also accelerated by the presence of micro-pores, whose formation is promoted by the stresses. The authors have determined the order of magnitude of the stresses. Dilatometric curves were obtained with a differential dilatometer for almost purely perlite type 60S2 steel and a white iron (2.5% C, 1.3% Si) whose A_{c1} point was equal to that of the steel (Figs 1 and 2, respectively). On the basis of an equation (Refs 3, 4) for the total stress produced by thermal expansion and using published data on modulus of elasticity (Ref 5) and shear modulus (Ref 6) of carbon steel, the authors calculate the value of

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The Influence of Inter-Phase Stress on Cast Iron in the Transition over the Eutectoidal Point

Poisson's ratio and arrive at - 22.3 kg/mm^2 as the value of the average tensile stresses in austenite. From a consideration of volume changes and deformation, the authors calculate the total compression stress at the Ar1 point to be 31.7 kg/mm^2. The stresses in cementite are of the same order but of opposite sign, this agreeing well with the published value.

Card 2/2 There are 2 figures and 8 references, 5 of which are Soviet and 3 English.

SUBMITTED: July 7, 1958

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065520007-4"

ZUBAREV, V.F.

Reply to K.P. Bunin, IA. V. Grechnyi and others. Izv.vys.ucheb. zav.; chern.met. no.10:145-146 O '58. (MIRA 11:12)

1. Zhdanovskiy metallurgicheskiy institut.
(Austenite) (Phase rule and equilibrium)

ZUBAREV, V.F., prof.,doktor tekhn.nauk; SINITSYNA, T.F., insh.

Structural characteristics of black-heart malleable cast iron close to voids and cavities. Sbor.nauch.trud. Zhdan.met.inst. no.4:157-168 '57. (MIRA 11:11)
(Cast iron--Metallography) (Gases in metals)

TKACHENKO, F.K., inzh.; ZURAKEV, V.F., prof., doktor tekhn.nauk.

Transformations occurring during the heating of hardened white iron. Metalloved. i obr. met. no.9:24-26 S '58.

(MIRA 11:10)

1.Zhdanovskiy metallurgicheskiy institut.
(Cast iron--Metallography)

137-58-6-13363

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 6, p 316 (USSR)

AUTHORS: Zubarev, V.F., Sinitsyna, T.F.

TITLE: Structural Peculiarities of Iron in the Vicinity of Voids and Cavities (Osobennosti struktury chernoserdechnogo kovkogo chuguna vblizi pustot i rakovin)

PERIODICAL: Sb. nauchn. tr. Zhdanovsk. metallurg. in-t, 1957, Nr 4, pp 157-168

ABSTRACT: The purpose of the work performed was the investigation of structural changes occurring in bull's-eye malleable iron in the proximity of voids and cavities. Investigations were carried out on cast iron of type KCh 33-8 with the following chemical composition: 2.5-2.8% C, 0.8-1.4% Si, 0.4-0.6% Mn, less than 0.12% S, and less than 0.14% P. After annealing at temperatures of 880-975°C, the cast-iron components were normalized at a temperature 880-860° for a period of 17-22 minutes. The heat treatment cycle required 51 hours. The RB had a value of 89-97. The following facts were established: 1. Gas blisters, shrinkage cavities and porosities cannot serve as zones of separation of graphite owing to the fact that

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Structural Peculiarities of Iron in the Vicinity of Voids and Cavities

they are always filled with gases which prevent the formation of graphitization centers. 2. The presence of large quantities of gas results in the formation of a decarburized layer which is obtained during high-temperature annealing operations. 3. Grain boundaries do not serve as cavities for separation of graphite but merely provide paths of least resistance for the movement of C atoms. 4. The experiments revealed characteristic peculiarities of graphitization in the vicinity of the shrinkage cavities. The assumption that these cavities serve as centers for accumulation of graphite was not corroborated by the experimental work; on the contrary, the formation of a decarburized zone and a graphite network, both of which impair the quality of the cast iron, is inevitable in the vicinity of such cavities.

1. Cast iron--Processing 2. Cast iron--Structural analysis
3. Cast iron--Test results

A. S.

ZUBAREV, V.F., doktor tekhn. nauk, prof.

