

SCBOLEV, Petr Alekseyevich

Of the Question about the Application of (Rentgenovskogo) Investigation of  
the Female Pelvis in Obstetrical Practice.

Dissertation for candidate of a Medical Science degree. Yaroslav Medical  
Institute, 1954.

SOEOLKV, P.A., kandidat meditsinskikh nauk.

A simple method for measuring the inclination of the female  
pelvis. Akush. i gin. no.6:57-58 N-D '55 (MLRA 9:6)

1. Iz kafedry akusherstva i ginekologii (zav.-dotsent Ye.K.  
Aleksandrov) Yaroslavskogo meditsinskogo instituta.

(PELVIMETRY  
modified Martin's method)

SOROLEV, P.A., kand.med.nauk

A device insuring the correct posture of the patient for X-ray examinations of the female pelvis. Akush. i gin. 33 no.6:81-83 N-D '57. (MIRA 11:3)

1. Iz Yaroslavskogo meditsinskogo instituta (dir.prof. N.Ye. Yarygin) i Kostromskoy oblastnoy bol'nitsy (glavnyy vrach-zaskuzhennyy vrach RSFSR M.V.Shchekunov)  
(PELVIMETRY, appar. and instruments)  
device for determ. of correct position in x-ray pelvimetry)

SOBOLEV, P.A.; ANAN'INA, N.P.

Protective net from metal fragments and from radiant energy. Gig. sanit.,  
Moskva no.3:58-59 Mar 1953. (CLML 24:3)

1. Of Sverdlovsk Institute for the Protection of Labor VTsSPS.

SOBOLEV, P.A.; BARYSHNIKOVA, Ye.N.

Special clothing for workers at aluminum electrolysis tanks. Gig.i san. no.  
8:53 Ag '53. (MLRA 6:9)

1. Sverdlovskiy institut okhrany truda Vsesoyuznogo tsentral'nogo soveta  
profsoyuzov. (Clothing, Protective)

VADASH, Y.F. [Vabash, I.F.]; SOBOLEV, P.A. [Soboliev, P.A.]

Simplified design and calculation of magnetic apparatus for water treatment reagents. Leh.prom. no.3:32-34 JI-S '63. (MIRA 16:11)

1. Chernovitskiy tekstil'nyy kombinat.

SOV/137-59-3-5527

Translation from: Referativnyy zhurnal. Metallurgiya, 1959, Nr 3, p 84 (USSR)

AUTHORS: Diyev, N. P., Kusakin, P. S., Paduchev, V. V., Sobolev, P. A.,  
Perestoronin, A. A.

TITLE: Phase Content of Cobalt-nickel Mattes  
(Fazovyy sostav kopal'to-nikelevykh shteynov)

PERIODICAL: Tr. In-ta metallurgii. Ural'skiy fil. AN SSSR, 1958, Nr 2. pp  
181-186

ABSTRACT: The authors studied the phase content of industrial Co mattes by the following methods: 1) Mineralogical-petrographic investigations; 2) gravitational [sink-float] separation in water, heavy liquids, suspensions, etc.; 3) air-separation; 4) flotation; 5) smelting out; and 6) classification according to grain size. Conclusions: 1) Co does not form an independent phase in mattes but is distributed between the sulfide and metallic solid solutions and the double sulfide  $2\text{FeS} \cdot \text{Ni}_3\text{S}_2$ , isomorphically taking the place of Fe and Ni in the lattice nodes of the respective phases; 2) the composition of separate phase components in Co mattes fluctuates in the following range: Metallic phase 18-40% (by weight), sulfide phase 43-40%, eutectoid

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Phase Content of Cobalt-nickel Mattes

38-20%, and slag intrusions 0-4%; 3) the metallic phase contains (in %): Ni 6.6-44, Fe 47.8-80, Co 0.85-2.6, and S 0.9-4.0. Co and Ni are concentrated mainly in the metallic phase; 4) the sulfide phase contains (in%): Ni 11.8-22.2, Fe 49-61, Co 0.7-0.9, and S 29.0-32.3; 5) the main mass of the metallic phase has a grain size of from 10 to 60  $\mu$ , a specific gravity of 7.88 and a melting point of 1370°C; 6) the specific gravity of the sulfide phase is 4.6.

N. P.

Card 2/2



DOKUCHALOV, Aleksandr Stepanovich; SOBOLEV, Petr Alekseyevich; RUDNEV, A.P., otv.red.; STUKACHEV, V.I., dotsent, retsenzent; MISHARINA, K.D., red.izd-va; ISLENT'YEVA, P.G., tekhn.red.

[Safety techniques in copper smelting and nickel plants] Tekhnika bezopasnosti na medeplavil'nykh i nikelovykh zavodakh. Moskva, Gos.nauchno-tekhn.izd-vo lit-ry po chernoi i tsvetnoi metallurgii, 1959. 214 p. (MIRA 12:8)

1. Moskovskiy institut tsvetnykh metallov i zolota im. M.I.Kalinina (for Stukachev).  
(Metallurgical plants--Safety measures)

SOBOLEV, P.A., inzh.

Organizing labor in repairing equipment of metallurgical plants.  
Bezop. truda v prom. 3 no.6:19-21 Je '59. (MIRA 12:10)

1.Sverdlovskiy institut okhrany truda Vsesoyuznogo tsentral'nogo  
soveta profsoyuzov.  
(Metallurgical plants--Equipment and supplies--Maintenance and repair)

SOBOLEV, P.F., dorozhnyy master (Stantsiya Slavyansk, Donetskoy dorogi.)

A high title has been conferred on our collective. Put' i put.  
khoz. 5 no.9:4 S '61. (MIRA 14:10)  
(Railroads--Employees)

SOBOLEV, P.I., podpolkovnik med. sluzhby

Changes in the apparatus for micrometric determination of oxygen  
saturation of the blood. Voen-med.zhur. no.11:64-66 N '57.  
(OXYGEN, in blood, (MIRA 11:4)  
determ. of saturation, appar. (Rus)

GEMBITSKIY, Ye.V., kand.med.nauk; SOBOLEV, P.I.; BERLINER, G.B.

Clinical course and treatment of acute luminal poisoning. Sov.  
med. 23 no.7:102-106 J1 '59. (MIRA 12:11)  
(PHENOBARBITAL toxicology)

BERLINER, G.B.; SOBOLEV, P.T.; MOS'PANOV, L.S. (Petrozavodsk)

Intravital diagnosis of a primary tumor of the heart. Klin.  
med. 40 no.11:118-120 11'62 (MIRA 16:12)

SOLOV, P. I. (Eng.)

SOLOV, P. I. (Eng.)

Packing (Mechanical Engineering)

Replacing asbestos-rubber cement with steel washers. Rech. transp. 12  
No. 3, 1952.

