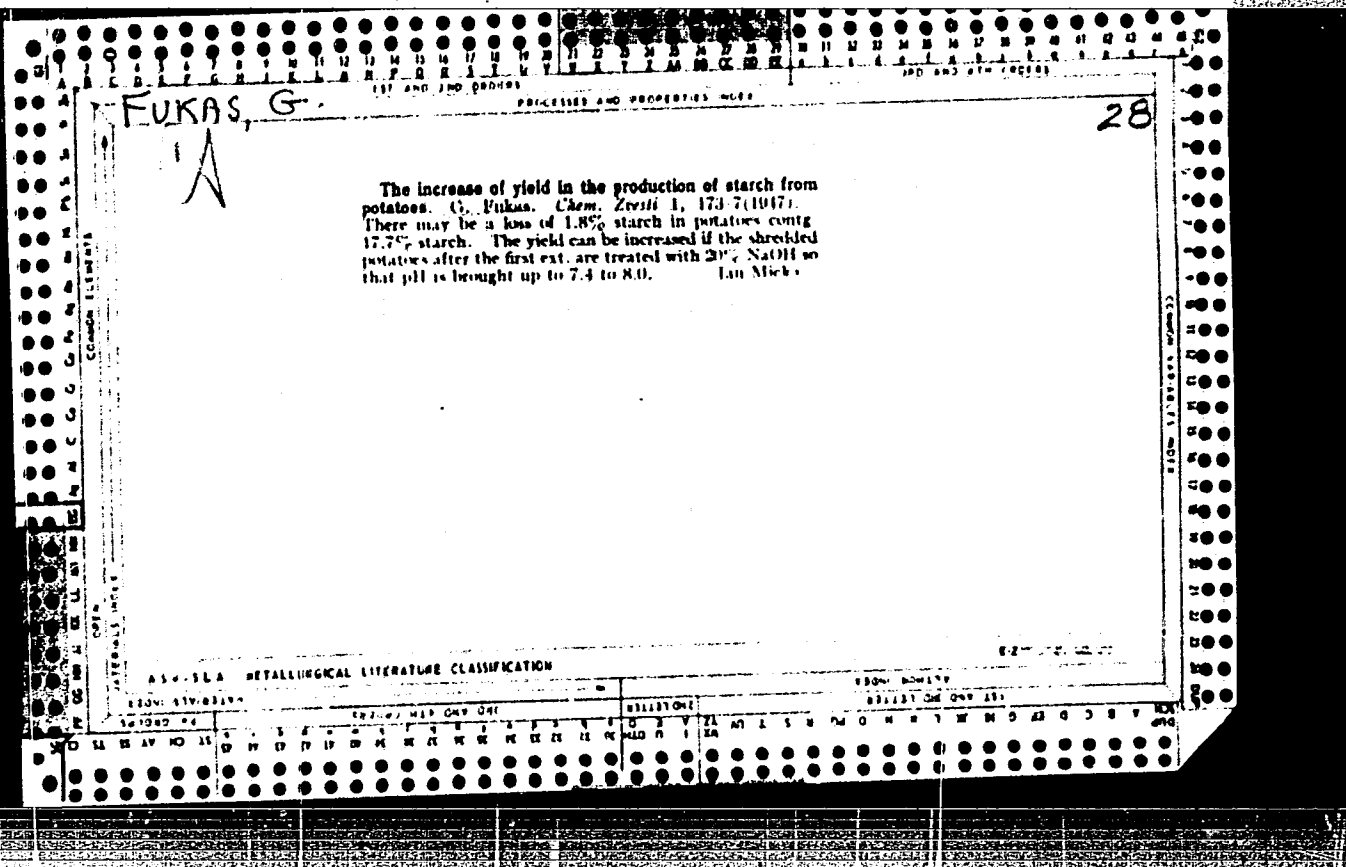


FUKAREK, Vera, Major mr. ph.

Methods of histamine determination for clinical purposes.  
Voj. san. pregl., Beogr. 13 no.9-10:468-470 Sept-Oct 56.

(HISTAMINE, determ.  
technics (Ser))



BENISKA, Jozef, doc. inz.; FUKAS, Gustav, inz.

Modification of cautchoucs. Pt.5. Chem zvesti 18 no.2:109-116  
'64.

1. Department of Organic Technology, Slovak Higher School of  
Technology, Bratislava, Kollarovo namesti 2.

Reference:

"Handbook of Statistics", Vol. 1. (Ed. Samuel Kotlarski)  
Vol. 1, Pt. 1. Jan. 1981, 1982.

See: Handbook of Statistics, Vol. 1, Pt. 1, 1981, 1982, September  
1982, incl.

FUKATKO, J.

"Economic Engineers", P. 3, (TECHNICKE NOVINY, Vol. 1, No. 17/18, Dec. 1953, Praha, Czechoslovakia)

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 3, No. 12, Dec. 1954, Uncl.

FRKATKO, J. SEMRAD, J.

"Education of technicians toward economic thinking, p.1" ZA SOCIALISTICKOU  
VEDU A TECHNIKU. Vol.3, no.1, Jan 1953. Czechoslovakia.

SO: Monthly List of East European Accessions, U.C., Vol.3, No.5, May 1953  
Uncl.

FUKATO, J. - Normalisace, Vol 4. No. 1, Jan 1955

Tasks of Czechoslovak technical standardization in the present year. p.1

SO: Monthly list of East European Accessions, EEAL, LC, Vol. 4, No. 9, Sept. 1955 Uncl.

L 21858-65 EWT(m)/EWP(k)/EWA(d)/EWP(t)/EWP(b) PF-4 AFWL/SSD/ASD(m)-3/  
APGC(g)/APGC(f) JD/HW  
ACCESSION NR: AP5001587 Z/0031/64/012/012/0881/0885

AUTHOR: Fukatko, R. (Engineer, Candidate of sciences); Vacek, J. (Engineer)

TITLE: Explosives and their effect in explosive metal forming 8

SOURCE: Strojirenska vyroba, v. 12, no. 12, 1964, 881-885

TOPIC TAGS: explosive forming, metal explosive forming, metal forming explosive, impact wave, impact wave propagation, semtex 1 explosive

ABSTRACT: Some fundamentals of the explosive forming of metals are briefly reviewed. It is shown that the detonation rate, the most important characteristic of explosives, varies greatly in the case of conventional industrial explosives, depending on the density, homogeneity, shape, and size of the charge and the conditions of detonation (see Fig.1 of the Enclosure). Therefore, a special metal forming explosive, Semtex 1, has been developed. This explosive detonates at a constant rate in all charge sizes from 2 mm up. It is completely waterproof and can be shaped in any form. Its characteristics are: heat of explosion--1190 kcal/kg, gas specific volume--0.75 m<sup>3</sup>/kg, detonation rate--7600 m/sec, and density--1.49 g/cm<sup>3</sup>. The duration of the impact wave is one hundred thousandth to one thousandth of a second. The intensity of impact waves depends on the medium in which it propagates. Generally, the greater the accu-

Card 1/2



L 21858-65

ACCESSION NR: AP5001587

tic resistance of the medium, the more intensive is the propagation of the impact wave. The pressure of the impact waves of Semtex 1 in water is much higher than in air (see Fig. 2 of the Enclosure). The propagation rate in air depends on the overpressure in front of impact wave. For instance, for an overpressure of 1 kp/cm<sup>2</sup> the propagation rate is 460 m/sec, and for an overpressure of 1000 kp/cm<sup>2</sup> it is about 10,000 m/sec. In water, however, at an overpressure of 1 kp/cm<sup>2</sup> the propagation rate is 1460 m/sec, and at an overpressure of 1000 kp/cm<sup>2</sup> the propagation rate is 1590 m/sec. The impact wave in nonhomogeneous media such as dry sand becomes deformed and changes gradually into an ordinary pressure wave (see Fig. 3 of the Enclosure). The pressure of impact waves at the point of transition from air increases 13 times and from water, 2-3 times. The form of the charge determines the configuration of the pressure field, i.e., a ball charge produces a circular impact wave and a cylindrical charge produces a wave in pair form. The pressure of the latter decreases more slowly. Orig. art. has: 9 figures [NW]

ASSOCIATION: Vyznamny ustav prumyslove chemie, Pardubice--Semtin (Research Institute of Industrial Chemistry)

SUBMITTED: 00

ENCL: 03

SUB CODE: WA, MM

NO REF SOV: 004

OTHER: 011

ATD PRESS: 3169

Cora 2/5

FUKATKO, T.

"Apparatus for measuring the properties of electronics." p. 251

SDELOVACI TECHNIKA. Praha, Czechoslovakia, Vol. 3, No. 8, Aug., 1955

Monthly List of East European Accessions (EEAI), LC, Vol. 8, No. 9, September, 1959  
Unclas

FUKATKO, T.

FUKATKO, T. Servomechanism stabilizer of voltage in a 2-kw. network with a voltage stability of  $\pm 0.5\%$  p. 20

Vol. 4, no. 1, Jan. 1956

SDELOVACI TECHNIKA

TECHNOLOGY

Praha, Czechoslovakia

So: East European Accession Vol. 6, no. 2, 1957

FUKATKO, T.

Increasing danger from radioactive instruments. p. 42

NORMALIZACE. (Urad pro normalizac) Praha, Czechoslovakia, Vol. 7,  
no. 3, Sept. 1959

Monthly List of East European Accessions (EEAI), LC. Vol. 9, no. 2,  
Feb. 1960

Uncl.

ЕУКАТИКО, Т

5/009/60/009/006/007/011  
3102/3212

2/2000 also 153P

АВТОРЫ: Петухов, В. А., Габанец, И. I., Зурявлев, А. А., Камашин, М. М., Котов, В. И., Мяс, Е. А., Чуриков, Ю. Л., Соколов, В. П., Ткачев, И. П., Гонда, П., Добиаш, И., Марек, М., Пулатко, Т. I., Сватов, Л. I.