Basic principles of the physicochemical theory of white cast iron and steel graphitization. Izv. vys. ucheb. zav.; chern. met. no.4: 133-141 Ap '58. (MIRA 11:6)

1. Zhdanovskiy metallurgicheskiy institut.
(Cast iron--Metallography) (Steel--Metallography)

SOV/129-58-9-5/16

AUTHORS: Tkachenko, F.K., Engineer and Zubarev, V. E., Doctor of Technical Sciences, Professor

TITLE: Transformations During Heating of Hardened White Iron (Prevrashcheniya pri nagreve zakalennogo belogo chuguna)

PERIODICAL: Metallovedeniye i Obrabotka Metallov, 1958, Nr 9, pp 24-26 (USSR)

ABSTRACT: The authors carried out a combined investigation of the internal transformations taking place in non-hardened and hardened cast iron by means of simultaneous photo-recording of the thermal, dilatometric and magnetic curves during the process of heating and cooling of the specimen. The experiments were carried out on a specially designed dilatometer fitted with a photo-recording. The thermal curve was recorded by means of a light point reflected from the curved mirror of a mirror galvanometer which was joined to the thin (d = 0.3 mm) chromel-alumel thermocouple. For recording the e.m.f. variations in an inductance a furnace was used, the heating element of which was the primary winding, whilst the secondary winding was a coil of nichrome wire wound

Transformations During Heating of Hardened White Iron

onto the quartz tube of the dilatometer. For compensating the induction e.m.f. a compensating coil was connected in series with the secondary coil. Into the circuit of the secondary coil an oscillograph loop was connected as shown in the sketch, Fig.1. All the curves were recorded simultaneously on a single sensitive paper which was fitted onto a rotating drum. The investigations were carried out on 5 mm dia, 50 mm long specimens of the steels U10 and 60S2 and white iron, the compositions of which are entered in Table 1. The determined thermal, dilatometric and magnetic curves of the heating and cooling processes are graphed in Fig.2; in Fig.3 the differential dilatometric curves of heating and cooling are graphed for the materials in the hardened state. The following conclusions are arrived at:
1. Magnetic transformation of the ferrite which enters into the structure of commercial white iron takes place below the Ac_1 point.

2. At the temperatures of the second transformation, a transformation of the residual austenite into martensite and a magnetic transformation of the carbide of an

Transformations During Heating of Hardened White Iron

unknown composition take place.
3. An increase in the permeability in the temperature range of the third transformation is attributed to eliminating the internal stresses in the α-phase.
There are 3 figures, 1 table and 1 Soviet reference.

ASSOCIATION: Zhdanovskiy metallurgicheskiy institut
(Zhdanov Metallurgical Institute)

1. Cast iron--Transformations

ZUBAREV, V.F.; TKACHENKO, F.K.

Position of equilibrium lines in the right-hand part of the iron-carbon equilibrium diagram. Lit. proizv. no.3:28 Mr '58.
(MIRA 11:4)

(Phase rule and equilibrium)

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065520007-4"

Category : USSR/Solid State Physics - Phase Transformation in Solid Bodies E-5

Abs Jour : Ref Zhur - Fizika, No 3, 1957, No 6629

Author : Zuberov, V.F.

Title : Effect of Stresses on the Formation of Centers of Graphitization in the Annealing of White Cast Iron.

Orig Pub : Liteynoye proiz-vo, 1956, No 8, 21-25

Abstract : No abstract

Card : 1/1

Category : USSR/Solid State Physics - Phase Transformation in Solid Bodies E-5

Abs Jour : Ref Zhur - Fizika, No 3, 1957, No 6629

Author : Zubarev, Y.F.
Title : Effect of Stresses on the Formation of Centers of Graphitization in the Annealing of White Cast Iron.

Orig Pub : Liteynoye proiz-vo, 1956, No 8, 21-25

Abstract : No abstract

Card : 1/1

steel (cemented dynamo steel) with an equal content of admixtures is given. The difference in the color of the greenish oxide film and of the red-yellow not oxidized layer may be clearly seen. An increased resistance to oxidation in the directions of the dendrite axes is mentioned. Another figure showing a 60S2 steel sample (with 0,57% of C, and 1,72% of Si), containing less silicon, shows a considerable reduction of the oxidation resistance and thus a green coloring. It was found with this method that silicon exhibits a tendency for a dendrite liquation. It is assumed that no "reversible" silicon liquation exists. There are 4 references, which are Soviet.

ASSOCIATION: Zhdanovskiy metallurgicheskiy institut (Zhdanov Metallurgical Institute)

ANDRIANOVA, T.N.; ZUBAREV, V.I., red.

[Throttling of gases and vapors; a lecture] Drosselirovanie gazov i parov; lektsiia. Pod red. V.I.Zubareva. Moskva, Mosk. energeticheskii in-t, 1962. 23 p.
(MIRA 17:4)

ZUBAREV, V.I.; BEREGOVSKIY, V.I.; FIGURKOV, I.V.