9. Monthly List of Russian Accessions, Library of Congress, August 1952 ~~1953~~, Uncl.

SOBOLEV, P., inzhener.

Quality of feed water filtration for steam boilers. Mor. i rech. flot 13 no. 1:  
(MIRA 6:10)  
29 My '53. (Feed-water purification)



SCBOLEV, IAVEL IVANOVICH

Epp  
.R91597

Szhiganiye mazuta v tochkakh sudovykh parovykh kotlov. Furning black oil in ships' steam boilers. Moskva, Rechnoy Transport, 1955.  
156, 3 P. illus., diagrs., graphs, tables.  
Bibliography: P. 158

L  
SOBOLEV, Pavel Ivanovich; MYASNIKOV, N.V., redaktor; SHIMKO, K.N.,  
retsensent; AMININ, V.G., retsensent; VITASHKINA, S.A.,  
redaktor; KRASNAYA, A.K., tekhnicheskii redaktor.

[Combustion of mazut in furnaces of marine boilers] Szhiganie  
mazuta v topkakh sudovykh parovykh kotlov. Moskva, Izd-vo  
"Ruchnoi transport," 156 p. (MLRA 8:12)  
(Boilers, Marine) (Mazut)

SOBOLEV, Pavel Ivanovich; PENKIN, I.S., retsenzent; KOMOGORTSEV, P.Ya.,  
redaktor; SHELNIKOVA, Z.V., redaktor izdatel'stva; KRASNAYA, A.K.,  
tekhnicheskii redaktor

[Servicing and repairing injectors] Obsluzhivanie i remont inzhektorov.  
Izd.2-oe, ispr. i dop. Moskva, Izd-vo "Rechnoi transport," 1957.  
77 p. (MIRA 10:7)

(Injectors)

ANTONOVICH, Sergey Aleksandrovich, kand.tekhn.nauk; NOVIKOV, Viktor Vasil'yevich, inzh.; RENSKIY, Nikolay Mikhaylovich, inzh.; POMKINSKIY, Leonid Ivanovich, inzh.; SHIMKO, Konstantin Nikolayevich, kand.tekhn.nauk. Prinimal uchastiye SMANTSER, A.I., inzh. AL'BANOV, V.M., inzh., nauchnyy red.; LAKHANIN, V.V., prof., doktor tekhn.nauk, retsenzent; KULIKOVSKIY, P.P., kand.tekhn.nauk, retsenzent [deceased]; STEPANYUK, Ye.I., kand.tekhn.nauk, retsenzent; PAVLOV, A.V., inzh., retsenzent; PETROV, M.D., inzh., retsenzent; ROMANOV, P.A., inzh., retsenzent; SOBOLEV, P.I., inzh., retsenzent; VITASHKINA, S.A., red.izd-va; YERMAKOVA, T.T., tekhn.red.; VOLCHOK, K.M., tekhn.red.

[Handbook for marine heat engineers] Spravochnik sudovogo teplotekhnika. Sost. S.A.Antonovich i dr. Leningrad, Izd-vo "Rechnoi transport," Leningr.otd-nie, 1960. 679 p. (MIRA 14:3)  
(Marine engineering) (Heat engineering)

SOBOLEV, P., inzh.

Causes of the burning-through of water tubes of KV boilers and  
means for controlling it. Rech. transp. 20 no. 2:44-45 F '61.  
(MIRA 14:2)

(Boilers, Water-tube)

SOBOLEY, P. N.

Quantitative relation between mineral and chemical content of granitoids. P. N. Sobolev (Moscow Univ., Dept. Petrography). *Vestnik Moskov. Univ.* 12, Ser. Biol., Pechoved., Geol., Geograf. No. 1, 219-27(1957).--By plotting chem. vs. mineral compn. of alaskite (quartz alkali-feldspar), leucocratic granite, biotitic porphyrous granite, biotitic granite, and adamellite (orthoclase-bearing quartz-hornblende-mica-diorite), it was shown that petrographic study gives reliable results for assigning nomenclature, classification, and diagnosis for all types of granitoids.

A. P. Kotlyar

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amb

BOGDENKO, Mariya Lukinichna; SOBOLEV, P.N., doktor istoricheskikh nauk,  
otv.red.; ZELENIN, I.Ye., red.izd-va; MARKOVICH, S.G., tekhn.red.

[Establishment of state grain farms during 1928 - 1932] Stroitel'-  
stvo zernovykh sovkhov v 1928 - 1932 gg. Moskva, Izd-vo  
Akad.nauk SSSR, 1958. 250 p. (MIRA 12:7)  
(State farms) (Grain)

1/2

Name: SOBOLEV, Petr Nikiforovich

Dissertation: The solidarity of the neediest peasants with the proletariat during the preparation for and carrying out of the Great October Socialist Revolution

Degree: Dcc Historical Sci

Affiliation: [not indicated]

Defense Date, Place: 2 Jul 56, Council of Inst of History, Acad Sci USSR

Certification Date: 23 Mar 57

Source: BMVO 14/57



SOBOLEV, P.S.

Improved method of ligation of the umbilical cord. Sov.med. 22  
no.7:123-125 J1 '58 (MIRA 11:10)

1. Iz roditel'nogo doma No.19 Moskvy (glavnyy vrach - zaslyzhennyy  
vrach RSFSR N.N. Filimonov, nauchnyy rukovoditel' - prof. Ye.I. Kvater):  
(UMBILICAL CORD  
ligation, double-stage method (Rus))

SOBOLEV, P.V., inzh.

Stabilization of earth-roadbed soils with artificial wetting  
in droughty regions of Central Asia. Avt.dor. 25 no.8:16-17  
Ag '62. (MIRA 16:2)  
(Soviets Central Asia--Soil stabilization)

SOBOLEV, P.V., inzh.

Designing vertical curves for the longitudinal profile of railroads.  
Transp. stroi. 13 no.6:52-53 Je '63. (MIRA 16:9)  
(Railroads--Grades)

SOBOLEV, P.V., inzh.

Testing the compactness of saline-soil banks. Avt.dor. 26  
no.9:16-17 S '63. (MIRA 16:10)

SOBOLEV, P.V.

Building temporary roads during the laying of pipelines in shifting  
sands. Stroi. truboprov. 9 no.5:29-30 My '64. (MIRA 17:9)

1. Tashgiprotrans, Tashkent.

SOBOLEV, P.V., inzh.

Sources of the water supply for the artificial wetting of  
soil in roadbeds. Transp. stroi. 14 no.3:7-10 Mr '64.  
(MIRA 17:6)

SOBOLEV, P.V., inzh.

