21(7)

AUTHORS: Koval'skiy, N. G., Podgornyy, I. M., Khvashchevskiy, S.

SOV/56-35-4-16/52

TITLE: The Energy of X-Ray Radiation Emitted by a Strong Pulsed Discharge in Hydrogen (Energiya rentgenovskogo izlucheniya, ispuskayemogo moshchnym impul'snym razryadom v vodorode)

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1958, Vol 35, Nr 4, pp 940 - 946 (USSR)

ABSTRACT: Already in 1953, after the discovery of hard X-ray radiation accompanying an extensive discharge in hydrogen or deuterium, tests were carried out for the purpose of estimating the limits of this energy spectrum. For this purpose the filtering method, the method of measuring the length of recoil electron tracks in thick nuclear emulsions, the method of the shielded recorder, and the method of the nuclear photoeffect (reaction (γ,n) on Be) were employed. In the present paper the authors employed the method of the track length of recoil electrons in a cloud

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825620006-2"

chamber. For the purpose of determining the energy of X-ray quanta according to electron energy it is necessary to know whether the electrons originate from a photo- or a Compton effect. Conditions are illustrated by figure 1 in form of a diagram. Within the range of 200 - 400 keV the photoeffect in air may be neglected as against the Compton effect, but this is not the case with the formation of photoelectrons on the glass walls of the chamber. For the production of the pulsed discharge a battery consisting of 12 condensers of the type IM-3/50 (36 μF) was used; the discharge took place in a porcelain tube of 1 m length and 17 cm diameter; hydrogen pressure in the tube amounted to 6.10^{-2} torr. With a voltage of 40 kV (200 kA) on the condenser battery, this pressure permitted maximum discharge amperage. Figure 2 shows a block scheme of the test device which is described with all details. Measuring results are shown by 3 diagrams (Figs 4-6):Figure 4 shows the energy distribution

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of the recoil electrons which were formed under the influence of X-ray radiation; figure 5 shows the energy distribution of the electrons formed by X-ray radiation in the tube for U_{max} = 240 kV, figure 6 shows the same for U_{max}=285 kV. The following summary of investigation results is given : 1) The times of the formation of neutron- and X-ray-radiation in the discharge process coincide. 2) The deuterons responsible for the occurrence of neutrons in deuterium discharges are accelerated in the direction of the cathode; the intensity maximum of X-ray and neutron radiation is in the zone near the anode. 3) X-ray- and neutron radiation is observed in one and the same zone of the primary gas pressure in the discharge tube. 4) By estimation of the maximum deuteron energy a value of 250 keV is obtained; this value is in good qualitative agreement (within the limits of measuring errors) with the energy limit of the X-ray spectrum (320 kV). The authors thank L.A.Artsimovich

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and S.Yu. Luk'yanov for valuable discussions, and T.L.Asatiani for his help in preparing the cloud chamber. There are 6 figures and 8 references, 4 of which are Soviet.

SUBMITTED: May 27, 1958

9(3)
AUTHORS: Podgornyy, I. M., Koval'skiy, N. G., Pal'chikov, V. Ye. SOV/20-123-5-15/50

TITLE: High Power Pulse Discharge Electrons Generating Hard X-Radiation (Elektrony vyzyvayushchiye zhestkoye rentgenovskoye izlucheniye moshchnykh impul'snykh razryadov)

PERIODICAL: Doklady Akademii nauk SSSR, 1958, Vol 123, Nr 5, pp 825-827 (USSR)

ABSTRACT: The present paper reports on the energy of electrons generating hard x-radiation. . The discharge was produced in a porcelain chamber of 175 mm diameter and 1000 mm height. The discharge battery consisted of a condenser battery of 36 μF capacity. The experiments were carried out in hydrogen at an initial pressure of 6.10^{-2} torr which corresponds to the maximum yield of hard X-ray quanta. The presence of X-ray pulses was controlled by a scintillation recording system with pulse oscillograph. This apparatus is described in short. In order to find the dispersion curve of the spectrograph, the electron trajectories had to be constructed graphically. It is not difficult to find the maximum value of the energy which had to be acquired by the electrons when moving along the discharge axis. The experimental data available proved

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that the maximum energy of the electrons amounts to 300 kev. A beam of 100 kev electrons was used for the control of the calculated electron trajectories. Thus, the following facts were proved by direct experiments: The electrons which cause the hard X-radiation in a powerful pulse discharge in hydrogen are accelerated along the axis of the discharge chamber. The recorded maximum energy of the electrons amounted to 300±20 kev which agrees well with the results obtained by measurements of the maximum energy of the X-ray spectrum. There are 1 figure and 4 Soviet references.

PRESENTED: July 31, 1958, by L. A. Artsimovich, Academician

SUBMITTED: July 25, 1958

24(3)120 66702

SOV/109-4-8-22/35

AUTHORS: Granovskiy, V.L., Luk'yanov, S.Yu., Spivak, G.V. and Sirotenko, I.G.

TITLE: Report on the Second All-Union Conference on Gas Electronics

PERIODICAL: Radiotekhnika i elektronika, 1959, Vol 4, Nr 8, pp 1339 - 1358 (USSR)

KovaLisKiy, N.G.

I.M. Podgornyy and N.G. Koval'skiy - "New Data on X-ray Radiation During Pulse Discharges"
V.A. Khrabrov and M.M. Sulkovskaya dealt with the investigation of the neutron radiation in powerful gas discharges in chambers with conducting walls.
N.A. Borzunov et al. - "Investigation of the Gas Discharge in a Conical Chamber".
S.M. Osovets et al. - "A Turn of Plasma in Transverse Magnetic Field".
I.G. Kesayev "Data on the Division of a Cathode Spot on Mercury in a Low-pressure Arc" (see p 1289 of the journal).
A.E. Robson (England) - "A New Theory of the Cathode Spot" (see p 1295 of the journal).
L.N. Dreuzova - "Positive Column in a Hydrogen Discharge With Stationary and P lse Loads".
I.G. Nekrashevich and A.A. Labud - "Current Distribution on the Surface of Elec r es in Electric Pulse Discharges".
L.S. Eyg - "Some Prop ties of Gas Discharges in Low-voltage in Halogen Counters".

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G.Y. Glotova and V.L. Granovskiy - "Comparison of the Initial De-ionisation in the Isotopes of Hydrogen (H and D)".
L.A. Akol'zina communicated some results on the pre-breakdown current pulses at low pressures.
M.Ya. Vasil'yeva and A.A. Zaytsev - "Charge-density oscillation Waves in Cylindrical Plasma".
L. Pekárek of Czechoslovakia communicated some information on the wave-like phenomena in gas-discharge plasma.
B.G. Brezhnev dealt with the problem of the determination of the energy of fast ions in pulse discharges.
B.B. Kadomtsev - "Convection Instability of a Plasma String".
S.I. Braginskiy and V.D. Shafranov - "Theory of a High-temperature Plasma String".
The fifth section was presided over by N.A. Kaptsov and dealt with high-frequency currents in gases. The following papers were read:
V.Ye. Golant - "Formation of Ultra-high Frequency Pulse Discharges in Inert Gases".

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G.I. Pateyuk - "Influence of the Boundary Conditions on the Formation and Maintenance of High-frequency Discharges".
P.S. Bulkin et al. - "Investigation of a Self-maintained Ultra-high Frequency Pulse Discharge and the Process of its Development".
G.M. Zastenker and G.S. Solntsev - "Some Results of the Investigation of the Formation of Low-pressure High-frequency Discharges".
G. Margenau (USA) - "Conductivity of Weakly Ionised Plasma".
A.A. Kuzovnikov - "The Conditions of Transition From High-frequency Corona Discharge at Atmospheric Pressures".
V.Ye. Golant - "The relationship Between the Characteristics of the Ultra-high Frequency Current and the Direct Current in Gas Discharges".
B.B. Lazov'yer analysed the conductivity of the disintegrating plasma in the window of a resonance discharge tube.
S.M. Levitskiy and I.P. Shashurin dealt with the applicability of the probe method to high-frequency discharges (see p 1238 of the journal).

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The paper by V. Ye. Mitsuk et al. was devoted to the investigation of the ultra-high frequency plasma by means of the Stark effect.
G.S. Solntsev et al. dealt with the problem of electric fields in a high-frequency discharge at low pressures.
Ye. Bedarau of Rumania read a paper entitled "High-frequency Discharges in Methane".
The work of the sixth section was devoted to the problems of plasma and its radiation; the section was presided over by V.A. Fabrikant. The following papers were read:
Yu.M. Kagan - "New Techniques in the Probe Methods of Plasma Investigation".
V.I. Drozdov - "Osc[illegible]ographic Measurements in Plasma".
V.A. Simonov and [illegible] - "Investigation of the Movement of Plas[illegible] of a Mass Spectrometer of [illegible]

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S/056/60/038/005/012/050
B006/B070

24.2120
26.2310

AUTHORS: Koval'skiy, N. G., Podgornyy, I. M., Stepanenko, M. M.

TITLE: Investigation of Fast Electrons in Strong Pulse Discharges

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1960, Vol. 38, No. 5, pp. 1439-1445

TEXT: At first, the authors describe the experimental arrangement and the method of measurement. The apparatus used was essentially similar to the pulse generator used for earlier investigations. The condenser bank consisted of 12 condensers of the type IIM-3/50 (IM-3/50) with a total capacity of 36 μF. The discharge chamber was of porcelain, and had a length of 1 m and a diameter of 17 cm. During one discharge, the condenser bank supplied up to 45 kv. The discharge chamber was evacuated after each discharge and filled anew with gas (hydrogen, deuterium, or spectrally pure inert gases). The authors (partly in collaboration with others) had observed in earlier studies (Refs. 1-4) the appearance of a hard X-radiation and an acceleration of electrons (up to (300±20)kev for an initial discharge voltage of 40 kv) while investigating controlled

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thermonuclear reactions. Following these studies, the authors investigated the dependence of the maximum electron energy on the parameters of the discharge. The dependence of the limiting energy in the electron spectrum on the pressure of hydrogen in the discharge chamber (in the range $4.10^{-3} \leq p_0 \leq 6.10^{-1}$ torr) was determined by means of a magnetic spectrograph, and is shown in Fig. 1. In the range $2.10^{-2} < p_0 < 1.3 \cdot 10^{-1}$ torr the curve shows a high maximum; the peak value of the electron energy is 295kev. The pressure dependence of the electron energies is analogous to the pressure dependence of neutron yield in discharges in deuterium, but deviates somewhat from the pressure dependence of the intensity of the hard X-radiation. The dependence of the limiting electron energy (E_0) on the initial voltage U_0 was also investigated (for $p_0 = 7.10^{-2}$torr, in H_2). Fig. 2 shows $E_0(U_0)$ in the range $30 < U_0 \leq 45$ kv. E_0 steeply rises with U_0 up to $U_0 = 40$ kv, and then falls. Further, E_0 was determined as a function of the strength of an external magnetic field in the range $0 < H < 150$ oe (Fig. 3). E_0 falls from 300 to 150 kev when the magnetic field increases from 0 to 30 oe; with a further increase of the field, E_0 becomes less

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Investigation of Fast Electrons in Strong Pulse Discharges

S/056/60/038/005/012/050
B006/B070

than 50 kev. The radial distribution of the fast electrons accelerated along the discharge axis was studied by means of a special collimator schematically shown in Fig. 4. Fig. 5 shows the radial distributions determined for $p_0 = 7.10^{-2}$ torr and three different thicknesses of the Al filter (30, 54, and 75μ). Electron energies of 80, 110, and 140 kev, respectively, correspond to these thicknesses. The half width of the distribution curve decreases with increasing thickness of the filter. This shows that the non-equilibrium electron group is accelerated in the immediate neighborhood of the axis. Numerical results of the investigations of fast electrons in H_2, D_2, and the inert gases are collected in a table. The investigations led to the conclusion that in high-power pulse discharges there exist two groups of non-equilibrium electrons; the first group having energies of up to 100 kev is accelerated by the electric fields occurring with the pinch effect, while the second group, which has energies of up to 300 kev, is accelerated in the local electric fields resulting from instabilities of the plasma column. The authors thank S. Yu. Luk'yanov for discussions of the results. There are 5 figures, 1 table, and 8 references: 7 Soviet and 1 Italian.

