L 19679-65 EWT(d)/EMD-2/EWP(1) Po-4/Pq-4/Pg-4/Pk-4 IJP(c)/AMDC(a)/SSD/BSD/AFWL/ ASD(a)-5/ASD(s)/AFMD(c)/AFMDC/AFETR/RAEM(a)/AFTC(b)/RAEM(d)/ESD(c)/ESD(dp) GG/BB

ACCESSION NR: AP4038886 S/0119/64/000/005/0012/0013

AUTHOR: Abrosimov, I. L.; Aleskerov, S. A.; Akhundov, E. I.; Gel'man, M. M.

TITLE: Semiconductor analog-to-digital voltage converter 16 B

SOURCE: Priborostroyeniye, no. 5, 1964, 12-13

TOPIC TAGS: automatic control, industrial automatic control, analog digital converter, digital computer semiconductor analog digital converter

ABSTRACT: A new voltage-to-code converter is intended for introducing process-sensor information into a digital computer for the purpose of centralizing supervision and control of the process. The well-known principle of comparing the input voltage with a linearly-variable voltage is used: the input variable is converted into a time interval. The linearly-variable voltage is obtained by integrating a square pulse, a square-pulse shaper and a d-c amplifier perform

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L 19679-65

ACCESSION NR: AP4038886

this operation. A transistorized comparison device yields the time intervals proportional to the running value of the input voltage. A special transistorized gate is controlled by the comparator pulses and turns a pulse generator on and off. The latter produces 5-v, 0.25-microsec pulses at a repetition frequency of 1 mc. The number of pulses equivalent to an input voltage value is counted by a transistorized binary counter. Max input voltage, 20 v; conversion frequency, 300 cps; ambient temperature, up to 40C; claimed apparatus error, 0.2%. Orig. art. has: 4 figures.

ASSOCIATION: none

SUBMITTED: 00 ENCL: 00

SUB CODE: DP, EC NO REF SOV: 003 OTHER: 000

Card 2/2

L 05635-67 EWT(1)

ACC NR: AP6021553 SOURCE CODE: UR/0233/65/000/005/0077/0082

51
B

AUTHOR: Abrosimov, I. L.

ORG: none

TITLE: Investigation of a slaved multivibrator using a tunnel diode

SOURCE: AN AzerbSSR. Izv. Ser fiz-tekhn i matem n, no. 5, 1965, 77-82

TOPIC TAGS: multivibrator, tunnel diode, volt ampere characteristic, switching circuit

ABSTRACT: The particular tunnel diode circuit investigated was first described by V. V. Izokh and V. P. Bagrintsev (Pribory i tekhnika eksperimenta, 1963, No. 5) (Fig. 1). It acts as a two-position switch triggered by a pulse applied to the regular diode. The author presents formulas for the voltages and currents in the two states of the multivibrator, based on the approximate characteristics of the tunnel diode, and curves permitting optimal selection of the tunnel diode and the remaining circuit elements. Orig. art. has: 3 figures and 9 formulas.

Card 1/2

L 05635-67

ACC NR: AP6021553

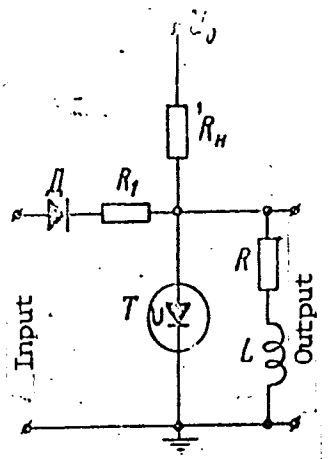


Fig. 1. Schematic diagram of tunnel-diode multivibrator.

SUB CODE: 09/ SUBM DATE: none/ ORIG REF: 004/ OTH REF: 002

Card 2/2

ACC NR: AP6005613 SOURCE CODE: UR/0233/65/000/003/0108/0115

AUTHOR: Abrosimov, I.L.; Aleskerov, S. A.; Lizhdvoy, G. L.

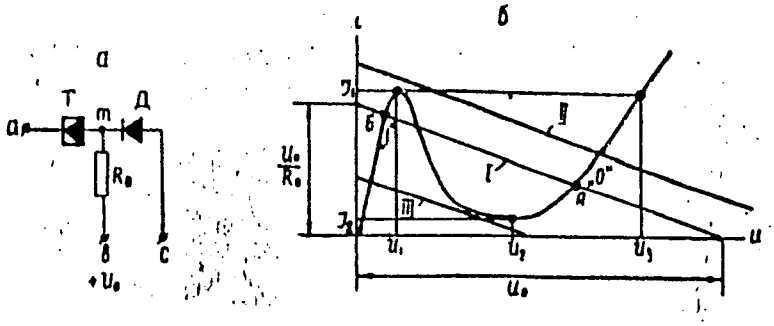
ORG: none

TITLE: Tunnel-diode storage element

SOURCE: AN AzerbSSR. Izvestiya. Seriya fiziko-tekhnicheskikh i matematicheskikh nauk, no. 3, 1965, 108-115

TOPIC TAGS: tunnel diode, computer storage device, memory

ABSTRACT: A well-known (P. M. Thompson, "Industrial Electronics", 1963, v. 1, no. 6) tunnel-diode storage element (see figure) is considered. The circuit comprises tunnel diode T, bias resistor R_0, and decoupling point-contact diode D. Bias U_0 and resistor R_0 determine



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L 39532-66
ACC NR: AP6005613

the position of the load line I where the element has two stable states (0, 1). Static conditions of the element are analyzed, tolerances of parameters are considered, and a formula for the output voltage is developed. These experimental results are reported: a Ge-tunnel-diode storage element developed a 200-mv 30-nsec pulse on a 200-ohm resistor (diode parameters: I_1 = 5.2 ma ± 15%; I_2 = 0.9 ma ± 20%; U_1 = 45 mv; U_2 = 245 mv; U_3 = 405 mv; C = 50 pF; decoupling diode:Ge, D10 type). A GaAs-tunnel-diode storage element developed a 450-mv 30-nsec pulse on a 200-ohm resistor (diode parameters: I_1 = 10.5 ma; I_2 = 0.8 ma; U_1 = 105 mv; U_2 = 550 mv; U_3 = 1.12 v; C = 7 pF). Orig. art. has: 4 figures and 30 formulas.

SUB CODE: 09 / SUBM DATE: 28Dec64 / ORIG REF: 003 / OTH REF: 002

Card 2/2

L 06394-67 EWT(1) GG

ACC NR: AP6025282 SOURCE CODE: UR/0119/66/000/007/0005/0007

AUTHOR: Abrosimov, I. L.(Engineer); Aleskerov, S. A. (Doctor of technical sciences)

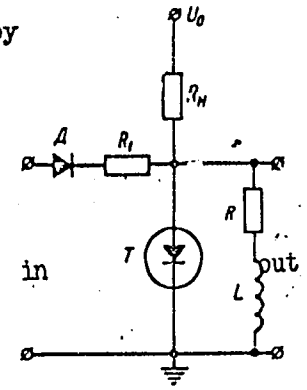
ORG: none

TITLE: Analysis and calculation of a tunnel-diode switching circuit

SOURCE: Priborostroyeniye, no. 7, 1966, 5-7

TOPIC TAGS: tunnel diode, switching circuit, multivibrator, trigger

ABSTRACT: By analyzing the tunnel-diode characteristics and by using well-known tunnel-diode relations, formulas for relay-type operation, shaped-pulse duration, input resistance ensuring trigger operation, etc. are deduced. These formulas permit designing slave multivibrators and triggers on the basis of the same tunnel-diode circuit (see figure) operated under different conditions. The slave-multivibrator circuit operates on the voltage-switching principle. Its monostability is attained by changing the resulting characteristic of the active element by means of a shunt resistance. Orig. art. has: 4 figures and 26 formulas.



SUB CODE: 09 / SUBM DATE: none / ORIG REF: 005

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UDC: 621.382.2:621.374.3:621.373.431.1

L 38197-66

ACC NR: AP6008533

(3) $$U_0 = \frac{I_{coll}}{\omega_0 C_1' + a} \frac{\sin \frac{\omega_0 t_0}{2}}{\frac{\omega_0 t_0}{2}} e^{-\pi/tq}, \quad a = \frac{(2 \sin \omega_0 t_0 + \pi) e^{-\pi/tq}}{4} \frac{h_{21}}{1 + h_{11}}$$

(4) $$t_0 = (2.3 + q)\theta_\Phi, \quad q = \ln\left[\frac{\theta_\Phi}{t_0^*}(e^{t_0^*/\theta_\Phi} - 1)\right]$$

These relationships may be used for shaper design and for the calculation of output pulse parameters. An example of such a calculation is given. Orig. art. has: 4 figures and 14 formulas.

SUB CODE: 09/ SUBM DATE: 25May64/ ORIG REF: 006/ OTH REF: 000

Card 2/2

ACC NR: AM5028930 (N) Monograph UR/

Abrosimov, Konstantin Aleksandrovich; Mil'to, Aleksey Aleksandrovich; Pasinskiy Anatoliy Maksimovich

15

Technology of reinforced concrete shipbuilding (Tekhnologiya zhelezobetonnogo sudostroyeniya) Leningrad, Izd-vo "Sudostroyeniye", 65. 0347 p. illus., biblio. 2,500 copies printed.

TOPIC TAGS: shipbuilding engineering, concrete, reinforced concrete, construction material

PURPOSE AND COVERAGE: This book presents the newest developments in the technology of constructing reinforced concrete ships. Special note is made of the methods of producing reinforced concrete ship structures, shipyard construction of the ship hulls, and the use of new high-efficiency materials. Descriptions are made of the technology and organization of mechanical assemblying, insulation work, finishing and equipment for installing reinforced concrete ships. Data is given on the main works of shipyard reinforced concrete shipbuilding, its equipment, and technical and economic aspects of building these ships. A large part of the book deals with mechanization of production processes of building the hulls. The book is recommended for technical engineers in the planning, construction and scientific study organizations of the shipbuilding industry, and for engineers in shipyard reinforced concrete shipbuilding. It can be useful for students of shipbuilding institutes and departments.

Card 1/2 UDC: 629.12.011.25.002.7

ACC NR: AM5028930

TABLE OF CONTENTS (abridged):

Card 2/2 SUB CODE:13 // /SUBM DATE: 09Jul65/ ORIG REF: 040

ABROSIMOV, K.F., kand. tekhn. nauk; BROMBERG, A.A., prof.; KATAYEV, F.P., kand. tekhn. nauk; BORODACHEV, I.P., kand. tekhn. nauk, retsenzent; NEMIROVSKIY, E.I., inzh., red.; SAVEL'YEV, Ye.Ya., red.izd-va; UVAROVA, A.F., tekhn.red.; MODEL', B.I., tekhn.red.

