

SIDORENKO, I.S.; REVUTSKIY, Ye.I.

Studying the properties of superconducting resonators at the  
frequency of 1100 Mc. Zhur. tekhn. fiz. 35 no.4:748-750 Ap '65.  
(MIRA 18:5)

ACC NR: AF6032923 SOURCE CODE: UR/0142/66/009/003 0349/0352

AUTHOR: Sidorenko, I. S.

ORG: none

TITLE: High-power pulse generator

SOURCE: IVUZ. Radiotekhnika, v. 9, no. 3, 1966, 349-352

TOPIC TAGS: pulse generator, vhf ~~generator~~

ABSTRACT: A high-power pulse generator designed to work at the 6-m wavelength is described. The generator, shown in Fig. 1, has the following characteristics: output pulse power, 1.72 Mw; pulse duration, 400 to 800 usec; and pulse repetition rate, 1-5 pulses/sec. The generator uses a GI-4A power triode connected in a common grid configuration. The triode has a carbonized, thoriated tungsten cathode; its anode is water-cooled, while its base and body are air-cooled. The anode-to-cathode circuit consists of two concentric shorted quarter-wave lines that can be tuned with a plunger. The grid-to-cathode circuit, a tunable multicylinder resonator, is located within the anode-to-cathode circuit. The generator output is conductively coupled. In operation, output stability was satisfactory for an anode voltage

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UDC: 621.373.431

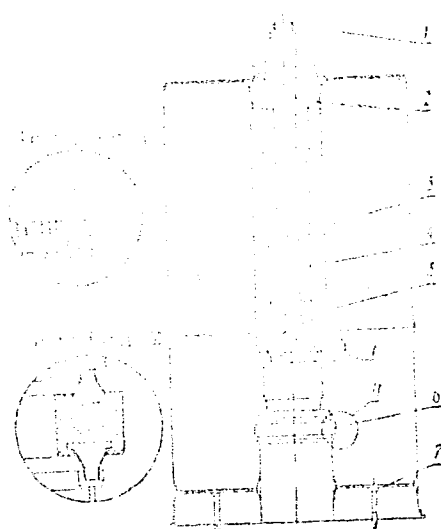


Fig. 1. Pulse generator

1 - heated conductors; 2 - grid-to-cathode plunger; 3 - inside cylinder of grid-to-anode circuit and outside cylinder of grid-to-cathode circuit; 4 - air duct and inside cylinder of grid-to-cathode circuit; 5 - middle cylinder of grid-to-cathode circuit; 6 - KVK-5 isolating capacitor; 7 - grid-to-anode plunger.

of 41.5 kv; corona discharge began at an anode voltage of 42 kv. The generator is reliable and easy to operate. Orig. art. has: 2 figures and 1 table.

SUB CODE: 09/14/ SUBM DATE: 26Apr65/ ORIG REF: 005/ ATD PRESS: 5099

Card 2/2

1. [Illegible], 1. 1., 1953.
2. [Illegible] (600)
4. Quarries and Quarrying
7. Production of crushed stone and gravel at the Bseennikov plant. Mekh. trud. rab. 7, No. 4, 1953.

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

SERGEYEV, A.A., red.; AMPILOGOV, I.M., red.; ASSONOV, V.A., red.; BABAYANTS, N.A., red.; BABOKIN, I.A., red.; BALAMUTOV, A.D., red.; BOGORODSKIY, N.N., red.; BOLOHENKO, D.N., red.; BUCHNEV, V.K., red.; VAKHMINTSEV, G.S., red.; VORONKOV, A.K., red.; GARKALENKO, K.I., red.; GORBATOV, P.Ye., red.; GOLOVLEV, V.Ya., red.; DOKUCHAYEV, M.M., red.; DUBNOV, L.V., red.; YEVTEYEV, A.D., red.; YEREMENKO, Ye.K., red.; ZENIN, N.I., red.; KRIVONOGOV, K.K., red.; KUPALOV-YAROPOLK, I.K., red.; MATSYUK, V.G., red.; NIKOLAYEV, S.I., red.; ONISHCHUK, K.N., red.; PETROV, K.P., red.; PILYUGIN, B.A., red.; PLATONOVA, A.A., red.; POLESIN, Ya.L., red.; POKROVSKIY, L.A., red.; POMETUN, D.Ye., red.; POLYUSHKIN, A.Kh., red.; REYKHER, V.P., red.; SEDOV, N.A., red.; SIDORENKO, I.T., red.; FIDELLEV, A.A., red.; CHAKHMAKHCHEV, A.O., red.; CHEMODUROV, M.Ya., red.; SHUMAKOV, A.A., red.; YAREMENKO, Ye., red.; PARTSEVSKIY, V.N., red.izd-va; ATTOPOVICH, M.K., tekhn. red.

[Standard safety regulations for blasting operations] Edinye pravila bezopasnosti pri vzryvnykh rabotakh. Izd.2. Moskva, Gos. nauchno-tekhn.izd-vo lit. vy po chernoi i tsvetnoi metallurgii, 1958. 318 p. (MIRA 13:1)

1. Russia (1923- U.S.S.R.) Komitet po nadzoru za bezopasnym vedeniyem rabot v promyshlennosti gornomu nadzoru. (Mining engineering--Safety measures)

SIDORENKO, I.T., inzh.

Enrichment of crushed stone. Put' i put.khoz. no.10: '33 0 '58.  
(MIRA 11:12)

(Stone, Crushed)

SIDORENKO, I.T., inzh.

Better utilization of the PDSU-75 mobile stone-crushing unit.  
Put' put.khoz. no.9:43-44 S '59. (MIRA 12:12)  
(Stone, Crushed) (Railroads--Equipment and supplies)

SIDORENKO, I.T.

New machinery for stone crushing plants. Put' i put.khoz. no.12:  
2 of cover, 19-20 D '59. (MIRA 13:4)  
(Stone, Crushed) (Milling machinery)



SIDORENKO, I.T., inzh.

Answering the challenge of Muscovites. Put' i put.khoz. 4 no.11:  
32 N '60. (MIRA 13:12)

(Quarries and quarrying)

1.1680

41901  
S/220/02/000/004/011/012  
1005/1203

AUTHOR: Kagan, Ya.I., Terletskaia, V.S., Sidorenko, I.Ya. and Sundur, G.K.

TITLE: investigation of the process of compression of ferro-magnetic powders

PERIODICAL: Poroshkovaya metallurgiya, no 4, 1962, 90-93

TEXT: The aim is to obtain data on the cold-working effect during the compression of metal powders. The maximum coercive force for nickel and iron powders samples, with densities ranging from 2.75 to 7.25 g/cm<sup>3</sup>, was found for samples with a density of 5.5 g/cm<sup>3</sup>. This fact, and the straight-line decrease in the coercive force with increase in the density of the same samples which underwent an annealing at 300°C, led the authors to the conclusion that the compression process of metal powders increases the deformation of their crystal lattices up to a certain limit. For the above powders this limit is expressed by the maximum coercive force found for samples with a density of 5.5 g/cm<sup>3</sup>. There are 4 figures.

ASSOCIATION: VNIIElektromash, g. Khar'kov (VNIIElectromash, Khar'kov)

~~cont 1/2~~

KAGAN, Ya.I.; SIDORENKO, I.Ya.

Quantitative investigation of carbides in carbon steel. Fiz.  
met. i metalloved. 13 no.6:842-849 Je '62. (MIRA 15:7)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut tekhnologii  
elektromashin i apparatostroyeniya.

(Carbides)

(Steel—Metallography)

KAGAN, Ya.I.; BRONIN, S.V.; SIDORENKO, I.Ya.

Magnetic method of quantitative carbide analysis. Fiz. met.  
i metalloved. 13 no.6:926-928 Je '62. (MIRA 15:7)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut tekhnologii  
elektromashino- i apparatostroyeniya.  
(Carbide—Analysis) (Magnetic testing)

KAGAN, Ya.I.; BROVIN, S.V.; SIDORENKO, I. Ya.

Investigating the process of tempering hardened carbon steels.  
Metalloved. i term. obr. met. no.2:35-38 F'64 (MIRA 17:7)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut tekhnologii  
elektromashin i apparatostroyeniya.

37

14037. Experiments on the Use of Liquid Fertilizer Under Sugar Beets. (Russian) K. Sijatakas. *Sovetskaya Agronomiya*, v. 10, June 1952, p. 77-78.  
Solutions of fermented manure, superphosphate, and potassium salts were applied underground twice during the growing season. Significant increases of yields were obtained.

1. SIDORENKO, K.
2. USSR (600)
4. Machine-Tractor Station
7. In the tractor brigade of Yakov Shul'ga. MTS No. 12 1952.

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

NIYAZOV, A.H.; SIDORENKO, K.H.