Card 3/4

KOVAL'SKIY, N. G., Cand Phys-Math Sci (diss) -- "High-speed electrons causing hard X-ray irradiations of large impulse discharges". Moscow, 1960. 13 pp (Moscow State U im M. V. Lomonosov, Sci Res Inst of Nuclear Phys), 130 copies (KL, No 14, 1960, 126)

GORELIK, L.L.; KOVAL'SKIY, N.G.; PODGORNYY, I.M.; SINITSYN, V.V.

Study of the escape of plasma through the magnetic gaps of traps with a field intsenifying toward the periphery. Dokl. AN SSSR 147 no.3:576-579 N '62. (MIRA 15:12)

1. Predstavleno akademikom L.A. Artsimovichem.
(Plasma (Ionized gases)) (Magnetic fields)

ACCESSION NR: AT4025318 S/0000/63/000/000/0270/0273

AUTHORS: Gorelik, L. L.; Koval'skiy, N. G.; Podgorny*y, I. M.; Sinitsy*n, V. V.

TITLE: Investigation of plasma in an "Orekh" magnetic trap with the aid of special bolometers

SOURCE: Diagnostika plazmy* (Plasma diagnostics); sb. statey. Moscow, Gosatomizdat, 1963, 270-273

TOPIC TAGS: plasma magnetic field, magnetic mirror, plasma confinement, bolometer, thin film

ABSTRACT: The spatial and time distributions of heat flow from the wall of a magnetic-trap vacuum chamber with a field that increases towards the periphery were investigated to ascertain the influence of the region near the point of zero field in the escape of charged particles at low plasma concentrations, and also the character of

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ACCESSION NR: AT4025318

time variation of the width of an annular magnetic slot. Several specially developed bismuth bolometers were used to measure the heat flow from an "Orekh" magnetic trap. The bolometer constructions are described. Measurements of the magnetic gap have shown that the width of the gap is larger at small values of the magnetic field, and the experimentally observed broadening of the magnetic gap can be sufficiently well explained by classical diffusion. The escape of plasma particles was measured by introducing a metallic cylinder into the trap and measuring the heat escaping through the magnetic gaps with germanium borometers. In the case of the first configuration of the magnetic field in the trap it was found that the particle escape from the system is due to loss of the adiabatic invariant on entering the region of weak magnetic field near the center, whereas in the case of the second configuration the plasma is essentially concentrated in the region of the weak magnetic field near the center. Thin film bolometers were also used to measure the escape of heat from the trap for plasma of high density ($\sim 10^{14}$ cm^{-3})

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ACCESSION NR: AT4025318

and low density (10^{12} cm^{-3}). The escape times were found to be 60--70 and 150--200 microseconds, respectively. The bolometers described can be used to solve various problems in plasma physics. Orig. art. has: 2 figures.

ASSOCIATION: None

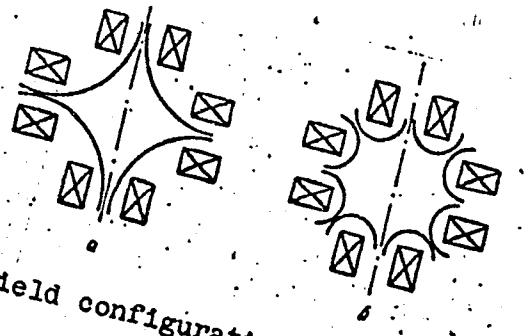
SUBMITTED: 190ct63 DATE ACQ: 16Apr64 ENCL: 02

SUB CODE: ME NR REF SOV: 004 OTHER: 000

Card 3/5

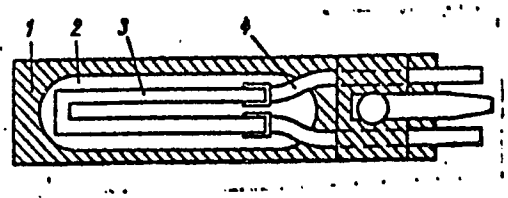
ACCESSION NR: AT4025318

ENCLOSURE: 01



Magnetic field configurations in the 'Orekhi' trap

Card 4/5



Construction of bismuth bolometer:

1 - frame, 2 - oxidized-aluminum foil, 3 - thermoresistance of lead-bismuth alloy, 4 - silver leads

Card 5/5

ACC NR: AP6036031 SOURCE CODE: UR/0057/66/036/011/1976/1983

AUTHOR: Koval'skiy, N. G.; Sumarokov, V. N.

ORG: none

TITLE: Investigation of plasma in a magnetic trap having opposed magnetic fields

SOURCE: Zhurnal tekhnicheskoy fiziki, v. 36, no. 11, 1966, 1976-1983

TOPIC TAGS: plasma magnetic field, plasma velocity, plasma, magnetic field, magnetic trap, plasma lifetime, collision ionized plasma, hydrogen plasma, magnetic field plasma effect, plasma physics, plasma research, plasma structure

ABSTRACT: The behavior of plasma in a trap having opposed fields was studied for a case of when the typical time period for collision processes in (ion-ion coulomb collisions and proton charge exchanges by neutral hydrogen atoms) is only a few milliseconds. A plasma bunch was injected into the trap through a ring diaphragm set on the axis of the system in the region of the magnetic gap.

Card 1/2 UDC: 533.9

ACC NR: AP6036031

The velocity of the bunch was $1-2 \cdot 10^7$ cm/sec, and the total energy of the plasma injected into the trap was 0.3 j. Experiments showed that at the initial moment the plasma fills the central region of the trap near the point of zero magnetic field intensity. At a field intensity of 3000 oe, the concentration of plasma was $\sim 3 \cdot 10^{11}$ cm^{-3}. As a result of special efforts the concentration of impurity atoms and neutral hydrogen in the chamber did not exceed $5 \cdot 10^9$ cm^{-3}. It is shown that protons leave the trap in the region of the magnetic ring gap with an average transverse energy of $\sim$50 ev. This demonstrates the effectiveness of the conversion of directed plasma bunch energy into a Larmor ion rotation in interaction with opposed magnetic fields. The containment time of particles with a given average energy exceeds by one order the time of flight through the region affected by the magnetic field. Plasma lifetime was found to be strongly affected by the intensity of the magnetic field. Orig. art. has: 2 tables and 4 figures. [Authors' abstract] [SP]

SUB CODE: 20/SUBM DATE: 04Dec65/ORIG REF: 002/OTH REF: 006/

Card 2/2

L 45807-66 EWT(1)/T/EWP(k)

ACC NR: AR6023300 SOURCE CODE: UR/0058/66/000/003/H070/H070

AUTHOR: Koval'skiy, N. I.

66
B

TITLE: Ultrasonic field of plane radiators

SOURCE: Ref zh. Fizika, Abs. 3Zh487

REF. SOURCE: Tr. 1-y Mezhvuz. nauchn. konferentsii po primeneniyu molekul. akust. k issled. veshchestva i v nar. kh-ve. Tashkent, 1964, 277-288

TOPIC TAGS: ultrasonic field, ultrasonic wave propagation, standing wave, traveling wave, pressure, ultrasonic velocity

ABSTRACT: Depending on the number and standing waves can arise in the vessel. The formation of standing waves occurs not only upon reflection from the partition, but also in the case when head-on propagation of radiation from two sources. Expressions are derived for the sound pressure and the vibrational velocity of the field of plane waves, produced by radiators built into the walls of a cubic vessel, in the case of head-on and transverse radiation directions. Cases when there are 1, 2, 3, 4, and 6 radiators are considered. The calculations were made without account of the in-

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ACC NR: AR6023300

O

fluence of the side walls, on the basis of a solution of the one-dimensional wave equation. The radiators are assumed to be identical and to operate in phase. The positions of the minima and maxima of the energy density are obtained for the cases under consideration. With decreasing distance between the radiator and reflector, or between opposing radiators, the volume of the irradiated liquid decreases, and the energy density in the vessel increases and may reach large values. Waves reflected from the lateral walls of the vessel increase the minimum values of the energy, while the growing friction and the associated energy losses decrease them. A. Shpil'kin, [Translation of abstract]

SUB CODE: 20

LC

Card 2/2

GAFUROV, A.T.; AYKHODZHAYEV, T.T.; ABDURASHITOV, K.; TURSUNOV, S.; KOVAL'SKIY, N.I.; MULLOKANDOV, R.N.; REZNIK, G.P.; YAKUBOV, L.M.

Change of certain characteristics of cotton and kenaf under the action of ultrasound. Prim. ul'traakust. k issl. veshch. no.14: 121-127 '61. (MIRA 14:12)

(Ambary hemp) (Cotton)
(Ultrasonic waves--Industrial applications)

3419 KOVAL'SKIY, N.N.

Apparaty i. oborudovaniye dlya okrasochn ykh rabot. m., 1954. 24s s. ill., 1 l. chert. 20sm. (M-vo stankostroit. i. instrum. Prom-sti SSSR Tsentr byruo tekhn informatsii. Obmen opytom v stankostroit i instrum. Prom-sti. No. 16). 1.500 ekz. Bespl - sost. ukazan NA oborote tit. l. (54.15028 ZH) 621.795.3

KOVAL'SKIY, N.N.

USSR/ Engineering - Assembly conveyers

Card 1/1 Pub. 103 - 1/22

Authors : Gavrilyuk, A. M., and Koval'skiy, N. N.

Title : Technology for painting machine-tools in a continuous mass production

Periodical : Stan. i instr. 26, 6, 1-4, June 1955

Abstract : The engineering and technical personnel of the milling machine factory in Gorki, designed a pulsating-type conveyer for the assembly and painting of machine components during continuous mass production. A description of the operation and construction of the above mentioned conveyer is given, and the chemical composition of dyes and coatings, is specified. Drawings; illustrations.

Institution : .....

Submitted : .....

KOVAL'SKIY, N.N.

KOVAL'SKIY, N.N.

Mechanizing the painting operations in the machine-tool industry.
Stan. i instr. 28 no.12:30-32 D '57. (MIRA 10:12)
(Paint machinery)

KOVALISHIN, A.A.

ANTOSHIN, Ye.V.

-25(5) p3 PHASE I BOOK EXPLOITATION SOV/1361

Spravochnik mekhanika mashinostroitel'nogo zavoda v dvukh tomakh.
t. 2: Tekhnologiya remonta (Handbook for Mechanics of Machine-building Plants in Two Volumes. Vol. 2: Technology of Repair Operations) Moscow, Mashgiz, 1958. 916, 1059 p. 40,000 copies printed.

Resp. Ed.: Ya.S. Borisov, Engineer; Ed.: K.O. Tsypin, Engineer; Tech. Ed.: I.F. Sokolova; Ed. of Set: Ya.S. Borisov, Engineer; A.F. Vladimirskiy, Doctor of Technical Sciences, and A.A. Koskin, Candidate of Technical Sciences; Managing Ed. for Reference Literature (Mashgiz): V.I. Krylov, Engineer.

PURPOSE: This handbook is intended for personnel responsible for repair and maintenance operations in a machinery-manufacturing plant.

COVERAGE: The handbook contains information pertinent to the organization of repair and maintenance operations, design-preparation of maintenance work, and economics of maintenance. Information on scientific research organizations and plants participating in preparation of this volume is included in the coverage of Volume I (SOV/1359). There are no references. Basic topics covered include reconditioning and making of parts in maintenance operations; metal-working, bonding, and pipe-fitting; finishing operations involved in maintenance work; checking parts for precision; basic bench and assembly work; maintenance of power equipment; and maintenance of foundations.

Card 16/26

KOVAL'SKIY, N.N.

Equipment for finishing operations used in the Czechoslovakian machinery industry. Biul.tekh.-ekon.inform. no.4:76-79 '59. (MIRA 12:7)

(Czechoslovakia--Machinery industry)

KOVAL'SKIY, N.N.

Polishing equipment used in finishing operations in machine manufacturing. Lakokras.mat.i ikh prim. no.5:49-52 '60. (MIRA 13:11)
(Machinery--Painting) (Grinding and polishing)

KOVAL'SKIY, N.N.

Alkyd-styrene paint materials and prospects for their use in machinery manufacturing. Lakokras.mat.i ikh prim. no.5:78-79 '60.
(MIRA 13:11)

(Machinery--Painting)

KOVAL'SKIY, N.N.