[Machines for road construction; road, construction, hoisting and conveying machinery, trucks and tractors]Mashiny dlia stroitel'stva dorog; dorozhnye, stroitel'nye i pod"emnotransportnye mashiny, avtomobili i traktory. [By]K.F.Abrosimov, A.A.Bromberg, F.P.Kataev. Pod red. A.A.Bromberga. Moskva, Mashgiz, 1962. 510 p. (MIRA 16:3)
(Road machinery)

GUTMAN, Ye. I., redaktor; DZYUBA, M.L., redaktor; POLYANOVSKIY, V.M., redaktor; YUROVITSKIY, Ye. N., redaktor; ABROSIMOV, M.A., redaktor; GERASIMOV, P.K., redaktor; D'YAKOV, M.I., redaktor; SAVEL'YEV, B.V., redaktor; TSITSIN, N.V., redaktor; YAKUSHKIN, I.V., redaktor

[Collective farmer's calendar for 1948] Kalendar' kolkhoznika na 1948 god. [n.p.] Gos. izd-vo sel'khoz. lit-ry [n.d.] 78 p. (MLRA 10:4)

(Collective farms)

1. ABROSIMOV, M.

2. USSR (600)

4. Russia - Economic Policy

7. Planned development of socialist national economy. Sots. sel'khoz. 23. no. 10. 1952.

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

ABROSIMOV, M. A.

"State Farms", Sovkhozy, Moscow, Gos. izd.-vo sel'khoz lit-ry, 1951

ABROSIMOV, M.V.

9(4) PHASE I BOOK EXPLOITATION SOV/2773

Poluprovodnikovyye termosoprotivleniya; sbornik statey (Thermistors; Collection of Articles) Moscow, Gosenergoizdat, 1959. 229 p. 13,000 copies printed.

Ed. (Title page): B. S. Sotskov, Doctor of Technical Sciences, Professor; Ed. (Inside book): V. A. Vetrov; Tech. Ed.: G. I. Matveyev; Editorial Board: B. S. Sotskov, Doctor of Technical Sciences, Professor (Chief Ed.), N. P. Udalov, Candidate of Technical Sciences, N. S. Zaytsev, Engineer, Ye. N. Shogorev, Engineer, and V. I. Turkulets, Engineer.

PURPOSE: This collection of articles is intended for engineering and technical personnel of plants, OKB, NII and also instructors and students of vuzes.

COVERAGE: The book contains articles dealing with problems of manufacture of thermistors and determining thermistor parameters and characteristics. The authors also discuss problems of industrial application of thermistors as control elements. The book is an effort of cooperation by scientists of a number of vuzes, members of NII and engineers of one of the plants (name is not given) of Mosgorsovnarkhoz. No personalities are mentioned. References appear at the end of some articles.

ABROSIMOV, M. YA.; IVIN, I. A.

Beets and Beet Sugar

Experience of the G. M. Malenkov Collective Farm in raising high yields of sugar beets. Sov. agron. 10 no. 9, 1952

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

AKROSIMOV, M. Ya.

"Glavnyy agronom Rakityanskogo rayonnogo otdela sel'skogo khozyaystva," Sov. Agron. No.9, 1952

L 2729-66 EWT(d)/EWP(v)/EWP(k)/EWP(h)/EWP(1) GS

ACCESSION NR: AT5023172 UR/0000/65/000/000/0241/0245

AUTHOR: Doganovskiy, S. A. (Moscow); Abrosimov, N. A. (Moscow)

TITLE: A computer for the automatic construction of time graphs in operative control systems.

SOURCE: Vsesoyuznaya konferentsiya po avtomaticheskomu operativnomu upravleniyu proizvodstvennymi predpriyatiyami. 1st, Moscow, 1963. Avtomaticheskoye operativnoye upravleniye proizvodstvennymi protsessami (Automatic operative control of production processes); trudy konferentsii. Moscow, Izd-vo Nauka, 1965, 241-246

TOPIC TAGS: automatic control technology, digital computer, analog computer, computer control system

ABSTRACT: The operative control of production processes requires the establishment of time graphs of the flow of production, building, and other operations. The technological flow of operation during the production of an arbitrary product is given in the form of an arrow diagram, and the problem is to establish, on the basis of such an arrow diagram, the time diagram for the execution of the entire set of operation during the realization time which is the best for the entire complex (critical path). The problem can be handled by digital or analog computers; however, it is desirable to reduce the size of the equip-

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ACCESSION NR: AT5023172

ment in the presence of a large number of necessary operations. For the particular task of automatic time graph calculation, the personnel of the IAT propose a special circuit shown in Fig. 1 of the Enclosure designed with resistors which are connected according to a prescribed program. The article describes briefly the principles, operation, and design of such a device, which, in its experimental form, can establish optimum time graphs for 40 operations. Orig. art. has: 8 figures.

ASSOCIATION: None

SUBMITTED: 11May65 ENCL: 01 SUB CODE: IE, DP

NO REF SOV: 000 OTHER: 000

Card 2/3

L 2729-66

ACCESSION NR: AT5023172 ENCL: 01

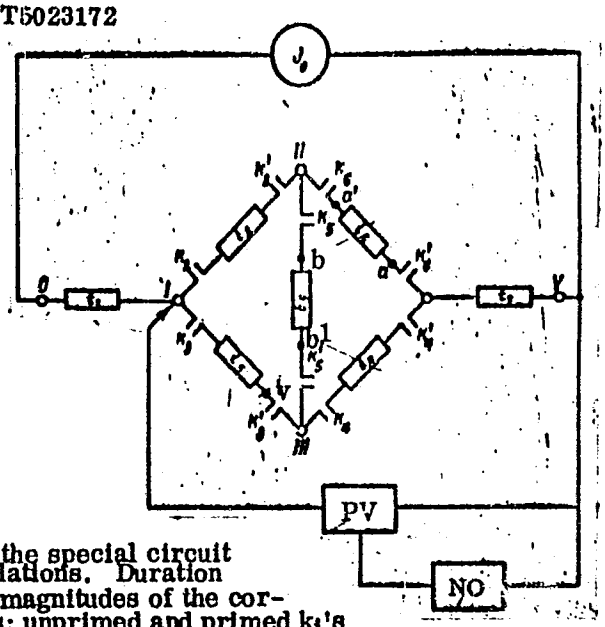

Fig. 1. Diagram of the special circuit for time graph calculations. Duration t_i's are fixed by the magnitudes of the corresponding resistors; unprimed and primed k_i's are switches; PV-peak voltmeter, NO null organ; J_0-constant current source.

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3,172
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B106/B108

24.6400

AUTHORS: Abrosimov, N. K., and Kocharov, G. Ye.

TITLE: Effect of source thickness on the form of energy and angular distributions of α-particles

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Seriya fizicheskaya, v. 26, no. 2, 1962, 237-244

TEXT: The effect of the thickness of the radiation source on the form of the spectrum of one group of α-particles was determined. The results can be generalized to some other groups of α-particles and other charged particles. The energy and angular distributions of α-particles emitted from a plane uniform source of thickness h were made the basis to the calculations. The number of particles with energies of from E to E + dE emerging per unit time from one surface element dS at angles of from θ to θ + dθ (from the surface normal) is $dN_{SE\theta} = \eta \sin\theta\cos\theta dr d\theta dS/2$ (1)

(η = number of α-particles emitted per unit volume per unit time; r may lie between $R_0-R(E)$ and $R_0-R(E)-(dR/dE)dE$; R_0 = total range of α-particles in

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the source; R(E) = range of α-particles in the source as a function of energy). Integrating Eq. (1) over S neglecting the edge effect (sufficiently large source) yields the energy and angular distributions of α-particles on the source surface: $d^2N/dEd(\cos\theta) = (N_0/2h)\cos\theta dR/dE$ ($N_0 = \eta Sh$ (number of α-particles emitted by the entire source per unit time). For sources with $h \geqslant R_0$ (thick source)

$$\frac{d^2N}{dEd(\cos\theta)} = \begin{cases} \frac{N_0}{2h} \cdot \frac{dR}{dE} \cos\theta & E \leqslant E_0, \quad 0 \leqslant \theta \leqslant \frac{\pi}{2} \\ 0 & E > E_0 \end{cases} \qquad (2).$$

For sources with $h < R_0$ (thin sources)

$$\frac{d^2N}{dEd(\cos\theta)} = \begin{cases} \frac{N_0}{2h} \cdot \frac{dR}{dE} \cos\theta & \begin{cases} E \leqslant E_a, \quad \theta_E \leqslant \theta \leqslant \frac{\pi}{2} \\ E_0 \geqslant E \geqslant E_a, \quad 0 \leqslant \theta \leqslant \frac{\pi}{2} \end{cases} \\ 0 & \begin{cases} E < E_a, \quad 0 \leqslant \theta \leqslant \theta_E \\ E > E_0 \end{cases} \end{cases} \qquad (3).$$

Integration of (2) and (3) over θ between 0 and θ_k yields the energy

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distribution of α-particles on the source surface if all α-particles with θ between 0 and θ_k are recorded; for sources with $h \geqslant R_0$

$$\frac{dN}{dE} = \begin{cases} \frac{N_0}{4h}\frac{dR}{dE} - \frac{N_0}{4h}\cdot\frac{dR}{dE}\cos^2\theta_k & E \leqslant E_0 \\ 0 & E > E_0 \end{cases} \quad (4),$$

for sources with $h < R_0$

$$\frac{dN}{dE} = \begin{cases} 0 & E < E_k \\ \frac{N_0 h}{4[R_0 - R(E)]^2}\cdot\frac{dR}{dE} - \frac{N_0}{4h}\cdot\frac{dR}{dE}\cos^2\theta_k & E_k \leqslant E \leqslant E_a \\ \frac{N_0}{4h}\cdot\frac{dR}{dE} - \frac{N_0}{4h}\cdot\frac{dR}{dE}\cos^2\theta_k & E_a \leqslant E \leqslant E_0 \\ 0 & E > E_0 \end{cases} \quad (5)$$

(E_k = rate of the equation $\cos\theta_k = h/(R_0 - R(E_k))$; E_k vanishes when $\theta_k \geqslant \arccos h/R_0$). When all α-particles emitted at arbitrary angles are recorded, θ_k becomes $\pi/2$, and the second terms in Eqs. (4) and (5) cancel