ТИТЛ: The model of the ring proton synchrotron

РЕЗЮМЕ: Атомная энергия, в. 9, no. 6, 1960, 491-493  
Текст: The ring proton synchrotron which is a powerful focusing accelerator with a magnetic field constant with respect to time, has been suggested in 1951 by A. A. Kolesnitskiy, A. Petukhov, and M. S. Mininovich and, independently of them, in 1955 by J. von (Phys. Rev. 92, 1152 (1955)). The new device seems to be able to produce a proton beam with radial spread of particles being small. The model of this ring synchrotron (with radial sections) has been constructed in the Ob'yedinennoye Institut Yadernykh Issledovaniy (Joint Institute of Nuclear Research). The electromagnet consists of eight elements arranged periodically, each of which has a direct and an inverse sector; it also has two straight sections. The azimuthal

Card 1/3

22447  
5/009/60/009/006/007/011  
3102/3212

Текст: The model of the ring...  
dimension of the direct sector, which focuses the beam in radial direction, is 20-30', and that of the inverse sector, which brings about the vertical focusing, is 7-10'. The inverse sectors cause the standard perimeter of the ring synchrotron to be bigger than that of a standard strongly focusing accelerator. The ratio of the maximum radius to the orbit to the minimum radius of curvature is approximately equal to 3. The orbit with the radius of the field are arranged such that the magnetic field increases with the radius according to  $R = R_0 (R/R_0)^4$ , i.e., it increases from 42 oe at  $R = 35$  cm to 340 oe at  $R = 59$  cm. The magnet exhibits the characteristic that the gap between its poles increases in proportion to the gap radius. Therefore, the vertical dimensions of all working area will also change from 2 to 4 cm. The increase of the field geometrical dimensions (index of the sectors and dual to 4) bring about a dynamic stability of the orbits, and the frequency of the free oscillations will also be constant. The number of betatron oscillations and from circulation may be varied from 1 to 3 in the vertical direction, and from 2.5 to 3.5 in the radial direction. The model is especially suited for

Card 2/3

5/009/60/009/006/007/011  
3102/3212

Текст: The model of the ring...  
electron accelerations; the injection (of 20-40 kev electrons) may be done continuously or in a pulsed manner. The acceleration is done with an electric rotational field having a voltage of 10 to 20 kv per circulation and a frequency of 450-500 cps. The first test results obtained from this unit show that it is very sensitive with regard to the accuracy of coil action and the stability of the principal magnetic characteristics. There are 2 figures and 7 references. 5 Soviet-bloc and 2 non-Soviet-bloc. The references are: English-language publications read at follows: K. S. Aron, Phys. Rev. 92, 1152 (1955); T. Ohkawa, Rev. Scient. Instrum., 29, 106 (1958).

SUBMITTED: May 28, 1960

Card 3/3

FUKUKO, T.

9

26850  
Z/030/61/000/004/005/005  
D230/D305

213100  
AUTHORS:

uln 2406, 2606  
Potukhov, V.A., Habanec, J., Zhuravlev, A.A., Karmasin, M.,  
Kotov, V.J., Myas, E.A., Obukhov, J.L., Sechor, V., Cirák,  
J., Banda, F., Dobikš, J., Marek, M., Fukuko, T., Svetov, L.  
V.

TITLE: A model of an annular cyclotron

PERIODICAL: Jaderná energie, no. 4, 1961, 136 - 137

TEXT: This is a translation of an Russian article entitled "Model' kol'tsevoogo fazotrona" (Model of an Annular Cyclotron) originally published in the Soviet periodical "Atomnaya energiya", 9, (1960), no. 12, pp 491-493. It deals with the model of an annular cyclotron which is a fixed-field, alternating-gradient accelerator, built by Soviet and Czechoslovak physicists at the United Institute of Nuclear Research in Dubna. The proposal for an annular cyclotron was made for the first time in 1953 by A.A. Kolomenskiy, V.A. Potukhov and M.S. Rabinovich (Ref 1: Nekotoryye voprosy teorii tsikli-cheskikh uskoritelov) (Some Problems of the Theory of Cyclic Accelerators), AN SSSR, 1955; Pribory i tehnika experimenta (1956), no. 2, p. 26). The elec-

Card 1/2

9

26850  
Z/038/61/000/004/005/005  
D238/D305

A model of an annular cyclotron

tronagnet of the accelerator consists of eight similar, alternately reversed parts, each of which has two sectors with opposite orientation of the magnetic field, and two straight sections. The accelerator is used for electron acceleration. Electrons with energies of 20-40 keV can be injected either continuously or in pulses. Using a combination of eddy and radio-frequency fields, a beam energy up to 2MEV can be obtained with this model. Preliminary results obtained during test runs have shown the high accuracy of the machine and the great stability of its principal magnetic characteristics. Also, in agreement with the theory, a number of various resonances was observed which have a substantial influence on the intensity of the accelerated beam. There are 2 figures and 7 references: 4 Soviet-bloc and 3 non-Soviet-bloc. The references to the English-language publications read as follows: K. Symon, Phys. Rev. 90 (1952), 1152; T. Okhawa, Rev. Scient. Instrum. 29, (1958), 100.

Card 2/2

28730  
S/057/61/031/010/013/015  
B111/B112

24.6730  
AUTHORS:

Bonda, F., Gabanets, I., Dobiash, I., Zhuravlev, A. A.,  
Karmasin, M., Kotov, V. I., Marek, M., Myao, E. A., Obukhov,  
Yu. L., Petukhov, V. A., Svetov, L. V., Sokhor, V., Fukatko,  
T., and Tairak, Yu.

TITLE: Annular proton synchrotron with radial sectors

PERIODICAL: Zhurnal tekhnicheskoy fiziki, v. 31, no. 10, 1961, 1253-1261

TEXT: This article describes the model of an annular proton synchrotron with radial sectors, built and put into operation at the Ob'yedinennyy institut yadernykh issledovaniy (Joint Institute of Nuclear Research).

Technical data:

Number of periodicity elements  
Azimuthal dimensions of a direct sector  
Azimuthal dimensions of an inverse sector  
Azimuthal dimensions of the gap  
amplification factor  
Initial radius

8  
22°30'  
7°30'  
7°30'  
~3  
35 cm

10

Card 1/51



28780  
S/057/61/031/010/013/015  
B111/B112

Annular proton synchrotron with ...

Final radius	59 cm
Vertical dimension of the chamber for the initial radius	2 cm
Coefficient k for which $H = H_0 (r/r_0)^k f(0)$	4
Field strength in the initial radius	~ 42 oe
Field strength in the final radius	~ 340 oe
Injection energy	20 - 40 kev
Critical energy (total)	1.12 Mev
Final energy (total)	~ 2 Mev

The frequencies of free particle oscillations were found to be  $\nu_x \approx 3.1$  and  $\nu_z \approx 1.8$ , which are lower than the theoretical value. The machine

can also be used for studying the behavior of the particle beam and its accumulation. A cross-sectional view of the electromagnet is shown in Fig. 1. A pressure of  $1 - 2 \cdot 10^{-6}$  mm Hg prevailed in the vacuum chamber. The injection system is designed both for pulsed and continuous operation. Acceleration is effected by an electric rotating field of 500 cps and 10 - 25 v per revolution. A special "speed up" system (rotating field of 600 v per revolution) serves for improving the electron-capture efficiency.

Card 2/51

10

26780

S/057/61/031/0:0/013/015  
B111/B112

Annular proton synchrotron with ...

The pulse, which is excessively increased by the "speed up" process, is reduced by a thyratron circuit. A constant value of  $k$  could be attained with a theoretically calculated arrangement of the field coils along the ideal orbit. In addition to the principal coils, a coil was placed at the yoke of each sector, by which the influence of the iron resistance was eliminated.  $k$  and the azimuthal field distribution were measured with induction coils and a ballistic galvanometer. With a few exceptions, the values of  $k$  agreed with theoretical values to within  $\pm 1\%$ . The azimuthal inhomogeneity of the field was never greater than  $\pm 1\%$ . The position of the magnetic surfaces was determined with Permalloy feelers with an error of 0.2 mm. The deviation from the theoretical values was never greater than 0.5 mm. The indication of the beam during the first revolutions (without acceleration) was carried out with screens and coordinate nets in the chamber, and later (with acceleration) with photomultipliers equipped with radially adjustable sets of targets. The measurements showed that the field is strongly affected by the induction and "speed-up" core (e.g., azimuthal inhomogeneity). It was found that under optimum conditions, the upward deviation of the beam from the center of the chamber did not exceed  $\pm 4$  mm, and that the deviation of the equilibrium

X

Card 3/84

28736  
S/057/61/031/0'0/0:3/0'5  
B111/B112

Annular proton synchrotron with ....

orbits at one and the same point of the magnetic field was 25 mm per revolution. It is noted that this model can be used to study resonances with free oscillations, electron capture into a betatron system, and accumulation of accelerated particles. Yu. A. Chernyshov, A. Grachev, and R. N. Fedorov are thanked for assistance. There are 6 figures, 1 table, 9 references: 4 Soviet and 5 non-Soviet. The three most recent references to English-language publications read as follows: Ref. 7: T. Ohkawa, Rev. Sci. Instr., 29, 108, 1958. Ref. 8: F. T. Cole et al., Rev. Sci. Instr., 28, 403, 1957. Ref. 9: K. M. Terwilliger et al., Rev. Sci. Instr., 28, 987, 1957.

SUBMITTED: December 6, 1960

Fig. 1: Cross-sectional view of electromagnet and vacuum chamber.  
Legend: (1) magnet; (2) chamber; (3) principal coils of magnet; (4) yoke coils.