Painting machine tools. Stan.i instr. 31 no.3:26-28
Mr '60. (MIRA 13:6)
(Painting, Industrial)

KOVAL'SKIY, N.N.; PADEYSKIY, V.N.

Use of lacquers and paints in corrosion control. Lakokras.mat.i ikh prim. no.1:60-67 '61. (MIRA 14:4)
(Corrosion and anticorrosives) (Paint materials)

KOVAL'SKIY, N.N.

Mechanization and automatipn of processes for applying of corrosive coatings in the machinery industry. Mashinostroitel' no.5:12-14 My '61. (MIRA 14:5)
(Protective coatings) (Automation)

RABKIN, Yefim Borisovich, prof.; SOKOLOVA, Yelena Georgiyevna, kand. med. nauk; FRID, Yudol'f Vladimirovich, kand. tekhn. nauk; KOVAL'SKIY, Nikolay Nikolayevich, inzh.-khim.; CHERNIGOVSKIY, V.N., akademik, red.; KARPOVA, N.L., red.

[Aid for efficient color schemes; with colorimetrical index of samples] Rukovodstvo po ratsional'nomu tsvetovomu oformleniiu; s naborom kolorimetrirovannykh obraztsov tsvetov. Moskva, Izd-vo "Transport," 1964. 46 p. (MIRA 17:4)

1. Predsedatel' komissii po fiziologicheskoy optike pri Institute fiziologii im. I.P.Pavlova AN SSSR (for Chernigovskiy).

KOVAL'SKIY, N.N., inzh.

Automation and mechanization of the painting of machines.
Vest.mashinostr. 45 no.10:52-53 O '65.
(MIRA 18:11)

ASHURKOV, L.M., spets. mashinstr.; BLIZHEVSKIY, L.A., spets. mashinst.; VASIL'YEVA, Ye.N., spets. mashinstr.; KOVAL'SKIY, N.N., spets. mashinstr.; MOKIN, M.I., spets. mashinstr.; SMIRNOV, V.P., spets. mashinstr.; BOBKOV, L.S., retsenzent; VETUKHNOVSKIY, Z.B., retsenzent; MAKSIMYAK, G.P., retsenzent; MIKHAYLOVSKIY, V.I., retsenzent; SHVYRYAYEV, G.K., retsenzent; VALETOV, V.V., red.; RADAYEVA, Z.A., red. izd-va; TIKHANOV, A.Ya., tekhn. red.

[Norms for the consumption of materials in the manufacture of machinery; a handbook] Normirovanie raskhoda materialov v mashinostroenii; spravochnik. Pod red. V.V.Valetova. Moskva, Gos. nauchno-tekhn.izd-vo mashinostroit.lit-ry. Vol.2. 1961. 479 p. (MIRA 15:2)

(Machinery industry)

KOVAL'SKIY, N.V. [Koval's'kyi, M.V.]; KREMENTULO, Yu.V.; REUTSKIY, V.Ye. [Reuts'kyi, V.IU.]; SIGOV, B.A. [Sihov, B.O.]

Digital program control system for a milling machine with a step-wise power motor. Avtomatyka no.2:81-83 '60.
(MIRA 13:7)

1. Institut elektrotekhniki AN USSR.
(Milling machines) (Automatic control)

KOVAL'SKIY, N.V. [Koval's'kyi, M.V.] (Kiyev)

Network for coincidence of the presence or absence of two zero output potentials. Avtomatyka 8 no.1:58 '63. (MIRA 16:3)
(Electronic computers--Circuits) (Pulse circuits)

KOVAL'SKIY, N.V. [Koval's'kyi, M.V.] (Kiyev); REUTSKIY, V.Ye. [Reuts'kyi, V.IU.] (Kiyev)

Concerning the recording and reproduction of a bipolar digit-pulse signal from one track of a magnetic tape. Avtomatyka no. 5:56-59 '60. (MIRA 14:4)

(Magnetic recorders and recording)

KOVAL'SKIY, M.V

27586
S/102/61/000/001/004/005
D274/D303

9,7910 (1024)

AUTHORS: Reuts'kyy, V.Yu. and Koval's'kyy, M.V. (Kyyiv)

TITLE: Compact recording and reproduction of digital pulse signals on standard magnetic tape

PERIODICAL: Avtomatyka, no. 1, 1961, 65-66

TEXT: A method of recording and reading digital pulses is described which permits accommodating 8 separate recording channels on two tracks of standard magnetic tape of 6.35 mm width. This is important for automatic control of machine tools (cutters, etc.) which involves three controlled parameters, requiring three tracks (whereas standard magnetic tape functions properly with two tracks only). The method consists in orthogonal (cross-wise) recording of the program signal of two parameters on one track, and on the other - the recording of the third-parameter signal and two channels for command signals. Tests have shown that the signal of the second (noisy)

Card 1/2

Compact recording...

channel does not exceed the noise level of the tape. Thus, the dual-track, orthogonal, bi-polar, recording on standard magnetic tape can be also used as an intermediate (temporary) memory in the digital control of machine tools and other systems. In the tests, standard heads of the tape-recorder D-9 were used. The grooves of the magnetic heads were reduced to 4 microns. The principle of orthogonal recording consists in making the grooves perpendicular to each other. The first magnetic head records the program signal and sign (of signal) of one parameter, and the second head records the signal of the second parameter on the same track as the first head. In reading the signals, the first head reads both (first and second) signals, but, as the ratio between the amplitudes is very high, the signal of the secondary parameter does not exceed the noise level of the tape. This ratio is illustrated by a figure which shows that the ratio of the area of the groove of the first head to the area common to both grooves (of both heads) is 750. The second track is used in an analogous manner. There are 2 figures and 2 Soviet-bloc references.

SUBMITTED: June 17, 1960

Card 2/2

KOVAL'SKIY, N.V. [Koval's'kyi, M.V.] (Kiyev); REUTSKIY, V.Ye. [Reuts'kyi, V.IU.] (Kiyev); SIGOV, B.A. [Sihov, B.O.] (Kiyev)

Reversive ring-type commutators. Avtomatyka no.1:74-78 '62. (MIRA 15:2)

(Switching theory)(Electric relays)

KOVAL'SKIY, Nikolay Vladimirovich; KREMENTULO, Yuriy Vasil'yevich; REUTSKIY, Vadim Yefimovich; SIGOV, Boris Alekseyevich; IVAKHNENKO, A.G., red.; KOVAL'CHUK, A.V., red.; GUSAROV, K.F., tekhn. red.

[Numerical programmed control] TSifrovoe programmnoe upravlenie [By] N.V.Koval'skii i dr. Pod red. A.G.Ivakhnenko. Kiev, Gos. izd-vo tekhn. lit-ry USSR, 1962. 124 p. (MIRA 15:3)

1. Chlen-korrespondent Akademii nauk USSR (for Ivakhnenko).
(Machine tools--Numerical control)

KOVAL'SKIY, P.A., prof., doktor biolog. nauk; SOLOVEY, A.S., red.; FEDOTOVA, A.F., tekhn. red.

[Specialized histology of domestic animals, with the elements of embryology] Chastnaia gistologiia domashnikh zhivotnykh s osnovami embriologii. Moskva, Gos. izd-vo sel'khoz. lit-ry, 1957. 271 p.
(Veterinary histology) (Veterinary embryology) (MIRA 11:7)

KOVALSKIY P. A.

KOWALSKIJ, P.; GLUSCHTSCHENKO, G.

On nerve structures of the periosteum. Acta Morph. Acad. Sci. Hung. 11 no.2:167-178 '62.

1. Institut fur Histologie, Landwirtschaftliche Hochschule, Bjelaja Cerkowj, UdSSSR (Direktor: Prof. P. Kowalskij)

(PERIOSTEUM innervation)

KOVAL'SKIY, P.A.

"Practical work in histology and embryology" by Z.S.Katsnel'son, and I.D.Rikhter. Reviewed by P.A.Koval'skii. Nauch.dokl.vys. shkoly; biol.nauki no.4:208-209 '62. (MIRA 15:10)
(HISTOLOGY--STUDY AND TEACHING)
(EMBRYOLOGY--STUDY AND TEACHING)
(KATSNEL'SON, Z.S.)(RIKHTER,I.D.)

IVANOV, Ivan Filippovich, prof.; KOVAL'SKIY, Pavel Alekseyevich, prof.; BYRDINA, A.S., red.; DEYEVA, V.M., tekhn. red.

[Histology and the principles of embryology of domestic animals] Gistologiia s osnovami embriologii domashnikh zhivotnykh. Moskva, Sel'khozizdat, 1962. 678 p. (MIRA 16:6)
(Histology) (Veterinary embryology)

KOVAL'SKIY, P.F.

BEZBORODOVA, G.B.; GOLOVCHENKO, B.A.; KOVAL'SKIY, P.F.; NECHIPORENKO, Yu.I.; RUDNITSKIY, A., redaktor; GOLOVCHENKO, G., tekhnicheskiy redaktor.

[Dump trucks] Avtomobili-samosvaly. Kiev, Gos. izd-vo tekhn. lit-ry USSR, 1953. 129 p. (MLRA 8:2)
(Dump trucks)

KOVAL'SKIY, P.F. [Koval's'kyi, P.F.]

Put work achievements of inventors and efficiency promoters into practice. Mekh. sil'. hosp. 9 no.2:1-3 F '58. (MIRA 11:3)

1.Golovniy inzhener po vinakhidnitstvu Ministerstva sil's'kogo gospodarstva URSR.
(Agricultural machinery)

KOVAL'SKIY, P.F. [Koval's'kyi, P.F.]

Ukrainian inventors and efficiency promoters are striving for higher labor productivity. Mekh. sil'. hosp. 11 no.5:12-13 My '60. (MIRA 14:3)

1. Glavnyy inzh. Ministerstva sel'skogo khozyaystva USSR po izobretatel'stvu i ratsionalizatsii.

(Ukraine--Agriculture--Labor productivity)

KOVAL'SKIY, P.F. [Koval'skyi, P.F.]

Made by skillful rural workers. Mekh. sil'. hosp. 14 no.5:
14-16 My '63. (MIRA 16:10)

1. Nachal'nik otdela izobretatel'stva i ratsionalizatsii
Ukrainskogo respublikanskogo ob"yedineniya "Ukrsil' gosptekhnika."

30098
S/057/61/031/011/013/019
B125/B102

9.4230 (1532)
26.7331

AUTHORS: Volodichev, N. N., Grishin, V. K., Koval'skiy, S., Lobanov, Yu. N., and Savenko, I. A.

TITLE: The magnetic-field characteristics of a strongly focusing accelerator with spiral sectors

PERIODICAL: Zhurnal tekhnicheskoy fiziki, v. 31, no. 11, 1961, 1350-1357

TEXT: The authors' experimental study of the possibility of generating a field of the type

$$H_z|_{z=0} = H_0\left(\frac{R}{R_0}\right)^k F\left(N\theta - N\operatorname{tg}\xi \ln\frac{R}{R_0}\right),$$
$$H_R|_{z=0} = H_\theta|_{z=0} = 0, \qquad (2)$$

by means of spiral sectors had the following aims: Guarantee of a radial dependence of the field $\langle H_z \rangle = H_0(R/R_0)^k$, study of the modulation frequency F, of procedures for its correction and of the possibility of determining a sufficiently high modulation coefficient $A \simeq 2$. In the arrangement described, a magnetic three-sector element modulates part of

Card 1/8-1

The magnetic-field...

the magnetic system of an accelerator with spiral sectors. This device had the parameters $k = 9$, $H_{min} = 11$ oe, $H_{max} = 300$ oe, $R_{min} = 45$ cm, $R_{max} = 65$ cm, $\xi = 65^{\circ}$, $C = 2$, $N = 10$, $\theta_s = 45^{\circ}$, $\theta_p = 14^{\circ}$. Fig. 1 shows shape and dimensions of a sector. Magnetic measurements were made by a method based on the galvanomagnetic Hall effect. An n-type Ge crystal served as pickup for the Hall electromotive force. Fig. 4 shows the experimentally found azimuthal distribution of the field for a fixed value of the radius and also the sinusoidal line of the period $\theta_p + \theta_b$ which is equal to the period of the magnetic system. For $R = \text{const}$, the azimuthal distribution can be represented as $H(\theta) = H(\theta_o)(1 + A \sin\frac{2\pi\theta}{\theta_p + \theta_b})$.