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out. On the assumption that the dependence of the range of the α-particles on the energy in different media obeys the power function $R = AE^n$ ($n \approx 1.5$), Eqs. (2)-(5) take the following forms:

$$\frac{d^2N}{dEd(\cos\theta)} = \begin{cases} \frac{1}{2h} N_0 AnE^{n-1}\cos\theta & E \leqslant E_0,\ 0 \leqslant \theta \leqslant \frac{\pi}{2} \\ 0 & E > E_0 \end{cases} \quad (2'),$$

$$\frac{dN}{dE} = \begin{cases} \frac{1}{4h} N_0 AnE^{n-1} - \frac{1}{4\pi} N_0 AnE^{n-1}\cos^2\theta_H & E \leqslant E_0 \\ 0 & E \geqslant E_0 \end{cases} \quad (4'),$$

$$\frac{d^2N}{dEd(\cos\theta)} = \begin{cases} \frac{1}{2h} N_0 AnE^{n-1}\cos\theta & \begin{cases} E < E_a,\ \theta_E \leqslant \theta \leqslant \frac{\pi}{2} \\ E_0 \geqslant E \geqslant E_a,\ 0 \leqslant \theta \leqslant \frac{\pi}{2} \end{cases} \\ 0 & \begin{cases} E < E_a,\ 0 \leqslant \theta \leqslant \theta_E \\ E > E_0 \end{cases} \end{cases} \quad (3'),$$

$$\frac{dN}{dE} = \begin{cases} 0 & E < E_H \\ \frac{N_0 hAnE^{n-1}}{4R_0^2\left[1-\left(\frac{E}{E_0}\right)^n\right]^2} + \frac{1}{4h} N_0 AnE^{n-1}\cos^2\theta_H & E_H \leqslant E \leqslant E_a \\ \frac{1}{4h} N_0 AnE^{n-1} - \frac{1}{4h} N_0 AnE^{n-1}\cos^2\theta_H & E_a \leqslant E \leqslant E_0 \\ 0 & E > E_0 \end{cases} \quad (5').$$

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Here,

$$E_a = \left(\frac{R_0 - h}{A}\right)^{\frac{1}{n}}, \quad E_b = \left(\frac{R_0 - \frac{h}{\cos\theta_E}}{A}\right)^{\frac{1}{n}}, \quad \theta_E = \arccos\frac{h}{R_0\left[1-\left(\frac{E}{E_0}\right)^n\right]}$$

The allowance for the thickness of the source in absolute counting of charged particles, as well as the effect of the source thickness on the accuracy of energy measurements in an ionization α-spectrometer and on the pulses of a high-voltage electrode and of the grid of an ionization chamber were studied on the basis of these results. V. O. Naydenov, undergraduate degree student of the LPI im. M. I. Kalinina (LPI imeni M. I. Kalinin), is thanked for calculations. There are 4 figures and 5 Soviet references.

ASSOCIATION: Fiziko-tekhnicheskiy institut im. A. F. Ioffe Akademii nauk SSSR (Physicotechnical Institute imeni A. F. Ioffe of the Academy of Sciences USSR)

ACCESSION NR: AP4013420 S/0057/64/034/002/0313/0320

AUTHOR: Abrosimov, N.K.; Kaminker, D.M.; Petrov, I.A.; Sherman, S.G.

TITLE: On the theory of a duct consisting of magnetic quadrupole lenses for obtaining pure beams of μ-mesons of various energies

SOURCE: Zhurnal tekhn.fiz., v.34, no.2, 1964, 313-320

TOPIC TAGS: meson, μ-meson, π-meson, μ-meson duct, magnetic lens, quadrupole magnetic lens, magnetic lens system, momentum selector

ABSTRACT: The theory of the so-called μ-meson duct is discussed (A.Citron a. H. Overas. Report CERN sc.,143,1961; E.Braunersreuther, V.Chabaud, C.Delorme and M. Morugo, Report CERN 61-12,1961). The duct consists of a sequence of identical and equally spaced magnetic quadrupole lenses so oriented that the successive convergence planes are perpendicular to each other, and is intended for obtaining a beam of μ-mesons from the decay in flight of π-mesons. Previous theoretical treatments have restricted the discussion to the case of thin lenses. The results of the present paper are valid for lenses of arbitrary thickness (length). The equation of

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ACCESSION NR: AP4018420

the trajectories is of the type of Hill's equation. The stability criteria are obtained with the aid of Floquet's theorem. If the lenses are made very long, the stability regions become narrow (only particles having momenta within a small range are passed) and the system, no longer useful as a π-meson duct, can be employed as a momentum selector. From the envelope of the stable trajectories, the region in phase space is obtained from which μ-mesons, produced by decay of π-mesons in stable orbits, are captured. An expression is derived from which, by numerical integration, one can obtain the efficiency of a proposed system, i.e., the number of separable μ-mesons produced per entering π-meson. "The authors consider it their pleasant duty to express their gratitude to D.G.Alkhazov and A.P.Komar for detailed discussion of the present work." Orig.art.has: 30 formulas and 3 figures.

ASSOCIATION: Fiziko-tekhnicheskiy institut im. A.F.Ioffe AN SSSR, Leningrad (Physical Technical Institute, AN SSSR)

SUBMITTED: 15Dec62 DATE ACQ: 26Feb64 ENCL: 00

SUB CODE: PH, SD NR REF SOV: 001 OTHER: 009

Card 2/2

ACC NR: AP6002455 SOURCE CODE: UR/0057/65/035/012/2248/2249

AUTHOR: Abrosimov, N.K.; Nikolayeva, V.A.; Sherman, S.G.

ORG: Physico-technical Institute im. A.F.Ioffe, AN SSSR, Leningrad (Fiziko-tekhnicheskiy institut AN SSSR)

TITLE: Approximate calculation of the efficiency of a mu-meson duct

SOURCE: Zhurnal tekhnicheskoy fiziki, v.35, no. 12, 196 2248-2249

TOPIC TAGS: mu meson, pi meson, magnetic quadrupole lens, particle beam, ~~mathematic method~~ pion scattering

ABSTRACT: N.K.Abrosimov, D.M.Kaminker, I.A.Petrov, and S.G.Sherman (ZhTF, 34, 313, 1964) have proposed a method for estimating the efficiency of a magnetic quadrupole lens muon duct. This method involves evaluation of a triple integral. Here it is pointed out that the muon capture efficiency, which is a periodic function of z, is actually nearly independent of z when the pion momentum is high (z is presumably a coordinate measured along the duct; the notation of the earlier paper is employed and the reader is permitted to guess what the symbols mean), and that by assuming this quantity to be independent of z one can reduce the triple integral to a double integral. If the pion momentum scatter is small one can further reduce the triple integral to a single integral. The muon efficiencies of three ducts of different design were calculated as functions of the pion momentum and the results are presented

Card 1/2 UDC: 537.533.33

ACC NR: AP6002455

graphically. The muon efficiency passes through a maximum at a certain pion momentum. The maximum muon efficiency increases and the pion momentum at which the maximum efficiency is reached decreases with increasing values of the ratio ℓ/d, where ℓ and d are two lengths that are presumably defined in the reference cited above. Orig. art. has: 3 formulas and 1 figure.

SUB CODE: 20 SUBM DATE: 14May65 ORIG. REF: 001 OTH REF: 000

Card 2/2

USSR

ABROSIMOV, N.K. Physical-Technical Institute imeni A.F.Ioffe, Academy of Sciences USSR, Leningrad

(Source: Works of the International Conference on Accelerators, Dubna, 21-27 August 1963)

ABROSIMOV, N.Z., Cand Med Sci -- (diss) "~~The~~ Significance of the ~~development of the~~ heparin factor in the process of ~~the~~ coagulation ~~of the blood~~ in patients ~~with heart and vascular diseases~~" Mos,1958. 14 pp (Min of Health USSR. Central Inst for the Advanced Training of Physicians.) 200 copies.

(KL, 12-58, 101)

ARROSIMOV, N.Z. (Moskva)

Effect of digitalis preparations and mercusal on the prothrombin level. Klin.med. 36 no.1:34-38 Ja '58. (MIRA 11:3)

1. Iz terapevticheskoy kliniki (zav.-prof. B.Ye. Votchal) TSentral'nogo instituta usovershenstvovaniya vrachey.

(DIGITALIS,
eff, on prothrombin level (Rus)
(DIURETICS, MERCURIAL, eff.
mersalyl, on prothrombin level (Rus)
(PROTHROMBIN, eff. of drugs on
digitalis & mersalyl (Rus)

Abrosimov, N.Z.

ABROSIMOV, N.Z.

Method for determining heparin time and its significance in clinical practice. Lab.delo 3 no.5:16-20 S-O '57. (MIRA 11:2)

1. 2-ye kafedra terapii (zav. - prof. B.G.Votchal) TSentral'nogo instituta usovershenstvovaniya vrachey na baze klinicheskoy bol'nitsy imeni Botkina, Moskva.
(HEPARIN) (BLOOD--ANALYSIS AND CHEMISTRY)

ABROSIMOV, N.A.

Diagnosis of respiratory acidosis. Nauch.trudy Kuaz.med.inst. 18 no.2:47-51 '64.

Inhalation of oxygen as a factor contributing to the development of respiratory acidosis. Ibid.:52-54

Treatment and prevention of respiratory acidosis. Ibid.:55-63 (MIRA 19:1)

1. Kafedra gospital'noy terapii (zav. kafedroy - prof. N.A. Troitskiy) Ryazanskogo meditsinskogo instituta.

IHBKOSIMOV, F.

21(2) PHASE I BOOK EXPLOITATION SOV/2708

Atomnaya energiya i flot; sbornik statey (Atomic Energy and the Navy; Collection of Articles) Moscow, Voyenizdat, 1959. 232 p. (Series: Nauchno-populyarnaya biblioteka) Number of copies printed not given.

Ed.: Ya. M. Kader; Tech. Ed.: A.M. Gavrilova; Ed. and Compiler: L. D. Chernous'ko, Engineer, Captain.

PURPOSE: This book is intended for the general reader.

COVERAGE: The papers in this collection discuss in popular style, and on the basis of data published in the Soviet and non-Soviet press, problems of the use of atomic and hydrogen weapons in combat operations at sea. The collection includes reports on the damaging factors of a nuclear explosion and on the immense power of this weapon of mass destruction. A number of articles are devoted to the antinuclear defense of ships and of shore objects, and to the introduction of nuclear power plants in naval vessels. Also included in the collection are papers dealing with the future prospects for naval use of nuclear energy, and with the construction of the world's first atomic icebreaker, the "Lenin", which is expected to play an important part in the further conquest of the Arctic regions. The collection also contains papers published in the journal Sovetskiy flot in 1955 - 1958, in revised and supplemented form.