Characteristics of road surveying in shifting sand from the  
point of view of engineering geology. Transp. stroi. 14  
no.5:37-38 My '54. (MIRA 18:11)

SOBOLEV, P.V., inzh.

Building high, sandy embankments with bulldozers. Avt. dor. 27  
no.2:11-12 F '64. (MIRA 17:3)



88433

S/056/60/039/006/022/063  
B006/B056

26.2321

AUTHORS: Ioffe, M. S., Sobolev, R. I., Tel'kovskiy, V. G.,  
Yushmanov, Ye. Ye.

TITLE: Investigation of the Confinement of Plasma in a Trap With  
Magnetic Plugs

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1960,  
Vol. 39, No. 6(12), pp. 1602 - 1611

TEXT: A report is given on plasma confinement in a cylindrical magnetic mirror which is some 10 cm in size. The experiments were carried out with a hydrogen plasma having a mean density of  $\sim 1 \cdot 10^9 \text{ cm}^{-3}$ , at a minimum pressure of the neutral gas of  $\sim 3 \cdot 10^{-7} \text{ mm Hg}$ . The mean ion energy was 1 - 2 kev, the electron energy  $\sim 10 \text{ ev}$ ; the magnetic field was 5 - 8 koe. In this case, it is possible to reckon with adiabatic and quasineutral conditions, i.e. the Larmor radius of the ions is small compared with the trap dimensions, and the Debye screening radius is small compared with the region filled by the plasma. The greatest losses in fast ions occur as a

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Investigation of the Confinement of Plasma in a Trap With Magnetic Plugs S/056/60/039/006/022/063  
B006/B056

result of charge exchange with the neutral gas. The experimental arrangement, in which the experiments were carried out, is shown in Fig.1. The maximum field in the center of the trap (constant in time), was 8000 oes, and in the plugs it was 12,400 oes, i.e. the plug ratio was 1.55. The mean lifetime  $\tau$  of the fast ions in the trap was measured as a function of pressure for different accelerating voltages, magnetic fields, and plug ratios in the hydrogen pressure range of  $3 \cdot 10^{-7}$  -  $2 \cdot 10^{-5}$  mm Hg. The experimentally determined  $1/\tau$ -values are, as shown, indeed linear functions of pressure, as must be expected also of charge exchange processes. Also the flux of fast neutral particles and therefore also the current of secondary electrons in the range of  $2 \cdot 10^{-7}$  -  $3 \cdot 10^{-6}$  mm Hg is a linear function of pressure. If pressure is reduced, the neutral-particle flux tends toward zero (and not toward a constant value). Among the processes developing in the plasma, there may also be the process  $H^+ + H_2^+ \rightarrow H + 2H^+$ , which fact has been pointed out by G. I. Budker. However, it was found that the ion escape from the trap takes place much more quickly than would be expected, if only charge exchange and scattering processes are taken

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Investigation of the Confinement of Plasma  
in a Trap With Magnetic Plugs

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into account. Thus, additional losses of fast ions must be assumed, whose time dependence was investigated. It was found that the losses not connected with charge exchange decrease with time until eventually they vanish completely. Such anomalous losses of ions are due to the presence of plasma in the trap. If the density of the charged particle is so low that the Debye range is of the same order as the trap dimensions, the losses are equal to zero. The authors thank Academician L.A.Artsimovich and B. B. Kadomtsev for their interest, advice, and discussions, V. M. Petrov, E. N. Braverman, and Yu. T. Bayborodov for their technical collaboration. There are 9 figures, 2 tables, and 11 references: 7 Soviet, 1 Swiss, and 2 US.

SUBMITTED: July 20, 1960

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89202

S/056/61/040/001/007/037  
B102/B204

26.2321  
AUTHORS:

Ioffe, M. S., Sobolev, R. I., Tel'kovskiy, V. G.,  
Yushmanov, Ye. Ye.

TITLE:

Escape of plasma from a magnetic mirror trap

PERIODICAL:

Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 40,  
no. 1, 1961, 40-48

TEXT: This paper is a continuation of an earlier paper (Ref. 1), in which the authors studied the retaining of a hydrogen plasma with a thickness of  $10^9$  cm<sup>-3</sup>, which consisted of fast ions (1-2 kev) and slow electrons (~10 ev). Anomalously fast escape of ions from the magnetic mirror trap could be found, which was caused not alone by the charge-exchange losses. In order to get to the bottom of this additional leakage, experiments were undertaken for the purpose of a direct measurement of the fast ions leaving the magnetic trap. The losses which occurred through the end walls, and which occurred through the lateral walls were studied separately. For the purpose of measuring the quantity of ions leaving the trap through the end walls (in the direction of the magnetic fields) a sector-shaped metal electrode (1/6 of

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Escape of plasma ...

the end-wall area), to which the -20 v were applied for the purpose of preventing an impinging of plasma electrons, was used. By means of the signals emitted from the sector, the charges conveyed to the sector by ions were measured. Fig. 1 shows the lateral and front view of the electrodes, as well as the comb-like arranged 8-plate electrodes, by means of which the quantity of ions (thus only that of the fast ions) could be determined additionally and independently. From the recordings of sector electrode and comb electrodes, the following quantities of fast ions

$\alpha$	1.33	1.55	2.0	2.35
$10^7 Q_{\text{sect}}$ , coul.	3.3	8.7	12.8	10.8
$10^7 Q_{\text{tot}}$ coul.	46	125	200	200

and the following quantities of slow ions

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Escape of plasma ...		1.33	1.55
$\alpha$			
$10^8 Q_{sect}$ , coul.		5.5	19.0
$10^8 Q_{comb}$ , coul.		2.4	7.6
$Q_{slow}/Q_{fast}$ , %		$\sim 5$	$\sim 15$

could be found to exist.  $\alpha = H_{max}/H_0$ ,  $Q_{tot}$  is the total charge incident upon the two end walls, due to the additional escape mechanism. The quantity of fast ions incident upon the lateral walls (perpendicular to the H-field) was measured by means of an arrangement shown in Fig. 2. The electrodes had a size of 2.8 cm<sup>2</sup> and had a distance of 10 mm from the chamber wall. To the measuring electrode a -20 v was again applied. The measurements yielded the following results:

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Escape of plasma ...

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$\alpha$	1.33	1.55	2.0	2.35
$10^6 Q_{side}$	0.83	1.8	4.4	5.8
$10^6 Q_{tot}$	1.9	5.3	16.3	23.2
$q_{wall} \%$	43	34	27	25

$Q_{tot}$  again denotes the total charge of fast ions inciding upon the lateral walls due to the mechanism of additional losses,  $q_{wall}$  is the ratio of these charges. Thus, up to 40% of the fast ions, leaving the trap in consequence of the mechanism responsible for the additional losses, may do so through the lateral walls. Fig. 3 shows a typical oscillogram of the current from the comb electrodes (a) and from the side wall (b). The results of these studies confirm the conclusions drawn in Ref. 1 with respect to the anomalously high fast ion losses. The major part of these losses, no less than

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Escape of plasma ...