According to these experimental data, the amplitude $A = \frac{H(\theta)_{max} - H(\theta)_{min}}{H(\theta)_{max} + H(\theta)_{min}}$ was equal to 0.2. Further experimental results are given by Figs. 5 - 8. The compensating field consists of the fields from the compensating coils wound on the lateral surfaces of the two

Card 2/4

The magnetic-field...

neighboring sectors. By investigation of the simulated magnetic field, the law of the distribution of the ampere turns of the principal and of the compensating coils was found. Varying the current in these coils, the rate of increase of the magnetic field with respect to radius and amplitudes of modulation can be varied within certain limits. This fact facilitates the development of an accelerator with spiral sectors. There are 11 figures and 4 references: 2 Soviet and 2 non-Soviet. The two references to English-language publications read as follows: K. R. Symon, D. W. Kerst, L. W. Jones, L. J. Laslett, K. M. Terwillinger. Phys. Rev., 103, 1837, 1956; T. Ohkawa. Rev. of Sci. Instr., 29, 108, 1958.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet (Moscow State University)

SUBMITTED: January 28, 1961

Fig. 1. Geometry of a spiral sector.

Legend: (1) Center of the machine.

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The magnetic-field...

Legend to Fig. 4: (1) Experimental points, (2) points of the curve $A \sin(2\pi\theta/(\theta_p + \theta_b))$, (3) sector.

Fig. 5. Distribution of the magnetic field along the spiral lines for three sectors.

Legend: (1) Sector.

Fig. 6. Radial distribution of the magnetic field.

Legend: (1) Curve found by direct measurement, (2) curve found from (1) considering the function of azimuthal distribution of the field.

Fig. 7. Azimuthal distribution of the magnetic field in the air gap between sectors.

Legend: (1) Field generated by the principal coil, (2) entire field, (3) field of the compensating coil, (4) sector, (5) air gap.

Card 4/64

VOLODICHEV, N.N.; GRISHIN, V.K.; KOVAL'SKIY, S.; LOBANOV, Yu.N.; SAVENKO, I.A.

Characteristics of the magnetic field of a high-focusing spiral-coil accelerator. Zhur. tekh. fiz. 31 no.11:1350-1357 N '61. (MIRA 14:11)

1. Moskovskiy gosudarstvennyy universitet.
(Particle accelerators)
(Magnetic fields)

KOVAL'SKIY, S.

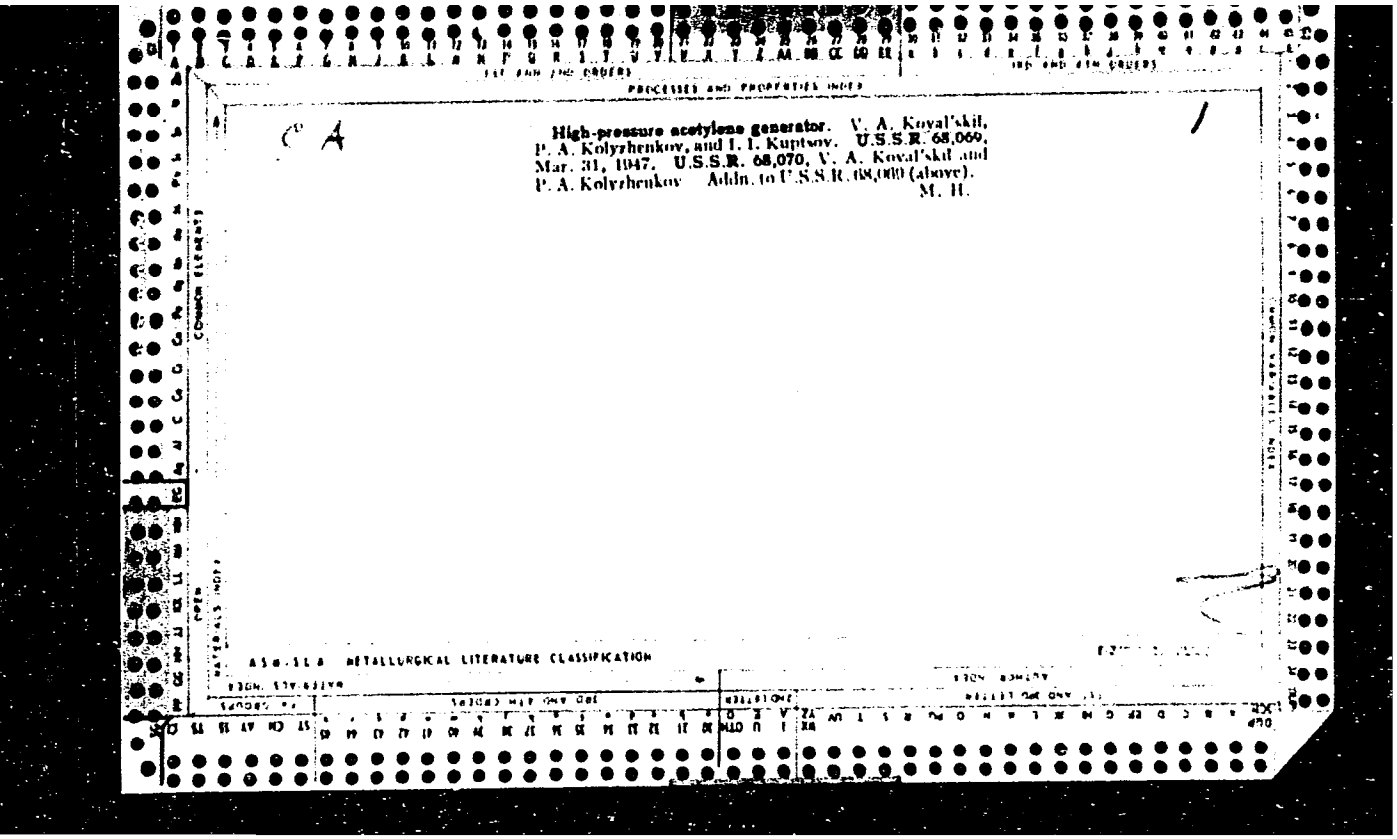
Device for testing single piles with a static load. Prom.stroi.i inzh.soor. 4 no.2:58-59 Mr-Ap '62. (MIRA 15:11)

1. Rukovoditel' fiziko-tekhnicheskoy laboratorii Krivorozhskogo filiala Yuzhnogo nauchno-issledovatel'skogo instituta promyshlennogo stroitel'stva.
(Piling (Civil engineering)--Testing)

KOVAL'SKIY, V., avtomekhanik.

Supporting frames used for lifting front wheels. Avt.transp. 35 no.3:34 Mr '57. (MLRA 10:5)

1.Avtotransportnaya kontora tresta "Krivbassrudstroy".
(Lifting jacks)



C A

High-pressure acetylene generator. V. A. Koval'skil, P. A. Kolyzhenkov, and I. I. Kuptsov. U.S.S.R. 68,069, Mar. 31, 1947. U.S.S.R. 68,070, V. A. Koval'skil and P. A. Kolyzhenkov Addn. to U.S.S.R. 68,069 (above). M. H.

1

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

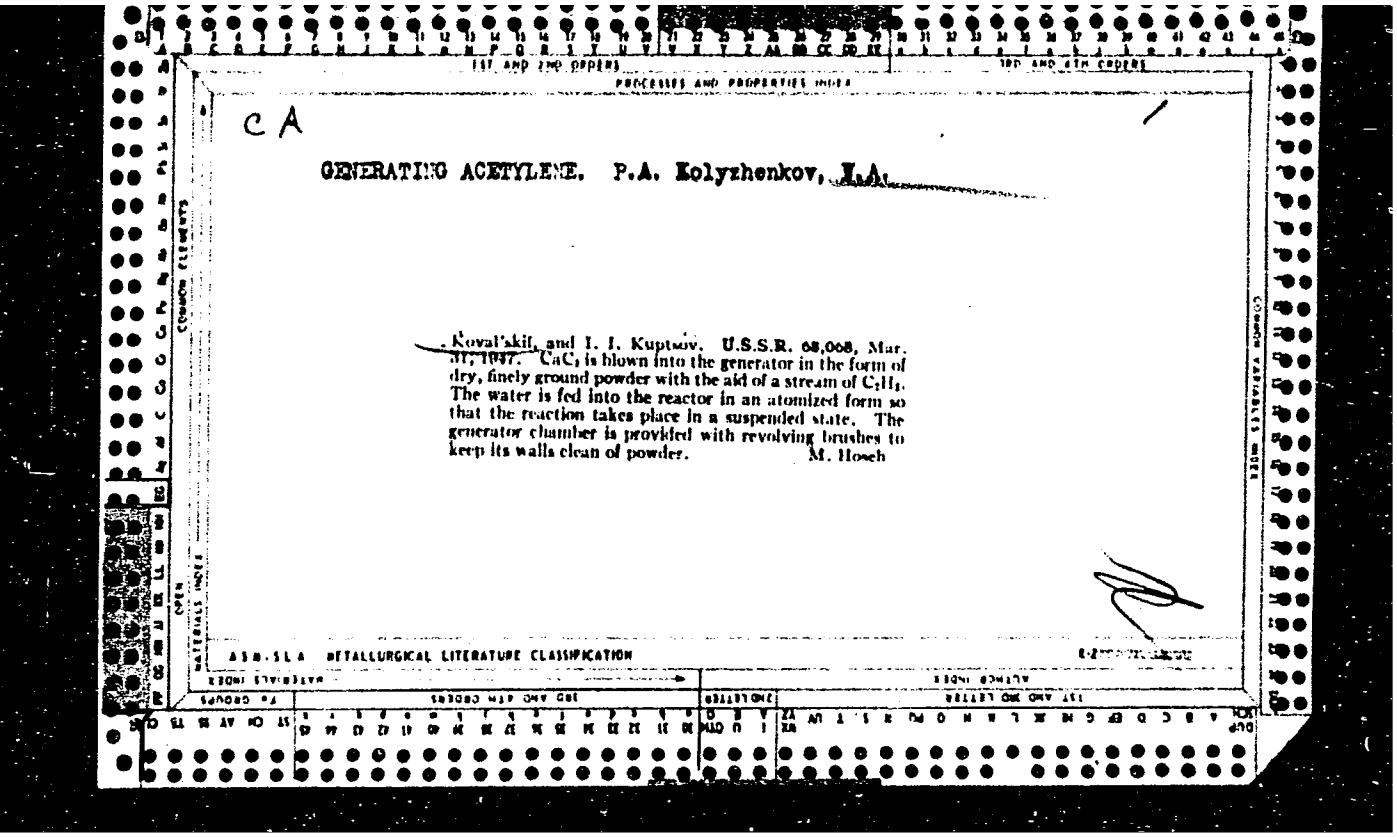
KOVAL'S'KYY, P.O.; KAS'YANENKO, V.H., diysnyy chlen.

Trophic innervation of the periosteum. Dop.AN URSR no.5:337-341 '51.
(MLRA 6:9)

1. Akademiya nauk Ukrayins'koyi RSR (for Kas'yanenko). 2. Bilotserkivs'kyy sil'skohospodars'kyy instytut (for Koval's'skyy).
(Periosteum) (Nerves)

KOVAL'SKIY, V.A.; OFITSEROV, D.M.; SHASHKOV, A.N., kand. tekhn. nauk, red.

[Handbook on portable acetylene generators] Rukovodstvo po perenosnym atsetilenovym generatoram. Moskva, Mashgiz, 1963. 114 p. (Bibliotechka avtogenshchika, no.10)
(MIRA 17:4)



CA

GENERATING ACETYLENE. P.A. Kolyzhenkov, I.A.

Koval'skii, and I. I. Kuptsov. U.S.S.R. 68,068, Mar. 31, 1947. CaC_2 is blown into the generator in the form of dry, finely ground powder with the aid of a stream of C_2H_2. The water is fed into the reactor in an atomized form so that the reaction takes place in a suspended state. The generator chamber is provided with revolving brushes to keep its walls clean of powder. M. Hosch

KOVAL'SKIY, V. A. DA 49/49T18

USSR/Chemistry-Acetylene Dec 48
Chemistry-Calcium Carbide

"An Apparatus for Determining the Acetylene Yield From Calcium Carbide," V. A. Koval'skiy, I. I. Strizhevskiy, All-Union Sci Res Inst for Autogenous Treatment of Metals, 3 pp

"Zavod Lab" Vol XIV, No 12

Describes apparatus in detail. It is less bulky than usual type. Gas volume is 200 liters weight of carbide sample 0.5-0.75 kg. Includes three sketches.