AVAILABLE: Library of Congress (UY767.C39)

ABROSIMOV, P. per chapter authors

25

JUN 25 1963

PHASE I BOOK EXPLOITATION SOV/6261

Kernenergie und Flotte; Artikelsammlung (Nuclear Energy and the Navy; Collection of Articles) [Berlin] Deutscher Militarverlag [1961]. 232 p. Errata slip inserted. 2000 copies printed.

Translation from the Russian of: Atomnaya energiya i flot.

Translator: Erika Steuk, Lieutenant Commander. Responsibility for German editio : Claus Gruszka, Engineer; Ed.: Klaus Krumsieg.

PURPOSE: This collection of articles is intended for officers of the army, coast guard, and merchant marine.

COVERAGE: The book, a translation from the Russian, contains 25 articles dealing with the application of nuclear weapons to naval combat operations. Chapters 19 and 25 have been supplemented with additional data for this edition. The devastating features of nuclear explosions are discussed. Attention is also given to the protection of personnel, ships, and coastal facilities against nuclear weapons, and to the present and future applications of nuclear

Card 1/6

Nuclear Energy and the Navy (Cont.) SOV/6261

power plants to shipping. No personalities are mentioned. There are 16 references: 10 Russian (including 3 translations from English-language sources), 1 French, 1 German, 1 English, 1 American, and 2 either English or American.

TABLE OF CONTENTS:

Nuclear Energy and the Navy (Cont.) SOV/6261

Card 3/6

1. RUDNEV, L. V.; CHERNYSHEV, S. YE.; ABROSIMOV, P.V., Arch.; KHRYAKOV, A.F.,Arch.

2. USSR 600

4. Moscow University

7. 26-story building of Moscow State Univerity, Gor. khoz.,Mosk, 23, No. 7, 1949.

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

ABROSIMOV, P. V.; VORONKOV, A. V.

ABROSIMOV, P. V.: VORONKOV, A. V.

Moscow - Buildings

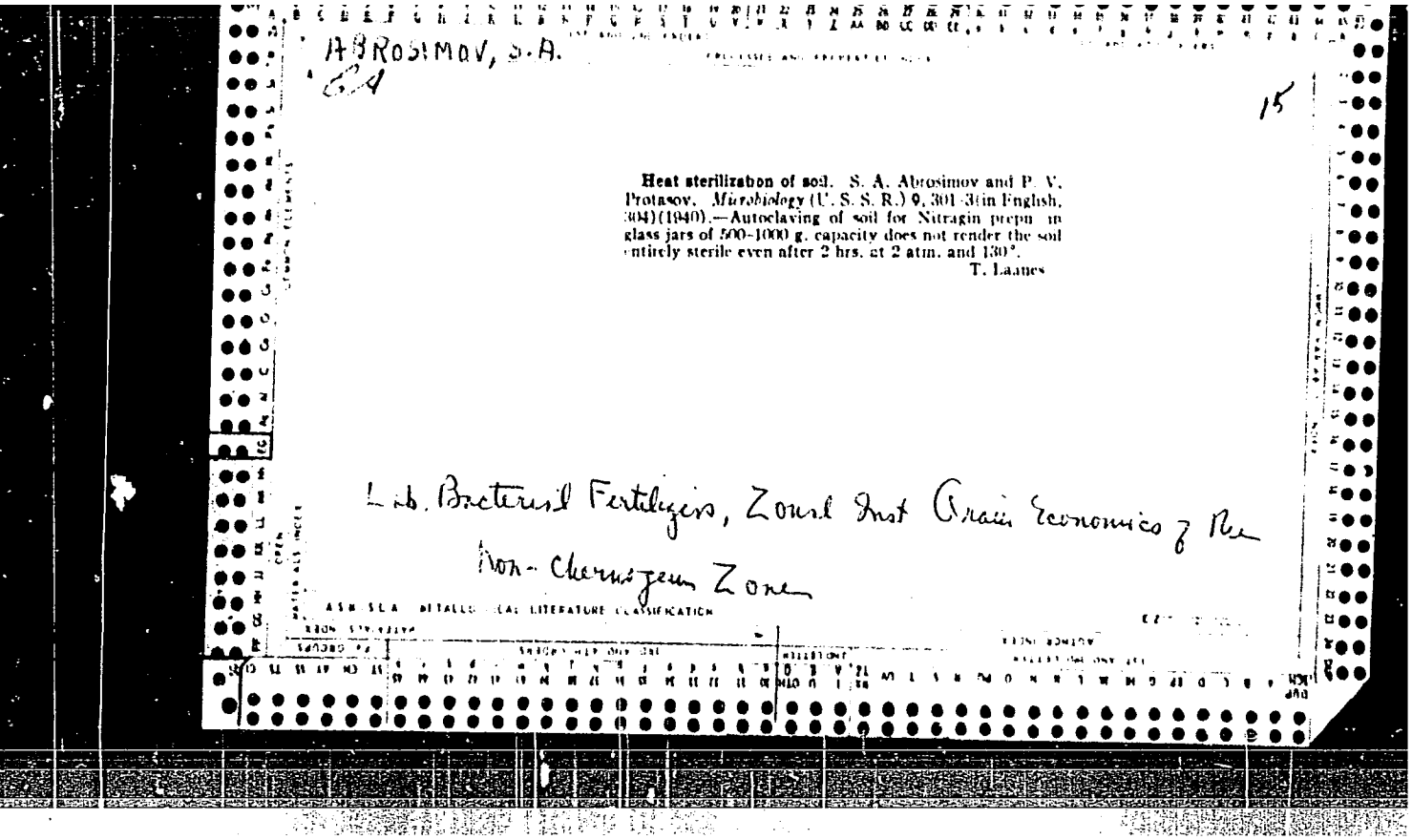
Construction of tall edifice of the Moscow State University. Gor. khoz. Mosk. 26 no. 1, 1952.

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

ABROSIMOV, S.

Studying the historic documents of the congress. Ist.prom. i khud.promys. 2 no.12:8 D '61. (MIRA 14:12)

1. Rukovoditel' nachal'noy ekonomicheskoy shkoly rayonnogo g. Ogre, Latviyskoy SSR.
(Latvia--Communist Party of the Soviet Union--Party work)



ABROSIMOV, S.A.

15

Heat sterilization of soil. S. A. Abrosimov and P. V. Protasov. *Microbiology* (U. S. S. R.) 9, 301-3(in English, 304)(1940).—Autoclaving of soil for Nitragin prepn in glass jars of 500–1000 g. capacity does not render the soil entirely sterile even after 2 hrs. at 2 atm. and 130°.
T. Laanes

Lab. Bacterial Fertilizers, Zonal Inst Grain Economics of Non-Chernozem Zone

ANGELINA, P., geroy Sotsialisticheskogo Trud[illegible], laureat Stalinskoy premii; TSIMIDANOV, K.; MEL'NIK, V.; MYASNIKOV, F.; YEFREMOV, G.; BOGACH, N., geroy Sotsialisticheskogo Truda; ABROSIMOV, V., geroy Sotsialisticheskogo Truda; PAVLOV, M.; ARONOV, L.

Radio network for every machine-tractor station. Radio no.4:6-9 Ap '54. (MLRA 7:4)

1. Brigadir traktornoy brigady Staro-Beshevskoy MTS, Stalinskoy oblasti, deputat Verkhovnogo Soveta SSSR (for Angelina). 2. Direktor Staro-Beshevskoy MTS, Stalinskoy oblasti (for TSimidanov). 3. Sekretar' rayonnogo komiteta KPSS po zone Golobskoy MTS, Volynskoy oblasti (for Mel'nik). 4. Direktor Isetskoy MTS, Tyumenskoy oblasti (for Myasnikov). 5. Direktor Pon'kinskoy MTS, Shadrinskogo rayona, Kurganskoy oblasti (for Yefremov). 6. Direktor Kotovskoy MTS, Odesskoy oblasti (for Bogach). 7. Direktor Shestakovskoy MTS, Kirovogradskoy oblasti (for Abrosimov). 8. Glavnyy inzhener Upravleniya sel'skogo khozyaystva Stavropol'skogo kraya (for Pavlov). 9. Direktor Ol'ginskoy MTS, Poltavskogo rayona, Omskoy oblasti (for Aronov). (Radio) (Machine-tractor stations)

[redacted], Ye.Ya., kand. tekhn. nauk, dotsent ; [redacted], V.P., kand. tekhn. nauk, dotsent; ABRAMOVICH, V.A., inzh.

Experimental study of pressure distribution in the friction of journal bearings of construction machinery. Sbor. trud. LIIZHT no.201:137-148 '63. (MIRA 17:12)

LADYZHENSKIY, B.N.; KULINICH, V.P.; KATEYEV, Yu.V.; ZARUBIN, S.N.; ROZENBLIT, Ya.L.; ABROSIMOV, V.I.

Desulfuration of acid electric steel by the blowing-in of powderlike limestone. Lit. proizv. no.8:42-43 Ag '64. (MIRA 18:10)

LYUBIMOV, K.N., inzhener; ABROSIMOV, V.I., inzhener.

Hydraulic glue press for hot veneering. Der.prom. 5 no.8:20 Ag '56. (MLRA 9:10)

1.Proyektno-konstruktorskoye byuro Rosprcmsoveta.
(Veneers and veneering) (Hydraulic presses) (Gluing)

AZIZOV, Abdul-Kerim Abdulovich; ABROSIMOV, Vasiliy Il'ich; KUDRYAVTSEVA, Anna Fedorovna; KOROTOVSKIY, M.P., red.; OSADCHIY, F.Ya., red.; PROKHOROV, V.P., tekhn.red.

[Light industry of Kazakhstan and prospects for its development] Legkaia promyshlennost' Kazakhstana i perspektivy ee razvitiia. Alma-Ata, Izd-vo Akad.nauk Kazakhskoi SSR, 1960. 245 p. (MIRA 13:7)

(Kazakhstan--Manufactures)

KRASKOVSKIY, Ye.Ya., kand.tekhn.nauk; TRET'YAKOV, A.V., kand.tekhn.nauk; YAKOVLEV, V.F., kand.tekhn.nauk; BONDYUGIN, V.M., inzh.; ABROSIMOV, V.I., inzh.

Studying rolling friction on roll models. Sbor. st. NIITIAZHMASHa Uralmashzavoda no.6:189-205 '65.

(MIRA 18:11)

YAKOVLEV, V.F., kand.tekhn.nauk; TRET'YAKOV, A.V., kand.tekhn.nauk; KRASKOVSKIY, Ye.Ya., kand.tekhn.nauk; BONDYUGIN, V.M., inzh.; ABROSIMOV, V.I., inzh.