Synthesis of mixed esters-ethers of the naphthenic series.  
Izv. AN Turk.SSR.Ser.fiz.-tekh., Khim. i geol.nauk no.5:116-  
119 '65. (MIRA 18:11)



ZOLOTNITSKIY, M.Yu.; BEZVERKHAYA, E.; MARGOLINA, S.; SIDORENKO, L.

Practical summer work of medical school students. Fel'd. i akush.  
24 no.7:59-60 JI '59. (MIRA 12:10)  
(MEDICINE--STUDY AND TEACHING)

S  
SIDORENKO, L. H., kandydat nauk medycznych

Important prognostic factors in gastric cancer. Nowotwory 12 no.1:1-8  
'62.

1. Z Zakładu Onkologii Instytutu Doskonalenia Lekarzy w Leningradzie  
i z Instytutu Onkologii AMN ZSRR Kierownik Zakładu: członek korespon-  
dent AMN ZSRR, prof. A. Rakow Dyrektor Instytutu Doskonalenia Lekarzy :  
doc. A. E. Kisielew Dyrektor Instytutu Onkologii AMN ZSRR członek  
rzeczywisty AMN ZSRR prof. A. I. Serebrow.

(STOMACH NEOPLASMS diag)

26588

S/185/60/005/003/003/020  
D274/D303

24,2300

AUTHORS: Afanas'yev, M.G., Gordiyenko, A.G., Kolisnychenko,  
L.K., Vil'yams, A.P. and Sydorendko, L.I.

TITLE: Measurement and stabilization of the magnetic field  
of a powerful electromagnet by the method of nuclear  
magnetic resonance

PERIODICAL: Ukrayins'kyy fizychnyy zhurnal, v. 5, no. 3, 1960,  
319-325

TEXT: A device is described for measuring and stabilizing the  
magnetic field of a d.c. electromagnet. The device has the advan-  
tage (compared to earlier devices of this kind) of incorporating a  
single pickup for measuring a wide range of values of the magnetic  
field, and of stabilizing strong magnetic fields (up to 12.5 k oer-  
sted). Magnetic fields of 2.5 to 12.5 k oerst. were investigated.  
A basic diagram of the pickup is shown. Lithium (in a solution  
of LiCl is used as the source of nuclear signals. The LiCl solution

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Measurement and stabilization...

has an admixture of paramagnetic  $\text{FeCl}_3$  or of  $\text{MnSO}_4$ ; this is necessary for reducing the relaxation time. A block diagram of the measuring device is given. It contains an oscillator, rectifier, low-frequency amplifier, voltmeter and RC-filter. It was experimentally shown that the design of the pickup and of the oscillator ensure a high stability of frequency; for 8 - 10 hours of operation, the frequency oscillations did not exceed  $1.5 \cdot 10^{-5}$  for a  $\pm 5\%$  change in voltage. The amplification factor was chosen so that the output signal should be sufficient for controlling the stabilizing circuit (over 5 v). The observation of the nuclear signal and the measurement of the magnetic field were carried out by the ordinary method of G.K. Yagola et al. (Ref. 5: Izmeritel'naya tekhnika, no. 6, 1955). The accuracy of magnetic-field measurements is determined by the accuracy of frequency measurements (equal to  $6 \cdot 10^{-5}$ ) and by the accuracy of determining the position of the signal on the oscillograph screen. The results of measuring the amplitude of the proton and lithium signals as a function of magnetic field strength are plotted for a 10 kw electromagnet. Another plot shows the results

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Measurement and stabilization...

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of signal-to-noise ratio measurements as a function of field strength. For lithium, the highest ratio was 10. The stabilizer contains an electromagnet with a principal and an auxiliary winding. The relative error  $\delta_r$  consists of a dynamic and a static error. The static error was reduced to a minimum of 10 - 25%. In order to ensure stability of the system, the ratio of the time constant of the principal winding to time constant of the stabilization circuit was taken as equal to 2 - 3. Experimental curves are given with the relative error of the stabilization system. The total relative error does not exceed  $3 \cdot 10^{-5}$  over the entire range of stabilized field strength (2.5 - 12.5 k oerst). In conclusion, the device was put into operation for a long time; it was found reliable and handy, and, therefore, used for experiments with magnetic analyzers. There are 7 figures and 12 references: 8 Soviet-bloc and 4 non-Soviet-bloc. The references to English-language publications read as follows: H.A. Thomas, Phys. Rev., 79, 339, 1950; N. Blombergen, E.M. Purcell, R.N. Pound, Phys. Rev. 73, 679, 1949.

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S/185/60/005/003/003/020  
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Measurement and stabilization...

ASSOCIATION: Fizyko-tekhnichnyy instytut AN USSR (Physico-technical Institute AS UkrSSR)

SUBMITTED: August 14, 1959

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GORDIYENKO, A.G.; [HORDIENKO, A.H.]; VIL'YAMS, A.P.; AFANAS'YEV, N.G.  
[Afanas'iev, M.H.]; SIDORENKO, L.I. [Sydorenko, L.I.]

Remote proton magnetometer with a long line for measuring wide  
ranges of magnetic fields. Ukr. fiz. zhur. 5 no.6:857-858 N-D '60.  
(MIRA 14:3)

1. Fiziko-tekhnicheskii institut AN USSR.  
(Nuclear magnetic resonance)  
(Magnetometer)

AFANAS'YEV, N.G. [Afanas'iev, M.H.]; VIL'YANS, A.P.; GORDIYENKO, A.G.  
[Hordilenko, A. H. ]; SIDORENKO, L.I. [Sydoranko, L.I.]

Remote action magnetometer. Ukr. fiz. zhur. 6 no.2:191-196  
Mr-Apr '61. (MIRA 14:6)

1. Fiziko-tekhnicheskiy institut AN USSR, g. Khar'kov.  
(Magnetometer)



S/0120/63/000/006/0176/0177

ACCESSION NR: AP4006841

AUTHOR: Denyak, V. M.; Sidorenko, L. I.

TITLE: Nuclear resonance phase detector used in electromagnetic field stabilizers

SOURCE: Pribory\* i tekhnika eksperimenta, no. 6, 1963, 176-177

TOPIC TAGS: phase detector, nuclear resonance, electromagnetic field stabilizer, nuclear magnetic resonance

ABSTRACT: A phase detector is briefly described which comprises two amplifiers using one 6N1P double triode tube, a trigger unit using one 6N3P double triode for separate anode triggering, and two shaping stages employing one 6N3P double triode. One amplifier is intended to pass even nuclear-resonance pulses, the other the odd pulses. Both are gated by the trigger pulses for the duration of  $\tau_{trig}$ . Output pulses from the trigger anodes are fed to

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storage capacitors. If the nuclear-resonance signal appears with a zero modulating field, the d-c components on the capacitors are equal. If the field varies by  $\Delta H$  from its resonance value, the difference between charges will be proportional to  $\Delta H$ . The time constant of the phase detector depends on the frequency of the nuclear-magnetic-resonance signal and can be brought to 20 or 30 microsec for modulation frequencies as high as 400 cps. Orig. art. has: 2 figures.

ASSOCIATION: none

SUBMITTED: 22Dec62

DATE ACQ: 24Jan64

ENCL: 00

SUB CODE: SD

NO REF SOV: 000

OTHER: 000

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L 21429-66 FBD/EWT(1)/EWP(e)/EWT(m)/EEC(k)-2/T/EWP(k)/EWA(h) IJP(c) WG/WH  
ACC NR: AP6011491

SOURCE CODE: UR/0386/66/003/007/0279/0281

AUTHOR: Livshits, B. L.; Nazarov, V. P.; Sidorenko, L. K.; Tursunov, A. T.;  
Tsikunov, V. N.

ORG: Institute of General and Inorganic Chemistry, Academy of Sciences SSSR (Institut obshchey i neorganicheskoy khimii Akademii nauk SSSR)

TITLE: Features of the time behavior of the generation in a laser with moving ruby crystal

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki. Pis'ma v redaktsiyu. Prilozheniye, v. 3, no. 7, 1966, 279-281.