49/49T18

STRIZHEVSKIY, I.I., kandidat khimicheskikh nauk; KOVAL'SKIY, V.A., inzhener; SHASHKOV, A.N., kandidat tekhnicheskikh nauk, redaktor; MATVEYEVA, L.S., redakter.

[Operation of portable acetylene generators] Ekspluatatsiia perenosnykh atsetilenovykh generatorov. Moskva, Ges.nauchno-tekhn.izd-vo mashinostroit. lit-ry, 1955. 71 p. (Rukovodiashchie materialy po gazoplamennoi obrabotke metallov, no.8). (MLRA 9:9)
(Acetylene generators)

5(0) PHASE I BOOK EXPLOITATION SOV/2227

Vsesoyuznyy nauchno-issledovatel'skiy institut avtogennoy obrabotki metallov

Proizvodstvo atsetilena dlya gazoplamennoy obrabotki metallov (Production of Acetylene for Flamespraying Metals) Moscow, Mashgiz, 1958. 87 p. (Series: Spravochnyye materialy po gazoplamennoy obrabotke metallov, vyp. 14) Errata slip inserted. 7,000 copies printed.

Comps.: I.I. Strizhevskiy, Candidate of Chemical Sciences and S.G. Guzov, Engineer; Eds.: A.N. Shashkov, Candidate of Technical Sciences and V.A. Koval'skiy, Engineer; Tech. Ed.: A.Ya. Tikhanov; Managing Ed. for Literature on Heavy Machine Building (Mashgiz): S.Ya. Golovin, Engineer.

PURPOSE: This book is intended for persons engaged in the production of acetylene for the purpose of flamespraying metals.

Card 1/5

COVERAGE: The book provides a systematic discussion of the structure of equipment used in acetylene production and their arrangement in installations which prepare and use acetylene to flame-spray metals. Rules for servicing equipment, production control and industrial safety measures are also discussed. The book, Obshchaya instruktsiya po proizvodstvy atsetilena (General Instructions for Acetylene Production), published in 1952, served as a basis for reference materials. Rules for the location and construction of acetylene installations and the distribution of equipment are given in accordance with the Giprokislorod (State Institute for the Design and Planning of Oxygen Installations) under the Ministry of the Chemical Industry. No personalities are given. There are no references.

TABLE OF CONTENTS:

Production of Acetylene (Cont.)

AVAILABLE: Library of Congress

Card 5/5

Tm/bg
8-17-59

KOVAL'SKIY, V.A.

SOV-133-58-3-11/19

AUTHORS: Strizhevskiy, I.I., Candidate of Chemical Sciences, and Koval'skiy, V.A., Engineer

TITLE: Acetylene Generators for Processing Fine Carbide and Carbide Dust (Atsetilenovyye generatory dlya perevabotki karbidnoy melochi i pyli)

PERIODICAL: Svarochnoye proizvodstvo, 1958, pp 35-38 (USSR)

ABSTRACT: Information is presented on design of new generators for processing fine-granulated carbide, developed at VNIIAvtogen; 1) "GPS-35" (Figure 1) of medium pressure and discontinuous action for 2/8 granulation; 2) "ANK" for fine and coarse carbide; 3) "PG-35" (Figure 4) for processing carbide dust; 4) "GND-35" for carbide of 2 to 80 mm granulation; 5) stationary "ASS" generator with an additional device for flooding fine carbide and dust by vortex water motion. The enumerated generators ensure safe work processes. There are 8 diagrams.

ASSOCIATION: VNIIAvtogen

1. Gas generating systems---Design 2. Acetylenes---Production
3. Carbides---Applications

Card 1/1

STRIZHEVSKIY, Iosif Isaakovich; GUZOV, Samson Getsovich; KOVAL'SKIY, Veniamin Aronovich; GLIZMANENKO, D.L., kand.tekhn.nauk, red.; SOBOLEVA, G.N., red.izd-va; MODEL', B.I., tekhn.red.

[Acetylene producing and distributing centers] Atsetilenovye stantsii. Izd.2., perer. i dop. Moskva, Gos.nauchno-tekhn. izd-vo mashinostr.lit-ry, 1959. 291 p. (MIRA 12:10)
(Acetylene)

KOVAL'SKIY, V.A

PHASE I BOOK EXPLOITATION SOV/4976

Moscow. Vsesoyuznyy nauchno-issledovatel'skiy institut avtogennoy obrabotki metallov

Ekspluatatsiya perenosnykh atsetilenovykh generatorov (Operation of Portable Acetylene Generators) 2d ed., rev. and enl. Moscow, Mashgiz, 1960. 78 p. Errata slip inserted. 9,000 copies printed. (Series: Spravochnyye materialy po gazoplamennoy obrabotke metallov, vyp. 18)

Compilers: I. I. Strizhevskiy, Candidate of Chemical Sciences, and V. A. Koval'skiy, Engineer; Ed.: A. N. Shashkov, Candidate of Technical Sciences; Ed. of Publishing House N. S. Stepanchenko; Tech. Ed.: A. F. Uvarova; Managing Ed. for Literature on Heavy Machine Building: S. Ya. Golovin, Engineer.

PURPOSE: This booklet is intended for foremen, gas welders, and cutters in industrial plants, building organizations, and machine repair shops.

Card ~~1/4~~

Operation of Portable Acetylene Generators SOV/4976

COVERAGE: The booklet contains concise information of the production of acetylene from calcium carbide and on the arrangement of acetylene generators. Portable acetylene generators manufactured in the USSR are described, and information on their technical characteristics, installation, use, repair, and maintenance is presented. Problems of storing and unpacking calcium carbide are discussed and safety rules for the operation of portable acetylene generators are outlined. D. M. Ofitserov and D. I. Tesmenitskiy helped in the preparation of the manuscript. There are 9 references, all Soviet.

TABLE OF CONTENTS:

Card ~~2/4~~

KOVAL'SKIY, Veniamin Aronovich; OFITSEROV, Dmitriy Maksimovich; SHELECHNIK, Moisey Markovich; NOKRETSOV, A.M., red.

[Design and operation of equipment for the production of actylene] Ustroistvo i ekspluatatsiia oborudovaniia dlia polucheniia atsetilena. Moskva, Vysshaia shkola. 1965. 187 p. (MIRA 18:8)

KOVALSKY, VP

U.S.S.R. / Human and Animal Physiology. Metabolism. T

Abs Jour: Ref Zhur-Biol., No 5, 1958, 21954.

Author : Kovalsky V. P., Kapner R. B.
Inst : Not given.
Title : Adaptive Changes of Certain Dehydrgenases and and Arginases in the Organism of Animals.

Orig Pub: Dokl. AN. S.S.S.R., 1957, 112, 5, 905-908.

Abstract: Chinchilla rabbits weighing 2.7-3kg were fed, in the course of 30-40 days, different rations (cereals and vegetables). The rations contained, in effect, equivalent amounts of nutritional units and digestible proteins. Following the cereal ration the intensity of the dehydrogenation processes (the activity of succindehydrogenase, dehydrogenase, alpha-gly-

1. KOVAL'SKIY, V. S., Prof.

2. USSR (600)

4. Cranes, Derricks, Etc.

7. Wedge grop for dill-protecting devices of cranes. Vest.mash., 33, no. 1, 1953.

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

KOVAL'SKIY, V.V., prof.

Geochemical ecology. Priroda 53 no.3:44-51 '64. (MIRA 17:4)

ACCESSION NR: AT4032221 S/3089/63/000/005/0161/0168

AUTHOR: Koval'skiy, V. V.; Ponomarenko, I. N.

TITLE: Seasonal changes of the geographic position and intensity of the planetary high-level frontal zone over Siberia and the Far East

SOURCE: AN UkrSSR. Mezhduvedomstvenny*y geofizicheskiy komitet. Geofizika i astronomiya; informatsionny*y byulleten', no. 5, 1963, 161-168

TOPIC TAGS: meteorology, planetary high-level frontal zone, climate, climatology

ABSTRACT: Data have been compiled on the frequency of appearance and intensity of the planetary high-level frontal zone over Siberia and the Far East in January, April, July and October. Conclusions are drawn concerning the peculiarities of seasonal changes of the geographic position of the climatological planetary high-level frontal zones and their relationship to atmospheric processes. Maps of the frequency of the planetary high-level frontal zone are given (Figures 1 and 2 of the Enclosure). It is shown that the frequency of the planetary high-level frontal zone over different latitudes in Siberia and the Far East has characteristic seasonal peculiarities. In winter and in the transitional seasons the planetary high-level frontal zone is situated predominantly in a single zone which

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ACCESSION NR: AT4032221

can be considered the climatological planetary high-level frontal zone, but in summer there are two such zones. The position of the zones of high frequency and of climatological planetary high-level frontal zones varies from season to season with a change in synoptic processes. In the winter and spring it is oriented from west-southwest to east-southeast from latitude 55-67° near the Ural range to 40° over the Far East and the Pacific Ocean. The zone has the same orientation in autumn but is situated 2-3° farther north over western Siberia and 6-7° over the Far East and the Pacific Ocean. In the summer the principal part of the zone is displaced far to the north and lies in the extreme northern regions of Siberia. The seasonal change of the position of the zone over the ocean and continent is different. Over the Pacific Ocean and the Far East the most northern position is assumed in the autumn and the most southern in winter and spring. Over the mainland the most northern position is in summer and the most southern in winter. The variations of the zone over northern regions attain 6-8°, but over continental regions range up to 20-25°. The character of the longitudinal seasonal changes in intensity of the zone also differs. The insignificant frequency of appearance of the extratropical branch of the planetary high-level frontal zone over Central

Card 2/5

VASIL'YEV, Viktor Grigor'yevich; KOVAL'SKIY, Vitaliy Vladimirovich; CHERSKIY, Nikolay Vasil'yevich; BONDARENKO, V.I., red.; IGNAT'YEV, I.P., red. izd-va; PARNIKOV, Ye.S., tekhn. red.

[Origin of diamonds] Problema proiskhozhdeniia almazov. IAkutsk, IAkutskoe knizhnoe izd-vo, 1961. 151 p. (MIRA 15:3)

(Diamonds)

KOVAL'SKIY, V.V.

Classification of certain characteristic types of kimberlites of Yakutia. Geol. i geofiz. no.2:61-76 '61. (MIRA 14:5)

1. Yakutskiy filial Sibirskogo otdeleniya AN SSSR.
(Yakutia—Kimberlite—Classification)

KOVAL'SKIY, V.V.

Composition of kimberlite bodies as revealed by the studies of the Muna and Olenek diamond regions. Trudy IAFAN SSSR. Ser.geol. no.8:39-73 '62. (MIRA 15:7)

(Yakutia—Kimberlite)

KOVAL'SKIY, V. V.

Dissertation defended for the degree of Candidate of Geologo-Mineralogical Sciences at the Joint Academic Council on Geologo-Mineralogical, Geophysical, and Geographical Sciences; Siberian Branch 1962

"Kimberlite Rocks of Yakutiya and Main Principles of Their Petrographic Classification."

Vestnik Akad. Nauk, No. 4, 1963, pp 119-145

KOVAL'SKIY, V.V.

Interrelation of vent and vein facies of kimberlite rocks as revealed by the Olenek diamond-bearing region. Nauch.soob. IAFAN SSSR no.7:89-98 '62. (MIRA 16:3)

(Yakutia--Kimberlite)

VINOGRADOVA, Z. A.; KOVAL'SKIY, V. V.

On the chemical elementary composition of Black Sea plankton.
Dokl. AN SSSR 147 no.6:1458-1460 D '62.
(MIRA 16:1)

1. Odesskaya biologicheskaya stantsiya Instituta gidrobiologii AN UkrSSR i Institut geokhimii i analiticheskoy khimii im. V. I. Vernadskogo AN SSSR. Predstavleno akademikom A. P. Vinogradovym.