Studying contact stresses by means of electric tensometric roll models. Sbor. st. NIITIAZHMASHa Uralmashzavoda no.6:211-227 '65. (MIRA 18:11)

KRESTOV, G.A.; ABROSIMOV, V.K.

Thermodynamic characteristics of the structure changes in water caused by the hydration of ions at various temperatures. Zhur. strukt. khim. 5 no.4:510-516 Ag '64. (MIRA 18:3)

1. Ivanovskiy khimiko-tekhnologicheskiy institut.

ABROSIMOV, V.N.

Effect of ultraviolet rays of various wavelengths on production of agglutinins. Zhur.mikrobiol.epid.i immun. no.5:96-99 My '55. (MLRA 8:7)

1. Iz kafedry patologicheskoy fiziologii (zav. -prof. A.D.Ado) II Moskovskogo gosudarstvennogo meditsinskogo instituta imeni I.V. Stalina.

(ULTRAVIOLET RAYS, effects,
on agglutinin form)
(AGGLUTINATION, effect of radiations on,
ultraviolet rays, on agglutinin form.)

ABROSIMOV, V.N.(Moskva)

Mechanism of the action of botulin toxin on respiration. Arkh. pat. 18 no.1:86-92 '56. (MLRA 9:6)

1. Iz kafedry patologicheskoy fiziologii (zav.-chlen-korrespondent AMN SSSR prof. A.D. Ado)II Moskovskogo meditsinskogo instituta imeni I.V. Stalina.

(RESPIRATION, effect of drugs on,
botulin (Rus))
(CLOSTRIDIUM BOTULINUM,
toxin, eff. on resp. (Rus))

ABROSIMOV, V.N. (Moskva)

Mechanism of respiratory insufficiency in experimental diphtheria intoxications [with summary in English]. Arkh.pat. 20 no.10:32-40 '58 (MIRA 11:12)

1. Iz kafedry patologicheskoy fiziologii (zav. - chlen-korrespondent AMN SSSR prof. A.D. Ado) II Moskovskogo meditsinskogo instituta imeni N.I. Pirogova.

(DIPHTHERIA, exper.
mechanism of resp. insuff. in animals (Rus))
(RESPIRATION,
insuff., mechanism of develop. in diphtheria in animals (Rus))

ABROSIMOV, V.N.

Effect of toxic components of Bordetella pertussis on the neural regulation of respiration. Arkh. pat. 23 no.2:41-46 '61. (MIRA 14:2)

(WHOOPING COUGH) (VAGUS NERVE)
(RESPIRATION)

ABROSIMOV, V.N. (Moskva)

Disorder of the central regulation of respiration in botulism infection. Pat. fiziol. i eksp. terap. 6 no.3:44-48 My-Je'62 (MIRA 17:2)

1. Iz kafedry patologicheskoy fiziologii (zav. - chlen-korrespondent AMN SSSR prof. A.D. Ado) II Moskvoskogo meditsinskogo instituta imeni N.I. Pirogova.

ADO, A.D.; ABROSIMOV, V.K.

The specific effect of bacterial toxins on the nervous regulation of respiration. J. hyg. epidem. (Praha) 8 no.4:433-[illegible] '64.

1. Pirogoff Medical Institute, Moscow.

ABROSIMOV, V.N.

Electrophysiological studies of the reflex activity of the respiratory center in experimental botulism. Pat. fiziol. i eksp. terap. 8 no.6:71-72 N-D '64.

(MIRA 18:6)

1. Kafedra patologicheskoy fiziologii (zav. - chlen-korrespondent AMN SSSR prof. A.D. Ado) II Moskovskogo meditsinskogo instituta imeni Pirogova.

L 15773-66 EWT(d)/EWT(m)/EWP(w)/EWA(d)/EWP(v)/T/EWP(t)/EWP(k)/EWP(h)/EWP(z)/EWP(b)
ACC NR: AP6006184 EWP(l) MJW/JD/HM/EM SOURCE CODE: UR/0135/66/000/002/0026/0027

AUTHOR: Abrosimov, V. P. (Engineer); Litvinov, S. P. (Engineer); Gerfanov, A. V. (Engineer)

ORG: none

TITLE: Welding of thin-wall stainless-steel tubes

SOURCE: Svarochnoye proizvodstvo, no. 2, 1966, 26-27

TOPIC TAGS: welding, stainless steel tube, tube welding, spiral joint tube, welded tube

ABSTRACT: A unit for automatic welding of thin-wall Kh18N10T [AISI-321] steel tubes with a spiral joint has been developed and put into operation at an unidentified plant. The strip is first tightly coiled on a drum and the coil is faced on both ends in a lathe to make the strip uniformly wide along the whole length. This operation reduced the width deviations to a maximum of 0.07 to 0.08 mm. From machined strip 400 mm wide and 0.8 mm thick, tubes 110 or 142 mm in diameter were welded with an automatic argon-shielded arc. The cost of the tubes welded by the new method is claimed to be but a small fraction of the cost of

Card 1/2 UDC: 621.791.754:546.293:621.3.462:669.15-194

L 15773-66

ACC NR: AP6006184

seamless tubes of the same size. When lighter strip, 0.4—0.5 mm thick, is used the edges should be flanged. This is done by a flanging attachment containing two flanging rolls which also serve as strip guides. Orig. art. has: 3 figures. [AZ]

SUB CODE: 13/ SUBM DATE: none/ ATD PRESS: 4200

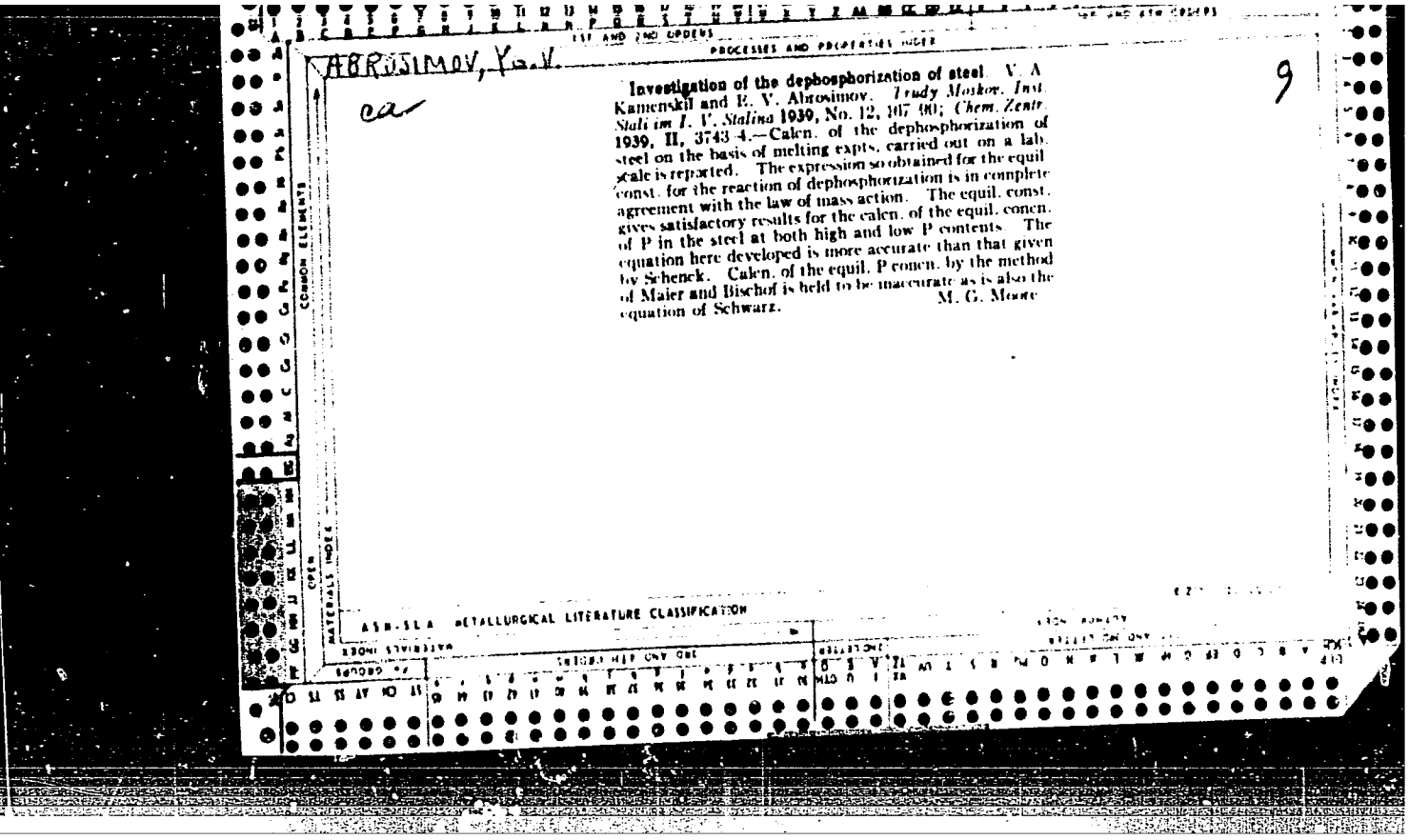
Card 2/2

ABROSIMOV, V.S.

Flux disk pad for the welding of girth joints in cylinders. Avtom. svar. 16 no.6:94 Je '63. (MIRA 16:7)
(Electric welding--Equipment and supplies)

KOLESANOV, F.F.; KONAREVA, A.S.; Prinimali uchastiye: ABROSIMOV, V.V.; GAVRIN, E.G.; SUYETINA, G.F.; OLENNIKOV, B.I.; PANOV, O.V.

Nodulizing fine oxidized nickel ore by tumbling with subsequent firing. TSvet. met. 35 no.5:47-52 My '62. (MIRA 16:5)
(Nickel ore) (Sintering)



ABROSIMOV, Ya. V.

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Investigation of the dephosphorization of steel. V. A. Kamenskii and Ya. V. Abrosimov. *Trudy Moskov. Inst. Stali im I. V. Stalina* **1939**, No. 12, 107-80; *Chem. Zentr.* **1939**, II, 3743-4.—Calcn. of the dephosphorization of steel on the basis of melting expts. carried out on a lab. scale is reported. The expression so obtained for the equil. const. for the reaction of dephosphorization is in complete agreement with the law of mass action. The equil. const. gives satisfactory results for the calcn. of the equil. concn. of P in the steel at both high and low P contents. The equation here developed is more accurate than that given by Schenck. Calcn. of the equil. P concn. by the method of Maier and Bischof is held to be inaccurate as is also the equation of Schwarz.

M. G. Moore

ABROSIMOV, Ye V.