TOPIC TAGS: ruby laser, laser emission, laser pulsation, laser r and d

ABSTRACT: This is a continuation of earlier work (Pis'ma ZhETF v. 1, no. 5, 35, 1965) where it was shown that a laser with a ruby crystal moving along the axis of a planar resonator with speed  $v \sim 30$  cm/sec radiates energy in a narrower spectral interval than a laser with stationary crystal, and that this increases the spectral density of the stimulated emission. To check whether continuous generation can be realized in a laser with moving crystal, and to investigate the influence of crystal motion on the time behavior of the laser generation mode, the authors used high-speed photography partially supplemented with oscillograms pertaining to the start

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of generation. first that in a wide range of above-mentioned frequencies a sharp increase takes place in the frequency of the lasing into continuous regions which are short compared with the generation duration. Further increase in the speed, at  $\sim 1.1$  of threshold pump, resulted in a gradual expansion of the continuous regions. At speeds  $v \sim 80$  cm/sec the generation becomes continuous in a number of oscillations still disclose traces of the spike regime. The generation into continuous generation is greatly improved by introducing into the resonator a round diaphragm of 1 mm diameter, which increases the diffraction losses and prevents by the same token the generation by modes with high transverse indices. The level of the continuous generation then becomes approximately stationary. Detailed investigations of the conditions necessary to ensure continuous generation in a laser with moving crystal should make it possible in the future, on the one hand, to formulate the principles of continuous operation of a solid-state laser with a moving crystal, and, on the other, explain the spike character of the generation of most contemporary solid-state lasers. The authors thank Academician I. V. Obreimov for interest in the work and Ch. K. Mukhtarov for useful discussion of the results. Orig. art. has: 1 figure.

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001550430003-0

SUB CODE: 20/

SUBM DATE: 05Jan66/

ORIG REF: 001/

OTH REF: 001/ ATD PRESS: 4221

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L 63652-65 EDC(b)-2/ EWG(r)/ EEC(k)-2/ EWA(h)/ EWA(k)/ EWT(l)/ EWT(m)/ FBD/ EWP(i)/ EWP(b)/ T/

ACCESSION NR: AP5016280 EWA(m)-2/ EWP(e) Pf-l/ Pi-l/ UR/ 0386/ 65/ 001/ 005/ 0023/ 0025  
PI-l/ Pm-l/ Pn-l/ Po-l/ Pc-l/ Peb SCTB/ IJP(c) WG/ GG/ JAJ/ WH

AUTHOR: Livshits, B. L.; Nazarov, V. P.; Sidorenko, L. K.; Tsikunov, V. N.

TITLE: Dependence of spectral composition of stimulated emission on the velocity of motion of the crystal <sup>81</sup><sub>73</sub>

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki. Pis'ma v redaktsiyu. Prilozheniye, v. 1, no. 5, 1965, 23-25, and insert between pages 24 and 25

TOPIC TAGS: <sup>75</sup>laser, stimulated emission, <sup>15</sup>glass laser, crystal laser, line narrowing, population inversion

ABSTRACT: The authors report on an effect previously predicted by them (DAN SSSR, in press) in which the inhomogeneity of the inverse population in stimulated emission from solid media (crystals, glasses, etc.) becomes smoothed out when the crystal moves relative to the resonator. Because of this, the number of modes decreases and the stimulated-emission spectrum becomes narrower, but the total intensity remains unchanged, so that the spectral density of the stimulated emission increases. In the tests, a ruby crystal 12 cm long was made to execute reciprocating motion with maximum velocity ~ 35 cm/sec inside a plane resonator with

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ACCESSION NR: AP5016280

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distance 50 cm between mirrors. The light-pump pulse could be turned on at different phases of crystal motion, corresponding to reciprocating velocity relative to the resonator from 0 to  $\sim 35$  cm/sec. The spectrum of the induced emission was analyzed with the aid of a Fabry-Perot etalon. The interference patterns were photographed. Measurements were made at different air gaps between mirrors. Comparison of the interference patterns (5 mm gap) of emission from the stationary and moving ( $\sim 35$  cm/sec) crystal near the lasing threshold ( $V = 1800$  V) shows that when the crystal moves a whole series of side modes ceases to generate, the intensity of the central modes increasing. This means that as the crystal moves the central modes draw energy from the large volume occupied by the active centers (compared with the stationary crystal), thereby suppressing the weaker modes. In the case of a higher pump level ( $V = 2000$  V) and the same  $\sim 35$  cm/sec velocity, the effect of the increased spectral density is less pronounced. This means that in order to approach single-mode generation it is necessary to increase the velocity of the crystal. In general, the motion of the crystal makes it possible to eliminate the inhomogeneity of the transition responsible for generation of the active centers. The authors are grateful to Academician I. V. Obreimov for interest and continuous attention to the work, Ch. K. Mukhtarov for fruitful discussion of the problem, N. K

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ACCESSION NR: AP5016280

Rel'skiy and D. A. Mukhamedova for participating in the measurements, and A. Strel'-  
tsov, D. D. Brezhnev and V. I. Lantsov for help in constructing the generator with  
moving crystal." Orig. art. has: 2 figures. [02]

ASSOCIATION: Institut obshchey i neorganicheskoy khimii im. N. S. Kurnakova  
Akademii nauk SSSR (Institute of General and Inorganic Chemistry, Academy of  
Sciences, SSSR)

SUBMITTED: 22Apr65

ENCL: 00

SUB CODE: EC, GP

NO REF SOV: 001

OTHER: 004

ATD PRESS: 4055

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BABIN, Ye.P.; MARSHTUPA, V.P.; RUDENKO, N.Z.; BORODINA, Z.S.; SIDORENKO, L.M.

Kinetics of the formation of isomers of isopropyltoluenes in toluene alkylation by propylene. *Izv.vys.ucheb.zav.;khim.i khim.tekh.* 6 no.5:787-794 '63. (MIRA 16:12)

1. Donetskii meditsinskiy institut i Donetskoye otdeleniye instituta organicheskoy khimii AN UkrSSR.

... BORENKO, L.M.

of catalytic reactions on the isomeric composition of  
... no.4:895-900 Ap '65. (MIRA 13:6)

... Institut organicheskoy khimii AN UkrSSR  
... st. 134.

BABIN, Ye.P.; RUDENKO, N.V.; IDORENKO, L.M.; BRODINA, Z.S.

Effect of the temperature on the composition of cymene fractions during the alkylation of toluene by catalysts based on aluminum chloride. Zhur. prikl. khim. 38 no.5:1185-1188 My '65.  
(MIRA 18:11)



SIDORENKO, L.N.

Lung resection in tuberculosis. Zdrav. Kazakh. 17 no.9:  
26-29 '57. (MIRA 12:6)

1. Iz Karagandinskoy gorodskoy tuberkuleznoy bol'nitsy.  
(LUNGS--SURGERY) (TUBERCULOSIS)

BERMAN, N.A., kand. med. nauk.; SIDORENKO, L.N.

A rare variation of anomaly of the urinary tract. Urologia 23 no.6:  
51-52 N-D '58. (MIRA 11:12)

1. Iz 1-go khirurgicheskogo otdeleniya (zav. - chlen-korrespondent AMN  
SSSR prof. S.A. Kholdin) Instituta onkologii AMN SSSR.  
(URINARY TRACT, abnorm.  
accessory kidney with crossed ureter (Rus))

SIDORENKO, L. N. Cand Med Sci -- (diss) "Clinical anatomic evaluation of ~~the~~  
types of operations in <sup>gastric</sup> ~~cases~~ of cancer ~~of the stomach.~~" Len, 1959. 19 pp  
(State Order of Lenin Inst for the Advanced Training of Physicians im S. M.  
Kirov), 200 copies (KL, 46-59, 140)

69  
-78-

SIDORENKO, L.N.

Exploratory laparotomies in stomach cancer. Zdravookhranenie  
2 no.3:17-21 My-Je '59. (HIRA 12:10)

1. Iz kafedry onkologii (zav. - prof.A.I.Rakov) Leningradskogo  
gosudarstvennogo instituta dlya usovershenstvovaniya vrachey  
(direktor - prof.N.I.Blinov) na baze Instituta onkologii AMN  
SSSR (direktor - deystv.chlen AMN SSSR, prof.A.I.Serehrov).  
(ABDOMEN--SURGERY) (STOMACH--CANCER)

SIDORENKO, L.N. (Leningrad, nab.reki Fontanki, d.2, kv.438)

Anatomical types (forms of growth) of cancer of the stomach and their clinical significance. Vest.khir. 83 no.8:30-37 Ag '59. (MIRA 13:1)

1. Iz kafedry onkologii (zav. - prof. A.I. Bakov) Leningradskogo instituta usovershenstvovaniya vrachev (dir. - prof. N.I. Blinov) na baze Instituta onkologii AMN SSSR (dir. - prof. A.I. Serebrov).  
(STOMACH neoplasms)

SIDORENKO, L.N.