(Black Sea—Plankton)

KOVAL'SKIY, V.V.; SHUMKOVA, I.A.

Adaptive changes in the enzymes of the mammary gland in cows. Dokl. AN SSSR 152 no.5:1243-1246 O '63. (MIRA 16:12)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut zhivotnovodstva. Predstavleno akademikom A.I.Oparinym.

KOVAL'SKIY, V.V.; SHUMKOVA, I.A.

Adaptive variations in lactic phosphatases and the mammary glands in cows. Dokl. AN SSSR 152 no.6:1467-1470 O. '63.
(MIRA 16:11)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut zhivotnovodstva. Predstavleno akademikom A.I. Oparinym.

KOVAL'SKIY, V.V.

Role of trace elements in animal husbandry and urgent tasks in studying them. Zhur. VKHO 8 no.6:646-654 '63. (MIRA 17:2)

1. Chlen-korrespondent Vsesoyuznoy akademii sel'skokhozyaystvennykh nauk imeni Lenina.

GOLOLOBOV, A.D., kand. biol. nauk; KOVAL'SKIY, V.V., prof., red.; DARDYRENKO, A.A., red.

[Methodological recommendations on the determination of trace elements in soils, plant and animal organisms] Metodicheskie rekomendatsii po opredeleniiu mikroelementov v pochvakh, rastitel'nykh i zhivotnykh organizmakh. [n.p.] Otdel nauchno-tekhn. informatsii VIZha, 1963. 61 p. (MIRA 17:8)

1. Moscow. Vsesoyuznyy nauchno-issledovatel'skiy institut zhivotnovodstva. 2. Chlen-korrespondent Vsesoyuznoy akademii sel'skokhozyaystvennykh nauk imeni V.I.Lenina (for Koval'skiy).

KOVAL'SKIY, V.V.; MASLYANAYA, M.K.

Copper deficiency in cereal plants grown on peat soils. Agrokhimiia no.4:84-95 Ap '64. (MIRA 17:10)

1. Institut geokhimii i analiticheskoy khimii im. Vernadskogo AN SSSR.

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ACC NR: AP6034078 SOURCE CODE: UR/0221/65/060/001/0045/0061

AUTHOR: Koval'skiy, V. V. (Moscow); Rezayeva, L. T. (Moscow)

ORG: Institute of Geochemistry and Analytical Chemistry im. V. I. Vernadskiy, AN SSSR (Institut geokhimii i analiticheskoy khimii AN SSSR)

TITLE: Biological role of vanadium in Ascidians

SOURCE: Uspekhi sovremennoy biologii, v. 60, no. 1, 1965, 45-61

TOPIC TAGS: vanadium, physiology

ABSTRACT: Ascidians are organisms that selectively concentrate vanadium from sea water and food (microorganisms, detritus, and plankton organisms), and as such are of special interest in the study of the biological role of vanadium. The authors survey the literature and their own data on the dynamics of vanadium in the blood of Ascidians, in which this element is localized chiefly in the blood cells. The observed oxidation-reduction conversions of hemolysates of Ascidian blood cells are evidently related to a transfer of electrons with the aid of a vanadium system. It is proposed that the physiological role of vanadium in the Ascidian organism is related to oxidation-reduction processes. Orig. art. has: 9 figures, 5 tables and 1 formula. [JPRS: 34,186]

SUB CODE: 06 / SUBM DATE: none / ORIG REF: 019 / OTH REF: 055

Card 1/1

VOSKRESENSKAYA, V.B.; KOVAL'SKIY, V.V.; NIKITOV, E.N.; PARINOVA, [illegible].F.

Find of "titanolivine" in the kimberlites of Siberia. Zap.Vses.min.ob-va 94 no.5:60[illegible]-603 '65.

(MIRA 18:[illegible])

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825620006-2"

KOVAL'SKIY, V.V., prof. (Moskva)

Most outstanding Soviet biochemist. Priroda 54 no.12:116-117 D '65. (MIRA 18:12)

KOVAL'SKIY, V.V., prof.; VORONTSOVSKAYA, I.Ye.

Uranium in the silt of Lake Issykkul'. Priroda 54 no.8:79-80 Ag '65. (MIRA 18:8)

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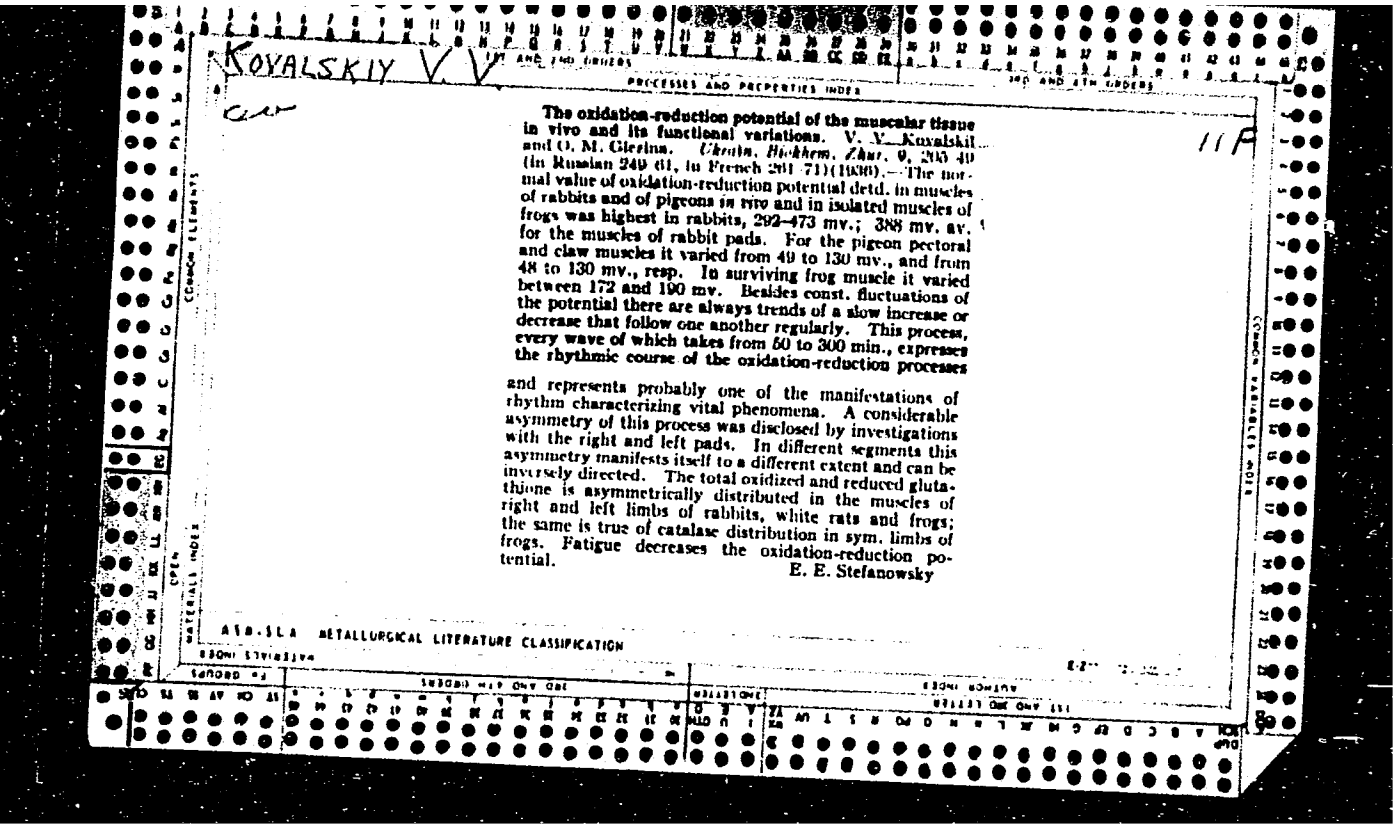
KOVAL'SKIY, V.V.; NEVAINVA, L.T. (Moskva)

Biological role of vanadium in ascidians. Usp. sovr. biol. 60 no.1:45-61 Jl-Ag '65. (MIRA 18:8)

1. Institut geokhimii i analiticheskoy khimii im. V.I. Vernadskogo AN SSSR.



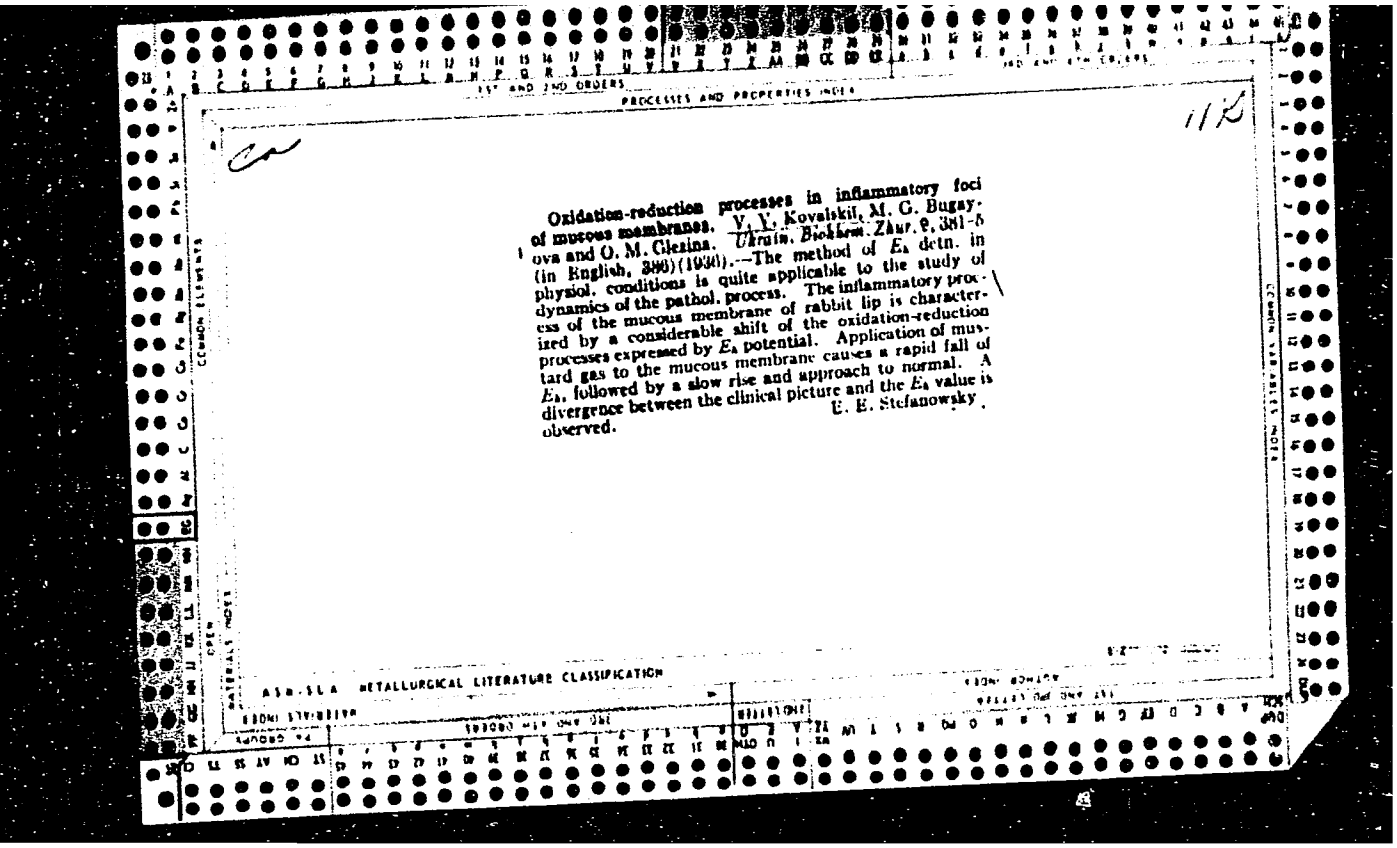
KOVALSKIY V. V.