Stoff-und Warmebilanzen beim Siemens-Martin-Verfahren (Metallurgie des Stahls) Berlin, Technik, 1953. 68 p. diagrs., tables. Translation of the final chapter of "Metallurgiya stale Martinovskiy protsess" by K. G. Trubin and G N. Oyks, pub. in Moscow, 1951.

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ABROSIMOV, E. V ; ANSHE . I. I.; YEZHOV, G. I. (Engr.); TRUBIN, K. G. (Prof., Dr. Tech. Sci.);

"The Effort of Teeming Conditions upon the Quality of Pipe Steel," in book The Application of Radioisotopes in Metallurgy, Symposium XXXIV; Moscow; State Publishing House for Literature on Ferrous and Nonferrous Metallurgy, 1955.

Prof. K. G. TRUBIN, Dr. Tech. Sci.; G. I. YEZHOV, Engr.; E. V. ABROSIMOV, Assistant; I. I. ANSHELES, Assistant, Chair of Steel Metallurgy, Moscow Inst. of Steel im I. V. Stalin;

ABROSIMOV, E. V.; SHIMON, Sh.; TRUBIN, K. G. (Prof., Dr. Tech. Sci.)

"Desulphuration at the Purging of Metal with Oxygen," in the book The Application of Radioisotopes in Metallurgy, Symposium XXXIV; Moscow; State Publishing House for Literature of Ferrous and Nonferrous Metallurgy, 1955.

Prof. K. G. TRUBIN, Dr. Tech. Sci.; Sh. SHIMON; E. V. ABROSIMOV, Chair of Steel Metallurgy, Moscow Inst. of Steel im I. V. Stalin.

ABROSIMOV, E. V.; TRUBIN, K. G. (Prof., Dr. Tech. Sci.); ANSHELES, I. I.;

"The Distribution of Tungsten Between the Metal, Slag and Gas Phases in the Smelting of Steel by the Basic Process," in the book The Application of Radioisotopes in Metallurgy, Symposium XXXIV; Moscow; State Publishing House for Literature on Ferrous and Nonferrous Metallurgy, 1955.

Prof. K. G. TRUBIN, Dr. Tech. Sci.; E. V. ABROSIMOV, Assistant; I. I. Ansheles, Assistant Chair of Steel Metallurgy, Moscow Inst. of Steel im I. V. Stalin.

18

Improvement of the open-hearth process with the help of gaseous oxygen. E. [illegible] Primenenie Kisl.

cutting scrap and for blowing the charge. A disadvantage of blowing with O is the sputtering of the [illegible] of the charge on account of formation of [illegible] decrease the rate of heat transfer to the bath [illegible]

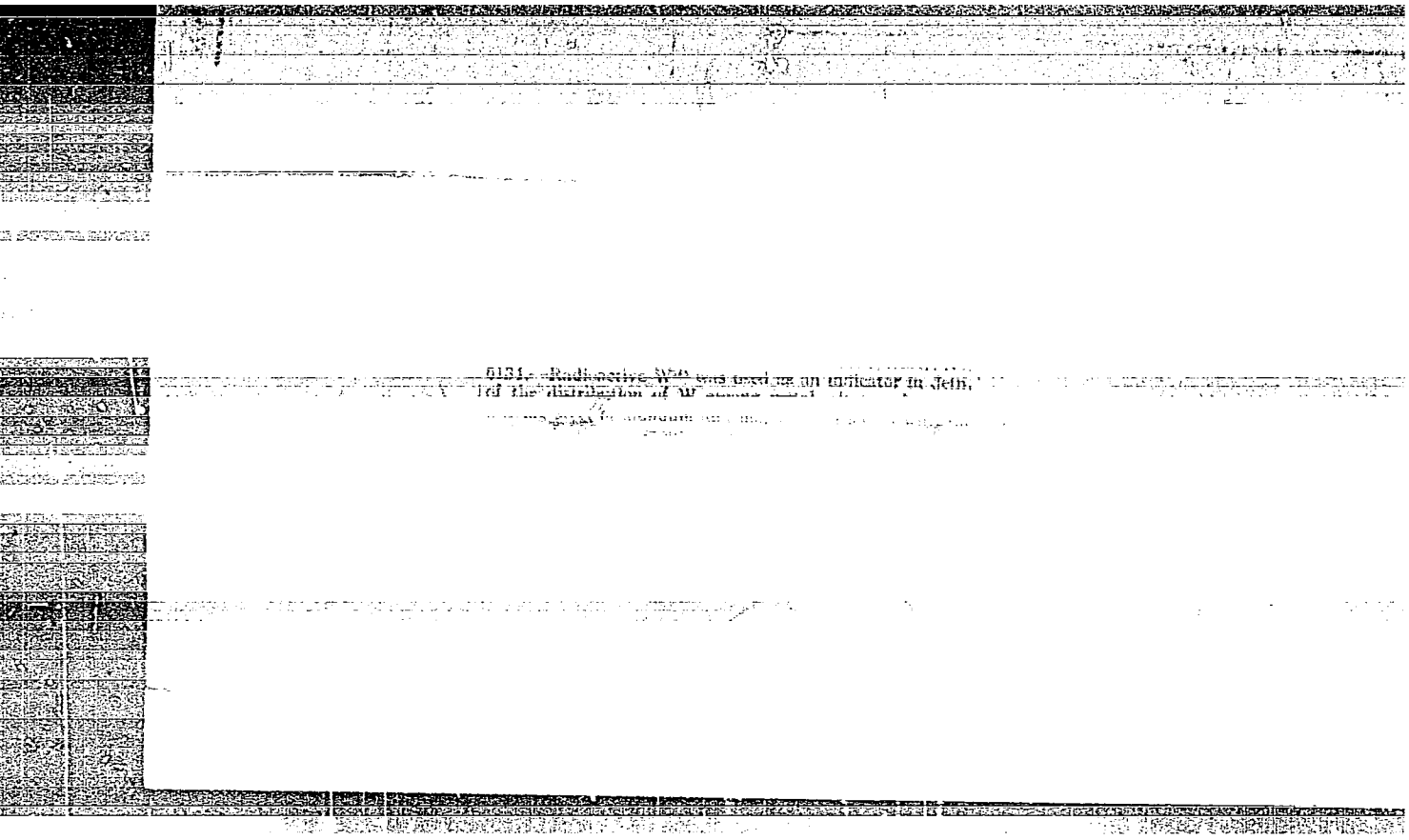
most the Fe oxide remains in the slag where its concn. increases up to 40% and heating of the [illegible] difficult. On blowing with O the [illegible] the final slag contains up to 20% of oxides of Fe, and the time of C oxidation decreases. Alexis N. Pestoff

Region of predominant occurrence of the reaction of decarburization in an open-hearth furnace. V. V. Abrosimov and V. A. Kudrin. [illegible] *Primenenie Kisloroda v Staleplavil nom Proizvodstve* (Moscow: Izdatel. Akad. Nauk S.S.S.R.) *Sbornik* 1955, 103-114; *Referat. Zhur., Met.* 1956, No. 6177.—In O-free melts decarburization occurs (at the start of boiling) mainly near the slag-metal interface. Later the reaction front moves toward the bottom. In all cases the reaction proceeds predominantly in the sub-slag layer, or at the bottom. Samples taken just before the O blast and also a considerable time after blowing have the same characteristics as do the samples of O-free melts. Samples taken immediately after the blowing showed that the reaction [illegible]

SHIMON, Sh., kandidat tekhnicheskikh nauk; ABROSIMOV, Ye.V., dotsent, kandidat tekhnicheskikh nauk; TRUBIN, K.G., professor, doktor tekhnicheskikh nauk.

Removal of sulfur in the gaseous state by scavenging the metal with oxygen. Sbor.Inst.stali 34:146-177 '55. (MLRA 9:7)

1.Kafedra metallurgii stali.
(Sulfur--Isotopes) (Steel--Metallurgy)



YEZHOV, G.I., inzhener; ABROSIMOV, Ye.V., dotsent; ANSHELES, I.I., dotsent; TRUBIN, K.G., professor, doktor tekhnicheskikh nauk.

Effect of teeming conditions on the quality of pipe steel. Sber. Inst. stali 34:231-244 '55. (MLRA 9:7)

1.Kafedra metallurgii stali.
(Silver--Isotopes) (Pipe, Steel)

KRAVCHENKO, V.F., inzhener; ABROSIMOV, Ye.V., dotsent, kandidat tekhnicheskikh nauk; TRUBIN, K.G., professor, doktor tekhnicheskikh nauk.

Quality of large boiling-steel ingots. Sbor.Inst.stali 34:245-266 '55. (Iron--Isotopes) (Steel ingots--Metallurgy) (MLRA 9:7)

18(5) PHASE I BOOK EXPLOITATION SOV/2295

Moscow. Institut stali

Primeneniye kisloroda v staleplavil'nom proizvodstve (Use of Oxygen in Steelmaking) Moscow, Metallurgizdat, 1957. 418 p. (Series: Its: Sbornik, 37) Errata slip inserted. 3,500 copies printed.

Ed.: Ye. A. Borko; Ed. of Publishing House: Ya. D. Rozentsveyg; Tech. Ed.: Ye. B. Vaynshteyn; Editorial Board of the Institute: M.A. Glinkov, Doctor, Professor; R.M. Grigorash, Candidate of Technical Sciences, Docent; N.Z. Gudtsov, Academician V.P. Yelyutin, Doctor, Professor; A.A. Zhukhovitskiy, Doctor, Professor; I.M. Kidin, (Resp. Ed.) Doctor, Professor; B.G. Livshits, Doctor, Professor; A.P. Lyubimov, Doctor, Professor; I.M. Pavlov, Corresponding Member, Academy of Sciences, USSR; K.G. Trubin, Doctor, Professor; and A. M. Pekhovanov, Doctor, Professor

PURPOSE: This collection of articles is intended for scientific, industrial, chemical, and metallurgical engineers, physicists and students.

COVERAGE: This book is a collection of scientific research papers on the utilization of oxygen in steelmaking. The use of oxygen blast for the intensification of fuel combustion and the introduction of oxygen into liquid metal in order to oxidize admixtures are among the topics discussed. The use of oxygen in scrap-ore processes for making steel from pig iron with a high phosphorus content is also discussed. Several articles deal with the heating and processing fundamentals of steelmaking in a reirculation steel-melting furnace. Individual articles deal with the economics of steelmaking with oxygen-blast and the optimum conditions for effective utilization of oxygen. No personalities are mentioned. References follow each article.