Palliative resections in stomach cancer. Vop.crk. 9 no.1:  
76-84 '63. (MIRA 16:5)

1. Iz kafedry onkologii (zav.-chlen-korrespondent AMN SSSR prof. A.I.Rakov) Leningradskogo instituta usovershenstvovaniya vrachey (direktor - dotsent S.N.Polikarpov) na baze Instituta onkologii AMN SSSR (direktor - deystvitel'nyy chlen AMN SSSR prof. A.I. Serebrov).

(STOMACH—CANCER)      (STOMACH—SURGERY)

TSEL', Ye.A.; SIDORENKO, L.N.

Late results of surgical treatment of gastric cancer and their relation to the localization of the tumor and the size of intervention. Vop onk. 10 no.8:7-12 '64. (MIRA 18:3)

1. Iz II khirurgicheskogo otdeleniya (zav. - chlen-korrespondent AMN SSSR prof. A.I.Rakov) Instituta onkologii AMN SSSR (dir. - deystvitel'nyy chlen AMN SSSR prof. A.I.Serebrov). Adres avtorov: Leningrad, st. Pesochnaya, 2, ul. Leningradskaya, d.68, Institut onkologii AMN SSSR.

SIDORENKO, L.N.; BAZHENOV, A.G.

Cancer of the stomach in a patient with situs viscerum inversus  
totalis. Vop. onk. 10 no.10:102-103 '64.

(MIRA 18:8)

1. Iz kafedry onkologii gosudarstvennogo instituta dlya usovershenstvovaniya vrachey im. Kirova (zav. kafedroy - chlen-korrespondent AMN SSSR prof. A.I.Rakov) na baze Instituta onkologii AMN SSSR (direktor - soystvitel'nyy chlen AMN SSSR, prof. A.I.Serebrov). Adres avtorov: Leningrad, Pesochnoye, 2, Leningradskaya ul., 68, Institut onkologii AMN SSSR.



SIDORENKO, L.N.

Evaluation of combined resections in cancer of the stomach.  
Vop. onk. 11 no.3:13-20 '65. (MIRA 18:6)

1. Iz kafedry onkologii (zav. - chlen-korrespondent AMN SSSR prof. A.I. Rakov) Leningradskogo ordena Lenina instituta usovershenstvovaniya vrachey imeni S.M. Kirova (dir. - dotsent S.N. Polikarpov) na baze Instituta onkologii AMN SSSR (dir. - deystvitel'nyy chlen AMN SSSR prof. A.I. Serebrov).

ABRAMOV, Sh.I., prof.; BAIROV, G.A., prof.; BLINOV, N.I., prof.;  
GADZHIYEV, S.A., prof.; GODUNOV, S.F., prof.; GOMZYAKOV,  
G.A., prof.; DEMIN, V.N., prof.; ZVORYKIN, I.A., prof.;  
KAPITSA, L.M., kand. med. nauk; MOKROVSKAYA, S.P., kand.  
med. nauk; POSTNIKOV, B.N., prof.; PORKSHEYAN, O.Kh.,  
prof.; SIDORENKO, L.N., kand. med. nauk; TAL'MAN, I.M.,  
prof.; FEDOROVA, A.D., kand. med. nauk; FILATOV, A.N.,  
prof.; KHROMOV, B.M., prof.; SARKISOV, M.A., red.

[Errors, hazards and complications in surgery] Oshibki,  
opasnosti i oslozhneniya v khirurgii. Leningrad, Me-  
ditsina, 1965. 563 p. (MIRA 18:7)

KOLESOV, V.I., prof.; DEMIN, V.N., prof.; LEVIN, A.G.; SHAL'NEVA, T.S.;  
BOZHASH, I.Yu., VINGRADOV, A.G.; LECSKO, V.A.; SIDORENKO, I.N.;  
YARITSYN, S.S.

Regional perfusion of chemotherapeutic substances in malignant  
tumors of the extremities. Vest.khir. 93 no.8:58-62. Ag '64.  
(MLRA 18:7)

1. Iz fakul'tetskoy khirurgicheskoy kliniki (zav. - prof. V.I.  
Kolesov) 1-go Leningradskogo meditsinskogo instituta imeni  
Pavlova.

SIDORENKO, L.P., inzh.; SPUV, G.S., inzh.; YAKUB, Yu.A., inzh.

Use of shunting reactors for taking power from 400 kv. electric  
power transmission lines. Elek. sta. 32 no.2:48-50 F '61.  
(MIRA 16:7)

(Electric power distribution)

SIDORENKO, L.R.; LEONT'YEVA, M.P., inzh.; BELYAYEVA, N.P., inzh.

Experience in operating "Jensen-Lindgren" screens.  
Bum.prom. 35 no.7:19 Je '60. (MIRA 13:8)

1. Glavnyy inzhener Syas'skogo kombinata (for Sidorenko).  
(Woodpulp)

SIDORENKO, L.V., inzh.

Determining the coefficient of hydraulic resistance of mine pipes  
for compressed air. Sbor. trud. Inst. gor. dela AN URSR no.12:  
87-92 '61. (MIRA 15:11)

(Air pipes--Testing)

SIDORENKO, L.V.

Scientific technological conference on problems in using  
compressed air power in mining. Gor. zhur. no.12:63  
D '62. (MIRA 15:11)

1. Institut gornogo dela AN UkrSSR.  
(Compressed air)  
(Mining machinery--Pneumatic driving)

SIDORENKO, L.V., inzh.; SHCHELRIN, A.N., inzh.

More precise determination of the maximum coefficient of  
hydraulic resistance of tubes. Gor. zhur. no.10:69 0 '63.  
(MIRA 16:11)

1. Institut gornogo dela AN UkrSSR.



DOVGALEVSKIY, Yakov Mironovich. kand. tekhn. nauk; SEBODENKO, M.,  
red.; LUKASHEVICH, V., tekhn. red.

[Handbook of a heat-treatment specialist] Spravochnik termista.  
Saratov, Saratovskoe knizhnoe izd-vo, 1962. 417 p.

(MIRA 15:9)

(Metals--Heat treatment)

BELYAYEVA, Ye.D., prof.; LEBEDEVA, N.A.; SIDORENKO, N.A.

Diagnosis of tuberculous meningitis in children. Vop. okh. mat. i  
det. 6 no.10:29-33 0 '61. (MIRA 14:11)

1. Iz kafedry pediatrii (zav. - prof. Ye.D.Belyayeva) Kalininskogo  
meditsinskogo instituta (dir. A.N.Kushnev, nauchnyy rukovoditel' -  
prof. G.Kh.Khachatur'yan).  
(MENINGES--TUBERCULOSIS)

POKROVSKIY, Angelyar Aleksandrovich; SIDORENKO, M.D., red.;  
LUKASHEVICH, V.K., tekhn. red.

[Scrapers; brief manual] Skrepery; kratkii spravochnik. Saratov,  
Saratovskoe knizhnoe izd-vo, 1961. 211 p. (MIRA 15:6)  
(Scrapers)

AVDON'KIN, Fedor Nikolayevich; VADIVASOV, D.G., kand. tekhn. nauk, red.;  
SIDORENKO, M.D., red.; BYKOVA, M.N., red.; GOLKIN, A A., tekhn.  
red.

[Repair of motor vehicles] Remont avtomobilei. Pod red. D.G.Va-  
divosova. Saratov, Saratovskoe knizhnoe izd-vo, 1961. 535 p.  
(MIRA 14:7)

(Motor vehicles--Maintenance and repair)

KRASHYANSKIY, Leonid Fedorovich, zhurnal'st; SIDORENKO, M.D.,  
red.

[Miners' strategy] Shakhterskaia strategiiia. Rostov-na-Donu,  
Rostovskoe knizhnoe izd-vo, 1965. 73 p. (MIRA 18:8)

DAVYDENKO, I.I. (Davitovich); REVIEW, Ieksey Sergeevich;  
SILORENEV, V.S., rec.

[Automatic welding of small parts] Avtomaticheskaia  
svarka malogabaritnykh detalей. Rostov-na-Donu, Kostov-  
skoe knizhnoe izd-vo, 1966. 124 p. (R1311811)

KRESHCHANOVSKIY, N.S.; SIDORENKO, M.F.