Card 4/5j

Z/038/63/000/004/005/005  
D406/D301

AUTHORS: Fukátko, Tomáš and Bílek, František  
TITLE: Pulse generator with statistical and linear repetition rate  
PERIODICAL: Jaderná energie, no. 4, 1963, 128-130

TEXT: The Nuclear Research Institute developed and tested a pulse generator with periodic and statistical recurrence frequency which can be used for testing and calibrating pulse integrators, reducers, etc. This pulse generator consists of (1) the statistical pulse source, a TESLA 1 NA 31 noise diode, a wide-band amplifier and an amplitude discriminator which can also be used as a free-running multivibrator, and has a pulse rate, continuously adjustable in seven ranges from 8 to 5,000 pulses/min; (2) the periodic pulse source with a pulse rate continuously adjustable in six ranges from a few to 200,000 pulses/min; (3) the pulse shaping network, a multivibrator, amplifier, and mechanical counter; (4) the electrical supply system, an electronically regulated 280 V source and a reference

Card 1/2

Z/038/63/000/004/005/005  
D406/D301

Pulse generator ...

voltage, derived from a 14 TA glow-discharge-tube regulator. Since this pulse generator is able to imitate all output pulses of radiation detectors, it can be used in nuclear engineering wherever radiation detectors and pertinent active emitters are used for testing and calibrating pulse instruments. There are 5 figures.

ASSOCIATION:

Ústav jaderného výzkumu ČSAV (Nuclear Research  
Institute, Czechoslovak Academy of Sciences)

Card 2/2

FUKATKO, Tomas

Equipment for measurement of the intensity of fast ionic  
beams. Jaderna energie 9 no.9:296-299 S'63.

1. Ustav jaderneho vyzkumu, Ceskoslovenska akademie ved, Rez,  
u Prahy.

G/0025/64/000/002/0103/0105

ACCESSION NO: AP4037677

AUTHOR: Fukatko, T.; Krivanek, M.; Sebek, Z.

TITLE: Arrangement of measuring probes for adjustment of the cyclotron beam

SOURCE: Kernenergie, no. 2, 1964, 103-105

TOPIC TAGS: Cyclotron, beam, focussing, probe, measurement

ABSTRACT: A set of probes is described which was built into the ion tube of the Institute's cyclotron. The probes make possible measurement of beam position and intensity in the trajectory from deflector to target chamber. Figure 1 of Enclosure 1 shows the ion tube with probes and Faraday Cylinder. The probes are remotely controlled, and the incident current is measured with a special device. A method for the geometric adjustment of the ion tube by means of these probes is described. Orig. art. has; 4 figures.

Card

2/4

ACCESSION NO: AP4037677

ASSOCIATION: Institut fuer Kernforschung der Tschechoslowakischen Akademie  
der Wissenschaften, Rez bei Prag (Institute for Nuclear Research of the  
Czechoslovak Academy of Sciences)

SUBMITTED: 29 Aug 63

DATE ACQ: 10 Jun 64

ENCL: 01 <sup>02</sup>

SUB CODE: NP

NO REF SOV: 000

OTHER: 002

2/4

Card



ACCESSION NR: AP4037677

ENCLOSURE: 01

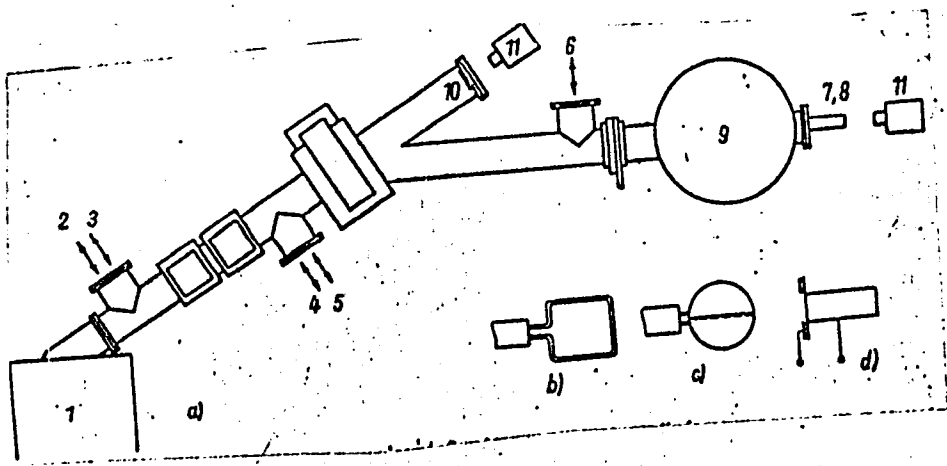
Fig. 1 Ion tube with probes and Faraday cylinder

- a) schematic of the ion tube  
1. cyclotron acceleration chamber; 2., 3. position of probes behind deflector; 4., 5. probes behind focussing lenses (in front of deflecting magnet; 6. probe in front of target chamber; 7., 8. position of Faraday cylinder; 9. target chamber; 10. position of luminescence screen; 11. television camera
- b) schematic of probes 2 and 4 used for measurement of horizontal distribution of beam intensity (measurement of horizontal position)
- c) schematic of probes 3 and 6 used for measurement of vertical beam position
- d) schematic of Faraday cylinder

Card 3/4

ACCESSION NR: AP4037677

ENCLOSURE: 02



Card 4/4

01540-05  
AUTHOR: FUJATKO, TOMAS; CHYLE, VACLAV (KHYLE, V.)  
TITLE: Stabilization of the amplitude of the accelerating voltages in cyclotrons  
SOURCE: Jaderna energie, v.10, no. 10, 1964, 380  
TOPIC TAGS: cyclotron  
Abstract: Abstract of a research paper describing the stabilization of the amplitude of the accelerating voltage in cyclotrons based on the principle of controlling the high-frequency output fed into a duant circuit and on automatic fine tuning of a 120 kilowatt high-frequency generator. A ±0.1 stability of the accelerating voltage was achieved.  
ASSOCIATION: Jstav jaderneho vyzkumu CSAV, Rez (Nuclear Research Institute)  
SUBMITTED: 00 ENCL: 00 SUB CODE: NP  
NR REF SOV: 000 OTHER: 000 JPRS

34  
B

19

Card 1/1

KULT, K.; KARMASIN, M.; FUKATKO, T.

Acceleration of alpha particles on the U-120 cyclotron.  
Chekosl fiz zhurnal 14 no. 3:206-209 '64.

1. Nuclear Research Institute, Czechoslovak Academy of Sciences, Rez.

L 37232-66 EWT(m) IJP(c)

ACC NR: AP6027832

SOURCE CODE: GE/0025/66/009/004/0122/0124

AUTHOR: Fukatko, T.

42  
P

ORG: Nuclear Research Institute CSAV, Rez, Czechoslovakia

TITLE: Stabilization of the deflector voltage in a cyclotron 19

SOURCE: Kernenergie, v. 9, no. 4, 1966, 122-124

TOPIC TAGS: cyclotron, voltage stabilization, voltage stabilizer/SG2S voltage stabilizer

ABSTRACT: The circuitry, construction, and operation of a voltage stabilizer for a cyclotron was described and illustrated by a schematic diagram. The device is capable of maintaining deflector voltage stable at  $< 5 \cdot 10^{-3}$  without requiring attachment to or interfering with the power supply. The device is based on the commercial line-voltage stabilizer with a 2 kVA capacity, manufactured by People-Owned Enterprise Krizik [location not given], supplemented by a back-coupling component operating on the basis of the zero-method. The control voltage is taken from the high-voltage distributor and compared potentiometrically with a stabilized SG2S type glow-lamp stabilizer. The author thanks V. Chyle for the careful construction of the stabilizer. Orig. art. has: 5 figures. JPRS

SUB CODE: 20,09/ SUBM DATE: 04AUG65/ ORIG REF: 002/

Card 1/1/116P

0917

1344

L 37175-66

ACC NR: AP6027869

SOURCE CODE: CZ/0038/66/000/003/0098/0099

AUTHOR: Fukato, Tomas<sup>6</sup>

ORG: Nuclear Research Institute, CSAV, Rez (Ustav jaderneho vyzkumu CSAV)

TITLE: Deflecting voltage stabilizer

SOURCE: Jaderna energie, no. 3, 1966, 98-99

TOPIC TAGS: voltage stabilizer, cyclotron, particle accelerator component, feedback amplifier/U-120 cyclotron

ABSTRACT: NRI Report No. 1386/65. The paper describes a deflecting voltage stabilizer for the U-120 cyclotron, characterized by relative simplicity, with a degree of stabilization of  $5 \times 10^{-3}$ , working on the principle of a controlled transducer. An electron-tube low-band amplifier is connected in the feedback circuit. Installation of the stabilizer requires no interference in the power supply arrangement of the deflector. [JPRS: 36,845]

SUB CODE: 20, 09 / SUBM DATE: none

Card 1/1112P

UDC: 621.384.6.015: 621.484.65

0917 7880

Fukel'man, L. M.

USSR / General and Special Zoology. Insects. Insects P  
and Arachnids. Chemical Method of Controlling  
Harmful Insects and Arachnids.

Abs Jour: Ref Zhur-Biol., No 21, 1958, 95561.

Author : Fukel'man, L. M.  
Inst : Moldavian Branch, All Union Institute for  
Plant Protection.  
Title : A Colorimetric Method of Determining Hexachloro-  
cyclohexane in Plants.

Orig Pub: Sb. tr. Moldo sto Vses. in-ta zashchity rast.,  
1957, vyp 2, 73-76.

Abstract: A description and verification of the colorim-  
etric method of BHC analysis in plant tissues  
which was previously used for determination of  
the quantity of BHC in the intestines of barn  
weevils after the seed was treated with this

Card 1/2

29

USSR/General and Special Zoology. Insects. Injurious In- P  
sects and Ticks. Pests of Fruit and Berry Crops

Abs Jour : Ref Zhur - Biol., No 11, 1951, No 49700

Author : Fukol'man L.M.

Inst : All-Union Institute of Plant Protection, Moldavian  
Station

Title : The Determination of Dichloroethane in the Soil.

Orig Pub : Sb. tr. Mold. nt. Vses. in-ta zashchity rast.,  
1957, vyp. 2, 77-80

Abstract : According to an analysis, especially on the  
fourth and fifth days, also on the eight-ninth  
days, after the fumigation of the soil by dich-  
loroethane, there was more dichloroethane among the  
vineyard rows where the soil was less packed than  
in the rows of the bushes. After 20 days there  
was as little dichloroethane among the rows, as  
in the bushes. Twice as much dichloroethane was

Card : 1/2

85



FUKEL'MAN, L.M.