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B102/B204

80% is given to the end walls, and only about 20% to an escape to the end walls of the trap. The escape is nonsteady, the ions are thrown out from regions not connected with one another, whose dimensions - perpendicular to the magnetic field - are small compared to the trap diameter, which, however, extend throughout the entire length of the trap along the magnetic field. There are 5 figures, 3 tables, and 2 Soviet-bloc references.

SUBMITTED: July 20, 1960

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BAYBORODOV, U. T.; IOFFE, M. S.; PETROV, V. M. and SOBOLEV, R. I.

3

Adiabatic Trapping with Combined Magnetic Fields

report presented at the Study Group on Mirror Configurations, Fontenay-aux-Roses, France, 15-19 Jul 1963.



L 10110-63

EWG(k)/EWT(1)/EEC(b)-2/ES(w)-2/BDS AFFTC/ASD/ESD-3/AFWL/

SSD Pz-4/Pab-4/Pi-4/Po-4 AT/IJP(C)

ACCESSION NR: AP3001172

S/0089/63/014/005/0443/0445

AUTHOR: Bayborodov, Yu. T.; Ioffe, M. S.; Petrov, V. M.; Sobolev, R. I.

TITLE: Adiabatic trap with combined magnetic field

82

SOURCE: Atomnaya energiya, v. 14, no. 5, 1963, 443-445

81

TOPIC TAGS: adiabatic traps, combined magnetic fields, confinement of plasma

ABSTRACT: Results are presented of experiments in plasma confinement by means of a PR-5 adiabatic trap with magnetic mirrors, in which the magnetic field grows in longitudinal and radial directions. The concept behind such a trap is that the growth of the field in a radial direction prevents the development in the plasma of convective instability, which provokes the escape of plasma across the magnetic field. Such a stabilizing field was generated by means of stabilizing windings added to the longitudinal field coils. At a sufficiently large stabilizing-field intensity, the lifetime of plasma in the trap increases considerably. The intensity of the longitudinal field in the central part of the trap and of the stabilizing field reached 5000 and 4500 oe, respectively, and the preliminary

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ACCESSION NR: AP3001172

pressure in the chamber reached  $1 \times 10^{-6}$  mm Hg. A differential system of evacuation by means of titanium pulverized directly on the inner surface of the chamber kept the pressure in the central part of the chamber at  $5 \times 10^{-8}$  mm Hg with a steady admission of hydrogen at 500 cm sup 3/hr into the plasma source. "Magnetron" injection was used to fill the trap with plasma. In these experiments  $n$  is approximately equal to  $10^9$  cm sup  $-3$ ,  $T_{sub i}$  is approximately equal to 5 kev, and  $T_{sub e}$  is approximately equal to 20 ev. The effect of the stabilizing field on the confinement features of the trap was determined from the dependence of plasma-decay-time variation on the field. It was found that plasma decays 35 times slower when the field equals 1500 oe than when it equals zero. The absolute value for plasma decay during a stabilized mode was 3.5 millisecc, as compared with 0.5 millisecc obtained in previous experiments. This difference is associated with the different pressure of the neutral gas in the chamber and proves that the decay is due to charge exchange. The maximum decay time obtained with this device (at still lower pressure) reached 10--15 millisecc. "The authors express thanks to L. A. Artsimovich for his continuing interest in the work, his contribution to its execution, and his extremely valuable discussion of the results." Orig. art. has: 3 figures.

ASSOCIATION: none  
 SUBMITTED: 11Apr63  
 SUB CODE: 90/afm  
 Card 2/2

DATE ACQ: 21Jun63  
 NO REF SOV: 004

ENCL: 00  
 OTHER: 001

I 15125-65 EEC(b)-2/EPA(w)-2/EWG(k)/EWT(1)/EEC(t)/EPA(sp)-2/T/EWA(m)-2  
 PI-4/Po-4/Pz-6/Pab-10 ESD(t)/ESD(gs)/RAEM(c)/AEDC(b)/SSD/SSD(b)/AFWL/ASD(a)-5  
 ASD(f)-2/ASD(p)-3/AFETR/IJP(c) AT/DM  
 ACCESSION NR: AP4045335 S/0089/64/017/003/0211/0215

AUTHOR: Marty\*nenko, Yu. V. ; Sobolev, R. I. B

TITLE: Magnetic field of the mirror configuration which increases along the radius

SOURCE: Atomnaya energiya, v. 17, no. 3, 1964, 211-215

TOPIC TAGS: <sup>pl</sup>plasma, magnetic field, nuclear fusion, thermonuclear reaction, magnetic plasma trap, magnetic mirror

ABSTRACT: In the recent paper (Yu. V. Gott et al, Yaderny\*y synthesis, Supplement, part 3, 1045 (1962)), the preliminary experiments were described on confining plasma in an adiabatic trap with a magnetic field which is increasing in both the longitudinal and in radical directions. Such a field is obtained by a superposition of the field of the usual trap with magnetic mirror by a system of linear conductors symmetrically located around the longitudinal axis. The currents in the neighboring conductors are opposite. In the present paper, a simplified combination field is considered with 4, 6, and 8 conductors. The results of

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ACCESSION NR: AP4045335

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the investigation were used for the computation of the establishment PR-3. The authors are grateful to M. S. Ioffe and O. B. Firsov for useful comments. Orig. art. has: 3 figures, 11 equations

ASSOCIATION: None

SUBMITTED: 02Sep63

ENCL: 00

SUB CODE: ME, EM

NO REF SOV: 004

OTHER: 002

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L 16019-65 EWT(r)/EWR(k)/EFA(sp)-2/EPA(w)-2/EEC(t)/T/EEG(o)-2/EWA(m)-2 Pr-6/Po-4/  
Pab-10/Fish IJP(c)/ASD(z)-2/BSL/SSD(b)/SSD/ASD(x)-5/ARDC(b)/2FWL/ASD(p)-3/AFETP/PAEM(a)/  
ACCESSION NR: AP4049537 ESD(gs)/ESD(t) AT S/0089/64/017/005/0366/0375

AUTHOR: Ioffe, M. S.; Sobolev, R. I.

TITLE: Confinement of plasma in trap with combined magnetic field B

SOURCE: Atomnaya energiya, v. 17, no. 5, 1964, 366-375

TOPIC TAGS: plasma, plasma confinement, plasma stabilization, mag-  
netic trap, magnetic mirror machine, PR 5 machine, controlled fusion  
reaction, plasma stability

ABSTRACT: Proceeding from the theoretical considerations of Rosen-  
bluth, Krall, and Rostoker (Nucl. Fusion, Suppl., Part I, 1962, p. 143),  
the authors investigated the properties of an adiabatic plasma trap  
with a magnetic field increasing in longitudinal as well as radial  
directions. This field configuration was realized by a special  
winding consisting of a system of straight current-carrying conductors  
parallel to the trap axis and at equal distances from each other.  
Preliminary information on plasma stability in such a trap was given  
by Yu. V. Gott, M. S. Ioffe, and V. G. Tel'kovskiy at the Salzburg  
Conference in 1961 (Nucl. Fusion, Suppl., Part III, 1962, p. 1045).

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L 16019-55  
ACCESSION NR: AP4049537

Since then, the PR-5 machine was built and operated; this work presents a more detailed description of the machine and gives the results of experimental investigation of the problem. In the experiments, plasma density was  $10^9$ — $10^{10}$  cm<sup>-3</sup> and the proton energy was about 5 kev. The data obtained on the dependence of plasma containment time on the stabilizing field strength and on the pressure of the neutral gas led to the conclusion that the combined field confines and stabilizes the plasma within a certain measure of magnetohydrodynamic instability

$$\beta = \frac{nI}{H^2/8\pi} \approx 10^{-4}.$$

Under stabilized conditions, plasma containment time was extended to about 3.5 msec. Stabilization was also confirmed by the analysis of plasma oscillations during the decay process; for under stabilized conditions the decay curve was free from the density pulsations characteristic of unstabilized plasma. The maximum containment time attained was 0.06 sec at a pressure of  $7 \times 10^{-9}$  mm Hg. Another series of measurements was made to investigate stability conditions within the plasma at various distances from the axis and at different field strengths of the stabilizing winding. The results show that the

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ACCESSION NR: AP4049537

stabilizing effect with rising field strength starts near the periphery; further increases in the field strength extend the stabilizing effect toward the center of the trap. The decay time tends to shorten toward the center in a stabilized plasma. The third series of measurements dealt with the density distribution of plasma along the radius of the trap, starting at a distance of 5 cm from the center line. The results revealed a pinch effect which increased toward the center of the trap with increasing stabilizing field strength. Orig. art. has: 9 figures.

ASSOCIATION: none

SUBMITTED: 10Sep64

NO REF SOV: 007

ENCL: 00

OTHER: 008

SUB CODE: ME, EM

ATD PRESS: 3141

Card 3/3

L 58335-65 EWT(1)/EPF(n)-2/EWG(m)/EPA(w)-2 Pz-6/Po-4/Pab-10/Pi-4 IJP(c)  
WW/AT

ACCESSION NR: AT5010440

UR/3136/64/000/545/0001/0013

AUTHOR: Ioffe, M. S.; Sobolev, R. I.

56  
B+1

TITLE: Plasma containment in a trap with a combined magnetic field

SOURCE: Moscow. Institut atomnoy energii. Doklady, no. 545, 1964. Uderzhaniye plazmy v lovushke s kombinirovannym magnitnym polem, 1-13

TOPIC TAGS: plasma containment, plasma trap, magnetic mirror, plasma lifetime

ABSTRACT: The authors investigate the plasma-containment properties of an adiabatic trap with magnetic field that increases in the longitudinal and radial directions. Such a field is obtained by superposition of the ordinary mirror configuration field (the fundamental field  $H_{0\parallel}$ ) on the field produced by a system of current-carrying conductors arranged parallel to the trap axis (stabilizing field  $H_{\perp}$ ); the conductors are placed uniformly in azimuth around the side wall. The trap was filled with plasma of density  $10^9$ -- $10^{10}$   $\text{cm}^{-3}$  and proton energy  $\sim 5$  KeV (electron energy  $\sim 20$  eV). Preliminary information on the stability of the plasma on such a combined system were reported by the authors earlier (Nuclear Fusion Suppl. part III, 1045, 1962). In this report the authors present the results of more detailed



L 58335-65

ACCESSION NR: AT5010440

investigations of the plasma behavior and a more detailed description of the apparatus. On the basis of the results obtained, it is concluded that such a combined field ensures stable plasma containment provided there is no magnetohydrodynamic instability. The stabilization of the instability is confirmed by an analysis of plasma oscillations for different values of the stabilizing field. The maximum attained containment time was 0.06 sec at pressure  $7 \times 10^{-9}$  mm Hg. A qualitative plot of the distribution of the plasma density along the radius of the trap is presented. Orig. art. has: 9 figures.

ASSOCIATION: none

SUBMITTED: 00

ENCL: 00

SUB CODE: ME

NR REF SOV: 006

OTHER: 007

AR  
Card 2/2

*SOBOLEV, R.N.*

USSR/Geophysics - Petrography of granites

FD-778

Card 1/1 : Pub 129-15/24

Author : Sobolev. R. N.

Title : Problem of the Trondhjemites, plagiogranites and plagioclasites

Periodical : Vest. Mosk. un., Ser. fizikomat. i yest. nauk, Vol 9, No. 2, 109-114, Mar 1954

Abstract : Table of the numerical characteristics of plagiogranites, and table of the mineralogic composition of plagiogranites according to various authorities. Concludes that the three named rocks are all identical, being one and the same rock.

Institution : Chair of Petrography

Submitted : July 10, 1953

*Sobolev, R.N.*

5-2-20/35

SUBJECT: USSR/Geology

AUTHOR: Sobolev, R.N.

TITLE: Amantauskaya and Kokkuduktyubinskaya Granitoid Intrusions  
(Amantauskaya i Kokkuduktyubinskaya intruzii granitoidov)

PERIODICAL: Byulleten' Moskovskogo Obshchestva Ispytateley Prirody, Otdel  
Geologicheskii, 1957, # 2, pp 153-154 (USSR)

ABSTRACT: Devonian intrusions of granitoids are widely spread in the  
Sarysu-Teniz elevation (Central Kazakhstan). According to their  
age they are divided into 2 complexes:

1. The first complex is more ancient. Granitoid intrusions  
of the first complex penetrate perphyrites of the lower part  
of the Lower-Middle Devonian layers. The Kokkuduktyubinskaya  
intrusion belongs to this complex.

2. The second complex is represented by the Amantauskaya  
intrusion. Granitoid intrusions of this complex penetrate all  
the rocks of the Lower-Middle Devonian layers and are covered  
with Lower-Turney limestones.

Card 1/2

Granitoids of these both complexes have different petrographic

SOBOLEV, R.N.

Relations between the chemical and quantitative mineral composition of granitoid rocks. Vest. Mosk. un. Ser. biol., pochv., geol., geog. 12 no.1:219-227 '57. (MLRA 10:11)

1. Kafedra petrografii Moskovskogo gosudarstvennogo universiteta.  
(Granite)

SOBOLEV, R.N.

Amantauskaya and Kokkuduktiubinskaya granitoid intrusions.  
Biul. MOIP. otd. geol. 32 no.2:153-154 Mr-Ap '57. (MIRA 11:3)  
(Kazakhstan--Rocks, Igneous)

SOBOLEV, R.N.; YEMEL'YANENKO, P.F.

Age of granitoid intrusions in the Sary-su--Tengiz upland.  
Sov. geol. no.62:154-157 '57. (MIRA 11:6)

1. Moskovskiy gosudarstvennyy universitet im. M.V. Lomonosova.  
(Kazakhstan--Rocks, Igneous)

SOBOLEV, R.N.

Petrochemistry of Devonian granitoids in the Sarysu-Tengiz upland  
(central Kazakhstan). Nauch.dokl.vys.shkoly; geol.-geog.nauki no.2:  
105-111 '58. (MIRA 12:2)

1. Moskovskiy universitet, geologicheskiy fakul'tet, kafedra petro-  
grafii.  
(Kazakhstan--Rocks, Igneous) (Geochemistry)

SOBOLEV, R.N.

Genesis of plagioclase granites. Vest. Mosk. un. Ser. biol.,  
pochv., geol., geog. 13 no.2:157-162 '58. (MIRA 11:9)

1. Moskovskiy gos. universitet, Kafedra petrografii.  
(Trondhemites)



SOBOLEV, R.N.

Origin of myrmekites. Vest.Mosk.un.Ser.biol.,pochv.,geol.,  
geog. 13 no.4:131-136 '58. (MIRA 12:4)

1. Kafedra petrografii Moskovskogo universiteta.  
(Rocks, Igneous)

SOBOLEV, R.N.

Potash feldspars in Devonian granitoids in central Kazakhstan.  
Sov.geol. 2 no.11:124-130 N '59. (MIRA 13:5)

1. Moskovskiy gosudarstvennyy universitet im. M.V.Lomonosov.  
(Kazakhstan--Feldspar)

SOBOLEV, R.N.

Geologic and petrographic features of the granitoids of the first Devonian intrusive complex in the Sary-su-Tengiz Upland.

Izv. vys. ucheb. zav.; geol. i razv. 4 no.3:29-37 Mr '61.

(MIRA 14:6)

1. Moskovskiy gosudarstvennyy universitet imeni M.V. Lomonosova.

(Kazakhstan--Rocks, Igneous)

Миронова, Л.С.; БОБНЕР, Е.Н.

Geological and petrographical characteristics of contact  
formations of the Kiik Massif. Vest. Mosk. un. Ser. 4:  
Geol 18 no.5:29-36 S-0'63. (MIRA 17:2)

1. Kafedra petrografii Moskovskogo universiteta.

KABANOV, M.P., SUBOLEV, R.N.

Manifestation of Lower Carboniferous igneous activity in the eastern part of the Sarysu-Tengiz watershed (central Kazakhstan). Izv. vys. ucheb. zav.; geol. i razv. 6 no.9:139-140 S '63. (MIRA 17:10)

1. Moskovskiy gosudarstvennyy universitet im. M.V. Lomonosova.

SODOLIV, R.N.

Some characteristics of the processes of hybridism and differentiation in the Topar intrusive. Izv. vys. ucheb. zav.; geol. i razv. 6 no.12:66-74 D '63 (MIRA 18:2)

I. Moskovskiy gosudarstvennyy universitet.

SOBOLEV, R.N.

Origin of the almandines of the Yokhudohtybe Massif. Dokl. AN SSSR  
160 no.4:921-922 F 165. (MIRA 18:2)

U. Moskovskiy gosudarstvennyy universitet. Submitted April 6, 1964.

SOBOLEV, R.N.; DOROKHOV, I.L.; BORSHCHEVSKIY, Yu.A.

New data on the age of the granitoids of the Topar complex in  
the northern part of the Dzhungaria-Balkhash geosyncline.  
Dokl. AN SSSR 165 no.3:676-677 N '65. (MIRA 18:11)

1. Submitted May 29, 1965.



DOROKHOV, I.I.; MIGDISOVA, L.F.; SOBOLEV, R.N.

Geological position and age of intrusives of the Izhakstagalinsk complex in the northeastern part of the Torau synclinorium. *Biul. MOIP Otd. geol.* 40 no. 6:143-144 N-D '65 (MIRA 19:1)

1. Submitted May 13, 1965.

S/539/61/000/032/009/017  
D247/D301

AUTHORS: Kruglikov, S.S., Kudryavtsev, N.T. and Sobolev, R.P.

TITLE: Investigating electrolytes for smooth nickel plating

PERIODICAL: Moscow. Khimiko-tekhnologicheskii institut. Trudy, no. 32, 1961. Issledovaniya v oblasti elektrokhemii, 259-265

TEXT: The authors mention the development of additives for smooth electroplating which has taken place in the USA and concludes that the composition of the nickel electrolyte given, used with the addition of 0.5 g/l of coumarin at a pH of 4-6 and a current density of 4-6 amp/dm<sup>2</sup> at 50 ± 2°C with mechanical stirring provides good conditions for a semi-lustrous smooth nickel plate. The influence of the various electrolyte conditions has also been studied using a quantitative measurement of the smoothing capacity. There are 7 figures and 4 non-Soviet-bloc references. The 4 most recent references to the English-language publications read as follows: W.R. Meyer, Proc. Am. Electropl. Soc., 24, 123 (1936); D.G. Foulke and O. Kardos, Proc. Am. Electropl. Soc., 43, 172, 181, (1956);

Card 1/2

So. Bolev, A.

NO (9)  
AUTHOR:  
TITLE:  
PERIODICAL:  
ABSTRACT:

None Given  
All-Union Conference on Philosophical Problems of Modern Natural Sciences (Vsesoyuznoye sveshchaniye po filosofskim voprosam sovremennoye yestestvoznaniya). By the Editor (Of Russian): Uspokhi fizicheskikh nauk, 1959, Vol 68, Nr 4, PP 717-717 (USSR)

The above conference took place at Moscow in October 1958; it was attended by more than 600 scientists, among them 20 Academicians and 30 Corresponding Members, 13 USSR, as well as by delegates from Bulgaria, Hungary, East Germany, and Czechoslovakia. The following lecturers delivered at the conference are listed: Academician M. R. Gerasimov, (On Lenin's Book: "Materialism and Empirio-criticism"), Academician A. I. Oparin ("On the Problems of Modern Critique"), Doctor of Philosophical Sciences M. K. Gerasimov ("On the Relationship of the Philosophical Problems of Modern Critique"), Doctor of Philosophical Sciences M. K. Gerasimov ("On the Relationship of the Philosophical Problems of Modern Critique"), Academician I. A. Pok ("Interpretation of Quantum Mechanics" - already published in Uspokhi fizicheskikh nauk, 1957, Vol 62, Nr 4), Corresponding Member AS USSR A. D. Aleksandrov ("The Philosophical Content of and the

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Significance of the Theory of Relativity", Academician V. I. Abartseyan ("Some Methodological Problems of Cosmogony", Academician S. M. Sobolev and Professor A. A. Ivanovskiy ("On the Significance of Natural Science"), Corresponding Member AN SSSR P. M. Gerasimov and Academician V. A. Engel'gardt ("On the Biological, Physical and Chemical in the Investigation of the Origin of Life"), Academician A. I. Oparin ("The Problem of Modern Natural Science"), and, finally, Corresponding Member AS USSR M. K. Gerasimov, and, finally, Corresponding Member and the Modern Physiology of the Human's Theory of Reflection and the Modern Physiology of the Human's Theory of Reflection. About 30 delegates took part in the discussion of these lectures. Next, the introductory speech delivered by the President of the AS USSR, Academician A. S. Maslennikov, the President of the AS USSR, Academician A. S. Maslennikov, the President of the AS USSR, Academician A. S. Maslennikov, the President of the AS USSR, Academician A. S. Maslennikov, the President of the AS USSR, Academician A. S. Maslennikov, and finally a resolution passed by the All-Union Conference on philosophical problems of modern natural science is given under the title "On the Tasks of Modern Natural Science". The resolution essentially contains an appeal for the

Card 2/3

investigation of all new scientific facts in the sense of the theory of Marx and Lenin and of dialectic materialism for adaptation of ideas of the resolution of the 20th Party Congress, cooperation of scientists, coordination of research work, as well as some problems of organization, in conclusion, a list of printed works is given. 40 minutes lectures delivered during the conference were published. There are 8 Soviet references.

Card 3/3

SOBOLEV, Sergey Aleksandrovich; DENISENKO, L., redaktor; GOLOVCHENKO, G.,  
tekhnicnyi redaktor

[Aleksandr Fedorovich Mozhaiskii in the Ukraine] Oleksandr Fedo-  
rovych Mozhaish'kyi na Ukraini. Kyiv, Derzh. vyd-vo tekhn. lit-ry  
URSR, 1956. 43 p. (MIRA 10:4)  
(Mozhaiskii, Aleksandr Fedorovich, 1825-1890)

SEARCHED  
KRICHEVSKIY, Yevgeniy Samoylovich; FEDOROVICH, Leonid Grigor'yevich; FETISOV, Vladimir Fedorovich; VERTSNER, V.N., kand. fiz.-mat. nauk, retsenzent; KRUGER, M.Ya., inzh., retsenzent; SHOSHIN, I.A., inzh., retsenzent; SOBOLEV, S.F., inzh., retsenzent; DULIN, V.N., kand. tekhn. nauk, red.; BOGOMOLOVA, M.F., red. izd-va; FUKHLIKOVA, N.A., tekhn. red.

[Electrical equipment in optical and mechanical instruments] Elektrooborudovanie optiko-mekhanicheskikh priborov. Moskva, Gos. izd-vo obor. promysl., 1958. 467 p. (MIRA 11:7)

(Electronic apparatus and appliances)

(Electric apparatus and appliances)

LYAKHOVICH, V.V.; ZOLOTAREV, B.P.; RODIONOV, D.A.; SOBOLEV, S.F.

Accessory minerals in granitoids of the Gornyy Altai. Trudy  
Inst.min., geokhim.i kristalokhim.red.elem. no.2:144-163 '59.  
(MIRA 15:4)  
(Altai Mountains--Trace elements)

RUSSIAN BOOK INFORMATION

337/5740

Al'manakh nauki SSSR. Institut mineralogii, gemmologii i kristallogimii redkikh elementov

Voprosy mineralogii, gemmologii i gemmologii nestorochodnykh redkikh elementov (Problems in Mineralogy, Geochemistry, and Deposit Formation of Rare Elements) Moscow, Izd-vo AN SSSR, 1960. 353 p. (Series: Itogi Nauki i Tekhn., v. 4) Errata printed on the inside of back cover. 2,200 copies printed.

Chief Ed.: K. A. Vlasov, Corresponding Member, Academy of Sciences USSR; Resp. Ed.: V. V. Lyakhovich; Ed. of Publishing House: L. S. Tarasov; Tech. Ed.: P. S. Mashina.

RUSSIAN: This book is intended for geologists, mineralogists, and petrographers.

CONTENT: This is a collection of 25 articles on the formation, geology, mineralogy, petrography, and geochemistry of deposits of rare elements in Siberia and [Soviet] Central Asia. The distribution and characteristics of rare elements found in these areas as well as some quantitative and qualitative methods of investigating the rocks and minerals in which they are found.

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Problems in Mineralogy (Cont.)

507/5740

or with which they are associated, are discussed. Two articles present an economic investigation of the possibilities of industrial extraction and utilization of selenium, tellurium, and hafnium. No personalities are mentioned. Each article is accompanied by references.

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EG7/5740

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Cont 4/6

Problems in Mineralogy (Cont.)

897/5740

Zhukova, A. S. On the Problem of Genetic Types of Germanium-Bearing Deposits 174

Tikhonenkov, I. P., and R. P. Tikhonenkova. Contact Rocks of the Lovozerskiy Massif, Their Genesis and the Peculiarities of Distribution in Them of Rare Metal Mineralization 185

Volochkovich, K. L. On the Problem of the Structural Position of the Gorncaltsyskiy Rare Metal Province 203

METHODS OF INVESTIGATING ORES AND MINERALS

Lobedava, S. I. Rational Method of Quantitative Determination of Disseminated Beryllium in Gneiss Ores 209

Redionov, D. A., S. P. Sobolev, B. P. Zelotarev, and Ye. V. Vlasova. On Accidental Errors of Quantitative Mineralogical Analysis of Ore Slimes and Concentrates 214

Card 5/6

SOBOLEV, S.F.

Methods for the separation of accessory minerals from  
melanocratic igneous rocks. Trudy IMGRE no.18:159-164 '63.  
(MIRA 16:12)

JURBEV, Sergey Fedorovich; LEBEDEV, A.P., doktor geol.-miner.  
nauk, otv. red.; LYAKHOVICH, V.V., red. HARGRE A.M.,  
red.

[Gabbro-tonalite complex of the Polar Urals; materials  
on the study of accessory minerals and rare elements]  
Gabbro-tonalitovyi kompleks Poliarnogo Urala; po mate-  
rialam izucheniia aktsessornykh mineralov i redkikh  
elementov. Moskva, Nauka, 1965. 161 p. (MIRA 18:9)

SEBOLIN, E.F.

Rare-earth elements in the ultrabasic and basic rocks of the  
Urals. Geokhimiya no.4:433-442 Ap '68.

(MIRA 18:7)

1. Institut mineralogii, geokhimi i kristallografiicheskikh  
elementov, Moskva.

SOBOLEV, S. I.

USSR/Miscellaneous---machine construction

Card 1/1

Authors : Sobolev, S. I.; and Petukhov, N. E., engineers

Title : Electrical rivet welding

Periodical : Vest. mash. 34/3, 66-69, Mar/1954

Abstract : Electric-arc rivet welding under flux is being used more and more. The technology of rivet welding is expounded and the quality of the seams made in this manner are considered when low-alloy sheet steel 2-4 mm thick is used. In contrast to contact spot welding there is no limit to the dimensions of articles produced in this manner and it is possible to make box-like structures. The method is less costly. There are defects, such as failure of all the metal to fuse, but by proper techniques these can be eliminated. Tables; drawings.

Institution : .....

Submitted : .....

SKERSKIY, K.K.; SOBOLEV, S.K.; SHAPIRO, V.V.

Simple converter of voltage to pulse frequency. Priborostroenie  
no.11:26-28 N '62. (MIRA 15:12)  
(Electronic calculating machines)



KARNAUKHOV, V.V.; SOBOLEV, S.K., kand. tekhn. nauk; GUL'YEV, G.P.;  
KOZIN, G.N.; KRIVCHENKO, Yu.S.

Automation of the determination of the stopping moment of  
blowing in an oxygen-blown converter. Met. i gornorud. prom. no. 2:  
26-28 Mr-Ap '64. (MIRA 17:9)

SOBOLEV, S. K.: Master Tech Sci (diss) --- "Desulfurization of cast iron within the blast furnace by a suspension of lime and aluminum in gas". Moscow, 1958. 13 pp (Min Higher Educ USSR, Moscow Order of Labor Red Banner Inst of Steel im I. V. Stalin), 120 copies (KL, No 2, 1959, 122)

AUTHORS: Sobolev, S. K., Oyks, G. N. SOV/163-58-2-9/46

TITLE: Desulfurization of Cast Iron by Means of Lime (Desul'furatsiya chuguna izvest'ya)

PERIODICAL: Nauchnyye doklady vysshey shkoly. Metallurgiya, 1958, N= 2, pp. 59-65 (USSR)

ABSTRACT: Experiments for the desulfurization of cast iron by means of lime are described. Lime was blown in by means of a nitrogen current as carrier; the factors causing the optimum conditions in this process are discussed. Cast iron of different chemical composition was investigated. Finely ground lime was used as desulfurization agent. The best results were achieved with lime of a granular size of 0,16 mm. The method of blowing in pulverulent lime and aluminum with nitrogen carrier gas into molten cast iron is well suited for desulfurization. At a lime content of 1,5-3% and an aluminum content of 0,12% in the cast iron the consumption of nitrogen is 1 liter per 1 kg of cast iron. The desulfurization amounts to 70-90%. When the aluminum content in the cast iron mixture is increased the desulfurization degree increases, too. An increase of the intensity of blowing-in (more than 1,2 l/min. per 1 kg cast iron) does not affect the de-

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Desulfurization of Cast Iron by Means of Lime

SOV/163-58-2-9/46

sulfurization process. This way cast iron with a sulfur content of 0,02-0,22% was obtained. There are 5 figures, 3 tables, and 5 references, 2 of which are Soviet.

ASSOCIATION: Moskovskiy institut stali (Moscow Steel Institute)

SUBMITTED: November 20, 1957

Card 2/2

SOBOLEV, S.K., inzh.; KUDRIN, V.A., kand.tekhn.nauk; OYKS, G.N.,  
doktor tekhn.nauk; TRUBIN, K.G., doktor tekhn.nauk, v rabote  
prinimali uchastiye; BLIZNYUKOV, S.A.; ROZHKOV, I.M.;  
MALYSHEV, V.S.

Desulfuration of pig iron outside the blast furnace by lime  
with the addition of aluminum powder. Sbor.Inst.stali  
no.39:5-15 '60. (MIRA 13:7)

1. Kafedra metallurgii stali Moskovskogo ordena Trudovogo  
Krasnogo Znameni instituta stali im. I.V.Stalina.  
(Cast iron-Metallurgy) (Desulfuration)

PHASE I BOOK EXPLOITATION

SOV/5556

85

Moscow. Institut stali.

Novoye v teorii i praktike proizvodstva martenovskoy stali (New [Developments] in the Theory and Practice of Open-Hearth Steelmaking) Moscow, Metallurgizdat, 1961. 439 p. (Series: Trudy Mezhvuzovskogo nauchnogo soveshchaniya) 2,150 copies printed.

Sponsoring Agency: Ministerstvo vysshego i srednego spetsial'nogo obrazovaniya RSFSR. Moskovskiy institut stali imeni I. V. Stalina.

Eds.: M. A. Glinkov, Professor, Doctor of Technical Sciences, V. V. Kondakov, Professor, Doctor of Technical Sciences, V. A. Kudrin, Docent, Candidate of Technical Sciences, G. N. Oyka, Professor, Doctor of Technical Sciences, and V. I. Yavoyskiy, Professor, Doctor of Technical Sciences; Ed.: Ye. A. Borko; Ed. of Publishing House: N. D. Gromov; Tech. Ed.: A. I. Karasev.

PURPOSE: This collection of articles is intended for members of scientific institutions, faculty members of schools of higher education, engineers concerned with metallurgical processes and physical chemistry, and students specializing in these fields.

Card 1/14

New [Developments] in the Theory (Cont.)

SOV/5556

and M.I. Beylinov (Night School of the Dneprodzerzhinsk Metallurgical Institute).  
References follow some of the articles. There are 268 references, mostly Soviet.

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Foreword

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Yavovskiy, V. I. [Moskovskiy institut stali - Moscow Steel Institute].  
Principal Trends in the Development of Scientific Research in Steel  
Manufacturing

7

Filippov, S. I. [Professor, Doctor of Technical Sciences, Moscow Steel  
Institute]. Regularity Patterns of the Kinetics of Carbon Oxidation  
in Metals With Low Carbon Content

15

[V. I. Antonenko participated in the experiments.]

Levin, S. L. [Professor, Doctor of Technical Sciences, Dnepropetrovskiy  
metallurgicheskoy institut - Dnepropetrovsk Metallurgical Institute].

Card 3/14

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