Cerium distribution in cast steel and its effect on the structure  
and properties of the steel. Lit.proizv. no.11:32-36 N '61.  
(MIRA 14:10)

(Steel—Metallography) (Cerium)

S/148/62/000/001/008/015  
E073/E535

13.1100

**AUTHORS:** Kreshchanovskiy, N.S. and Sidorenko, M.F.

**TITLE:** Relation between the properties of the steel in the liquid and solid states

**PERIODICAL:** Izvestiya vysshikh uchebnykh zavedeniy, Chernaya metallurgiya, no.1, 1962, 131-136

**TEXT:** The authors made an attempt to establish a relation between the properties of the steel in the liquid and solid states and to study the influence of over-heating of the melt on these properties. Since the use of diffraction methods for this purpose is very difficult, particular attention was paid to indirect methods, namely, to measuring the changes in viscosity and electric resistance. For this purpose an instrument was built which permits combining measuring the kinematic viscosity (from the damping of free torsional oscillations of a cylindrical crucible with the melt) and measuring the electric resistance, from a quantity which is inversely proportional to the steady state torsion angle of the specimen inside a rotating magnetic field. The investigations were made on carbon and alloy steels. The

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Relation between the properties ... S/148/62/000/001/008/015  
E073/E555

viscosity was determined on molten electrolytic iron, which was previously remelted in a crucible vacuum furnace ( $10^{-4}$  mm Hg) and additionally refined in an electron beam furnace. In the case of steel, the viscosity was determined for specimens melted both in an open induction furnace and in vacuum. During heating in the range of  $1545$  to  $1610^{\circ}\text{C}$ , the viscosity changes from  $10.6$  to  $9.2$  millistokes, which is fully in agreement with published values, regardless of the fact that the compositions of the irons differed. A slight temperature hysteresis was detected in the viscosity and electric resistance of super-cooled iron, which leads to the assumption that the structure of liquid iron during heating is not the same as during cooling. Hysteresis in the viscosity and electric resistance was also observed for alloy steels and this leads to the assumption that metallic melts contain complexes which bring about the formation of a heterogeneous structure. It was found that for each of the tested steels there is a critical melt temperature at which the liquid melt will have a quasi-homogeneous structure leading to maximum impact strength and ductility in the solid state. In order to

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Relation between the properties ... S/148/62/000/001/008/015  
E073/E535

achieve the required "critical melt temperatures", special technological processes are required for some of the alloys which ensure a high temperature combined with protection against enrichment with gas. The authors conclude that extensive investigations of the physical properties of steels and alloys will be required for the purpose of determining their "critical melt temperatures". There are 4 figures and 8 references: 5 Soviet-bloc and 5 non-Soviet-bloc. The English-language references read as follows: Ref.6: K. Barfield, I. Kitchener. Iron Steel Inst., 1955, 180, 4; Ref.7: G. Cavalier. c.r. Acad.Sci., 1957, No.21,244.

ASSOCIATIONS: Moskovskiy energeticheskiy institut  
(Moscow Power Engineering Institute) and  
TsNIITMASH

SUBMITTED: March 21, 1961

Card 3/3

X

KRESCEANOVSKI, N.S. [Kreshchanovskiy, N.S.]; SIDORENKO, M.F.

Relation of steel properties in liquid and solid state. Analele  
metalurgie 16 no.3:59-64 J1-S '62.

KRESHCHANOVSKIY, N.S.; SIDORENKO, M.F.

Effect of inoculators on the viscosity of liquid steels. Izv. vys. ucheb. zav.; chern. met. 6 no.9:142-144 '63. (MIRA 16:11)

1. Tsentral'nyy nauchno-issledovatel'skiy institut tekhnologii i mashinostroyeniya i Moskovskiy energeticheskiy institut.

KRESHCHANOVSKIY, N.S.; SIDORENKO, M.F.

Effect of smelting temperature conditions on the viscosity of  
liquid high-alloy steel. Izv. vys. ucheb. zav.; chern. met.  
6 no.11:60-64 '63. (MIRA 17:3)

1. Moskovskiy energeticheskiy institut.

ACCESSION NR: AP4006249

S/0128/63/000/012/0019/0019

AUTHORS: Kreshchanovskiy, N. S. (Candidate of technical sciences); Sidorenko, M. F. (Engineer)

TITLE: Effect of modifiers on the viscosity of molten steels

SOURCE: Liteynoye proizvodstvo, no. 12, 1963, 19

TOPIC TAGS: molten steel viscosity, 40L steel, Kh15N25 steel, Kh15N25M3V3TYu steel, titanium effect, cerium effect, zirconium effect, magnesium effect, lithium effect, calcium effect, steel viscosity, steel modifier, steel modifying, modified steel, zirconium modified steel, cerium modified steel, titanium modified steel, magnesium modified steel, lithium modified steel, calcium modified steel

ABSTRACT: This work was carried out to study the effect of Ti, Ce, Zr, B, Mg, Li and Ca on the viscosity of carbon steel 40L and of alloyed steels Kh15N25 and Kh15N25M3V3TYu. Metal viscosity was determined by the method based on observing free torsional oscillations of the crucible containing molten metal and their attenuation during the periods of heating and cooling. It was determined that the curves of the 40L steel viscosity (with and without modifiers) coincided well. No viscosity hysteresis was noticed. Ce, Ca, Zr and Mg decreased the viscosity of 40L  
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ACCESSION NR: AP4006249

in the whole temperature range of the investigations, while B decreased it only at temperatures exceeding 1560C, and Ti increased it at all temperatures. Ce, Ca, Li and Mg decreased the viscosity of steel Kh15N25, while Zr and especially Ti increased it. The study of Kh15N25M3V3TYu showed no viscosity hysteresis phenomena. The curves of its viscosity (during heating and cooling) coincided well. It was concluded that the properties of molten alloyed steels are governed by the great quantities of Al and Ti which determine the viscosity. The homogenizing and refining action of Ce and Ca was reflected in the general lowering of steel viscosity (regardless of the steel type). Orig. art. has: 1 table and 3 figures.

ASSOCIATION: none

SUBMITTED: 00

DATE ACQ: 09Jan64

ENCL: 00

SUB CODE: ML

NO REF SOV: 004

OTHER: 000

Card 2/2

SIDORENKO, M.F., zasluzhennyy agronom UkrSSR

Promoters of the protection of orchards. Zashch. rast. ot  
vred. i bol. 9 no.5:3-5 '64. (MIRA 17:6)

1. Direktor Melitopol'skoy opytnoy stantsii sadovodstva,  
Zaporozhskaya obl.



L 39988-65 EPF(c)/EPF(n)-2/EPR/EWG(j)/EPA(s)-2/EWP(z)/EWA(c)/EWT(m)/EWP(b)/T/EWA(d)/  
EWP(t) Pr-4/Ps-4/Pt-10/Pu-4 IJP(c) WW/MJW/JD/JG/GS

ACCESSION NR: AT4048720

S/0000/64/000/000/0238/0242

64  
60  
B+1

AUTHOR: Kreshchanovskiy, N. S.; Sidorenko, M. F.; Trekalo, A. S.

TITLE: Effect of rare earth metals on some properties of austenitic chromium nickel steels

SOURCE: Vsesoyuznoye soveshchaniye po splavam redkikh metallov, 1963. Voprosy teorii i primeneniya redkozemel'nykh metallov (Problems in the theory and use of rare-earth metals); materialy soveshchaniya. Moscow, Izd-vo Nauka, 1964, 238-242

TOPIC TAGS: steel, chromium nickel steel, cerium, lanthanum, yttrium, iron silicide, rare earth admixture, austenitic steel, steel mechanical property, cast steel, steel weldability / Kh15N25M3V3TYu steel

ABSTRACT: Previous papers by N. S. Kreshchanovskiy and M. F. Sidorenko have shown that cerium significantly affects the physical properties of liquids melts: surface tension, viscosity, electrical conductivity and supercooling. Lowering the viscosity leads to a liquid melt of higher homogeneity, yielding higher stability of the mechanical properties. The present paper investigates the effect of cerium, lanthanum and yttrium on the plastic properties, resiliency and weldability of cast

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ACCESSION NR: AT4048720

austenitic steel, grade Kh15N25M<sub>3</sub>V3TyU. The addition of cerium (0.05-0.5%) decreases the quantity of admixtures in the steel without changing the main chemical composition. Caverns appear when cerium is added due to the shifting and accumulation of vacancies caused by metal deformation. Cerium oxides are the main causes of these caverns, and can be eliminated by first oxidizing the steel. When 0.05-0.1% cerium is added the plastic properties and resiliency of steel are increased. Larger amounts, however, lower the plastic properties, resiliency and strength. Weldability is highest when 0.05-0.1% Ce is added, and cracks appear when 0.3-0.5% cerium is added. In this case, Ce also purifies the metal of admixtures and improves the crystalline bond. Since Ce is a surface active substance it is adsorbed at the surface between the crystals, thus retarding all processes connected with dislocation shifting. The authors also investigated the effect of cerium on dislocation distribution in iron silicide (0.09% C, 2.3% Si). With cerium, the dislocations form rows in a three-dimensional network, thus affecting the mechanical properties of cast iron. The addition of lanthanum and yttrium to Kh15N25M<sub>3</sub>V3-TYu steel does not change the mechanical properties at room temperature. However, the properties of steel with added misch metal, lanthanum and yttrium are signi-

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ACCESSION NR: AT4048720

3

ificantly improved, especially when 0.1-0.15% is added. Cerium aids coagulation and redistribution of hardening phases, ensuring elimination of admixtures from the steel. It is noted that lanthanum and yttrium are more effective in improving the plasticity and resiliency of steel than misch metal. Orig. art. has: 4 figures.

ASSOCIATION: None

SUBMITTED: 13Jun64

ENCL: 00

SUB CODE: MM

NO REF SOV: 002

OTHER: 001

Card 3/3 mb

КРЕШЧАНОВСКИЙ, Н.С., канд. техн. наук; СИДОРЕНКО, М.Ф., канд. техн.  
наук; ТРЕКАЛО, А.С., инж.

Role of nonmetallic inclusions in the failure of cast steel.  
lit. proizv. no.11:29-31 N '65. (MIRA 18:12)

SIDORENKO, M.F.; KRUCHCHANOVSKIY, N.S.

Refining effect of rare-earth metals. Izv. vys. ucheb. zav.; Chern. mt.  
8 no.7:46-49 '65. (MIRA 18:7)

1. Moskovskiy vecherniy metallurgicheskiy institut.

L 27366-66 EWT(m)/EWP(w/EWA(d)/T/EWP(t)/ETI IJP(c) JD/JG

ACC NR: AP6012320

SOURCE CODE: UR/0304/65/000/006/0060/0061

AUTHORS: Sidorenko, M. F. (Candidate of technical sciences); Nazarenko, V. R. (Engineer); Sukhoyvanov, A. N. (Engineer); Zhurba, G. I. (Engineer)

89  
B

ORG: none

TITLE: Influence of modifiers on the properties of heat-resisting austenitic steels

SOURCE: Mashinostroyeniye, no. 6, 1965, 60-61

TOPIC TAGS: steel, austenitic steel, cesium, lithium, barium, calcium, magnesium, solid viscosity, welding technology, impact strength, tensile strength, heat resistant steel, crack propagation, TsZn9 steel, EI725 steel, IKh18N9T steel

ABSTRACT: The effect of adding Ce, Li, Ba, Ca, and Mg to TsZn9 steel, Ca, Mg and Ca to EI725 steel, and Ce to IKh18N9T steel on the mechanical and welding properties of the steels was determined. It was found that the addition of 0.3--0.4% Ca to TsZn9 steel completely prevents the formation of cracks during welding. The addition of Li and Ce had little effect on the quality of the weld. The addition of 0.3% Ca to EI725 steel improves the quality of the weld but has no effect on the strength limit or viscosity of the steel. The addition of 0.1--0.15% Ce to IKh18N9T steel increases the tensile properties and the impact strength of the steel by a factor of 1.2--1.3. It is concluded that the addition of Ca and Ce to austenitic steels improves the technological and mechanical properties of the latter.

SUB CODE: 11,13,20/ SUBM DATE: none

UDC: 669.15-194:669.26:669.24.004.68

Card 1/20

L 20786-66 EWT(m)/T/EWA(d)/EWP(w)/EWP(t) IJP(c) JD

ACC NR: AP6005748

SOURCE CODE: UR/0128/65/000/010/0037/0038

AUTHOR: Kreshchanovskiy, N. S. (Candidate of technical sciences); Sidorenko, M. F.  
(Candidate of technical sciences)

39  
36  
0

ORG: none

TITLE: Effect of metallic calcium on the structure and properties of cast high-alloy chromium-nickel steels

SOURCE: Liteynoye proizvodstvo, no. 10, 1965, 37-38

TOPIC TAGS: high alloy steel, calcium, mechanical property, weldability, ductility, desulfurization

ABSTRACT: Cr-Ni steels of the Kh15N25 type, additionally alloyed with Ti, W, Mo, Al and Nb, were treated with metallic Ca in amounts of 0.05, 0.01, 0.3, and 0.5%, while in the ladle, and poured into wedge-shaped molds at 1550°C. Specimens taken from the molds were tested for mechanical properties and weldability. Findings: the addition of Ca to high-alloy steels reduces the hysteresis of their ductility curves and affects their crystallization in the sense that the dendrite structure undergoes marked changes -- decrease in the length and thickness of the first- and second-order axes and in the spacing between the axes. Such changes appear only when up to 0.0-0.4% Ca is added; any further increase in the Ca content leads to an intense growth and rami-

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L 20786-66

ACC NR: AP6005748

3

fication of columnar crystals. Measurements of hardness in the tempered specimens (water quenching from 1200°C with tempering for 10 hr at 800°C) indicate that Ca inhibits the processes of the segregation and coagulation of secondary phases. Ca markedly increases the density of cast steel, improving the impregnability of interdendritic spaces owing to the decrease in the steel's ductility and surface tension. Contrary to the expectations, the addition of Ca to these steels did not lead to any marked changes in their S and P content, since the process of the desulfurizing of steel by Ca is considerably complicated by the fine-dispersity of the sulfides, which are difficult to remove from the melt. Further, the nitrides of Ca are unstable at melting temperatures and hence the nitrogen content of these steels does not decrease. Ca does not affect the redistribution of Sn in the cast steel but it inhibits the diffusion of Sn during high-temperature annealing. On the other hand, Ca improves the weldability of some of these steels. Thus, altogether, the effect of Ca on the properties of steels is many-sided and can be determined only through a comprehensive investigation of the properties of metal in liquid and solid states. To produce a maximum effect, metallic Ca should be added to steel directly prior to its tapping from the furnace or into the ladle. Orig. art. has: 10 figures.

SUB CODE: 11, 13, 20/ SUMM DATE: none/ ORIG REF: 003/ OTH REF: 000

Card 2/2



L 26036-66 EWT(m)/EWP(w)/EWA(d)/T/EWP(t) IJF(c) JD

ACC NR: AP6008865 (N)

SOURCE CODE: UR/0128/65/000/011/0029/0031

AUTHOR: Kreshchanovskiy, N. S. (Candidate of technical sciences); Sidorenko, M. F. (Candidate of technical sciences); Trekalo, A. S. (Engineer)

ORG: none

TITLE: Role of nonmetallic inclusions in the fracture of cast steel

SOURCE: Liteynoye proizvodstvo, no. 11, 1965, 29-31

TOPIC TAGS: ~~crystal~~ dislocation, surface active agent, austenitic steel, plasticity, nonmetallic inclusion, cast steel, material fracture, tensile strength, recrystallization temperature, induction furnace, metal melting, metallographic examination, plastic deformation/ 10Kh15N25 austenitic steel

ABSTRACT: 10Kh15N25 austenitic Cr-Ni steel was melted in a 50-kg basic induction furnace, with addition of Al, Si, Ca and Ce for the purpose of final deoxidation. Specimens of this steel (5 mm in diameter, 50 mm in length) were subjected to short-term static tensile tests at 20 and 650°C. Subsequent metallographic examination of the surfaces of fracture revealed the presence of closed cavities, conditionally termed caverns, which develop around nonmetallic inclusions in the part of the specimen that underwent plastic deformation and for the metal tensile-tested at 650°C resemble microcracks. The nonmetallic inclusions are represented by spinel, corundum, silicates, Ce oxides, and Ce sulfides and oxysulfides. The caverns and cracks run in the direction in which the load is applied and their shape and size depend on the shape, size and

45  
B

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UDC: 621.746.79:669.141.25

Z

L 26036-66

ACC NR: AP6008865

properties of nonmetallic inclusions and the degree of plastic deformation of the metal during testing. The distribution of dislocations investigated as a function of the plastic deformation of specimens warrants the assumption that the caverns form as a result of the plastic deformation of the regions of metal adjoining the nonmetallic inclusion, owing to the migration of the most mobile dislocations and their settlement at the metal-inclusion interface. As the degree of plastic deformation increases, the dislocations become arrayed along slip lines, bypassing the nonmetallic inclusions. The reason for fracture is the formation of dislocation pile-ups of a critical density at the moment when the metal's plasticity is exhausted; as the metal gets stretched at temperatures somewhat above recrystallization temperature (500-600°C), the caverns forming around the nonmetallic inclusions develop into cracks along which the metal ultimately fractures. Thus, nonmetallic inclusions are detrimental to the tensile strength of the investigated austenitic steel, at test temperatures somewhat above the recrystallization temperature, while at the same time enhancing the metal's plasticity. The deoxidizing agent, unless it is a surface-active element, enhances the softening temperature of the metal of the stressed zones and thus prevents the development of caverns into cracks. Thus, the role of nonmetallic inclusions in the processes of the plastic fracture of cast metal must be primarily related to the test temperature as well as to the character of fracture (ductile or brittle) and apparently also to the method of loading. For steels with more than one phase and with a large number of alloy elements the determination of the role

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L 26036-66

ACC NR: AP6008865

of nonmetallic inclusions is much more complicated, since then the movement of dislocations in the process of plastic deformation is chiefly determined by the amount and dispersity of the hardening phases. Orig. art. has: 6 figures, 3 tables.

SUB CODE: 11, 13, 20/ SUBM DATE: none/ ORIG REF: 003/ OTH REF: 002

Card

3/3

PB

ACC NR: AP7005393

(A)

SOURCE CODE: UR/0148/67/000/001/0066/0068

AUTHOR: Polissadov, V. N.; Sidorenko, M. F.; Gladkov, M. I.; Barantseva, Z. V.; Galunenko, I. P.

ORG: Moscow Evening Metallurgical Institute (Moskovskiy vecherniy metallurgicheskiy institut)

TITLE: Effect of rare earth metals on the properties of steel in the liquid and solid states

SOURCE: IVUZ. Chernaya metallurgiya, no. 1, 1967, 66-68

TOPIC TAGS: alloy steel, ferroalloy, rare earth metal, impact strength

ABSTRACT: The authors study the effect which ferrocerium (60% Ce, 25% La, the remainder--other rare earth metals) and an alloy of rare earth metals with a high lanthanum concentration (60% La, 25% Ce, the remainder--other rare earth metals) have on the properties of 40KhL and 35GL acid steels in the liquid and solid states. It was found that the kinematic viscosity of 40KhL steel containing ferrocerium admixtures increases with the concentration of nonmetallic inclusions, sharp-angled alumina inclusions having the strongest effect. Metal treated with ferrolanthanum admixtures has a somewhat lower kinematic viscosity, especially at high temperatures. The overall concentration of nonmetallic inclusions, and especially alumina, is also lower in steel

Card 1/2

UDC: 669.15-194:669.26:669.74:669.85/.86

ACC NR: AP7005393

with ferrolanthanum impurities. This is due to the higher deoxidizing capacity of lanthanum in comparison with cerium which reduces the concentration of oxygen dissolved in the molten metal and also improves conditions for elimination of oxide inclusions. Lanthanum is more effective than cerium in increasing the impact strength of 35GL steel. The introduction of rare earth metals into steel in quantities exceeding the optimum values has a detrimental effect on the mechanical properties of the metal. Orig. art. has: 5 figures.

SUB CODE: 11/ SUBM DATE: 10May66/ ORIG REF: 03/ OTH REF: 01

Card 2/2



*Small Welding Transformers of Commercial Frequency*  
Candidate of Technical Sciences 125 306 5/14  
Inventors: Yu.A. ~~and~~ Siderenko, M.N., Engineer

ABSTRACT: Small welding transformers of commercial frequency (Malyye baritnyye svarochnyye transformatory promyshlennoy chastoty)

PERIODICAL: Avtomaticheskaya Svarka, 1958, Nr 6, pp 69 - 75 (USSR)

ABSTRACT: Some problems of designing small commercial frequency welding transformers are treated. It is shown that the weight of such transformers can be reduced by decreasing their efficiency, choosing a suitable core design, intensifying the cooling of the windings, and using insulation with higher heat and humidity resistance. The article contains a brief description of a small, 7.5 kg, 25 kva step-down (220/25 V) transformer developed by the authors on the basis of the expounded theory. There are 5 figures and 1 graph.

ASSOCIATION: Ordena Trudovogo Krasnogo Znameni Institut elektrosvarki imeni Ye.O. Patona, AN UkrSSR (Order of Labor "Red Banner" Institute of Electric Welding im. Ye. O. Paton, AS UkrSSR)

SUBMITTED: March 29, 1958

AVAILABLE: Library of Congress

Card 1/1 1. Transformers-Welding 2. Transformers-Development

SOV/125-58-12-12/13

AUTHORS: Trufyakov, V.I., Sidorenko, M.N., Sakharov, V.A. and Koval'chuk, V.S.

TITLE: An Electromagnetic Vibration Machine for Endurance Tests of Weld Joints (Elektromagnitnaya vibratsionnaya mashina dlya ispytaniya svarnykh soyedineniy na vyнослиvost')

PERIODICAL: Avtomaticheskaya svarka, 1958, Nr 12, pp 84-90 (USSR)

ABSTRACT: Information is given on an electromagnetic vibration machine designed at the Institute of Electric Welding. It is used for bending tests of flat cantilever specimens of 100 cm<sup>2</sup> cross section, with a moment of inertia of up to 170 cm<sup>4</sup> and any given sequence of stress up to 44 c frequency. The oscillations of the cantilever specimen are caused and maintained by the varying force of electromagnetic attraction, arising during the passage of the magnetic flux through the specimen. There is an a.c. feed to the electromagnet, and the oscillation amplitude of the specimen is selected by changing the magnitude of the current. An additional electromagnet is switched on for tests with an asymmetric cycle in order to induce a constant component of stress in the specimen. The selection of the prescribed stress is brought

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An Electromagnetic Vibration Machine for Endurance Tests of Weld Joints

about by the use of electric resistance indicators fixed on the specimens. A detailed description of the design and operation of the machine is given. There are 3 diagrams, 1 circuit diagram, 1 photo and 3 Soviet references.

ASSOCIATION: Institut elektrosvariki imeni Ye.O. Patona (Institute of Electric Welding imeni Ye.O. Paton)

SUBMITTED: September 5, 1958

Card 2/2

LEBEDEV, V. K.; KORITSKIY, V. A.; SIDORENKO, M. H.; MAKAROV, M. D.

New transformers for manual arc welding. Avtom. svar. 15  
no.11:51-55 N '62. (MIRA 15:10)

1. Ordena Trudovogo Krasnogo Znameni Institut elektrosvarki  
imeni Ye. O. Patona AN UkrSSR.

(Electric welding—Equipment and supplies)

L 10299-63 EWP(k)/EWP(q)/EWT(m)/  
BDS--AFFTC/ASD--Pf-4--JD/HM

ACCESSION NR: AP3001120

S/0125/63/000/007/0070/0075

AUTHOR: Lebedev, V. K.; Sidorenko, M. N.

TITLE: Operational peculiarities of rectifiers for manual arc welding

SOURCE: Avtomaticheskaya svarka, no. 7, 1963, 70-75

TOPIC TAGS: splashing weld metal, VSS-300 welding rectifier, PSO-300 welding generator

ABSTRACT: Splashing of metal by the welding arc was investigated. With 3-mm electrodes and currents of 80-100 amp, the arc supplied by a VSS-300 3-phase selenium rectifier caused 5 per cent less splashing than that fed by a PSO-300 rotary converter. UONI-13/45 electrodes were used in both cases. This is explained by the fact that in the rectifier case a lesser amount of energy is released at the initial short-circuit. Estimates show that a considerable saving can be effected if the existing rotary converters are replaced by the above rectifiers; the Vilnius plant of electric-welding equipment could save about 500,000 rubles per year. Other experiments showed that a LG-500-Si Siemens-Schuckert welding rectifier causes more splashing than the rotary converter. "Economic estimates were made on our request by Engineer-Economist V. K. Makarov." Orig. art. has: 6 figures and 2 tables.  
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LEBEDEV, V.K.; ZARUBA, I.I.; SIDORENKO, M.N.

Improving the electric current supply for hand arc welding.  
Avtom.svar. 18 no.1:1-5 Ja '65. (MIRA 18:3)

1. Institut elektrosvarki im. Ye.O.Patona AN UkrSSR.

BLYAKHEROVA, R.M.; FIGA ENKO, G.S.; SIDORENKO, M.S.; FRUTSKOVA,  
M.G.; SAMSONOV, M.M.; KRAVTSOVA, B.Ye.; LYUBARSKIY, L.L.;  
SUDNOV, P.Ye.; FAYKIN, D.M.; FRYLATOVA, N.A., red.

[Recommendations for the production of strong and durum  
wheat.] Rekomendatsii po proizvodstvu zerna sil'nykh i tver-  
nykh pshenits. Moskva, Izd-vo "Kolos," 1964. 63 p.  
(MIRA 17:6)

1. Russia (1975- U.S.S.R.) Ministerstvo sel'skogo khozyaystva.  
Upravleniye nauki, propagandy i vnedreniya peredovogo opyta.
2. Ministerstvo sel'skogo khozyaystva SSSR (for Blyakherova,  
Figarenko, Sidorenko).
3. Gosudarstvennaya komissiya p sorto-  
ispytaniyu sel'skokhozyaystvennykh kul'tur pri Ministerstve  
sel'skogo khozyaystva SSSR (for Frutskova, Samsonov).
4. Vsesoyuznyy nauchno-issledovatel'skiy institut zerna i  
produktov yego pererabotki (for Kravtsova, Lyubarskiy, Sudnov).
5. Vsesoyuznyy institut zashchity rasteniy (for Faykin).

PROTSENKO, D.F., dotsent; SIDORENKO, M.V.

Anatomical characteristics of some cactuses. Nauk.zap.Kiev.un.  
7 no.6:173-182 '48. (MLRA 9:10)

(Cactus)

SIDORENKO, M.

23461

PODVOI DLYA CHERESEEN NA PESCHANYKH POCHEVAKH. SAD I OGROD, 1949,  
NO. 7, C. 24-26

SO: LETOPIS' NO. 31, 1949

SIDORENKO, M.V.

Urgent problems in the development of the gas industry of eastern regions. Gas.prom no.4:1-2 Ad '56. (MLRA 10:1)

1. Zamestitel' Ministra neftyanoy promyshlennosti SSSR.  
(Gas manufacture and works)



SIDORENKO, M.

Third session of the special working group on gas of the U.N.  
Economic Commission for Europe. Gaz.prom. no.12:37 D '57.  
(MIRA 11:1)

(Geneva--Gas industry--Congresses)

SIDORENKO, M.V., glavnyy red.; ZAREMBO, K.S., red.; KREMS, Ye.A., red.;  
RAABEN, V.N., red.; RYABTSEV, N.I., red.; BRENTS, A.D., red.;  
ITSIKSON, B.S., red.; KOMISSAROV, P.G., red.; POPOV, V.I., red.;  
TESNER, P.A., red.; FAL'KEVICH, A.S., red.; STEPANCHENKO, N.I.,  
vedushchiy red.; NOVIKVA, M.M., vedushchiy red.; MUKHINA, E.A.,  
tekhn.red.

[Ways of developing the gas industry of the U.S.S.R.; transactions  
of the All-Union Conference on Further Development of the Soviet Gas  
Industry] Materialy Vsesoyuznogo soveshchaniya po dal'neyshemu raz-  
vitiyu gazovoi promyshlennosti SSSR: Puti razvitiia gazovoi pro-  
myshlennosti SSSR. Moskva, Gos.nauchno-tekhn.izd-vo neft. i gorno-  
toplivnoi lit-ry, 1958. 432 p. (MIRA 12:4)

1. Vsesoyuznoye soveshchaniye po dal'neyshemu razvitiyu gazovoy  
promyshlennosti SSSR, Moscow, 1957.  
(Gas industry)

92-2-2/37

AUTHOR: Sidorenko, M.V., President, NTO NP

TITLE: Tasks of the Scientific and Technical Association of the Petroleum Industry (Zadachi nauchno-tekhnicheskogo obshchestva neftyanoy promyshlennosti)

PERIODICAL: Neftyanik, 1958, Nr 2, pp 1-3 (USSR)

ABSTRACT: The author describes the activities of the NTO NP (Scientific and Technical Association of the Petroleum Industry) and the role it plays in the development of the oil and gas industry. The association, founded in 1930, has at present 19 regional branch offices and 587 local units with a membership of 30 thousand engineers, technicians and specialized workers. The present task of the association is to develop and introduce new technical methods and to demonstrate the handling of new equipment in various branches of the oil and gas industry and the execution of the new technological processes. The association also popularizes domestic and foreign innovations. The author recommends that the regional branch offices of the association exercise a closer control over their professional sections, some of which are inactive and do not play a leading role in their field of activity. Each professional section

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Tasks of the Scientific and Technical Association (Cont.)

should help its members to develop their professional skill. The principle of close collaboration between scientists and workers should be enforced in all offices of the organization as is done at sessions held by members of the Azerbaydzhan Scientific and Technical Association. A coordination council for the dissemination of technical information has been created in Baku, and it is suggested that similar councils be created in other republics, provinces and districts. Considerable progress in disseminating technical information was made by a number of regional offices, including those of Krasnodar and Kuybyshev, and of the Bashkir, Tatar and Kazakhstan republics. Conferences for discussing professional problems were organized by the association in 1957, It is desirable that such conferences be held more frequently in 1958. Personal contact between members of various branches of the association is quite important. Properly-organized competitive tests for members of the association are also important. They facilitate the introduction of advanced techniques, automation and new technological processes. Unfortunately, the number of workers participating in

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Tasks of the Scientific and Technical Association (Cont.)

these competitive tests is far too small. With the help of the Scientific and Technical Association it will be easier to attain the goals set for the oil and gas industry by the government and the party.

ASSOCIATION: NTO NP (Scientific and Technical Association of the Petroleum Industry)

AVAILABLE: Library of Congress

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SIDORENKO, M.

Conference on problems of power held in Geneva. Gaz. prom. no.5:  
56 My '58. (MIRA 11:5)  
(Geneva---Power resources--Congresses)

SIDORENKO, M.

Work of the fourth session of the special working group on  
gas of the United Nations Economic Commission for Europe. Gaz.  
prom. no.8:54-55 Ag '58. (MIRA 11:8)  
(United Nations) (Gas industry)

25(5)

SOV/92-58-10-3/30

AUTHOR: Sidorenko, M.V., President of the Scientific Technical Society of the Petroleum Industry

TITLE: Development of Petrochemistry and Tasks of the Scientific Technical Society Oilmen (Razvitiye neftekhimii i zadachi NTO neftyanyikov)

PERIODICAL: Neftyanyik, 1958, Nr 10, pp 3-5 (USSR)

ABSTRACT: The author states that according to the resolution adopted by the Central Committee of the Communist Party of the USSR, the production of chemicals will double or even triple between 1959 and 1965, while the production of synthetic fiber and plastics will rise 4.5 8 times. Natural gas is recognized as the best and most economical crude stock from which chemicals can be produced. Oil well gases are rich in such valuable hydrocarbons as ethane, propane, butane and pentane. From the natural gas recovered in the Tatar and Bashkir ASSR and the Kuybyshev region it is possible to produce annually 120,000 tons of rubber, 500,000 tons of alcohol and 290 tons of polyethylene. This is roughly the same

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Development of Petrochemistry (Cont.)

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quantity of polyethylene that is produced in the USA. The proposed utilization of natural gas will save millions of tons of cereals, potatoes and vegetable fat. Characteristics of some valuable chemicals, appraised from the technical and economic point of view, will considerably improve when 8.5 billion cu m of gas are utilized by the chemical industry in 1965. The cost of formalin produced by natural gas oxidation will be much lower than it is now when this product is obtained through the gasification of coal. The production cost of some other products will drop as well. By the end of 1958 a number of newly built gas pipelines will bring natural gas to numerous chemical plants. Although the Soviet Union has enormous resources of natural gas, its gas production lags behind USA production. The search for gas and the recovery of gas must be intensified in order to attain targets set by the Soviet government of the communist party. Instead of the 60,000 tons of liquified gas produced annually at present, about 4 million tons should be recovered in 1965. The most important task of Soviet trade unions and party organizations is the propagation of scientific and technical information among petroleum industry workers. At the same time, members of the

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Development of Petrochemistry (Cont.)

SOV/92-58-10-3/30

Scientific Technical Society must try to find new methods for producing various chemicals and for processing petroleum and gas. To achieve this, conferences devoted to various problems of the chemical and petroleum industry must be organized and held frequently. The dissemination of literature pertaining to the production of synthetic fiber, plastics and other synthetic materials must be intensified. Various industrial processes for the chemical conversion of gas and petroleum should be automated, and a number of jobs mechanized. All members of the Scientific Technical Society are asked to take an active part in solving technical problems of various enterprises and to make strenuous efforts for the implementation of the resolution adopted in May by the Central Committee of the Communist Party.

ASSOCIATION: Nauchno-tekhnicheskoye obshchestvo neftyanoy promyshlennosti (Scientific Technical Society of the Petroleum Industry)

Card 3/3

SIDORENKO, M.

In the International Association of the Gas Industry. NTO no.8:59  
Ag '59. (MIRA 12:11)

1. Chlen prezidiuma Tsentral'nogo pravleniya Nauchno-tekhnicheskogo  
obshchestva neftyanoy i gazovoy promyshlennosti.  
(Oslo--Gas industry--Congresses)

SIDORENKO, M.

Fifth session of the Ad Hoc Working Party on Gas Problems of the  
U.N. Economic Commission for Europe. Gaz.prom. 4 no.5:54-55  
My '59. (MIRA 12:7)  
(Gas)