11 F

The oxidation-reduction potential of the muscular tissue in vivo and its functional variations. V. V. Kovalskii and O. M. Glezina. *Ukrain. Biokhem. Zhur.* 9, 205-40 (in Russian 249 ff, in French 201-71)(1938).—The normal value of oxidation-reduction potential detd. in muscles of rabbits and of pigeons in vivo and in isolated muscles of frogs was highest in rabbits, 292–473 mv.; 388 mv. av. for the muscles of rabbit pads. For the pigeon pectoral and claw muscles it varied from 49 to 130 mv., and from 48 to 130 mv., resp. In surviving frog muscle it varied between 172 and 190 mv. Besides const. fluctuations of the potential there are always trends of a slow increase or decrease that follow one another regularly. This process, every wave of which takes from 50 to 300 min., expresses the rhythmic course of the oxidation-reduction processes and represents probably one of the manifestations of rhythm characterizing vital phenomena. A considerable asymmetry of this process was disclosed by investigations with the right and left pads. In different segments this asymmetry manifests itself to a different extent and can be inversely directed. The total oxidized and reduced glutathione is asymmetrically distributed in the muscles of right and left limbs of rabbits, white rats and frogs; the same is true of catalase distribution in sym. limbs of frogs. Fatigue decreases the oxidation-reduction potential.

E. E. Stefanowsky

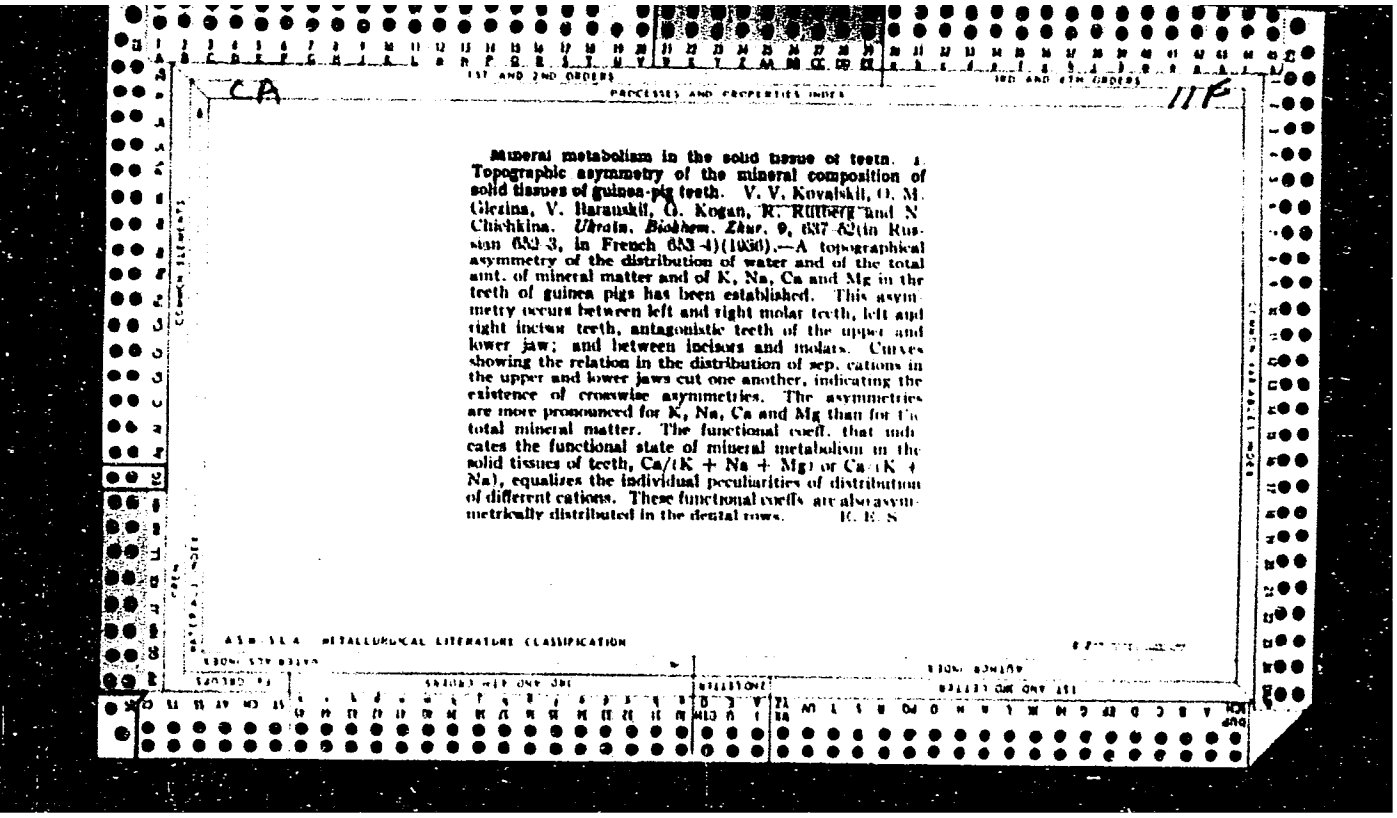
AVA-SLA METALLURGICAL LITERATURE CLASSIFICATION



PROCESSES AND PROPERTIES INDEX

Oxidation-reduction processes in inflammatory foci of mucous membranes. V. V. Kovalskii, M. G. Bugayova and O. M. Glezina. *Ukrain. Biokhem. Zhur.* 9, 381-6 (in English, 389)(1930).—The method of E_h detn. in physiol. conditions is quite applicable to the study of dynamics of the pathol. process. The inflammatory process of the mucous membrane of rabbit lip is characterized by a considerable shift of the oxidation-reduction processes expressed by E_h potential. Application of mustard gas to the mucous membrane causes a rapid fall of E_h, followed by a slow rise and approach to normal. A divergence between the clinical picture and the E_h value is observed.
E. E. Stefanowsky

A5a-5L4 METALLURGICAL LITERATURE CLASSIFICATION



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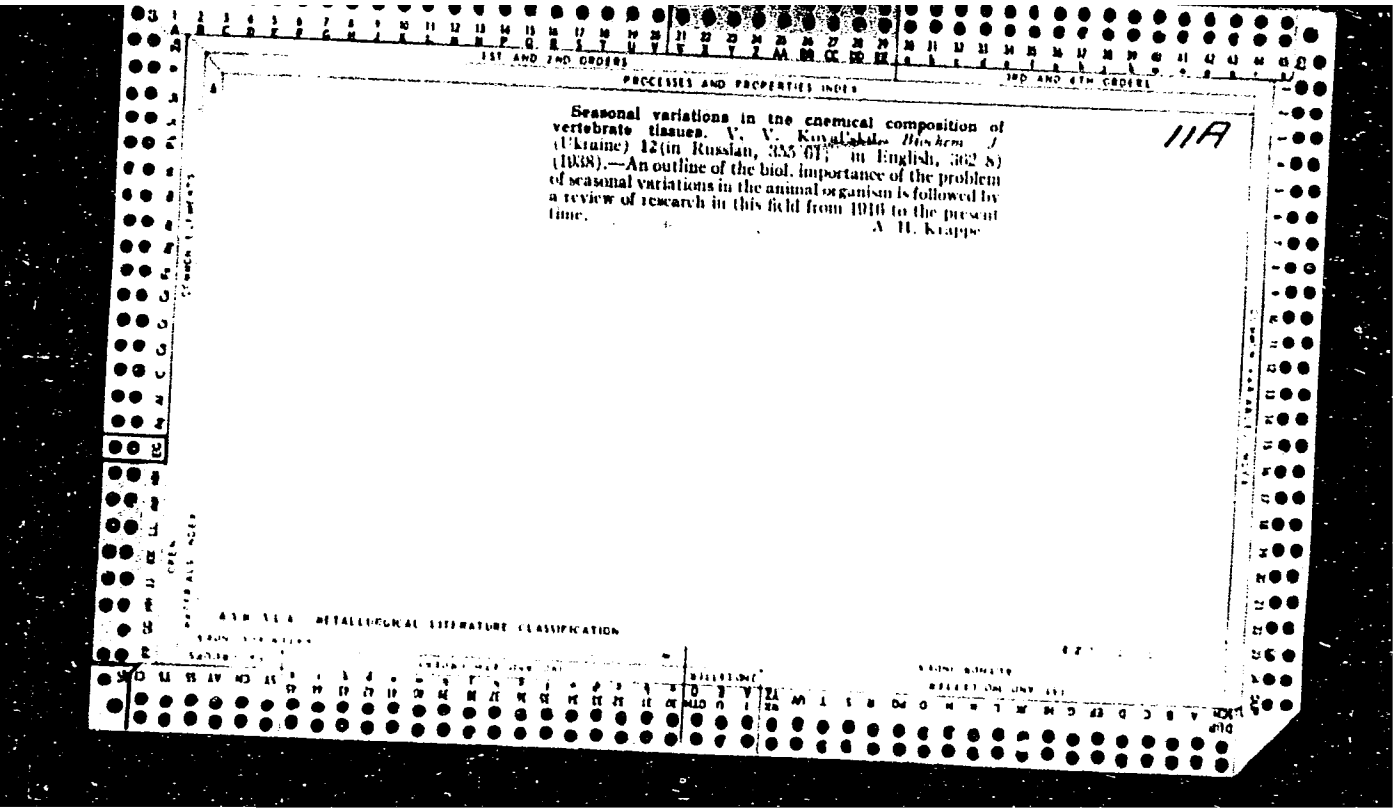
PROCESSES AND PROPERTIES INDEX

IIF

Mineral metabolism in the solid tissue of teeth. I. Topographic asymmetry of the mineral composition of solid tissues of guinea-pig teeth. V. V. Kovalskii, O. M. Glezina, V. Baranskii, G. Kogan, R. Rittberg and N. Chishkina. *Ukrain. Biokhem. Zhur.* 9, 637-52(in Russian 652-3, in French 653-4)(1938).—A topographical asymmetry of the distribution of water and of the total amt. of mineral matter and of K, Na, Ca and Mg in the teeth of guinea pigs has been established. This asymmetry occurs between left and right molar teeth, left and right incisor teeth, antagonistic teeth of the upper and lower jaw; and between incisors and molars. Curves showing the relation in the distribution of sep. cations in the upper and lower jaws cut one another, indicating the existence of crosswise asymmetries. The asymmetries are more pronounced for K, Na, Ca and Mg than for the total mineral matter. The functional coeff. that indicates the functional state of mineral metabolism in the solid tissues of teeth, Ca/(K + Na + Mg) or Ca/(K + Na), equalizes the individual peculiarities of distribution of different cations. These functional coeffs. are also asymmetrically distributed in the dental rows. H. E. S.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