Card 6/9

Use of Oxygen in Steelmaking SOV/2295

AVAILABLE: Library of Congress 00/ao
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17 [illegible]

PA - 2427

AUTHOR: ABROSIMOV,E.V., BARDIN,I.P., BELYANCHIKOV,K.P., VASIL'YEV,D.V., VESELKOV,N.G., GOLOSMAN,K.M., YEFANOV,N.I., YEFIMOV,L.M. et al

TITLE: M. M. T R U B E T S K O V (Russian)

PERIODICAL: Stal', 1957, Vol 17, Nr 3, pp 283-283 (U.S.S.R.)

Received: 5 / 1957 Reviewed: 5 / 1957

ABSTRACT: An obituary note for the metallurgical engineer and lecturer at the Moscow Steel Institute M.M.TRUBETSKOV (1896-1956), born at Alapayevsk (gouvernment of Perm, since 1917 active as designer at the Perm cannon factory. Finished his studies at the metallurgical faculty of the Petrograd Polytechnic Institute in 1923. From 1923-1927 he worked at various plants in the Ural. 1927-1956 chief constructional engineer and head of open hearth steel department of the "Stal'proyekt" Institute. He participated in projecting the great metallurgical plants of Magnitogorsk and Kuznetsk as well as the "Azovstal'", "Zaporozstal'" works and others. In 1944 he was appointed lecturer at the Moscow Steel Institute. Author of the book "Calculations of Open Hearth Furnaces" and of a number of articles. (1 Illustration).

ASSOCIATION: Not given

PRESENTED BY:

SUBMITTED:

AVAILABLE: Library of Congress

Card 1/1

Oxygen Increases the Efficiency of the Open-hearth (cont.)

to achieve (the amount of oxygen added being identical) a considerably greater mean thermal capacity during processes of charging and melting than in the case of furnaces equipped with SC. In this instance the process of charging is readily accelerated by increasing the thermal capacity and the degree of enrichment with oxygen. The author emphasizes the favorable effect of the O_2 in the flame on the technology of smelting. In the melting stage the cutting of the solid charge was performed with the aid of nozzles through which O_2 was forced under a pressure of 9-10 atm at a rate of 1200 m^3/hr; the melt-down was carried out with the aid of tubing 3/4" in diameter. The cutting process is accompanied by spattering of metal, intensified dust formation, and impaired service life of the walls and crown of the furnace. At an O_2 consumption of 6-10 m^3/T, the increase in productivity amounts to 8-12%. Direct oxidation of the molten metal with the aid of 5-6 m long tubes with a diameter of 3/4" is particularly advisable when smelting mild steels. The advisability of employment of the method described for blowing of medium-carbon steels is questionable in view of the intensive dust formation. The combined method of employment of O_2 produces better results in conjunction with a reduction of charging time. The advantages of this system were revealed in the operation of furnaces with SC and BC; however, this method also involves vigorous dust formation accompanied by spattering of the metal during cutting and blowing operations. 1. Open hearth furnaces--Production 2. Oxyge
Card 2/2 --Performance 3. Oxygen--Test results Ye.T.

SOV/137-58-7-14372

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 7, p 61 (USSR)

AUTHORS: Abrosimov, Ye.V., Kudrin, V.A., Demin, G.I.

TITLE: Balance of Materials and Heat When Oxygen is Used in Open-hearth Production With Solid-steel (Scrap) Charge (Material'-nyy i teplovoy balans martenovskogo skrap-protsessa pri primenenii kisloroda)

PERIODICAL: Sb. Mosk. in-t stali, 1957, Vol 37, pp 195-213

ABSTRACT: 29 experimental heats were run with solid-steel (scrap) charge in 70-t heavy-oil fueled furnaces at the "Serp i Molot" ("Hammer and Sickle") Plant. In oxygen heats O_2 was applied in the jet, in cutting the charge upon fusion, and in direct oxi-dation of the bath. The total O_2 consumption was 30-38 m^3/t. The yield of molten steel in oxygen heats is 0.9-1.0% lower than in ordinary heats. The total loss of Mn is also higher in the first group of heats: 66.5% instead of 61.83%. The maximum and mean increase in output in use of O_2 by a combination of methods (the furnace having a conventional silica-brick roof) were, respectively, 51 and 26.4%, and fuel consumption was reduced by 24.6%. When O_2 was employed, the rate of

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SOV/137-58-7-14372

Balance of Materials and Heat When Oxygen is Used in Open-hearth (cont.)

oxidation of C during the charging and melting period was 0 to 100%, and during the working period, 100% higher than in ordinary heats.

A.S.

1. Open hearth furnaces--Performance 2. Steel--Production 3. Oxygen--Thermal effects 4. Fuels--Reduction

Card 2/2

137-58-6-11669

Translation from Referativnyy zhurnal, Metallurgiya, 1958, Nr 6, p 63 (USSR)

AUTHORS Abrosimov, ~~Ye.V.,~~ Kudrin, V.A.

TITLE The Course of the Carbon Oxidation Reaction When an Open-hearth Bath is Blown With Oxygen (Protekaniye reaktsii okisleniya ugleroda pri produvke martenovskoy vanny kislorodom)

PERIODICAL Sb. Mosk. in-t stali, 1957, Vol 37, pp 232-251

ABSTRACT An investigation is conducted in a 70-t furnace using the scrap process. Samples of metal are taken simultaneously at three levels of the bath by means of beakers welded to a curved bar. Oxygen is delivered to the bath at a pressure of 8-10 atm through a 3/4" iron lance inserted through the middle door directly into the metal, to a depth of 150-200 mm. The point at which the decarburization reaction is occurring is determined by the $[O]' - [O]''$ difference, where $[O]'$ is the observed O content and $[O]''$ is the equilibrium $[O]$ relative to C. The smaller this difference, the more intensive the combustion of the C at this point. In standard heats, the decarburization reaction proceeds primarily in the layer beneath the slag on fusion with low heated metal and a large temperature

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The Course of the Carbon (cont.)

difference between the slag and the metal. As boiling continues, the reaction plane moves toward the bottom. When the bath is blown with oxygen, the reaction plane also moves from the stratum beneath the slag to the bottom, but the reaction proceeds predominantly in the middle of the bath. Bibliography: 39 references.

A.S

1. Metals--Processing 2. Metals--Test methods 3. Oxygen--Applications

Card 2/2

SOV/137-58-9-18570

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 9, p 56 (USSR)

AUTHORS: Kudrin, V.A., Abrosimov, Ye.V.

TITLE: Possibilities of Reducing the Duration of the Pure "Boil" Stage by Means of Bubbling Oxygen Through the Molten Metal in an Open-hearth Furnace (Vozmozhnosti sokrashcheniya perioda chistogo kipeniya pri produvke martenovskoy vanny kislorodom)

PERIODICAL: Sb. Mosk. in-t stali, 1957, Vol 37, pp 252-259

ABSTRACT: When O_2 is blown through the molten metal in an open-hearth furnace, the rate of oxidation of C is increased several times. In the process, as investigations have demonstrated, the zone in the center of the bath of molten metal participates in the decarbonization reaction and the conditions for degasification of metal become more favorable. The local overoxidation of metal, observed during blowing in the area where the O_2 enters (analogous to the overoxidation which occurs when Fe ore is added to the molten metal), is of very short duration. In contrast with common ore boiling, in the course of which the oxidizing effect of the ore is apparent for a considerably

Card 1/2

AUTHORS: Tyurin, Ye. I., Abrosimov, Ye. V., Saar, T. M. SOV/163-58-3-19/49

TITLE: Investigating the Non-Metallic Inclusions in Acid Ball-Bearing Steel by the Radioactive Indicator Method (Issledovaniye nemetallicheskikh vklyucheniy v kislov sharikopodshipnikovoy stali metodom radioaktivnykh indikatorov)

PERIODICAL: Nauchnyye doklady vysshey shkoly. Metallurgiya, 1958, Nr 3, pp 108 - 114 (USSR)

ABSTRACT: The influence of calcium silicate on the properties and the character of non-metallic inclusions in melts was investigated. The investigation was carried out with the radioactive isotope Ca^{45}. The distribution of calcium on metal and slag, as well as the distribution coefficient were determined. Furthermore the influence exerted by non-metallic inclusions was investigated which are contained in calcium metal. The non-metallic inclusions in calcium amount to 0,2028%. Calcium oxide occurs in non-metallic inclusions in the form of calcium silicate, calcium-aluminum silicate and the complex silicates $CaO - FeO - SiO_2$. The impurities in calcium amount to 0,0060%.

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Investigating the Non-Metallic Inclusions in Acid Ball-Bearing Steel by the Radioactive Indicator Method SOV/163-58-3-19/49

The distribution of the non-metallic inclusions in calcium depends on the crystallization process of the melt. The inclusions in the steel are in solid solution. They are plastic and cannot be deformed during the rolling process. The basic mass of the calcium containing non-metallic inclusions in the deoxidation process and in the crystallization of the steels are in liquid and semi-liquid state. There are 3 figures, 3 tables, and 6 references, which are Soviet.

ASSOCIATION: Moskovskiy institut stali (Moscow Steel Institute)

SUBMITTED: March 24, 1958

Card 2/2

KUDRIN, V.A., kand.tekhn.nauk, dotsent; TYURIN, Ye.I., inzh.; NECHKIN, Yu.M., inzh.; ABROSIMOV, Ye.V., kand.tekhn.nauk

Smelting of ball-bearing steel in acid open-hearth furnaces. Izv.vys.ucheb.zav.; chern.met. no.6:35-46 Je '58. (MIRA 12:8)

1. Moskovskiy institut stali. Rekomendovano kafedroy metallurgii stali Moskovskogo instituta stali.

(Open-hearth process) (Bearing metals)

SOV/133-58-6-7/33

AUTHOR: Yung Son Chol, Engineer and Abrosimov, Ye.V., Candidate of Technical Sciences

TITLE: The Formation of Dust in an Open-hearth Furnace During the Intensification of the Process with Oxygen (Pyleobrazovaniye v martenovskoy pechi pri intensifikatsii protsessa kislorodom

PERIODICAL: Stal', 1958, Nr 6, pp 506 - 509 (USSR).

ABSTRACT: An investigation of the influence of the intensification of the smelting process on the formation of dust was carried out on a 185-ton open-hearth furnace on the "Zaporozhstal" Works operating on scrap-ore practice and fired with a mixture of coke oven and blast-furnace gas. The apparatus used-a water-cooled probe for the collection of dust by suction (Figure 1) - was developed by the Moskovskiy institut stali (Moscow Institute of Steel). Changes in the content of dust in the course of smelting with a 25% oxygen-enrichment of air - Figure 2; the dependence of the dust content in the combustion products on the speed of decarburization: a) - during blowing oxygen into the metal bath; b) during a 25% oxygen enrichment of air; changes in the dust concentration in the course of blowing oxygen into the metal bath - Figure 4; a, b, v - blowing with pure oxygen; g and d - with an oxygen water mixture; mean chemical composition of the dust collected during heats in which

Card 1/3

The Formation of Dust in Open-hearth Furnace During the Intensification of the Process with Oxygen

oxygen was used - table; electron-photograph of dust particles - Figure 5. On the basis of the results obtained, the following conclusions are drawn: 1) The formation of dust in an open-hearth furnace takes place continuously during the heat, irrespective of the modifications of the process; 2) An addition of oxygen to flame increases the formation of dust due to increasing rate of decarburization; 3) During blowing of metal with oxygen, a copious formation of dust takes place. This is due to the evaporation of metal caused by high temperatures in the blowing zone; 4) During blowing of the metal bath with an oxygen-water mixture, the formation of dust is considerably decreased as the temperature of the metal on the blowing zone is sharply decreased; 5) During all periods of furnace operation (with the exception of fettling) the dust consisted mainly of iron oxides; 6) During the flow of the combustion products in the furnace working space and vertical flues, a coagulation of dust particles takes place, mainly due to thermal (Brownian) movement with the formation of particles of various sizes and various degrees of aggregation. The work

SOV/133-58-6-7/33

The Formation of Dust in Open-hearth Furnace During the Intensification of the Process with Oxygen

was carried out under the direction of Academician I.P. Bardin with the participation of members of MIS, TsNIIChM, VNIIO, Tsentroenergochermet and the "Zaporozhstal'" Works. There are 5 figures, 1 table and 5 Soviet references.

1. Open hearth furnaces--Performance 2. Dust--Applications 3. Metals --Production

Card 3/3

IVANOV, R.M., inzh.; ARKOSIMOV, Ye.V., dots., kand.tekhn.nauk

Decarbonization reaction during the oxygen impingement process.
Izv. vys. uchab. zav.; chern. met. no.7:17-27 Jl '58.
(MIRA 11:10)

1. Moskovskiy institut stali.
(Open-hearth process) (Oxygen--Industrial applications)

IVANOV, R.M. inzh.; ABROSIMOV, Ye.V., dots., kand.tekhn.nauk

Slag conditions during open-hearth smelting with various methods of gaseous oxygen blow. Izv.vys.ucheb.zav.; chern.met. no.11:9-21 N '58. (MIRA 12:1)

1. Moskovskiy institut stali.
(Open-hearth process)
(Oxygen--Industrial applications)

A BROSIMOV, Ye.V.

CHELISHCHEV, E.V.; SABIEV, M.P.; ABROSIMOV, Ye.V.; GRIGORYEV, V.P.;
SUKHOTIN, B.N.; FEDOROV, L.S.

Issledovanie sostava metalla na otdelynykh
gorizontakh po vysote vanny 500-tonnoy
martenovskoy pechi.

report submitted for the 5th Physical Chemical Conference on
Steel Production.

MOSCOW 30 JUN 1958

A BROSIMOV, Yu. V.

GRIGORYEV, B.P.; KOROLEV, B.G.; TAVOYSKIY, V.I.; ABROSIMOV, Yu.V.

K voprosu o kinetike okisleniya fosfora v
staleplavilynykh protsessakh.

report submitted for the 5th Physical Chemical Conference on Steel Production.

Moscow 30 JUN 1959

GRIGOR'YEV, V.P., inzh.; ABROSIMOV, Ye.V.

Effect of silicon and manganese in pig iron on the dephosphorization process during smelting with oxygen blow of the metal bath. Izv. vys. ucheb. zav.; chern. met. 2 no.4:45-51 Ap '59. (MIRA 12:8)

1.Moskovskiy institut stali. Rekomendovano kafedroy metallurgii stali Moskovskogo instituta stali.
(Steel--Metallurgy) (Oxgyen--Industrial applications)

KRAVCHENKO, V.F., kand.tekhn.nauk; ENKESH, Shandro, kand.tekhn.nauk
TRUBIN, K.G., kand.tekhn.nauk prof.; ABROSIMOV, Ye.V., kand.
tekhn.nauk, dots.

Effect of vibration on the quality of ingots. Izv.vys.ucheb.
zav.; chern.met. 2 no.7:23-34 Jl '59. (MIRA 13:2)

1. Moskovskiy institut stali. Rekomendovano kafedroy metal-
lurgii stali Moskovskogo instituta stali.
(Steel ingots--Vibration)

GRIGOR'YEV, V.P.; VISHKAREV, A.F.; KOROLEV, B.G.; ABROSIMOV, Ye.V.; YAVOYSKIY, V.I.

Effect of phosphorus and manganese on the surface tension of iron-carbon alloys. Izv.vys.ucheb.zav.; chern.met. no.4: 55-65 '60. (MIRA 13:4)

1. Moskovskiy institut stali.
(Iron alloys) (Surface tension)

S/130/60/000/006/006/011

AUTHORS: Kudrin, V. A., Nechkin, Yu. M., Tyurin, Ye. I., Abrosimov, Ye. V.

TITLE: Experiments on Compressed-Air Blow of Metal in Acid Open Hearth Furnaces

PERIODICAL: Metallurg, 1960, No. 6, pp. 17-18

TEXT: Blowing of the metal pool in open-hearth process may be successfully performed by replacing oxygen by compressed air. To reveal the special features in the technology of steel melting in an acid furnace with blowing of the pool, a number of melts using compressed air, were performed at one of the Ural plants. The experiments were made on 85-ton acid open-hearth furnaces with a hearth surface of 27-28 m^2 and 860-mm deep metal pool; blast furnace gas and mazut were used as fuels; the tests were carried out on ШХ-15 (ShKh15) steel with limited silicon reduction. The bubbling time was 2-3 hours. Iron tubes of 1 inch in diameter and 4-6m length were employed for the blast. The pressure of compressed air was 4-6 atm. and its consumption was about 500-700 nm^3/hour. Changes in the composition of the metal and the slag of one experimental smelt are given in a graph. It was established that air blast employed for an acid open hearth pool increased the burning-out rate of carbon up to 0.75% C/hr,

Card 1/2

KUDRIN, V.A.; NECHKIN, Yu.M.; TYURIN, Ye.I.; ABROSIMOV, Ye.V.

Determining the contamination of the ShKh15 steel by nonmetallic oxide inclusions. Zav.lab. 26 no.6:732-733 '60. (MIRA 13:7)

1. Moskovskiy institut stali.
(Steel--Metallography) (Oxides)

S/148/60/000/010/003/018
A161/A030

AUTHOR: Grigor'yev, V.P.; Abrosimov, Ye.V.

TITLE: Dephosphoration in the First Heat Half in Remelting High-Phosphorous Iron with Oxygen Blown Through the Bath

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Chernaya metallurgiya, 1960 No. 10, pp. 46 - 57

TEXT: The Moscow Steel Institute investigated heats in 350-ton rocking open-hearth furnaces melting iron with 1.4 - 1.6% P content by scrap-ore process with an oxygen blast. The experiment techniques had been described in No. 4, 1959, of this periodical. The observation results in the first half of the heats (before the addition of scale, ore and lime) are given in this article. The effect of CaO content in slag was low at up to 500 m^3 oxygen blown through, but increased rapidly with a higher oxygen volume; with 1,500 - 1,700 m^3 the CaO content in slag was 1.5 times higher than in heats without oxygen. The dephosphoration rate also rose, which is due to the effect of the dissolved active CaO fraction (Fig.4). The increased SiO_2 content had a strong negative effect in heats without oxygen, but not in a process with oxygen, due to the high CaO content sufficient for the

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Dephosphoration in the First Heat Half in Remelting High-Phosphorous Iron with Oxygen Blown Through the Bath

binding of SiO_2 and P_2O_5, and intense foaming and spilling of slag. Still, the Si and SiO_2 content in the charge must not exceed certain limits (indicated in (Ref. 1)) because of the diluting effect on the phosphoric acid in slags used for fertilizers, and the excessive slag volume causing difficulties. FeO only lowers the P content in conventional process until the concentration reaches 14 - 16% (stated also in Ref. 3 and in the dissertation of A.I. Sukachev, Khar'kov, 1953). The observations confirmed the opinion of N.N. Dobrokhotov (Ref. 4) that the rate of dephosphoration at a high FeO content in slag is only determined by the rate of removal of oxyphosphorous aniones from slag-metal interface into the slag mass. At a higher oxygen volume the high metal temperature and intense mixing speed up all the exchange processes, and FeO content above 14 - 16% does not loose the effect (Fig. 7, curve 2). The effect is stronger at an oxygen volume above 1,000 m^3, and it is advisable to increase the ore charge in the first heat half from 9 - 11% to 13 - 14% when melting rail steel, and to place the ore on the top of loose charge to prevent excessive oxidation of carbon and "softening" of the heat. In general, an increased oxygen volume results in a more complete dephosphoration with an equal FeO content. Manganese has a negative effect on dephosphoration, as

S/148/60/000/010/003/018
A161/A030

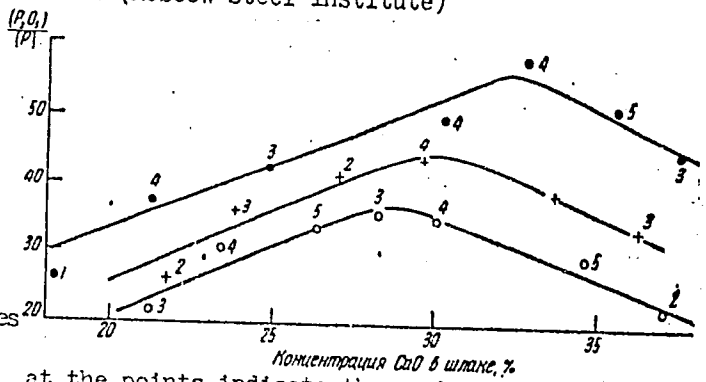
Dephosphoration in the First Heat Half in Remelting High-Phosphorous Iron with Oxygen Blown Through the Bath

the process with an oxygen blast it is necessary: a) to keep Mn content in iron at maximum 1.4% (comparing with 1.8 - 2.2% used in present practice); b) to raise the iron ore addition to 13 - 14% when melting rail steel. There are 10 figures and 7 references: 6 Soviet and 1 English.

ASSOCIATION: Moskovskiy institut stali (Moscow Steel Institute)

SUBMITTED: July 15, 1959

Figure 4:



The effect of CaO content in slag (1.5 - 2 h after the end of iron pouring into furnace). SiO_2=15-20%; FeO=10%. o-without oxygen; +-600-1200m^3 oxygen; •-1200-1900m^3 oxygen. The figures at the points indicate the number of studied heats

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New [Developments] in the Theory (Cont.) SOV/5556

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

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