Transfer to oxygen-blown smelting of the Almalyk Copper Smeltery and an increase in its capacity. TSvet. met. 36 no.8:6-9 Ag '63. (MIRA 16:9)
(Almalyk--Copper industry) (Oxygen--Industrial applications)

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065520007-4"

ZUBAREV, V.I.

Some problems of expanding the copper smelting industry in central Kazakhstan. TSvet. met. 32 no.3:1-4 Mr '59.
(MIRA 12:5)

1.Karagandinskiy sovnarkhoz.
(Kazakhstan--Copper industry)

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065520007-4"

TAVAROVSKI[illegible] V.[illegible], [illegible]BARE[illegible]V, V.I.

Unit for manufacturing of wax patterns from non-[illegible] free compositions. Lit. proizv. no.[illegible] [illegible] '[illegible]. (MIRA 18:[illegible])

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065520007-4"

AUTHOR: Zubarev, V.I. SOV/136-59-3-1/21

TITLE: Some Problems in the Development of the Copper-smelting Industry of Central Kazakhstan (Nekotoryye voprosy razvitiya medeplavil'noy promyshlennosti tsentral'nogo Kazakhstana)

PERIODICAL: Tsvetnyye Metally, 1959, Nr 3, pp 1 - 4 (USSR)

ABSTRACT: Central Kazakhstan is to play a major part in the 1.9-fold increase in copper production envisaged in the seven-year plan. The author discusses some of the main technical problems involved at three of the local enterprises. At the Balkhashskiy gorno-metallurgicheskiy kombinat (Balkhash Mining-metallurgical Combine), the Kounradskiy Mine, the rate of stripping in 1960 is to be double that in 1958 and much re-equipment will be required in 1959. The author states that the Gosplan SSSR is not taking the steps necessary to accelerate the production of high-productivity equipment for open-cast mining and flotation - e.g. the failure to organise the timely production of "Mekhanobr-7" flotation machines which were supposed to have come into service in 1958. On the metallurgical side, the author considers, the combine will only attain the

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065520007-4"

Some Problems in the Development of the Copper-smelting Industry of Central Kazakhstan

proposed copper output by replacing reverberatory smelting by, for example, cyclonic or oxygen (autogenous) smelting. The latter promising method cannot yet be adopted there because of delay in research and development work, but a start will be made in 1959 on the introduction of the former. By the start of 1960, working plans for the reconstruction of the copper-smelting plant must be ready for the work to start in the same year; the oxygen plant has already been commissioned. For solving the problem of increasing recovery of rare metals, the works should have the assistance of the AN Kazakh SSR (Ac.Sc. Kazakh SSR) and the Gintsvetmet and VNIItsvetmet Institutes.
At the Dzhezkazganskiy gorno-metallurgicheskiy kombinat (Dzhezkazgan Mining-metallurgical Combine) ore output is to increase 2.8-fold in the next seven years. This is to be achieved by increasing open-cast mining and the adoption of new underground mining methods. Here, too, equipment supply is likely to be a delaying factor and the author urges prompt aid by the Gosplan of the USSR and GNTK of the

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065520007-4"

SOV/136-59-3-1/21

Some Problems in the Development of the Copper-smelting Industry of Central Kazakhstan

Sovet Ministrov SSSR (Council of Ministers of the USSR). The ore beneficiation plants are to be reconstructed and for dealing with oxidised and mixed ores the method of Professor Mostovich or hydro-metallurgical techniques should be suitable; for the solution of this problem the combine should have the help of Gintsvetmet, Mekhanobr, and VNIItsvetmet organisations and the Ac.Sc. KazSSR; the author considers the proposal of Giprotsvetmet that no hydrometallurgical plant should be included in the plans of the Dzhezkazgan Copper-smelting Works premature, and regrets the proposed use of reverberatory smelting on the grounds that this is out of date. He favours electric smelting of pre-calcined concentrates, in which laboratory work is proceeding at the Kazakh Mining-metallurgical Institute and urges the rapid solution of the problems involved by this Institute and Gintsvetmet, VNIItsvetmet, Giprotsvetmet and the Academy of Sciences of the KazSSR. At the same time the linking of the region to the Karaganda power grid should be pushed ahead.

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The seven-year plan provides for the construction of the Boshchekul'skiy gorno-obogatitel'nyy kombinat (Boshchekul' Mining-beneficiation Combine). The Mekhanobr and Unipromed' Institutes should renew their studies of the local ores and the Irtysh-Boshchekul' section of the Irtysh-Karaganda canal should be given priority.

ASSOCIATION: Karagandinskiy sovnarkhoz (Karaganda Economic Council)

Card 4/4

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