Chromatographic determination of benzene hexachloride in plants.  
Fiziol.rast. 6 no.6:748-750 M-D '59. (MIRA 17:4)

1. Moldavian Station of All-Union Institute of Plant Protection,  
Kishinev.

(Benzene hexachloride)  
(Plants--Chemical analysis)  
(Paper chromatography)

FUKEL'MAN, L.M.

Chromatographic qualitative and colorimetric quantitative methods of determination of cevine in the green bulk of plants and fruits. Vop. pit. 22 no.2:80-85 Mr-Ap '63.  
(MIRA 17:2)

1. Iz khimicheskoy laboratorii (zav. L.M. Fukel'man)  
Moldavskogo filiala Vsesoyuznogo instituta zashchity  
rasteny, Kishinev.

FUKEL'MAN, L.M.

Methods for determining rogor (dimethoate) in preparations  
in plant tissues and fruits. Trudy VIZR no.20:61-68 pt.4 '64.  
(MIRA 18:12)

155-58-1-9/23

AUTHORS: Fukel'man, M.L., Tetelis, N.K., and Rossinevich, O.P.,  
Engineers

TITLE: Problems of UONI Type Electrode Welding by Alternating Current With the Aid of Impulse Generators. (K voprosu o svarke elektrodami tipa UONI na poremennom toke pri pomoshchi generatorov impul'sov)

PERIODICAL: Svarochnoye Proizvodstvo, 1958, Nr 1, pp 27 - 28 (USSR)

ABSTRACT: The authors state that experiments carried out at their plant and at the Institute of Electrowelding imeni Ye. O. Paton, have shown that the application of impulse generators for alternating current welding by electrodes with coatings, which poorly stabilize the arc process, can replace the application of direct current welding. Impulse generators (shown in Figure 2) have good operating properties, small size (350 x 300 x 250 mm) and a weight of 26.5 kg. The required power does not exceed 200 watts. Gas thyratrones of TG-1-2.5/4 type are utilized for these generators. Two machines of this type have been working for 1,000 hours under workshop conditions without failure, and the quality of joints is no worse than in welding by direct current. The authors come to the conclusion that with the aid of impulse generators connected in parallel, it is possible to perform arc welding by alternating current with UONI-13 and other types of electrodes with coatings

Card 1/2

135-58-1-9/23

Problems of UONI Type Electrode Welding by Alternating Current With  
the Aid of Impulse Generators.

devises for direct current welding. The application of im-  
pulse generators ensures stable processes and a reliable  
re-excitation of the arc. This is a portable device, is  
light and comfortable, which permits welding at any temper-  
ature of the surrounding air. These devices can be recom-  
mended for industrial application in various methods of gas-  
electric welding and for carbon arc welding of nonferrous  
metals and alloys by alternating current. There is 1 photo  
and 2 circuit diagrams.

AVAILABLE: Library of Congress

Card 2/2 1. Welding-Processes 2. Impulse generators-Applications

25(1)

SOV/235-59-5-17/21

AUTHOR: Kirichenko, S.I., Engineer, Fukel'man, M.L.

TITLE: The BEZ-250 Electrode-Holder for Welding Without Discarded Metal

PERIODICAL: Svarochnoye proizvodstvo, 1959, Nr 5, pp 40-41 (USSR)

ABSTRACT: The design of the BEZ electrode-holder (Figure 1) is free of one defect present in usual rod-type holders of its kind. It contains a semi-automatic device for exciting the arc, the necessary arc gap is obtained, reliable contact between the bottom of the holder and the article is achieved and the welder is protected from the flash of the arc. It can be used with a current of 250 amps, a/c or d/c and any type of electrode. Instructions for its use are given. The welder only needs 2-4 hours theory and 1-2 days practice to get used to it. At one plant it can save 650-750 thousand rubles annually, and 200 have already been produced. There is 1 diagram and 1 photo.

Card 1/1

ACCESSION NR: AP4013292

S/0135/64/000/002/0017/0021

AUTHORS: Lebedev, Yu. M. (Engineer); Mel'nik, S. S. (Engineer); Fukel'man, M. L. (Engineer)

TITLE: Automatic fusion of stainless steel on pearlite steel using two wire electrodes

SOURCE: Svarochnoye proizvodstvo, no. 2, 1964, 17-21

TOPIC TAGS: steel, stainless steel, pearlite steel, fusion, welding, two-wire welding, St.3 low carbon steel, SKhL-4 low alloy steel, AK-25 high-strength steel, ADS-1000-2 welder, 48-OF-6 flux, Sv-04Kh19Ni1M3 electrode wire, Sv-08Kh18Ni9Cr2S2 electrode wire, Sv-08Kh25Ni5TiF electrode wire

ABSTRACT: This work was carried out in order to study the automatic deposition of stainless steel on the low-carbon steel St.3, on low-alloy steel SKhL-4, and on high-strength steel AK-25. The purposes of this study were: 1) to determine the technical conditions which would secure minimum fusion of the basic metal; 2) to obtain the chemical composition of the built-up metal as near as possible to that of the electrode wire; 3) to avoid the formation of the undesirable martensite structures. The automatic welder ADS-1000-2 was adapted for this purpose, and two

Card 1/22

ACCESSION NR: AP4013292

wire electrodes were used simultaneously to build up the metal (under the 48-OF-6 flux). Electrodes made of the following steels were tested: Sv-07Kh25N12, Sv-04Kh19N11M3, Sv-08Kh18N9F2S2 and Sv-08Kh25N5TMF. It was established that the metal with the highest resistance to corrosion was obtained when the combination of the electrodes produced a built-up metal of austenite-ferrite composition with 3-8% of  $\delta$ -ferrite. In order to avoid the formation of the martensite structure the chemical composition of the first few built-up layers should be such that the points plotted for it on the structural diagram shown in Fig. 1 of Enclosure would lie to the right of the SK line. Orig. art. has: 3 tables, 8 figures, and 2 formulas.

ASSOCIATION: none

SUBMITTED: 00

DATE ACQ: 26Feb61

ENCL: 01

SUB. CODE: ML

NO REF SOV: 005

OTHER: 000

Card 2/32



MEL'NIK, S.S., inzh.; FUKEL'MAN, M.L., inzh.

Raising the quality of the deposition of copper and its alloys on  
low-carbon steel by gas welding. Star.proizv. no.2:23-25 F '64.  
(MIRA 18:1)

LEBEDEV, Yu.M. (g. Nikolayev); MEL'NIK, S.S. (g. Nikolayev); FUKEL'MAN,  
M.L. (g. Nikolayev)

Technology of mechanized hard facing of stainless steel with  
two wires. Avtom. svar. 17 no.4871-74 Ap '64 (MIRA 18:1)

05081-65

EPA(s)-2/EMP(k)/EWA(c)/EWT(m)/EWP(h)/T/EMP(v)/EMP(t)

JD/HM

ACCESSION NR: AP5021218

UR/0125/65/000/008/0006/0010  
621.791.76:669.12

AUTHOR: Fukel'man, M. I. (Engineer) (Nikolayev)

TITLE: Heat cycle during the welding of hull steels on ships afloat

SOURCE: Avtomaticheskaya svarka, no. 8, 1965, 6-10

TOPIC TAGS: heat cycle, arc welding, hull steel, shell plating, floating ship, waterline, cooling water, unilateral welding, heat propagation theory, heat drain, near weld zone, nucleate boiling

25  
B

ABSTRACT: In shipbuilding and ship repair it is often necessary to weld individual frame elements within the hull, and sometimes even entire subassemblies, without removing any section of the shell plating. Repair of this kind involves the use of floating or dry docks, the construction of special caissons, and is very expensive and time-consuming. An alternative to this is performing the welding while the ship is afloat. Then, however, it must be considered that the welding can be performed on only one side of the plating, the other side (below the waterline) being cooled by standing or running water. The attendant heat cycle has then special features of its own, which are investigated by the author. Special attention is paid to the rate of cooling during welding afloat. Corresponding correction factors are introduced to the known formulas of the theory of heat propagation during welding, for the case of a point source of heat (arc) moving rectilinearly at a finite

Card 1/2

L 65081-65

ACCESSION NR: AP5021218

speed along one side of an infinite plate on whose other side heat is intensively drained off by water. Calculations of the temperature fields for the case of welding of ribs 4, 6, and 10 mm thick at different rates of cooling show that cooling by running water sharply narrows the isotherms while at the same time reducing their lengths. The same applies to cooling by standing water. Equations of the general laws of the heat cycle in the metal of the near-weld zone in the presence of unilateral cooling are derived on the basis of dimensionless parameters. The theoretical coefficient of heat transfer from metal to water is calculated and found to be similar to the case of heat transfer during the boiling of water (nucleate boiling). Knowledge of these basic laws of the heat cycle during welding afloat can also assist in evaluating the effect of individual parameters of the cycle on structural parameters in the metal and selecting the optimal welding regimes assuring a high quality of joints and preservation of the protective external coatings. Orig. art. has: 5 figures, 7 formulas.

ASSOCIATION: none

SUBMITTED: 22Jan65

NR REF SOV: 009

ENCL: 00

OTHER: 000

SUB CODE: IE, 60

Card 2/2

L 9535-66 EWP(m)/EWA(d)/EWP(v)/T/EWP(t)/EWP(k)/EWP(a)/EWP(b)/EWA(o) MJW/  
ACC NR: AP5026292 JL/HM SOURCE CODE: UR/0125/65/000/010/0050/0051

AUTHOR: Mel'nik, S. S. (Engineer; Nikolayev); Fukel'man, M. L. (Engineer; Nikolayev)

ORG: none

37  
B

TITLE: Prospects for employing unshielded arc welding in shipbuilding

SOURCE: Avtomaticheskaya svarka, no. 10, 1965, 50-51

TOPIC TAGS: unshielded arc welding, shipbuilding engineering, welding electrode, welding technology

ABSTRACT: Since the employment of shielded arc welding in shipbuilding is technically difficult, the authors experimentally investigated the possibilities of the mechanized unshielded welding of hull steel by means of a 1.2 mm EP-439 thick welding wire with welding current of 140-180 a, on using an IIP-7 pulsed attachment in order to reduce the number of defects in the weld metal by causing the transfer of metal from the electrode wire to the molten pool to proceed in the form of smaller drops with a shorter time of transit across the arc column into the molten pool and hence with a reduced saturation of metal by the gases of the air. This technique was experimentally used to weld sections of framing to hull plating and watertight compartments. The resulting weldments were positively evaluated by representatives of the USSR Maritime Registry. Thus, unshielded arc welding with wire electrode may be

Card 1/2

UDC: 621.791.75:629.128

L 9535-66

ACC NR: AP5026292

introduced in shipbuilding in some cases where welding in a CO<sub>2</sub> atmosphere is not feasible. By the same token, the level of the mechanization of welding operations in enterprises of the shipbuilding industry can be raised. Orig. art. has: 2 figures, 1 table.

SUB CODE: 11,13/ SUBM DATE: 10Jun65/ ORIG REF: 000/ OTH REF: 000

*lch*

Card 2/2

FUKEL'MAN, M.L. (Nikolayev)

Thermal cycle in welding hull steel structures while ship  
is afloat. Avtom. svar. 18 no.8:6-10 Ag '65.

(MIRA 18:11)

1. Submitted January 22, 1965.

MEL'NIK, S.S. (Nikolayev); FUKEL'MAN, M.L. (Nikolayev)

Prospects for using welding without a protective atmosphere,  
in shipbuilding. Avtom. svar. 18 no.10:50-51 0 '65.  
(MIRA 18:12)



1. FUKEL'MAN, V., Eng.

2. USSR (600)

4. Shipbuilding

7. Egorov-Vorob'ev method for making projections of hull plates. Mor. flot 13, No. 4, 1953.

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

FUKEL'MAN, V.

FUKEL'MAN, V., inzhener-korablestroitel'.

From the history of caisson construction. Mor. i rech.flot 14  
no. 7:31 JI '54. (MIRA 7:7)  
(Caissons)

LEONT'YEV, Valerian Markovich, inzh.; FROLOV, Nikolay Fedorovich, inzh.;  
RIMMER, A.I., inzh., retsenzent; FUKEL'MAN, V.L., inzh.,  
retsenzent; KUZ'MENKO, V.K., dots., nauchnyy red.; STOLYARSKIY,  
L.L., inzh., nauchnyy red.; FRUMKIN, P.S., tekhn. red.

[Technology of shipbuilding and ship repairs] Tekhnologiya sudo-  
stroeniia i sudoremonta. Leningrad, Gos. soiuзное izd-vo sudo-  
stroit. promyshl., 1961. 435 p. (MIRA 15:2)

1. Predmetnaya komissiya Nikolayevskogo sudostroitel'nogo tekhn-  
nikuma (for Fukel'man).  
(Shipbuilding) (Ships--Maintenance and repair)

FUKEL'MAN, Viktor Leonidovich; KHOLODILIN, A.N., kand. tekhn.  
nauk, retsenzent; PANKOV, V.A., nauchn. red.; KAZAKOV,  
Yu.S., red.

[Theory of ships and the principles of hydromechanics]  
Teoriia korablia s osnovami gidromekhaniki. Leningrad,  
Izd-vo "Sudostroenie," 1964. 349 p. (MIRA 17:6)

FUKI, A.

USSR/Cultivated Plants. Potatoes. Vegetables. Melons.

M

Abs Jour: Ref Zhur-Biol., No 5, 1958, 20317.

Author : A. Fuki.

Inst : Stavropol' Agricultural Institute.

Title : The Effect of pH Quantity on the Condition of Potato Tubers.  
(Preliminary Report). (Vliyaniye velichiny pH na sostoyaniye klubney kartofelya ((Predvaritel'noye soobshcheniye)) ).

Orig Pub: Sb. nauchno-issled. rabot stud. Stavropol'sk. s.-kh. in-ta, 1956, vyp. 4, 50-52.

Abstract: In a laboratory test where the pH factor of the nutrient substance was 7.4, better conditions were established for the sprouting of Cornwall variety potato tubers in sandy culture. After winter storage the pH factor of degenerated tubers was 5.8, and of the non-degenerated ones 6.1.

Card : 1/2

USSR/Cultivated Plants. Potatoes. Vegetables. Melons.

M

Abs Jour: Ref Zhur-Biol., No 5, 1958, 20317.

Remark by the reviewer. No references are given to the method used, particularly to repeating the test.

Card : 2/2

FUCI, A.D.

Epidemiology of water fever. Sovet. med. 16 no.3:38-39 Mar 1952.  
(OIML 22:1)

1. Krasnodar.

FUKI, A. D.

USSR/Medicine - Leptospirosis

FD-554

Card 1/1            Pub. 148 - 17/23

Author            : Fuki, A. D.

Title             : A model for experimental non-icteric leptospirosis

Periodical        : Zhur. mikrobiol. epid. i immun. 6, 52-54, Jun 54

Abstract         : There is a detailed description of the conditions necessary for the successful use of suckling and weanling rabbits as models for non-icteric leptospirosis. Freshly isolated strains of L. "Monyakov" and L. grippotyphosa were found to be pathogenic for rabbits weighing from 150 to 500 grams. The disease in rabbits infected with types I and II Leptospirae followed the usual clinical course, jaundice appeared, and death occurred. Postmortem examinations revealed the characteristic pathologicoanatomical changes in the internal organs. No references are cited.

Institution       : The Krasnodarsk Institute of Epidemiology and Microbiology and the Krasnodarsk Kray Sanitary-Epidemiological Station

Submitted        : August 14, 1953. The paper was presented at a meeting of the Krasnodarsk Kray Department of the Society of Microbiologists, Epidemiologists, and Infectionists on November 28, 1951.

ZUBKOVA, R.I., FUKI, A.D.

~~XXXXXXXXXXXXXXXXXXXX~~  
Data on the occurrence of Q fever in Krasnodar Territory. Zhur.  
mikrobiol. epid. i immun. no.6:23-28 Ja '55. (MLRA 8:9)

1. Iz otdela rikketsiozov (zav.-prof. P. F. Zdradovskiy) Insti-  
tuta epidemiologii i mikrobiologii imeni N.F. Gamalei AMN SSSR  
(dir.prof. G.V.Vygodchikov) i Krasnodarskoy krayevoy sanitarno-  
epidemiologicheskoy stantsii (glavnyy vrach A.I. Bandur')

(Q FEVER, epidemiology,  
in Russia)



FUKI, A. D., and ZUBKOVA, R. I.

"Data on the Spread of Q Fever in Dniprogradskiy Kray." Proceedings of  
of Inst. Epidem and Microbiol im. Gamaleya 1954-56.

Division of Rickettsiosis, Zdrovskiy, P. F., Active Member of Academy  
of Medical Sciences USSR, Professor, head, Inst. Epidem and Microbiol  
im. Gamaleya AMS USSR

SO: Sum 1186, 11 Jan 57.

KULAGIN, S.M.; FUKI, A.D.; ZUBKOVA, R.I.; POPOVA, L.D.

Result of double vaccination against Q fever. Zhur. mikrobiol. epid. i  
immun. 29 no.11:25-29 N '58. (MIRA 12:1)

1. Iz Instituta epidemiologii i mikrobiologii imeni Gamalei AMN SSSR  
i Krasnodarskoy krayevoy sanitarno-epidemiologicheskoy stantsii.  
(Q FEVER, prev. & control,  
vacc., two-stage (Rus))

S/137/62/000/003/033/191  
A006/A101

AUTHORS: Eygeles, M. A., Leviush, I. T., Fuki, I. V.

TITLE: Concentration of beryllium ores

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 3, 1962, 11, abstract 3G77  
(V sb. "Issled. po obogashcheniyu i tekhnol. polezn. iskopayemykh",  
Moscow, Gosgeoltekhizdat, 1961, 115-123)

TEXT: Some fundamentals are presented on the technological classification of Be-ores according to a series of features characteristic for their concentration technology (the size of disseminations of Be-minerals, the mineralogical shape of Be, the composition of valuable minerals, the substantial composition of the ore mass). The concentration of beryllium ores was developed in two directions: the acid method and the alkaline method. Both these methods are based on the depression of dead rock minerals and the activation of beryllium flotation. An advantage of the acid method is the considerable activation of beryllium by HF and the possibility of obtaining separately mica, quartz and fluorspar products. A deficiency of this process is the necessity of double flotation of the basic ore mass in a strongly acid medium. In the alkaline

Card 1/2

Concentration of beryllium ores

3/137/62/000/003/033/191  
A006/A101

method,  $\text{Na}_2\text{S}$  is used as a selectively acting depressor, which makes it possible to depress, in one procedure, the basic dead rock minerals. Beryllium flotation can be intensified by the following means: a) processing the pulp by the collector during its heating to  $80 - 85^\circ\text{C}$  and b) removing multivalent cations during the softening of water. A method of flotating beryllium ore without preheating the basic pulp mass was developed under laboratory conditions. The basic flotation is carried out at room temperature with oleic acid.  $\text{Na}_2\text{S}$  is used as a depressor. The basic flotation concentrate is processed with  $\text{Na}_2\text{S}$ , heated and refined once or twice. The results of concentration obtained from both acid and alkaline methods are similar. Concentration of micaceous ores is complicated by the introduction of additional fluorite and actinolite cycles of flotation and repeated refining with preheating of the pulp. An additional cycle of talcum flotation is introduced prior to the processing with reagents, to remove easily flotated talcum and talcum rocks. Methods of concentration ability tests are presented.

A. Shmeleva

[Abstracter's note: Complete translation]

Card 2/2

KUZNETS, M.M., prof. [deceased]; BOGDANOVICH, S.N., dotsent; LEVKOVSKIY, N.M.,  
kand. med. nauk; SEMENOVA, V.N.; GLUKHEN'KIY, B.T.; FUKI, M.M.; OSADCHIY,  
Ye.D.; BARABASH, M.Ye.; VIL'CHINSKIY, S.P.; VITER, I.S.; VOROBETS, I.F.;  
GRABOVSKAYA, R.A.; RAKHMATULLINA, M.G.; SALOVA, G.V.

Treatment of lupus eruthermatosus with phthivazid. Vrach. delo no.4:  
373-378 Ap '59. (MIRA 12:7)

1. Kiyevskiy meditsinskiy institut.  
(LUPUS)(ISONICOTINIC ACID)

FUKI, M.M. [deceased]

Study of the characteristics of opposing a two-cycle engine with pressure charging. Trudy LKI no.26:183-203 '59. (MIRA 14:9)

1. Kafedra sudovykh dvigateley vnutrennego sgoraniya Leningradskogo korablestroitel'nogo instituta.  
(Superchargers)

FUKI, V.B.

Capacity of the blood to thrombogenesis in ischemic cardiac  
disease and its change following anticoagulant therapy.  
Kardiologiya 5 no.1:46-49 Ja-F '65. (MIRA 18:9)

1. Kafedra gospital'noy terapii (zav.- prof. M.N. Tumancvskiy)  
Voronezhskogo meditsinskogo instituta.

S/190/61/003/001/011/020  
B119/B216

AUTHORS: Smolyan, E. S., Grayevskiy, A. I., Demin, O. I., Fukin, V. K.,  
Matveyeva, G. H.

TITLE: Certain rules on polymerization of ethylene on heterogeneous  
catalysts

PERIODICAL: Vysokomolekulyarnyye soyedineniya, v. 3, no. 1, 1961, 81-83

TEXT: The authors point out the fact that the catalysts of the type  $TiCl_4$  plus organometallic alkylating agent used for the preparation of low-pressure polyethylene rapidly lose their high activity in the course of the reaction, dropping to one sixth of the initial activity within 30 to 40 min. The present work attempts to find the causes for this drop in activity. Experiments were carried out on polymerization of polyethylene on catalysts of the systems  $TiCl_4 + AlR_3$  ( $Al(C_2H_5)_2Br$ ,  $AlC_2H_5Cl_2$ ,  $Al(C_2H_5)_2OC_2H_5$ ,  $Al(C_2H_5)_3$ ,  $AlC_2H_5Cl(OC_2H_5)$  and other compounds). Polymerization was performed in an autoclave at  $60^\circ C$  and a pressure of 4 atm. abs. Individual

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Card 1/2



Certain rules on polymerization of...

S/19C/61/003/001/011/020  
B119/B216

catalysts were prepared by mixing the components under argon in a special thermostat and kept there for use. Catalyst activity was determined from the initial polymerization rate and, with the same results, from the polyethylene yield. It was found that the activity of all the catalysts is low at the very outset but increases to a maximum within 4 to 5 min and then drops to practically zero within another 20 to 30 min. The same effect was observed on catalysts removed from the argon atmosphere and placed in the reaction vessel in the absence of ethylene for polymerization. The authors found that the activity of a catalyst of the type under study depends on the concentration ratio of  $Ti^{3+}$  and  $Ti^{4+}$  (low initial activity due to the sole presence of  $Ti^{4+}$ , maximum activity on reaching the optimum  $Ti^{3+} : Ti^{4+}$  ratio, followed by decrease with increasing  $Ti^{3+}$  content). Further experiments showed that the optimum  $Ti^{3+} : Ti^{4+}$  ratio and thus also the maximum activity may be maintained constant by careful addition of a corresponding quantity of oxidizing agent (to reoxidize excess  $Ti^{3+}$ ). Air and  $O_2$ , respectively, were used as oxidizing agents. There are 3 figures and 3 non-Soviet-bloc references.

Card 2/3

ACCESSION NR: AT4012866

S/3060/63/000/000/0029/0037

AUTHOR: Kruglov, A. I.; Fukin, V. N.

TITLE: Electrode erosion as a function of the current pulse form

SOURCE: AN SSSR. Tsentr. n.-i. lab. elektr. obrabotki metallov. Elektroiskrovaya obrabotka metallov. Moscow, 1963, 29-37

TOPIC TAGS: electroplating, electrode, electrode erosion, electrode erosion pulse form dependence

ABSTRACT: In most work dealing with the erosion characteristics of metals under the influence of low-voltage pulse discharges in a liquid dielectric medium, the energy and duration of the pulse have been regarded as the fundamental pulse parameters. There is almost no work on the effect of the form of the pulse fed to the spark gap. The authors criticize the hypothesis of S. V. Divers (Spark machining. - Aircraft Production, 1961, 23, no. 12), claiming that his work lacks an experimental analysis of the effect of pulses of varying form, with the result that his conclusions are unsubstantiated. The major part of this article deals with preliminary findings on the effect of pulse form on electrode erosion. The authors designed a laboratory set-up for their experiments which consists principally of a pulse generator, a lab-type electroerosion unit with automatic feed control and

Card 17/2

ACCESSION NR: AT4012866

a working-pulse counter. Figure 1 in the Enclosure illustrates the dependence of the intensity of erosion of copper electrodes on the time shift  $\tau$  of a short (duration: 1.5 microsec., amplitude: 400 amps) pulse with respect to the leading edge of a long (duration: 20 microsec., amplitude: 60 amps) pulse. As the delay  $\tau$  in the arrival of the short pulse is increased, cathode and anode erosion increases, reaching a maximum at  $\tau = 11$  microsec. With further increase in delay, the erosion value falls off somewhat. The authors state that the results cannot be interpreted on the basis of the hypothesis of additive laws of material ablation during the effect of a unit pulse, as proposed by Divers, E. M. Williams (Theory of electric spark machining. - Electr. Engng, 1952, v. 71, no. 3) and others. Rather, they lend themselves to an explanation in line with the theory developed in the work of B. N. Zolotykh (Fizicheskiye osnovy\* elektroiskrovoy obrabotki metallov. Gostekhteorizdat, 1953) who regards erosion as the result of the processes of heat propagation under the effect of the plane sources which form on the anode and cathode because of the energy coming from the discharge channel. Orig. art. has: 14 formulas and 5 figures.

ASSOCIATION: Tsentral'naya n.-i. laboratoriya elektricheskoy obrabotki metallov AN SSSR (Central Scientific Research Laboratory for Electrical Machining of Metals AN SSSR)

Card 2/2

FUKKER, F.; RUSZNAK, I.; KRALIK, I.

Polarographic determination of the methyleneblue number of regenerated celluloses of high carboxyl content, by the suppression of oxygen maxima. In German. p. 59. (Acta Chimica, Vol. 9, No. 1/4, 1956, Budapest, Hungary)

SO: Monthly List of East European Accessions (EEAL) LC, Vol. 6, No. 8, Aug 1957. Uncl.

FUKKER, J.

TECHNOLOGY

Periodical: MAGYAR TEXTILTECHNIKA Vol. 11, no. 1, Jan. 1959

FUKKER, J. Determinatin of the concentration of certain dyes by means of  
the Karl Fisher solution. pl 4.

Monthly List of East European Accessions (EEAI) LC, Vol. 8, No. 5,  
May 1959, Unclas.

FUKKER, K.

### HUNG .

25. Flame photometric determination of sodium in alumina and hydrated alumina — *Alumíniumoxid-hidrációk és alumíniumoxidok nátriumtartalmának mikro-kémiai vizsgálata lángfotométerrel* — A. Hegedűs, K. Fekker and M. Dvorszky. (Hungarian Journal of Chemistry — *Magyar Kémiai Folyóirat* — Vol. 59, 1953, No. 11, pp. 334–341, 8 figs., 4 tabs.)

The "soluble" and "total" sodium content of alumina and hydrated alumina was determined by using a Zeiss Model III photometer with an air-acetylene flame. By the critical analysis of known procedures (electrodialysis, hydrochloric acid digestion and two treatments at superatmospheric pressures) two new methods were evolved, one with a sensitivity of less than 0.01% and another with a higher sensitivity of less than 0.001% sodium oxide: alumina, both within 2% error. It was found that about 50% of the sodium content of alumina and hydrated alumina (produced at *Magyaróvár*, Hungary) is present in a "combined" form i.e. the sodium was not dissolved quantitatively even by the hydrochloric acid washing of the sample. Determinations carried out during the glowing of the samples showed that at the point of transformation to  $\alpha$ -alumina the "combined" sodium migrates to the surface of the microcrystals and at the same time becomes soluble.

FUKKER, KAROLY

Palaeographic determination of the methylene blue  
number of the paper and the content of the  
suppression of the paper.

correlation between the I no. and the carbonyl content of the  
samples; viz. % of COOH is obtained by dividing the I  
no. reduced by the value of 100000.

EM  
RT

Fukker, H.

HUNGARY/Physical Chemistry - Electrochemistry

B-12

Abs Jour : Ref Zhur - Khimiya, No 7, 1958, 20801  
Author : I. Rusnak, K. Fukker, I. Krakik.  
Inst : Academy of Sciences of Hungary.  
Title : Polarographic Study of High Molecular Substances by  
Maximum Suppression Method.  
Orig Pub : Acta chim. Acad. sci. hung., 1958, 9, No 1-4, 49-57  
Abstract : A more detailed report on work published earlier  
(RZhKhim, 1956, 54683).

Card 1/1



COUNTRY : Hungary  
 CATEGORY : B-12

ABS. JOUR. : RZKhim., No. 14 1959, No. 48901

AUTHOR : Rusznak, I., Kralik, I., and Fukker, K.  
 INST. : Not given  
 TITLE : Theory and Application of Polarographic Maxima  
 Suppression. IV. Determination of the Molecular Weight of Basic Dye-stuffs. V. Relationship

ORIG. PUB. : Z phys Chem (BRD), 17, No 1-2, 56-60; 61-67 (1958)  
 Magyar Kem Polyoirat, 64, No 10, 397-400\*\*

ABSTRACT : IV. The authors have investigated the effect of the following dye-stuffs (D) on the polarographic maximum (M) in the C<sub>2</sub> wave in 0.002 N CH<sub>3</sub>COOH: rhodamine, methylene blue, fuchsin, auramine, and methyl violet. Equimolar solutions of D suppress M in equal degrees; solutions of D at equal weight concentration suppress M in inverse proportion to the molecular

\* Between Molecular Weight of the Cellulose Diacetate Monophthalate Fraction and the Capacity of Alkaline Solutions of the Latter to Suppress Polarographic Maxima

CARD: 1/5 \*\* 401-403 (1958)

CATEGORY :

ABS. JOUR. : RZKhim., No. 14 1959, No. 48901

AUTHOR :  
 INST. :  
 TITLE :

ORIG. PUB. :

ABSTRACT : weight of the D. In the region of D concentrations corresponding to a decrease in M to 50% of its initial value, a linear relationship is observed between the height of the M and the molecular weight of the D at equal weight concentrations of D. The latter observation has been utilized in the development of a procedure for the determination of the molecular weight of the D (accuracy  $\pm 4\%$ ).

CARD: 2/5

COUNTRY : Hungary  
CATEGORY :

B-12

ABS. JOUR. : RZKhim., No. 14 1959, No.

48901

AUTHOR :  
INST. :  
TITLE :

ORIG. PUB. :

ABSTRACT : height of the M and the molecular weight (at equal weight concentration of I). With increasing concentration of I the height of M decreases, at first rapidly, then at a slower rate. In the case of solutions containing equimolar amounts of I fractions, the fraction with the higher molecular weight has a stronger suppressing effect on M, the dependence of the height of M on the molecular weight being non-linear. The authors note differences in the

CARD: 4/5

COUNTRY : Hungary  
CATEGORY : B-12  
ABS. JOUR. : RZKhim., No. 14 1959, No. 48901  
AUTHOR :  
INST. :  
TITLE :  
ORIG. PUB. :  
ABSTRACT : character of the dependence of the suppressing effect of a given substance on the molecular weight in the cases of I fractions and of D. For Communication III see RZKhim. No 24, 1957, 77+54.  
M. Surova

CARD: 5/5

FUKKEL, K.

Science

"MAGYAR KEMIAI POLYMER"AT"

Investigations by means of polarographic maximum suppression. IV. Determination of the molecular weight of basic dyestuffs. V. Relationship between the molecular weight and the polarographic maximum suppression of the alkaline solutions of cellulose-acetate-monophthalate fractions. p. 397

Vol. 64, No. 10, Oct. 1958

Monthly List of East European Accessions (E+I), LC, Vol. 3, No. 4, April 1959  
Unclas.

COUNTRY : Hungary  
CATEGORY : H-34  
ABS. JOUR. : RZKhim., No. 1959, No. 88795  
AUTHOR : Rusznak, I.; Fukker, K.; Lay, M.  
INST. :  
TITLE : Determination of the Concentration of Individual Dyestuffs with Karl Fischer Solution  
ORIG. PUB. : Magyar textiltchn., 1959, 11, No 1, 4-6

ABSTRACT : An indirect method has been worked out for determining the absolute concentration of basic dyes by titration of the water that is formed (or used up) in the reaction between the dyestuff being analyzed and Karl Fischer solution. For 5 basic dyes, results are presented of comparative analyses conducted in accordance with the new method and by the conventional procedure; mean error of 14 determinations does not exceed 1.4%.

S. Rozenfel'd

CARD:

RUSZNAK, I.; KRALIK, I.; FUKKER, K.

Theory and possible use of the suppression of polarographic maxima.  
VI. Studies of the condensation reactions and of the kinetics of  
reactions of macromolecular substances. Coll Cz Chem 26 no.3:645-649  
Mr '61. (EEAI 10:9)

1. Forschungsinstitut für die Textilindustrie und Institut für prak-  
tische Chemie, Technische Universität, Budapest, Ungarn.

(Polarograph and polarography)  
(Macromolecular compounds)

S/081/62/000/017/062/102  
B158/B186

AUTHORS: Millner, Tivadar, Fukker, Károly, Martin, Kornél,  
Dvorszky, Magda

TITLE: Procedure for producing alumina of high electric insulating  
capacity

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 17, 1962, 383, abstract  
17K258 (Hungarian patent 148074, March 31, 1961)

TEXT: A coating of corundum is used for insulation of heating coils (for instance, an electron tube) at high temperatures. The authors have found that the electric insulating capacity of this coating is considerably improved if it is introduced as pure  $\alpha$ -corundum and burnt in a neutral, but preferably in a reducing, atmosphere. Pure alumina, burnt at  $1050^{\circ}\text{C}$ , is used as raw material. The powder is burnt in a tubular furnace (thermal response to  $1500^{\circ}\text{C}$  - 1 hr, holding at  $1550^{\circ}\text{C}$  - 3 hours, cooling to  $1100^{\circ}\text{C}$  - 1 hour). The alumina must be burnt in a stream of hydrogen, nitrogen, or a mixture of these or any other gas in vacuum. The product is ground in a ball mill with the addition of 0.1% steatite. A film obtained

Card 1/2

Procedure for producing alumina...

S/081/62/000/017/062/102  
B158/B186

from this powder by already well-known methods (for example, electro-phoresis) is applied to tungsten coils. The electric insulating capacity of such a film is demonstrated by the fact that among 10 electron tubes incandesced for 1000 hours no breakdown was observed, whereas in the same period of time 6 breakdowns occurred with the same type of lamp using a film-coated coil prepared by an old method. [Abstracter's note: Complete translation.]

Card 2/2



FUKLEV, V. A.

Author: Fuklen, V. A.

Title: The Milled Carbon pig-iron from cupola furnace. (Molouglerodisty  
chugun iz vranki.) 151 p.

City: Moscow

Publisher:

~~Publication~~ State Printing House of the Machine Consturction Literature

Date: 1950

Available: Library of Congress

Source: Monthly List of Russian Accessions, Vol. 3, No. 12, p. 638

PA 233T56

FUKLEV, V. A.

USSR/Metallurgy - Foundry, Equipment  
Materials

Jul 52

"Graphite Lining of Ladles for Desulfurization of Cast  
Iron," V.A. Fuklev, Cand Tech Sci

"Litey Proizvod" No 7, p 10

Describes expts for using graphite lining, instead of  
expensive magnesite and dolomite, in ladle for desul-  
furization of cast iron designated for steelmaking  
process in side-blown converters in case when proper  
S concn could not be maintained in cupola. Graphite  
mass contained 50-70% of ground graphite ore, 22-42%  
of quartz sand, and 8% of bentonite, having moisture  
content in 8-10% range. Service length of lining  
about 40 hrs.

233T56

FA 233T79

USSR/Metallurgy - Foundry, Equipment Sep 52

"Tuyere for Delivering Oxygen Into the Forehearth of a Cupola," V.A. Fuklev, Cand Tech Sci, M. A. Khabarov, Engr

"Litye Proizvod" No 9, pp 24, 25

Discusses possibility for overheating cast iron by blowing with oxygen in cupola forehearth. Describes detachable tuyere box designed and installed at plant of Tashsel'mash (Tashkent Agr Mach Bldg Plant imeni Voroshilov). Design permits removing oxygen tuyere for repair, replacing it by spare tuyere box within period of 8-15

233T79

min. Tuyere zone in box represents brickwork, 300-400 mm high and 800-900 mm long, fitted into opening in forehearth wall. Box is installed on carriage for sake of mobility.

233T79

FUKLEV, V. A.

FUKLEV, V.

"Vessels with Graphite Lining for Desulfurizing Iron." Tr. from the Russian. p.102  
(PRZEGLAD ODLEWNICTWA Vol. 3, no. 3, March 1953 Krakow, Poland)

SO: Monthly List of East European Accessions, LC, Vol. 3, no. 5, May 1954/Uncl.

TURBOVSKIY, M.M.; FUKLEV, V.A.

Graphite lining mixture for steel castings. Lit.proizv. no.6:28-29 Je '53.  
(MLRA 6:7)  
(Foundry supplies)

FURBER, V. A.

✓ Use of Oxygen in Melting Low-Carbon and Superheated  
Cast Iron. A. Fukuy, *Literos Provisores*, 1958 (3),  
1-3). The results of experiments on the treatment of cast  
iron with oxygen in the fore-hearth of a cupola to give a metal  
suitable for the production of high-quality malleable iron  
are described. The observed extents of oxidation of various  
elements are contrasted with data in the literature and  
examined thermodynamically. The mechanism of oxidation  
in cast iron is considered. The iron was deoxidized by adding  
0.02-0.03% of aluminium in the ladle, which also increased  
the number of graphitization nuclei and improved the  
mechanical properties. --S. K.

87

FUKLEV, V. A.

Blowing oxygen through foundry iron in multiple-bath forehearth.  
V. A. Fuklev, *Litovoe Proizvodstvo*, 1954, No. 6, 14-16.—Experiments are described in which the metal flowing from a cupola was blown with  $O_2$  as it was passing through a three-bath forehearth. Data are given on the changes in temp. and in C, Si, and Mn contents for various  $O_2$  blowing rates. Factors influencing refractory life are considered and practical hints on  $O_2$  blowing are given. A similar process is proposed for converting foundry iron into steel; in this case the forehearth has an additional (unblown) bath for desulphurisation.  
J. IRON STEEL INST. (R.U.C.)

of gov

~~ZNA~~ FUKLEV, V. A.

J4899\* Importance of Porosity in Cupola Melting. Znacho-  
le kopil'nika v vzgruzochnoi platke. (Gusain) V. A.  
Fuklev, *Litchnoe protshteno*, 1953, no. 12, Dec., p. 1775.

|| Proper use of this reservoir in maintaining surge capacity.  
Charge make-up and charging practice. Melting phenomena.  
Diagrams.

~~Q~~ ~~1977~~



FUKLEV, Valentin Andreyevich; KOGAN, S.M., redaktor; RAKHMATULLIN, F.,  
tekhnicheskly redaktor

[Oxygen blasting of white cast iron in the forehearth of a cupola  
furnace; practice of the "Tashsel'mash" and "Uzbeksel'mash" plants]  
Produvka belogo chuguna kislородом v kopil'nike vagranks; iz opyta  
zavoda "Tashsel'mash" i "Uzbeksel'mash". Tashkent, Gos. izd-vo  
Uzbekskoi SSR, 1956. 54 p. (MIRA 10:6)  
(Cast iron--Metallurgy) (Cupola furnaces)

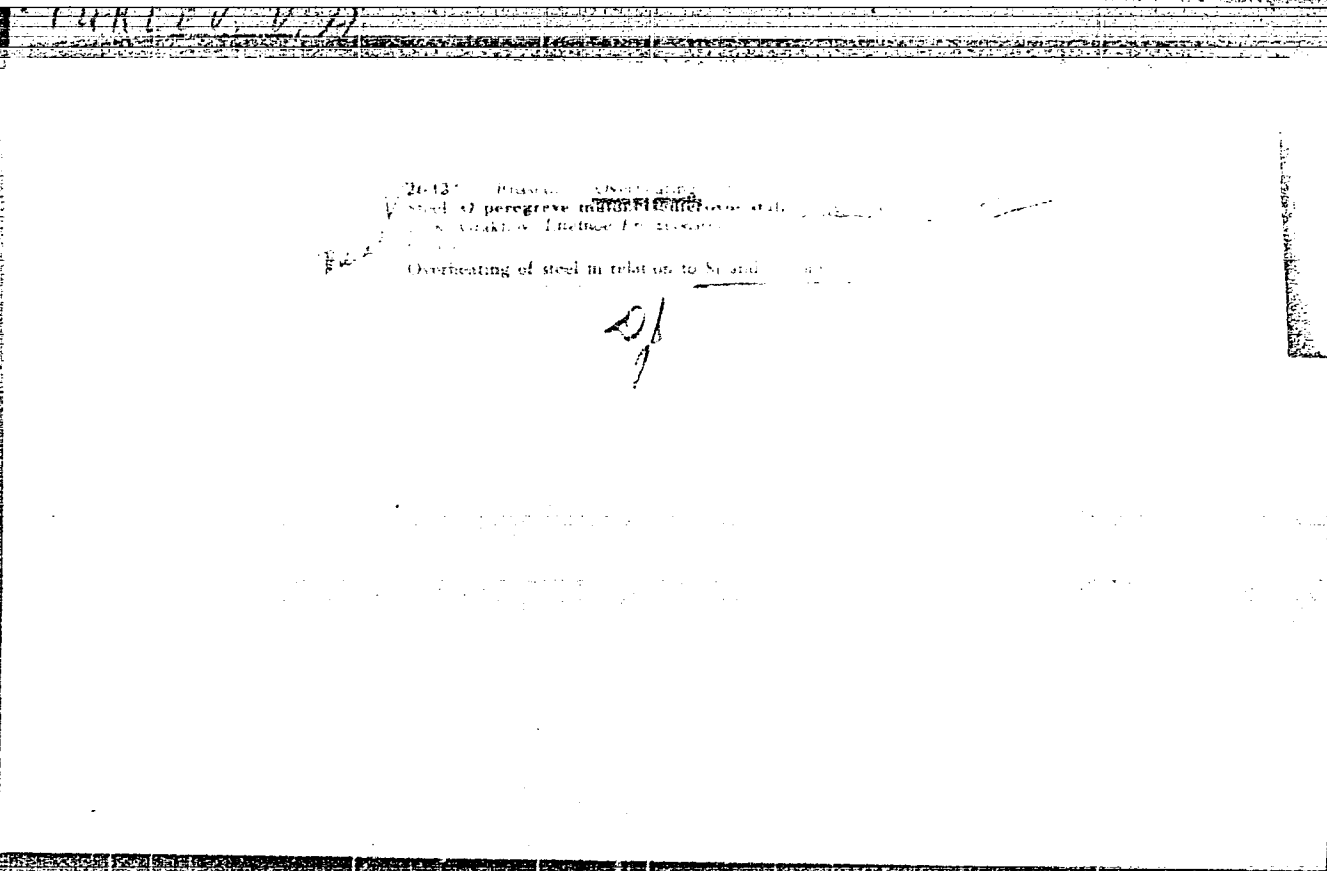
FUKLEV, V.A., kandidat tekhnicheskikh nauk.

Using removable tuyeres for feeding oxygen to the forehearth.

Lit. proizv. no.8:4-5 Ag '56.

(MLRA 9:10)

(Cupola furnaces)



SOV/137 59-2-2364

Translation from: Referativnyy zhurnal. Metallurgiya, 1959. Nr 2. p 20 (USSR)

AUTHOR: Fuklev, V. A.

TITLE: Reaction Heat of Oxidation of Some Elements During the Blowing of Oxygen or Air Through Molten Metal (Teplota reaktsii okisleniya nekotorykh elementov pri produvke zhidkogo metalla kislorodom ili vozdukhom)

PERIODICAL: Tr. Sredneaz. politekhn. in-ta, 1957. Nr 4. pp 201-215

ABSTRACT: Equations for the reaction heats of oxidation of Fe, Mn, Si, and C in relation to the temperature were developed according to data on the specific heats, heats of solution, and heats of phase transformations.  
I. T.

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18(3)

SOV/163-59-2-15/48

AUTHORS: Fuklev, V. A., Grakhov, L. K.

TITLE: On the Problem of Overheating of Steel in Side Blown Bessemerizing (K voprosu o peregreve stali pri malom bessemerovanii)

PERIODICAL: Nauchnyye doklady vysshey shkoly. Metallurgiya, 1959, Nr 2, pp 78-83 (USSR)

ABSTRACT: In the process mentioned in the title, the temperature rise due to oxidation of silicon is about 2 to 2 <sup>1</sup>/<sub>2</sub> times higher than the one caused by carbon combustion. This is explained by the fact that the silicon fully oxidizes in the liquid metal phase and emits its heat to the latter, whereas the carbon in the metal only partially oxidizes, and burns to CO<sub>2</sub> only outside the metal. Thus, the oxidation of Si is decisive for the temperature of the metal. The course of the gas temperature during the blowing of the side blown converter - shown in figures 1 and 2 - proves that the gas cannot cause an overheating of the tank. The authors advocate such overheating since it considerably shortens the blowing period (Fig 3), attaining a better utilization of the oxygen blown in. The habit of economizing ferrosilicon in practice is

Card 1/2

SOV/163-59-2-15/48  
On the Problem of Overheating of Steel in Side Blow Bessemerizing

criticized. In this case, the required temperature is only attained by the burn-up of iron, for which purpose 8 times more iron than silicon is necessary. Maximum efficiency is attained by high overheating, good utilization of the oxidation reactions of silicon and carbon, optimum utilization of the wind oxygen, and a minimum burn-up of iron. There are 3 figures and 4 references, 3 of which are Soviet.

ASSOCIATION: Sredneaziatskiy politekhnicheskiy institut  
(Soviet) Central Asia Polytechnic Institute)

SUBMITTED: August 28, 1958

Card 2/2

18(5)

SOV/128-59-6-8/25

AUTHOR: Grakhov, I.K., and Fuklev, V.A., Candidates of Technical Sciences

TITLE: Some Aspects of the Side-Blown Bessemer Process

PERIODICAL: Liteynoye Proizvodstvo, 1959, Nr 6, pp 20-22 (USSR)

ABSTRACT: Scientific studies have shown that Bessemer steel comes very close to or even surpasses with its properties the Siemens Martin steel and electric steel. This is indicated too by the considerable attention given to Bessemer steel during recent years. (The authors quote an article by S.E. Smith and J.E. Loy in "Blast Furnace and Steel Plant", March 1950). The specific specialties of the "baby Bessemer process" consist of blowing air at the surface of the converter or at an insignificant depth (but not from the bottom). The author compares the English experiments ("Journal Of Iron And Steel Institute", January and February 1947) and the Soviet experiments (Grakhov, I.K., Doctor thesis, 1955), both arriving at the same con-

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SOV/128-59-6-8/25

Some Aspects of the Side-Blown Bessemer Process

clusions about the "baby Bessemer process" with regard to the absorption of oxygen. The type of blowing is the basic factor of the baby Bessemer process. A similar role plays the intensity of the blowing method. This is especially the case during the start of the melting process when there is not yet a "boiling Process" in the converter. The results of the experiments are listed by means of 5 graphs. Conclusion: It is the intention of the whole process to create the conditions for an intensive oxydation of the carbon and for a boiling of the contents of the converter during the longest possible priod of time. (Remark of the editors office: The so-called "boiling" (caused by the oxydation of the carbon) shall not be regarded as an independent factor). There are 5 graphs, and 9 references, 7 of which are Soviet and 2 English

Card 2/2



FUKLEV, V.A.

Continuous metal blowing by oxygen in the trough. Izv.vys.ucheb.  
zav.; chern.met. no.7:60-67 '60. (MIRA 13:8)

1. Sredneaziatskiy politekhnicheskiy institut.  
(Open-hearth process)  
(Oxygen--Industrial applications)

FUKLEV, V. A.

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PHASE I BOOK EXPLOITATION

80V/5556

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 Mezhrvuzovskogo 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. Olinkov, Professor, Doctor of Technical Sciences, V. V. Kondakov, Professor, Doctor of Technical Sciences, V. A. Kudrin, Docent, Candidate of Technical Sciences, G. N. Oys, Professor, Doctor of Technical Sciences, and V. I. Yavovskiy, Professor, Doctor of Technical Sciences; Ed.: Ye. A. Boroko; 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.

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85

New [Developmmts] in the Theory (Cont.)

80V/5556

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

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New [Developments] in the Theory (Cont.)

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

TABLE OF CONTENTS:

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

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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  
metallurgicheskiy institut - Dnepropetrovsk Metallurgical Institute].

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