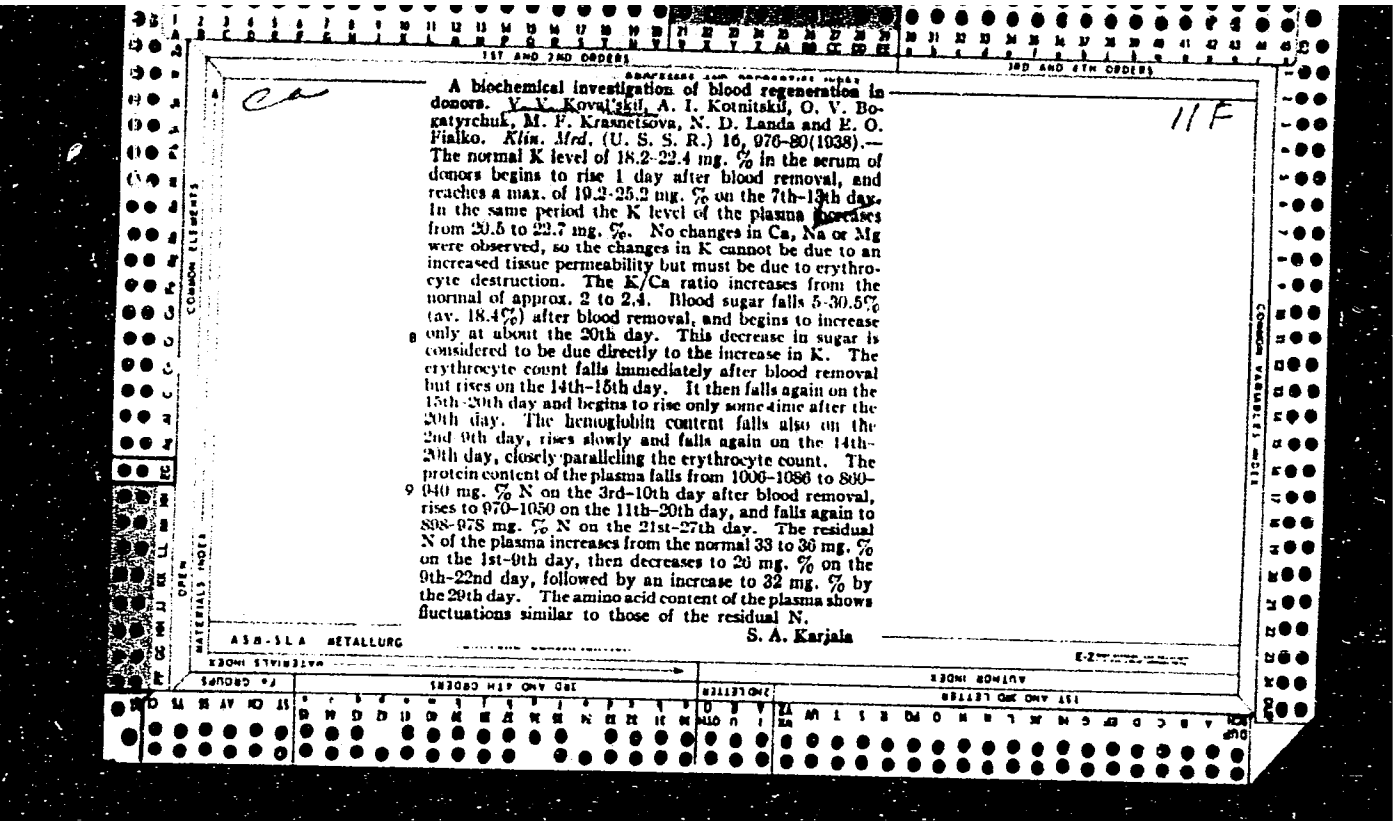
3RD AND 4TH ORDERS

11A

Seasonal variations in the chemical composition of vertebrate tissues. V. V. Kovalskii. *Biokhim. Zhur.* (Ukraine) 12(in Russian, 355-61; in English, 362-8) (1938).—An outline of the biol. importance of the problem of seasonal variations in the animal organism is followed by a review of research in this field from 1910 to the present time.

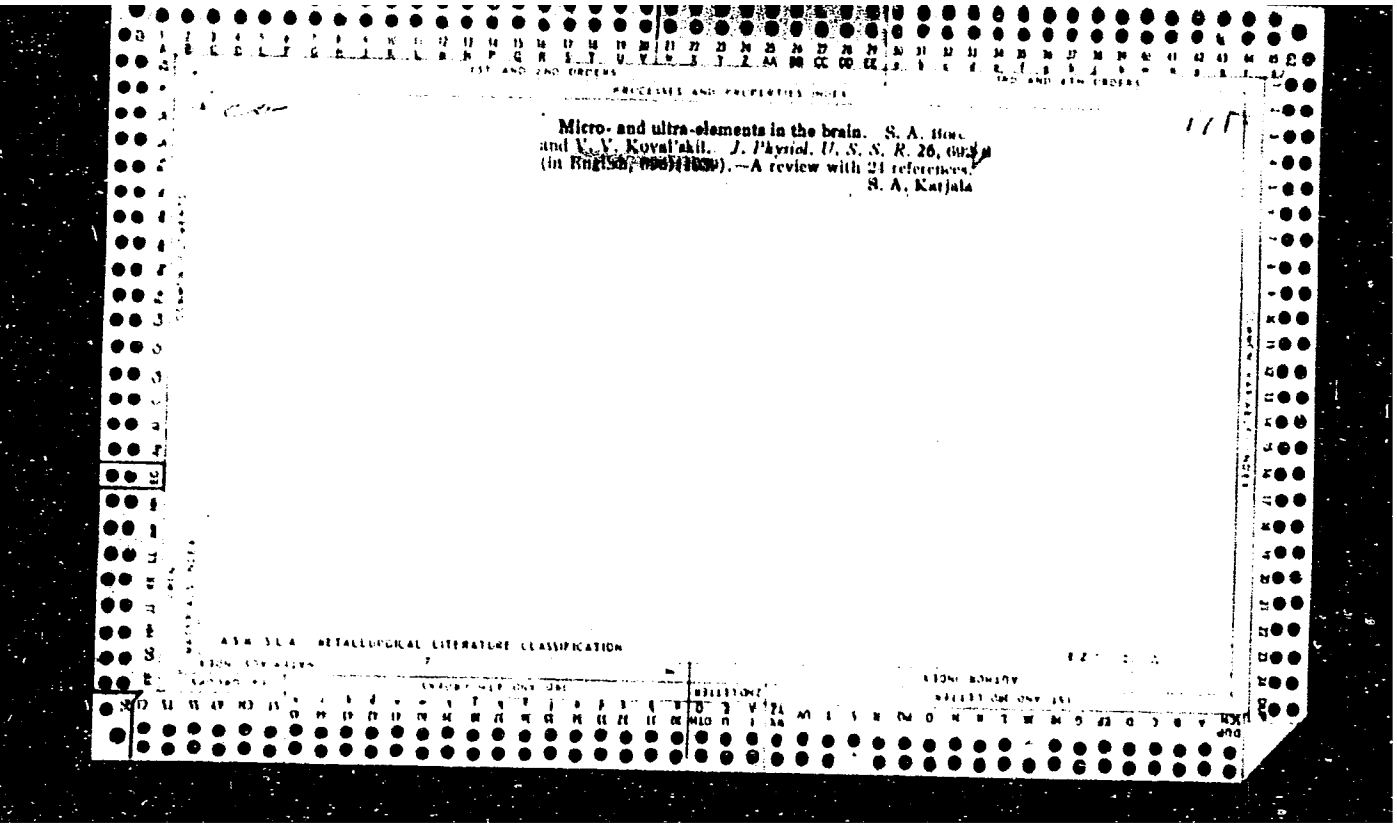
A. H. Krapp

A.S.M. METALLURGICAL LITERATURE CLASSIFICATION



A biochemical investigation of blood regeneration in donors. V. V. Koval'skii, A. I. Kotnitskii, O. V. Bogatyrchuk, M. F. Krasnetsova, N. D. Landa and E. O. Fialko. *Klin. Med.* (U. S. S. R.) 16, 976–80(1938).—The normal K level of 18.2–22.4 mg. % in the serum of donors begins to rise 1 day after blood removal, and reaches a max. of 19.2–25.2 mg. % on the 7th–13th day. In the same period the K level of the plasma increases from 20.5 to 22.7 mg. %. No changes in Ca, Na or Mg were observed, so the changes in K cannot be due to an increased tissue permeability but must be due to erythrocyte destruction. The K/Ca ratio increases from the normal of approx. 2 to 2.4. Blood sugar falls 5–30.5% (av. 18.4%) after blood removal, and begins to increase only at about the 20th day. This decrease in sugar is considered to be due directly to the increase in K. The erythrocyte count falls immediately after blood removal but rises on the 14th–15th day. It then falls again on the 15th–20th day and begins to rise only some time after the 20th day. The hemoglobin content falls also on the 2nd–9th day, rises slowly and falls again on the 14th–20th day, closely paralleling the erythrocyte count. The protein content of the plasma falls from 1006–1086 to 860–940 mg. % N on the 3rd–10th day after blood removal, rises to 970–1050 on the 11th–20th day, and falls again to 898–978 mg. % N on the 21st–27th day. The residual N of the plasma increases from the normal 33 to 36 mg. % on the 1st–9th day, then decreases to 26 mg. % on the 9th–22nd day, followed by an increase to 32 mg. % by the 29th day. The amino acid content of the plasma shows fluctuations similar to those of the residual N.

S. A. Karjala



Micro- and ultra-elements in the brain. S. A. Ilow and V. V. Koval'skil. *J. Physiol. U. S. S. R.* 26, 60[illegible] (in Russ[illegible]). —A review with 21 references.
S. A. Kurjala

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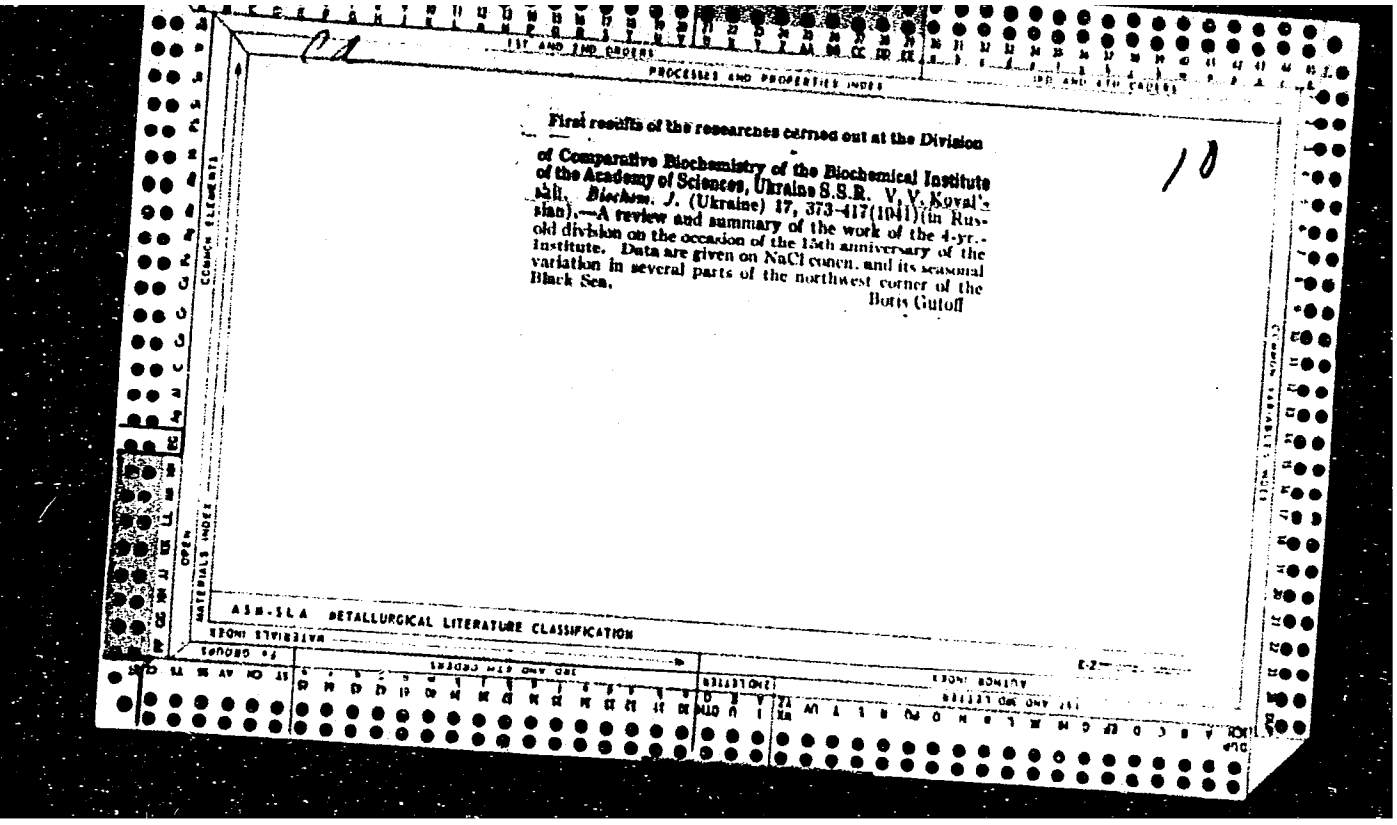
SO: Advances in Modern Biology (Uspekhi Sovremennoi Biologia) Vol. XII, No. 2, 1940



First results of the researches carried out at the Division of Comparative Biochemistry of the Biochemical Institute of the Academy of Sciences, Ukraine S.S.R. V. V. Koval's 50th. *Biochem. J.* (Ukraine) 17, 373-417(1941)(in Russian).—A review and summary of the work of the 4-yr.-old division on the occasion of the 15th anniversary of the Institute. Data are given on NaCl concn. and its seasonal variation in several parts of the northwest corner of the Black Sea.

Boris Gutoff

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ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION