

L 19683-65 EWT(1)/EWT(m)/EPF(c)/EPR/EWP(j)/T/EED(b)-3 Pc-1/Pr-1/Ps-1/Pae-2 IJP(c)/
ACCESSION NR: AP5003604 RPL WW/RM S/0191/64/000/007/0036/0038

AUTHOR: Rogov, V. M.; Smirnov, V. B.; Skirdova, K. M.; Shifrina, Kh. R.; Gomonova,
Z. F.

TITLE: Question of printing on polyethylene films

SOURCE: Plasticheskiye massy, no. 7, 1964, 36-38

TOPIC TAGS: synthetic material, printing ink, dye chemical

Abstract: Recipes of printing dyes, mentioned in patent and literature sources, as well as various resins, were tested as bonding dyes for printing on polyethylene films. The tests determined their suitability for deep printing on a multidye machine, operating at a speed of 1.5-75 m/min; drying on polyethylene films (for 2-3 min at 70°C); aggregative stability of the printed dye (no less than 24 hours); stability of the imprints to dry and wet friction and to repeated bending (under a load of 600 grams). The dyes were applied on polyethylene films 60 ± 10 microns thick, the surface of which was treated: 1) with a chromic mixture at 75°C for three minutes; 2) with a corona discharge at a voltage of about 15-20 kilovolts; 3) with a corona discharge on a laboratory setup for 1 min at a voltage of 15 kilovolts and a distance between the electrodes of 2-3 min. Recipes and

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results of tests are given for dyes compiled according to recipes of foreign patents, dyes in the form of a solution of polyethylene in aromatic solvents, dyes based on polyamide resins, dyes based on versamide and epoxide resin, dyes based on methylolpolyamide resin MPP-1^b and methylolpolyamide and epoxide resins, dyes based on copolymers of vinyl chloride and vinylbutyl ether, methacrylate and copolymers of methacrylic acid esters, and dyes based on alkyd resin. Preliminary treatment of the film was found to exert influence on the strength of the printed figure; the chemical method of treatment was most effective, but the electrical method is most suitable under industrial conditions and most economical. Orig. art. has 3 tables.

ASSOCIATION: none

SUBMITTED: 00

ENCL: 00

SUB CODE: MT, 00

NO REF SOV: 004

OTHER: 002

JPRS

Card 2/2

L 21083-65 EMT(m) DIAAP/AFWL/SSD
ACCESSION NR: AP5001981

S/0020/64/159/006/1252/1254

AUTHORS: Anton'yeva, N. M.; Dzhelelov, B. S. (Corresponding member
AN SSSR); Katykhin, G. S.; Smirnov, V. B.

TITLE: Investigation of the decay of Rh-100 //

SOURCE: AN SSSR. Doklady, v. 159, no. 6, 1964, 1252-1254

TOPIC TAGS: rhenium, radioactive decay, magnetic spectrometry,
gamma transition, gamma gamma coincidence, conversion line

ABSTRACT: The emission from the isotope Rh¹⁰⁰ was investigated with the aid of a "ketron" type magnetic spectrometer with scintillation recording of the electrons ($\Delta H_c/H_c = 0.5\%$) and with coincidence γ spectrometers used singly, doubly, and to measure total absorption with NaI crystals in a barrel. The isotope Rh¹⁰⁰ was obtained either from the reaction $Ag + p$ (660 MeV) or as the daughter product of the decay

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L 21083-65

ACCESSION NR: AP5001981

Pd¹⁰⁰ 3.7d → Rh¹⁰⁰ 20.8h → Ru¹⁰⁰

The observed transitions were identified by observing the growth and decrease in the intensities of the γ lines and some conversion lines in the Pd and Rh fractions. The authors observed approximately 16 new γ transitions belonging to the decay of Rh¹⁰⁰ and it is pointed out that previously observed lines actually constitute groups of lines. The research covered in detail the energy range from 200 to 2500 keV. A complete level scheme and tables of the γ transition energies and the results of the investigation of the γ - γ coincidence spectra are presented. Orig. art. has: 2 tables and 1 figure.

ASSOCIATION: Leningradskiy gosudarstvennyy universitet im. A. A. Zhdanova (Leningrad State University)

Card 2/3

L 21083-65

ACCESSION NR: AP5001981

SUBMITTED: 26Sep64

SUB CODE: NP

NR REF. SOV: 001

ENCL: 00

OTHER: 002

Card 3/3

L 26932-65 EWT(m) DIAAP
ACCESSION NR: AP5004190

S/0020/65/160/001/0057/0060

AUTHORS: Anton'yeva, N. M.; Dzheleпов, B. S. (Corresponding member
AN SSSR); Nikitin, M. K.; Smirnov, V. B.

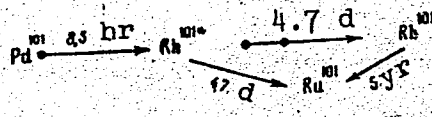
14
13
13

TITLE: Investigation of the decay of $Pd-101$, $Rh-101^*$, and $Rh-101$.

SOURCE: AN SSSR. Doklady, v. 160, no. 1, 1965, 57-60

TOPIC TAGS: palladium, rhodium, decay scheme, gamma transition

ABSTRACT: The decay of Pd^{101} , Rh^{101^*} , and Rh^{101} , in accordance with the scheme



Card 1/2

SMIRNOV, V.B.

Testing an aerial ionospheric station. Probl.Arkt. no.6:137-138
'59. (MIRA 13:6)
(Arctic regions--Ionospheric research)

S/058/61/000/007/082/086
A001/A101

AUTHOR: Smirnov, V.B.

TITLE: Preliminary results of testing an aircraft ionospheric station in the Arctic

PERIODICAL: Referativnyy zhurnal, Fizika, no. 7, 1961, 351, abstract 7Zh505 (V sb. "Issled. ionosfery. no. 5, Moscow, AN SSSR, 1960, 106-113, Engl. summary)

TEXT: The author presents data on an investigation of the ionosphere in the Arctic obtained by means of an aircraft ionospheric station during four flights in the region of Dikson Island. The ionospheric station was mounted on an IL-14 (IL-14) aircraft and had the following characteristics: range 0.5-15 Mc; power 10 kw; receiver passband 20 kc; pulse duration 50-250 μ sec. The aim of the flights was the testing of station operation under arctic conditions and obtaining altitude-frequency characteristics of the ionosphere vertical cross section which could be used for estimating the relative level of ionospheric absorption. Equipment, observation methods and results obtained are described. The measurements

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Preliminary results ...

S/O58/61/000/007/082/086
ACC1/AIG1

from 20 to 26 September, 1958, showed that absorption of radio waves in the ionosphere decreases northward and southward of Dixon Island. ✓

[Abstracter's note: Complete translation]

Card 2/2

S/169/61/000/010/044/053
D228/D304

9,9100

AUTHOR: Smirnov, V. B.

TITLE: Results of observations of the Arctic's ionosphere from
an aircraft in 1960

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 10, 1961, 28,
abstract 10G169 (V sb. Probl. Arktiki i Antarktiki,
no. 7, L., Morsk. transport, 1961, 58)

TEXT: A brief report is given about ionospheric observations in the
Arctic by means of an ionoprobe mounted on an aircraft. In all, 7 flights
with a total duration of 100 hours were made in the vicinity of the Cen-
tral Arctic. The observations confirmed the existence of a zone of
anomalous absorption coincident with the zone of auroras. Increased ab-
sorption was also observed on a flight in areas of the morning maximum of
magnetic disturbances. Several measurements of the drift of the E-layer

Gard 1/2

✓
B

SMIRNOV, V.B.

The abnormal absorption zone of the ionosphere observed during
vertical sounding. Probl. Arkt. i Antarkt. no.8:63-65 '61.
(MIRA 15:3)

(Ionosphere)

L3443

S/169/62/000/011/074/077
D228/D307

9/500

AUTHOR: Smirnov, V.B.

TITLE: Zone of anomalous absorption in the ionosphere during vertical sounding

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 11, 1962, 27, abstract 11G163 (In collection: Probl. Arktiki i Antarktiki, no. 8, L., Morsk. transport, 1961, 63-65)

TEXT: A panoramic airborne ionospheric station was developed at the Arkticheskiy i antarkticheskiy institut (Arctic and Antarctic Institute) in order to investigate the ionosphere in rather inaccessible Arctic areas. 7 flights in the Arctic with a total duration of about 100 hours were carried out from April 16 to 28, 1960. Flights were made in the eastern hemisphere from 70°N to the North Pole. A recorder was switched on when operating the radio navigation instruments or the communication radio station, so the observations occupied approximately 25% of the flight time. The main parameters of the equipment (the power of the transmitter, the sensitivity of the receiving device, the accuracy of the altitude and frequency) are given in the following table.

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Zone of anomalous absorption ...

S/169/62/000/011/074/077
D228/D307

quency markers) were checked regularly at the beginning and at the end of a flight. The local coordinates were determined during the flights, and the aircraft track and time were fixed. Ionograms were surveyed at a rate of two photos per minute. Data for quiet and disturbed ionospheric states were obtained as a result of the observations. The absence of reflections (symbol B), or a high value of the minimum signal reflection frequency ($f_{\min} \geq 2 \text{ Mc/s}$), was reckoned to be a criterion of the disturbed state. The main difficulty in interpreting airborne ionospheric data is the separation of time and local effects. To distinguish local effects, the results of airborne observations were compared with ground station observations. Analysis of the materials confirmed that there is a zone of anomalous absorption, coinciding approximately with the zone where the frequency of auroras and magnetic disturbances is maximal. In addition it was found that in a number of cases there was increased absorption when the aircraft was flying near the corresponding isocrones of the morning maximum of magnetic disturbances. Observations showed that the latitudinal extent of the zone of anomalous absorption is $\sim 6^\circ$. These data agree with the results

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Zone of anomalous absorption ...

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D228/D307

of Eggi (Edzhi) for the western hemisphere. The center of the zone for 50-180°E is situated approximately in 74°N. Hence the southern border of the zone is located in 71°N. A similar position for the zone's southern border was determined in flights with an ionospheric station near Dixon Island in September 1958. No zone of anomalous absorption was detected during the quiet ionospheric state; the relative level of absorption in these periods did not depend on the latitude. If the level of absorption while the ionosphere is in a quiet state is taken as unity, the increase in absorption at the center of the zone ≈ 3 . It is pointed out that a large number of flights must be made in different seasons of the year in order to obtain more complete and accurate data. 7 references.

[Abstracter's note: Complete translation]

Card 3/3

SMIRNOV, V.B., kand. tekhn. nauk

Airborne observations of the drift of nonuniformities in
the E Layer in Antarctica. Inform. biul. Sov. antark.
eksp. no.35:43-44 '62. (MIRA 16:11)

1. Arkticheskiy i antarkticheskiy nauchno-issledovatel'skiy
institut.

L 61581-65 EWT(d)/EED-2/EWP(1) Pg-4/Pg-4/Pk-4 IJP(c) BB/GG/GS/JXT(BF)
ACCESSION NR: AT5014719 UR/0000/65/000/000/0122/0129

AUTHOR: Yeremenko, I.V.; Smirnov, V.B.

27
B+1

TITLE: Increased capacity memories with unipolar information recording

SOURCE: Operativnyye i postoyannyye zapominayushchiye ustroystva (Rapid and non-volatile storage); sbornik statey. Leningrad, Izd-vo Energiya, 1965, 122-129

TOPIC TAGS: enlarged drum memory, unipolar memory recording, magnetic recording head, magnetic memory capacity

ABSTRACT: The feasibility of increasing the capacity of magnetic memories with mobile information carriers is discussed. The mere enlargement of the capacity must also be followed by an increase in the number of autonomous input and output information channels and a decrease in the energy needed for the recording of one bit of information. Among other aspects, the article discusses increases in drum width, describes briefly the unipolar principle for recording and reading of information, and presents a preliminary calculation and modeling of the magnetic circuit of a new magnetic head (remagnetization is carried out by the basic magnetic flux and not by the stray field). While the recording head of the "Ural-1" computer requires 6.3 mW of power for the recording of one binary sign, the newly designed head for unipolar registration requires

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ACCESSION NR: AT5014719

only approximately $2 \cdot 10^{-3}$ mW to do the same job. On the other hand, as a result of a reduction from 1 to 0.01 mm² in the area needed for the registration of one pulse, the capacity of the proposed drum is 200 times the capacity of the existing "Ural-1" drum. Orig. art. has: 7 formulas, 6 figures, and 2 tables.

ASSOCIATION: none

SUBMITTED: 20Jan65

ENCL: 00

SUB CODE: DP

NO REF SOV: 000

OTHER: 000

Card 2/2 *WOP*

L 56504-65 EWT(d)/EKD-2/EWP(1) Pq-4/Pg-4/Pk-4 IJP(c) BB/GG
ACCESSION NR: AP5016757 UR/0286/65/000/010/0081/0081
681.142.621

37
B

AUTHOR: Smirnov, V. B.; Balashov, Ye. P.; Genkin, V. L.; Smolov, V. B.

TITLE: A device for converting binary code to Grey code. Class 42, No. 171158

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 10, 1965, 81

TOPIC TAGS: code converter^{bc}, binary code, computer component

ABSTRACT: This Author's Certificate introduces a device for converting binary code to Grey code. The unit contains a register for binary code reception. The device is made with pulse transformers to reduce the amount of equipment required and to improve reliability. The start of one output winding in the transformer for the i -th digit is connected to the start of the output winding in the transformer for the $(i-1)$ -th digit. The end of the second output winding in the transformer for the i -th digit is connected to the end of the output winding for the $(i-1)$ -th digit. The end and start of the first and second windings for the i -th digit are connected respectively through diodes to the output busses for the converted code.

Card 1/2

L 56504-65

ACCESSION NR: AP5016757

ASSOCIATION: none

SUBMITTED: 06Jul64

NO REF SOV: 000

ENCL: 00

SUB CODE: DP

OTHER: 000

gal
Card 2/2

L 18456-66 EWT(d)/EMP(1) IJP(c) BB/CG
ACC NR: AP6006380 SOURCE CODE: UR/0413/66/000/002/0114/0114

INVENTOR: Genkin, V. L.; Smirnov, V. B.

ORG: none

TITLE: A mod 2 adder based on a fluxer. Class 42, No. 178165

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 2, 1966, 114

TOPIC TAGS: computer component, adder, fluxer, computer circuit

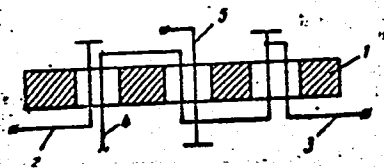
ABSTRACT: This Author's Certificate introduces a mod 2 adder based on a fluxer with two input windings, one output winding and a reset winding. Provision is made for both simultaneous and nonsimultaneous arrival of the input signals by passing the input windings through the end openings while the output winding encloses the two inside cross pieces.

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UDC: 681.142.07

L 18456-66

ACC NR: AP6006380



1 - fluxer; 2 and 3 - input windings; 4 - output winding;
5 - reset winding.

SUB CODE: 09/ SUBM DATE: 27Jul64

Card 2/2 *mg S*

L 45500-66 EWT(1)/EWT(m) JD

ACC NR: AP6015578

(N)

SOURCE CODE: UR/0146/66/009/002/0079/0082

AUTHOR: Smirnov, V. B.

ORG: Leningrad Institute of Aviation Instruments (Leningradskiy institut aviatsionnogo priborostroyeniya)

46
B

TITLE: Some problems in the construction of multicore magnetic elements

SOURCE: IVUZ. Priborostroyeniye, v. 9, no. 2, 1966, 79-82

TOPIC TAGS: magnetic core, logic circuit, magnetic core storage, *computer storage device, Boolean function*

ABSTRACT: The potentialities of ladder-shaped multicore flux-switching magnetic elements ("laddics") are briefly considered. This is an extension of the V. F. Gianola et al. work (BSTJ, Jan1959, v. 38, pp. 45-72). A 4-core (3-window) element can realize the Pierce function and a disjunction of a few binary variables. An 8-core (7-window) element can realize a 4-variable Boolean function represented by a complete disjunctive normal form. The same magnetic structure (with some added bias windings) can also be used for realization of a Boolean function of 12 independent variables represented by a disjunctive normal form. Orig. art. has: 3 figures and 4 formulas.

SUB CODE: 09 / SUBM DATE: 20Sep65 / ORIG REF: 001 / OTH REF: 001

UDC: 681.142.5

ms
Card 1/1

ACC NR: AP7001380

(A,N)

SOURCE CODE: UR/0413/66/000/021/0053/0053

INVENTORS: Balashov, Ye. P.; Smirnov, V. B.

ORG: none

TITLE: Two-hole transfluxor logic element. Class 21, No. 187832

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 21, 1966, 53

TOPIC TAGS: logic element, magnetic circuit

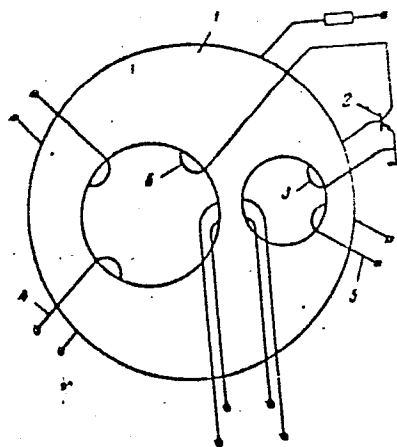
ABSTRACT: This Author Certificate presents a two-hole transfluxor logic element for executing the functions "AND", "OR", "EXCLUSION", and "PROCEED" spaced in the period of the input quantities, which contains setting, exclusion, and output windings. To increase the load capacity of the element, it contains a transistor with a winding connected to its base, which passes through the small hole of the transfluxor (see Fig. 1). The element also contains a collector winding passing through the large hole and a record winding encompassing the center crosspiece of the transfluxor. One of the exclusion windings passes through the large hole and the other--through the small hole.

UDC: 681.142.07

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ACC NR: AP7001380

Fig. 1: 1 - transfluxor; 2 - transistor;
3 - base winding; 4 and 5 - exclusion
windings; 6 - collector winding



Orig. art. has: 1 diagram.

SUB CODE: 09/ SUBM DATE: 30Jul65

Card 2/2

SOURCE CODE: UR/3116/66/280/000/0057/0066

AUTORS: G. G. Gorbunin, V. M. Smirnov, V. B.

ORG: UR/3116/66/280/000/0057/0066

TITLE: Spectral characteristics of absorption of the type found in the zone of the Northern lights

SOURCE: Izvestiya Akademiya Nauk SSSR, Seriya Fiziko-Matematicheskiye Nauki, No. 1, 1966. Issledovaniya magnitno-ionosferykh vozmushcheniy i rasprostraneniya voln v Arktike i Antarktike (Studies of magnetic and ionospheric disturbances and radio wave propagation in the Arctic and Antarctic), 57-66

TOPIC TAGS: aurora, ionosphere, ionospheric absorption, time constant, meteorology, meteorologic instrument, meteorologic observation

ABSTRACT: The f_{min} parameter (minimum frequency reflected from the ionosphere) gives only a qualitative representation of variations in ionospheric absorption. It is also ineffective in differentiating extremely high absorption levels. f_{min} data are only available at 15 minute intervals. All these deficiencies are eliminated by absorption measurements with riometers, since their use makes possible continuous determination of absorption in the ionosphere, and is particularly convenient for measuring high

Card 1/2

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SOURCE CODE: 151/3116/66/280/000/6557/6557

Author: [unclear], V. M.; [unclear], V. B.

1. Title: Spectral characteristics of absorption of the type found in the zone of the Antarctic front

2. Source: Leningrad, Arkticheskiy i antarkticheskiy nauchno-issledovatel'skiy institut. Trudy, No. 10, 1956. Issledovaniya magnitno-ionosfernykh vozmushcheniy i rasprostraneniya radiovoln v Arktike i Antarktike (Studies of magnetic and ionospheric disturbances and radio wave propagation in the Arctic and Antarctic), 57-66

3. Keywords: aurora, ionosphere, ionospheric absorption, time constant, meteorology, meteorologic instrument, meteorologic observation

4. Summary: The f_{min} parameter (minimum frequency reflected from the ionosphere) gives a quantitative representation of variations in ionospheric absorption. It is also ineffective in differentiating extremely high absorption levels. f_{min} data are only available at 15 minute intervals. All these deficiencies are eliminated by absorption measurements with riometers, since their use makes possible continuous determination of absorption in the ionosphere, and is particularly convenient for measuring high

Card 1/2

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... of absorption, something which is extremely essential for observations in the
... latitudes. The results of riometric observations performed by a network of
stations in the Arctic are described as performed by riometer with an operation
frequency of 2.3 megacycles and a noise ratio of 5. The time constant for the circuit
with the detector was 25-35 seconds while recording accuracy was approximately
1.5 mm, and the recording width in the center of the scale was 1.5 mm. Daily and
seasonal variations in absorption are presented in graphic form. The data cover the
period January-February 1954. A map of latitude-time variations in auroral absorption
for February 1954, is presented. The latitudinal distribution of auroral absorption
with various levels of magnetic activity was studied, and a chart of the geographic
distribution of auroral absorption, and average magnetic activity, was compiled.
Orig. art. has 6 figures and 3 tables.

... COPIES AVAILABLE DATE: 10/11/01 REF: 002/011 REF: 004

Card 2/2

ANTONAYEVA, H.M.; IZHELEPOV, I.S.; NIKIFOR, M.K.; SMIRNOV, V.B.

Study of the decay of ^{90}Sr , ^{90}Y , and ^{90}Zr . Dokl. AN SSSR 160
no.1:57-59 Ja 1955. (MIRA 18:2)

1. Leningradskiy gos. inzhenernyy universitet im. A.A. Zhdanova.
2. Chlen-korrespondent AN SSSR (for Izheleпов).

SMIRNOV, V. D.

1270. Organizatsionno-khozyaystvennoye ukrepleniye kolkhovov vologodskoy oblasti v poslevoyenny period. II., 1954, 15s. 21^{sm.} Mosk. gos. ped. in-t. im. V. G. Gorkin. 100ekz.--B. ts.--54-53713/.

SG: Knizhnaya Letopis, Vol. 1, 1955

SHAROV, V. S.

YU. V. GARDIN, A. I. KHARIN, A. M. KURAT, V. F. SHAROV,
I. N. SERBULOV, V. F. ZUBAREN:

In a Russian Symposium of papers entitled "Heat Treatment of
Rails," edited by I. S. Gardin and published by the Soviet
Academy of Science, Moscow 1958. The following articles
appeared; Investigation of slow cooling of rails in in-
ustrial (standard) boxes.

CO: 886103

SMIRNOV, V.D., inzhener; STABOAN, N.B., inzhener; GUBBAT, S.V., inzhener;
VINOKUROV, I.Ya., inzhener; FEDOROV, P.D., inzhener.

Experience in rolling lightweight sections. Staff no.12:1086-1089
(MLRA 10:9)

1. Novo-Tagil'skiy metalurgicheskiy zavod.
(Rolling (Metalwork))

SMIRNOV, V. D., Candidate Tech Sci (diss) -- "Experimental investigation of the operation of the grid of reinforced-concrete roof girders". Moscow, 1959. 15 pp (Min Higher Educ USSR, Moscow Order of Labor Red Banner Construction Engineering Inst im V. V. Kuybyshev), 130 copies (KL, No 25, 1959, 136)

SMIRNOV, V.D., inzh.

Some comments on joints of stressed elements in prestressed concrete
girders reinforced with wire boudles. Prom.stroi. 37 no.2:64 F '59.
(MIRA 12:3)

(Girders)

SMIRNOV, Vasilii Dmitriyevich; TERESHCHENKO, N.I., red.;
PROKOF'YEVA, L.N., tekhn. red.

[Labor accounts on collective and state farms] Uchet truda
v sovkhovakh i kolkhozakh. Moskva, Sel'khozizdat, 1963. 134 p.
(MIRA 16:7)

(Agriculture--Accounting)

SMIRNOV, VASILIIY DMITRIYEVICH

DECEASED
1962

1964

PEAT INSTITUTE

SHIRNOV, V.D., k.k.m. tekhnichesk; Pridel'N., V.I., inzh., red.

[Form containing a series of vibration rolled panels; based on materials of the Experimental Design Office of the Academy of Construction and Architecture of the U.S.S.R., the Client Plant for Reinforced Concrete Elements (Moscow Province) and the Moscow Provincial Construction Administration] Sel'zobkhozstroi'telnyye proizvodstvennye zavoda iz vibroprokatnykh panel'nykh; po materialam Eksperimental'no-konstruktivnogo biuro - I' OAN, Kilmoroy zavoda zhelezobetonnykh konstruktiv (Moskovskaya obl.) i Moskovskoye gos. gosstroi'tel'stvo. Moskva. Gosstroiizdat, 1961. 28 p. (MIRA 17:8)

1. Akademiya stroitel'stva i arkhitektury USSR. Nauchno-issledovatel'skiy institut organizatsii, mekhanizatsii i tekhnicheskoy pomoshchi stroitel'stva.

BOGOSLOVSKIY, Yu.D., inzh.; SMIRNOV, V.D., kand. tekhn. nauk;
BOGOMOLOV, F.M., inzh.

[Practices in preparing prestressed beams with a span of 18 meters in the West Ural Economic Region] Opyt izgotovleniya predvaritel'no napriazhennykh balok proletom 18 metrov v Zapadno-Ural'skom ekonomicheskom raione. Perm', 1963. 27 p. (MIRA 17:12)

1. Nauchno-tekhnicheskoye obshchestvo stroitel'noy industrii SSSR. Permskoye oblastnoye pravleniye. Trest "Orgtekhstroy." 2. Nachal'nik otdela vnedreniya i osvoyeniya novykh stroitel'nykh konstruktsiy tresta "Orgtekhstroy" (for Bogoslovskiy). 3. Glavnyy tekhnolog Permskogo zavoda ZhVK-3 (for Bogomolov).

SHABAROVA, Z.A.; SMIRNOV, V.D.; PROKOF'YEV, M.A.

Peptide synthesis with the participation of 3' (2')-O-phenylalanyladenine.
Blokhiimia 29 no.3:502-507 My-Je '64. (MIRA 18:4)

1. Khimicheskii fakul'tet Gosudarstvennogo universiteta imeni Lomonosova,
Moskva.

L 43183-65 EWP(m)/ENT(1)/FCS(k)/EWA(d)/EWA(1) Pd-1

UR/0170/65/008/003/0349/0357

ACCESSION NR: AP5009773

16
B

AUTHOR: Smirnov, V. D.

TITLE: Filling and emptying vessels of limited capacity with compressible gas at a constant and variable vessel volume

SOURCE: Inzhenerno-fizicheskiy zhurnal, v. 8, no. 3, 1965, 349-357

TOPIC TAGS: adiabatic process, isothermal expansion, equation of state, pressure distribution, gas flow rate

ABSTRACT: The process of filling and emptying a vessel of constant and variable volumes was studied analytically. For each case equations corresponding to sub-critical and supercritical pressure levels in the vessel were obtained. The corresponding gas mass flow rate expressions per second are

$$G_{sub} = af \left\{ \frac{2gn}{n-1} \frac{\rho_0}{v_0} \left[\left(\frac{p_f}{\rho_0} \right)^{\frac{2}{n}} - \left(\frac{p_f}{\rho_0} \right)^{\frac{n+1}{n}} \right] \right\}^{1/2}; \text{ and } G_{super} = af \left[\frac{2gn}{n+1} \frac{\rho_0}{v_0} \left(\frac{2}{n+1} \right)^{\frac{2}{n-1}} \right]^{1/2}$$

In addition, each process was calculated for adiabatic as well as isothermal expansion-compression. The constant volume filling process calculations indicate that the isothermal case does not differ much from the adiabatic compression case.

Card 1/2

(A) L 10993-66 EWT(d)/EWP(v)/EWP(k)/EWP(h)/EWP(1)
ACC NR: AP5028529

SOURCE CODE: UR/0286/65/000/020/0124/0124

INVENTOR: Smirnov, V. D.; Ushakov, V. N.; Splvak, M. A.; Gokhbaum, F. A.; Braylovskiy, M. I.; Astrova, T. I.

ORG: none

TITLE: Hydraulic cylinder for a high-capacity press. Class 58, No. 175823 /announced
by Experimental Construction bureau of the central scientific research institute
of building construction. (Eksperimental'no-konstruktorskoye byuro tsentral'nogo nauchno-
issledovatel' skogo instituta stroitel'nykh konstruksiy)

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 20, 1965, 124

TOPIC TAGS: press, hydraulic press, high capacity press, press cylinder, cylinder design

ABSTRACT: This Author Certificate introduces a hydraulic cylinder for a high-capacity press. The cylinder (see Fig. 1) consists of inner metal shell 1, encased in a reinforced-concrete housing. Expansion joint 2 separates top 3 and bottom 4 of the housing to reduce the internal stresses. Orig. art. has: 1 figure. [DV]

L 10993-66

ACC NR: AP5028529

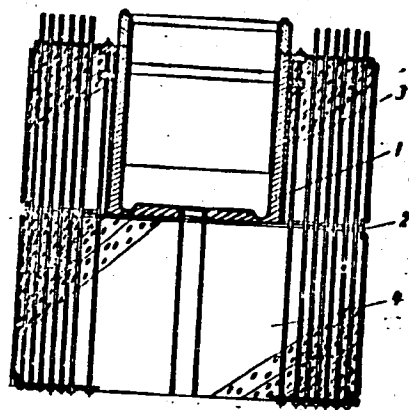


Fig. 1. Hydraulic cylinder

1 — metal shell; 2 — expansion joint;
3 — top of the housing; 4 — bottom of the
housing.

SUB CODE: 13/ SUBM DATE: 27May64/ ATD PRESS: 4170

Card 2/2

SHISHKIN, A.A., doktor tekhn. nauk, SMIRNOV, V.D., kand. tekhn. nauk;
BRAVINSKIY, E.A., kand. tekhn. nauk

Winter sealing of precast structures without heating. Izv. stroit.
43 no.10:7-10 '65. (MIRA 18:11)

L 07530-67 ARG/EWP(c)/EWP(h)/EWT(d)/FBO/FSS-2

ACC NR: AP6010464

(N)

SOURCE CODE: UR/0375/66/000/003/0032/0038

AUTHOR: Sysoyev, V. S. (Docent; Rear admiral; Candidate of naval sciences);
Smirnov, V. D. (Docent; Candidate of naval sciences; Captain)

ORG: none

30
B

TITLE: Air defense of ship formations

SOURCE: Morskoy sbornik, no. 3, 1966, 32-38

TOPIC TAGS: air defense tactic, military organization, naval fire control system,
naval tactic

ABSTRACT: Citing data from the great sea battles of the Second World War, the author points out that the air defense of ship formations has radically changed since that period when aircraft used only bombs and torpedoes against ships. The development of missiles has led to profound qualitative changes in the problems, organization, and means of air defense of ship formations. This article describes these changes. Where as previously only aircraft could make an aerial attack, now there are missile-firing submarines, missile ships, and coastal missile units. The effectiveness of the means of aerial attacks on ships has increased appreciably as a consequence of using nuclear warheads in various types of weapons and controlled missiles. The importance of fighting with weapons which are employed by different carriers has increased, i.e., with the wide introduction of controlled missiles air defense is faced with the problem of de-

Card 1/2

0 07510-01

ACC NR: AP6010464

destroying not only the vehicles but also the means of attack used by them. Furthermore the spatial boundaries of the zone of the air defense formations have increased, since an elementary calculation shows that at the speeds of modern aircraft of about 500 m/sec and bombing heights of 10—15 km the bombing boundary will be 20—25 km and more from the ships under attack. The element of surprise of aerial attack by the enemy has also increased immeasurably since it is possible to destroy the enemy with a single blow with the use of nuclear weapons. The importance of electronic facilities in the air defense systems has markedly increased and that the composition and significance of the forces and facilities in the air defense systems of ship formations have changed in that artillery and fighter aircraft have been replaced by rockets.

SUB CODE: 13,15/
19/ SUBM DATE: none

Card

2/2

gd

SMIRNOV, V.D.

Gas-forming dysentery bacteria; gas-forming variant of Shigella new-
castle; author's abstract. Zhur.mikrobiol.epid. i immun. 29 no.7:136-137
Jl '58 (MIRA 11:8)

(SHIGELLA,
newcastle, gas-forming strains (Rus))

SMIRNOV, V.D.

Etiological role of so-called gas-forming dysentery bacteria.
Zhur.mikrobiol.,epid.i immun. 30 no.12:123 D '59. (MIRA 13:5)
(SHIGELLA PARADYSNTERIAE)

SMIRNOV, V.D.

Clinical analysis of results of laboratory bacteriological examinations ("Early differential diagnosis of infectious diseases" by K.V.Bunin. Reviewed by V.D.Smirnov). Zhur.mikrobiol.epid.i immun. 32 no.2:139-140 F.'61. (MIRA 1416)
(COMMUNICABLE DISEASES) (DIAGNOSIS)
(BUNIN, K.V.)

SMIRNOV, V.D.

Use of fluorescing sera in the bacteriological diagnosis of intestinal infections. Zhur. mikrobiol. epid. i immun. 32 no.7:126-127 Je '61.

(MIRA 15:5)

(FLUORESCENCE MICROSCOPY) (INTESTINES---MICROBIOLOGY)

SKVORTSOV, V.V.; OSADCHIYEVA, A.L.; EYDINOVA, G.G.; ABRAMOVA, N.I.;
IVANOV, V.M.; SMIRNOV, V.D.

Reviews, criticism and bibliography. Zhur. mikrobiol.,
epid. i immun. 33 no.7:145-152 JI '62. (MIRA 17:1)

SMIRNOV, V.D.

Use of a compressible gas in filling and emptying vessels of finite capacity and either variable or invariable volume. Inzh.-fiz. zhur. 8 no.3:349-357 Mr '65. (MIRA 18:5)

SMIRNOV, V.D.; SHABLAGOVA, N.A.; PROKOP'YEV, M.A.

Synthesis of uridylyl-(5'→N)-phenylalanyl-3'(2')-O-adenosine.
Dokl. AN SSSR 160 no.4:845-848 F 165.

(MIRA 18:2)

I. Meckovski gosudarstvennyy universitet. Submitted July 25, 1964.

SMIRNOV, V.E.

"Studying the Effect of Thermal Deformations on the Precision of Metal-Cutting Machines." Thesis for degree of Cand. Technical Sci. Sub 20 Oct. 49, Moscow Aviation Technological Inst.

Summary 82, 18 Dec 52, Dissertations Presented For Degrees in Science and Engineering in Moscow in 1949. From Vechernyaya Moskva, Jan-Dec. 1949.

PHASE I

SMIRNOV, V. Ye.

BOOK

Call No.: TN665.S58 1952

Author: Smirnov, V. Ye., Professor.

Full Title: REVERBERATORY SMELTING; THEORY AND PRACTICE. 3rd revised and supp. ed.

Transliterated Title: Otrazhatel'naiia plavka; teoriia i praktika.

Publishing Data

Originating Agency: None.

Publishing House: State Publishing House of Scientific-Technical Literature on
Ferrous and Nonferrous Metallurgy.

Date: 1952 (1st ed., 1930. 2nd ed., 1941) No. pp.: 326 No. of copies: 4,000

Editorial Staff

Editor: None.

Ed.-in-Chief: None.

Tech. Ed.: None.

Appraisers: Sakhanskii, N.A.,
Engineer

Text Data

Coverage: The theory and practical problems of smelting ores and concentrates in reverberatory furnaces are considered in detail: physical-chemical principles of smelting, the construction and equipment of reverberatory furnaces, smelting processes, and methods of estimating furnace charges. The third edition includes supplementary data on thermotechnical aspects of reverberatory smelting, preparation of furnace charges, and control of production. 107 Diagrams. 58 Tables.

Purpose: The work is written for technical engineers and scientific workers.

Facilities (personalities and institutions with location): None.

No. Russian and Slavic References: 87

Available: Library of Congress.

ASM SMIRNOV V. E.

6

359-G. (Russian.) The Influence of Thermal Deformation on the Precision of Metal-Cutting Machines. V. E. Smirnov and D. N. Reshetov. *Stanki i Instrument*, v. 23, Jan. 1952, p. 3-12. Mathematical theory. Experimental data are charted, tabulated, and discussed. (G17)

SMIRNOV, V.E.

V 1559* Effect of Cooling Time of a Part on the Accuracy of Measurements. *Vliyanie vremeni okhlazhdeniya detali na tochnost' izmerenii.* (Russian) V. E. Smirnov. *Vestnik mashinostroeniia*, v. 35, no. 10, Oct. 1955, p. 56-58.

MG

Heating of a cylindrical semi-finished product during cutting affects the accuracy of final dimensions of part being machined. Takes into account the thermal deformation of the product during machining for better calculation. Graphs.

of
MET

AID P - 4481

Subject : USSR/Engineering
Card 1/1 Pub. 128 - 8/29
Authors : Bolotovskaya, T. P., Engineer, I. A. Bolotovskiy, Kand.
Tech. Sci., and V. E. Smirnov, Kand. Tech. Sci., Dotsent.
Title : Teeth interference of wheels cut on a broaching-type
machine.
Periodical : Vest. mash., #4, p. 31-34, Ap 1956
Abstract : A geometrical analysis of the angular correction of a
straight-tooth involute profile is presented. Charts.
Institution : None
Submitted : No date

Мирнов, В.С.

25(2) PHASE I BOOK EXPLOITATION SOV/3099

Konferentsiya po voprosam rascheta, konstruirovaniya i issledovaniya tuchatsyakh paradach i paradach gibkoy svyazi. (Moscow, 1977)

Raschet, konstruirovaniya i issledovaniya paradach; trudy konferentsii. [t. 1] (Design, Construction and Analysis of Transmissions; Transactions of the Conference on Problems in Design, Construction and Analysis of Gear and Flexible Transmissions, Vol 1) [Odesa] Odeskyye Politekh In-t, 1978. 199 p. 5,000 copies printed.

Sponsoring Agencies: Nauchno-tekhnicheskoye obshchestvo mashinostroitel'noy promyshlennosti, Odeskoye obshchestvo pravitsayev, and Odeskyye Politekhicheskyy Institut.

Ed. I. P. Mikhaylov, Engineer; Tech. Ed. A. S. Komisarovich; Editorial Board: L. S. Borovikh, Candidate of Technical Sciences, M. S. Belyayev, Engineer, M. D. Gaskin, Candidate of Technical Sciences, K. I. Zablonskiy, Candidate of Technical Sciences (Resp. Ed.), P. S. Zak, Candidate of Technical Sciences, Ya. G. Klat'yan, Candidate of Technical Sciences, V. M. Rudiyavtsev, Doctor of Technical Sciences, V. P. Mel'tsev, Candidate of Technical Sciences, N. S. Polotskiy,

Card 1/8
 Candidate of Technical Sciences, and U.S. British, Candidate of Technical Sciences.

COVERAGE: This book is the first of three volumes dealing with the transmission and construction of gears and worm gears. The second volume treats flexible transmissions. The third, theoretical and experimental analysis of transmissions. References follow several of the articles.

TABLE OF CONTENTS:

Bobrovskiy, I. A., Rational Selection of Replacement Coefficients and Distribution of Replacements Between Gears at Angular Correction With the Use of the "Equivalent" Method	99
This article discusses correction of involute gears by displacing the profiles (angular correction) for obtaining the maximum contact strength, bending strength, and wear resistance with the aid of limiting-contour diagrams.	
Malinov, V. S., Limiting-contour Diagrams and Methods of Their Construction. Change in Contour Form Due to a Change in Certain Geometrical Parameters	109
Components of nonlimiting-contour diagrams such as interference, overlapping coefficient, radial clearance, and changes of tooth height, and corner radii of the hob tooth are discussed.	
Belyayev, A. I., Investigation of the Load Capacity of Helical Gears. Theoretical Investigation, and Experimental Results. The results show that the load capacity of helical gears can be 50 percent greater than that of straight gears.	111
Krivonozhko, I. S., Basic Results of a Theoretical and Experimental Investigation of New Types of Worm Gear Trains	119
The use of worms with concave profiles is discussed. The results of the investigation show the advantages of worm gears of this type.	
Podolskiy, P. V., M. I. Kostin's Gearing System	129
A brief synopsis of Kostin's system of gearing for spur gears, including construction of profiles of concave and convex teeth, is presented. The author claims that the system has a load capacity 2 to 3 times greater than standard involute gearing systems. He further states that this fact has been confirmed by exhaustive tests at various plants.	
Solov'yev, A. I., Theoretical Fundamentals of the Friction Analysis of Automobile Transmissions and Experimental Methods of Investigating Friction in Automobile Mechanisms	141
The efficiency of gears, universal and the whole transmission is studied. Friction in roller contact bearings and in the differential friction losses in the transmission during unsteady motion, and experimental methods of investigating friction losses in automobile mechanisms are discussed.	

Card 6/8

S/145/60/000/005/003/010
D221/D301

AUTHORS: I.A. Bolotovskiy, and V.E. Smirnov, Docents

TITLE: On the problem of selecting the displacement coefficients for external gears machined by Fellow-cutters

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Mashinostroyeniye, no. 5, 1960, 41 - 50

TEXT: The consideration of specific parameters of the gear cutter permits the advantages of correction to be fully exploited. In practice, however, the selection of correction and the geometrical calculations are involved, due to special features of the Fellow-cutter when compared to a rack generating tool. These peculiarities result in a different geometry of teeth machined by a Fellow-cutter, and therefore, the displacement from the base contour must also be different. The root diameter of the gear would then be smaller, whereas the outside diameter will be greater than in the case of rack-cut gears. The fillets and their conjugation point with the involute will differ from those produced by

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On the problem of selecting ...

S/145/60/000/005/003/010
D221/D301

decreased. The area of the correction contour is narrowed by limited undercutting, interference and pointing in the region of small corrections. The author suggests an album of bounding contours for a rapid selection of the required shifts. The number of these curves should be limited to those which are applicable for any z_1 or z_2 . The outside diameter of gears are then determined by the rack equations, but the teeth are machined by a Fellow-cutter. The curves of undercutting, pointing and interference are plotted according to the parameters of tool which produces the maximum limitation. This ensures a contour applicable for gears machined by a Fellow-cutter and with outside diameter calculated by rack equations. There are 9 figures and 10 Soviet-bloc references.

ASSOCIATION: Ufimskiy aviatsionnyy institut (Ufa Aviation Institute)

SUBMITTED: June 26, 1959

Card 3/3

BOLOTOVSKAYA, Tat'yana Petrovna; BOLOTOVSKIY, Izrail' Arkad'yevich,
kand. tekhn. nauk; SMIRNOV, Vsevolod Erazmovich; EYDINOV,
E.S., kand. tekhn. nauk, retsenzent; BOGOSLAVETS, N.P.,
tekhn. red.

[Manual on gear correction]Spravochnik po korrigirovaniu
zubchatykh koles. Pod red. I.A.Bolotovskogo. Moskva, Mashgiz,
1962. 215 P. (MIRA 15:10)

(Gearing)

BOLOTOVSKAYA, T.P.; BOLOTOVSKIY, I.A., kand. tekhn. nauk, dots.;
BOCHAROV, G.S.; GULYAYEV, V.I.; KURLOV, B.A.; MERKUR'YEV,
I.A.; SMIRNOV, V.E.

[Handbook on the geometrical calculation of involute toothed
and worm gears] Spravochnik po geometricheskomu raschetu
evol'ventnykh zubchatykh i cherviachnykh peredach. [By] T.P.
Bolotovskaia i dr. Moskva, Mashgiz, 1963. 472 p.
(MIRA 17:4)

IGNAT'YEVA, Alla Venediktovna; KASHNOSHCHKOVA, Iaisiya
Ivanovna; SMIRNOV, Viktor Fedorovich; ROMANOVSKIY,
P.I., prof., red.; TAL'SKIY, D.A., red.

[Course in higher mathematics] Kurs vysshei matematiki.
Moskva, Vysshaia shkola, 1964. 682 p. (MIRA 18:1)

TAKELEKOV, K.Zh.; SMIRNOV, V.F.

Investigating the stability of bearing pillars in Dzheskazgan mines.
Trudy Inst.gor.dela AN Kazakh.SSR 14:81-86 '64.

(MIRA 18:1)

SMIRNOV, V.F., kand. med. nauk

Results of surgical treatment of hemorrhoids. Sov. med. 28
no.8:91-94 Ag '65. (MIRA 18:0)

1. Proktologicheskoye oddeleniye (dir. - prof. A.N. Kyshink)
Gosudarstvennogo onkologicheskogo Instituta imeni Gertsena
(dir. - prof. A.N. Novikov) i bol'nitsa No. 67 (glavnyy vrach. F.S.
Petrushko, Moskva).

1. SMIRNOV, V.F.
2. USSR (600)
4. Agriculture
7. Cultivation of dwarf fruit trees in the central belt of the U.S.S.R. Izd. 2-e. Moskva. Sel'khozgiz, 1952.

91 Monthly List of Russian Accessions. Library of Congress, February, 1952

SMIRNOV, V.F.

Experimental work by the section of Michurin experimenters
in the Moscow Naturalists' Society. Bot. zhur.40 no.5:767-
772 S-O '55. (MIRA 9:4)

1. Moskovskoye obshchestvo ispytateley prirody.
(Botanical research)

SMIRNOV, Viktor Fedorovich; SOKOLOVA, N.A., red.; YERMAKOV, M.S.,
tekhn.red.

[Varieties of fruit trees for private orchards of the central
zone] Sorta plodovykh derev'ev dlia priusadebnogo sada srednei
polosy. Moskva, Izd-vo Mosk.univ., 1960. 272 p.

(MIRA 13:10)

(Fruit trees--Varieties)

SMIRNOV, Viktor Fedorovich; SERGEYEV, V.I., red.; PROKOF'YEVA, L.N.,
tekhn.red.

[Growing dwarf fruit trees] Kul'tura karlikovykh plodovykh
derev'ev. Izd.4., ispr. i dop. Moskva, Gos.izd-vo sel'khoz.
lit-ry, 1960. 319 p. (MIRA 13:11)
(Dwarf fruit trees)

NAZARYAN, Ye.A.; LOBANOV, G.A.; TRUSEVICH, G.V.; STEPANOV, S.N.; DUSHUTINA,
K.K.; RYBAKOV, A.A.; KARANYAN, P.G.; UL'YANISHCHEVA, A.M.; TIKHONOV,
N.N.; KAZIZADE, F.N.; SIDERENKO, I.I.; SMIRNOV, V.F.; SHIDENKO,
I.Kh.; VASIL'YEV, V.P.; SHISHKOVA, M.I.; SERGEYEV, V.I., red.;
GOR'KOVA, Z.D., tekhn.red.

[Grusha] Pear. Moskva, Gos.izd-vo sel'khoz.lit-ry, 1960. 534 p.
(MIRA 13:12)

(Pear)

MIKHOV, Viktor Fedorevich

[Wonderful dwarf fruit trees] Chudesnye kerliki. Moskva,
Nauka, 1965. 150 p. (MIRA 19:1)

1. Predsedatel' seksii michurintsev-opytnikov Moskovskogo
obshchestva ispytateley prirody.

SMIRNOV, V.F.

Surgical treatment of hemorrhoids and a study of late results;
analysis of 2040 observations. #kz. vop. prokt.no.2917-29 163
(MIRA 18:1)

PUKHONTO, A.N.; ZHAVORONKOVA, A.Ya.; MOISEYEVA, Ye.I.; SMIRNOV, V.F.

Determination of butyl phosphoric acids, tributyl phosphate, and kerosine when react together in aqueous solutions. Zhur. anal. khim. 20 no.3:372-374 '65. (MIRA 18:5)

ca

7

Spectral method of quantitative analysis of steel alloys
S. L. Mandel'shtam, V. F. Smirov and V. V. Tseiden.
Tech. Phys. U. S. S. R. 3, 541-50 (1933) (in German).
--See C. A. 30, 3844. F. I. C.

458 514 METALLURGICAL LITERATURE CLASSIFICATION

Year	Volume	Page	Author	Title	Journal	Language	Notes
1933	3	541-50	Mandel'shtam, S. L., Smirov, V. F., Tseiden, V. V.	Spectral method of quantitative analysis of steel alloys	Tech. Phys. U. S. S. R.	German	See C. A. 30, 3844

LIST AND TWO ORDERS

PROCESSES AND PROPERTIES INDEX

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Spectral analysis of steel alloys. S. L. Mandel'shtam, V. F. Smirnov and V. V. Tzeldien. *Zavodskaya Lab.* 5, 447-53(1936); cf. C. A. 30, 4783¹.—A modification of the method of Scheibe (*Mitt. Forschungsanstalten GHH-Konowas* 2, 35(1932); C. A. 26, 393, 2087) for quantitative spectral analysis of alloys with the aid of a polarization photometer is described. Chas. Blanc

ASME-ISA METALLURGICAL LITERATURE CLASSIFICATION

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3

PROCESSES AND PROPERTIES OF IRON

The role of the electrode material in the iron arc spectrum. V. F. Smirnov. *J. Tech. Phys. (U. S. S. R.)* 7, 1552-9(1937); *Chem. Zentr.* 1939, I, 1932; *J. C. I.* 32, 4169. — In order to explain the influence of the material of the electrodes on the character of the spectrum of the Fe arc, the idea is developed that the process of the arc discharge can be broken up into 2 stages. During the 1st stage the polarity and the thermal cond. of the electrodes have no effect on the character of the spectrum, which is detd. solely by the compn. of the electrode material and the temp. of the points of electrodes. The duration of this 1st stage is short, since after a brief period the metal which initially evapd. is redeposited on the electrodes so that the electrodes are covered with a coating, which, because of the fractional evapn. taking place, is different in compn. from the original metal of the electrodes. The original material of the electrodes is thus no longer directly concerned in the discharge. The rapidity with which this coating is formed as well as the overall dimensions assumed by the electrodes depend first of all on the conditions of thermal cond. of the electrodes (the rate at which heat is conducted away from their points). Thus, under certain conditions characteristic differences are shown in the behavior of anode and cathode. These results offer a possible explanation of the variations in the spectrum which are at times observed in practical spectral analysis.

W. A. Munn

ASH-SLA METALLURGICAL LITERATURE CLASSIFICATION

IRON STEELING

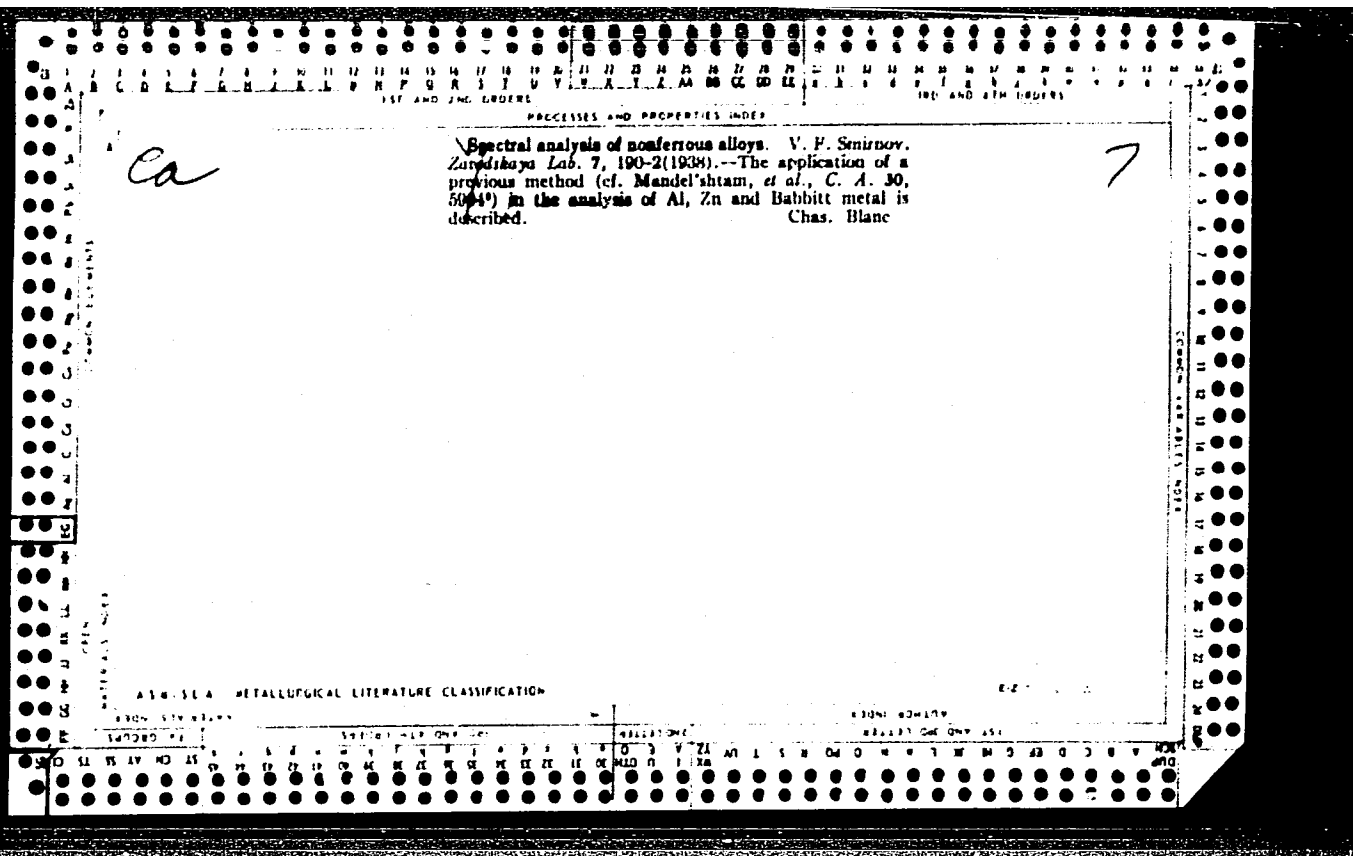
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CA

PROCESSES AND PROPERTIES INDEX

Series of alloy steels with the aid of a steelotype.
 V. E. Guzman. *Zashchita Lab. 9, 1200-70(1960).*
 In most cases it was possible to distinguish the contents of
 2573
 the various elements which differed one from another by
 not less than 20-40%. B. Z. Kamich

ASH-SLA METALLURGICAL LITERATURE CLASSIFICATION

COMMON ELEMENTS

OPEN MATERIALS INDEX

ALPHABETIC INDEX

NUMERIC INDEX

ALPHABETIC INDEX

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117 AND 119 INDEX PROCESS AND PROPERTIES INDEX 120 AND 121 INDEX

CA /

Portable electrotype. V. E. Smirnov. Zashchita Lab. 9, 1344(1940); Chem. Zentr. 1942, II, 2508.—The app. described is mounted on a 3-footed support or can be supported by hand. It is used with a 100-v. storage battery. W. T. H.

ASB-11A METALLURGICAL LITERATURE CLASSIFICATION

122 AND 123 INDEX

124 AND 125 INDEX

126 AND 127 INDEX

128 AND 129 INDEX

130 AND 131 INDEX

132 AND 133 INDEX

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1000 AND 1001 INDEX

*Industrial Scientific
Applications of Photography*

532

778.3 : 535.33 : 545.822

Photographic Method of Spectral Analysis of Steels and Cast Irons in the Visible Range of the Spectrum. V. F. SMIRNOV. *Bull. Acad. Sci. U.R.S.S., Sér. Phys.*, 9, 661-664, 1945.—An activated a.c. arc between the sample and a copper disc (13—14 cm. in diameter, 0.8-1.5 mm. thick) is used in conjunction with a photographic steelometer for determining Cr, Ni, Si, Mo, Ti, Al, V and W by means of photometric interpolation. The concentration ranges, lines measured, mean errors, etc., are tabulated. *Brit. Abs. C.*

131 AND 130 SERIES PROCESSES AND PROPERTIES INDEX 130 AND 131 SERIES

CA

New construction of the electronscope and new methods of semiquantitative steel analysis. V. F. Dmitriev (Phys. Inst. M.G.U.). *Bull. acad. sci. U.S.S.R., Ser. phys.* 9, 730-44(1948).—*Cf. C.A.* 40, 775. S. Pakswar

COMMON FIELDS

MATERIALS INDEX

COMMON VARIANTS INDEX

A.S.T.M. METALLURGICAL LITERATURE CLASSIFICATION

130H 1310217H 130000 H17 00Y 001 COLLECTOR 130H 00017V 031017 00Y 101

130H 1310217H	130000 H17 00Y 001	COLLECTOR	130H 00017V	031017 00Y 101
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117 AND 120 CODES

120 AND 4TH CODES

PROCESSES AND PROPERTIES INDEX

CA

A new construction of steelscope and a new method of semiquantitative analysis of steel. V. F. Smirnov. *Zavodskaya Lab.* 11, 314-18(1945); cf. *C.A.* 38, 2854.

The steelscope consists of a spectral app., a table for samples, a disk electrode, and a box with a spark generator to produce an a.-c. arc. The ammeter and rheostat are built in a sep. box. The optical system consists of a condenser lens, a slit, a rotating prism, a collimator objective, 2 dispersion prisms, and an ocular. A prism between the collimator objective and the ocular rotates the beam of light through an angle of 45°. An activated a.-c. arc is used as the source of the spectrum. This arc can be transformed into a spark spectrum by means of a battery of condensers (10-15 μ F.). W. R. Henn

GENERAL INDEX

COMMON VARIABLE INDEX

A.S.M. S.A. METALLURGICAL LITERATURE CLASSIFICATION

FROM SOURCE

120 AND 4TH CODES

117 AND 120 CODES

SMIRNOV, V. F.

PA 12T35

USSR/Spectroscopic Equipment
Steel

Nov/Dec 1946

"Portable VS-2 Styloscope and Its Use," V. F.
Smirnov, 2 pp

"Avtomobil'naya Promyshlennost'" No 11/12

Detailed description of autocollimator-type
spectroscope with periscope condenser used for
determining quality of steel auto parts. Photos
and diagrams.

12T35 /

SMIRNOV, V. F.

USSR/Nuclear Physics - Cosmic Rays
Nuclear Fission

21 Nov 49

"Decay of Cosmic Ray Particles Causing Nuclear Fission," G. Ye. Belovitskiy, N. V. Maslennikova, V. F. Smirnov, L. V. Sukhov, Phys Inst imeni Lebedev, Acad Sci USSR, 4pp

"Dok Ak Nauk SSSR" Vol LXIX, No 3

Considers problem of nature and properties of particles entering into composition of that component of cosmic rays which causes "star-forming" nuclear fissions ("stars"). Unstable particles causing "stars" are subject of present experiments, designed to clarify their existence. Submitted 17 Aug 49 by Acad D. V. Skobel'tsyn.

158T78

PHASE I

TREASURE ISLAND BIBLIOGRAPHIC REPORT

AID 171 - I

BOOK

Call No.: PD.S538

Authors: SMIRNOV, V. F., STRIGANOV, A. R., and KHRSHANOVSKIY, S. A.

Full Title: ORGANIZATION AND EQUIPMENT OF STANDARD SPECTRAL LABORATORIES

Transliterated Title: Organizatsiya i oborudovaniye tipovykh spektral'nykh laboratoriy

Publishing Data

Originating Agency: Academy of Sciences, USSR, Division of Physico-Mathematical Sciences, Committee on Spectroscopy

Publishing House: Publishing House of Academy of Sciences, USSR

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No. of copies: 4,000

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Editor: Bayev, L. K.

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Appraisers: Members of Committee on Spectroscopy:

V. K. Prokof'yev,

S. M. Rayskiy, A. K. Rusunov,

N. S. Sventitskiy,

V. G. Koritskiy,

S. L. Mandel'shtam, and

K. A. Sukhenko. Academician

G. S. Landsburg is Chairman

of the Committee.

Organizatsiya i oborudovaniye tipovykh spektral'nykh laboratoriy

AID 171 - I

Text Data

Coverage: The authors describe various methods and apparatus used for spectral analysis in laboratories of the USSR and also give the classification, general arrangement, equipment inventory and kind of professional personnel for each type of laboratory. The spectrometers, spectrographs, and other instruments of which photographs and diagrams are given are exclusively of Soviet make.

The book may be of interest as indicating the scope and kind of equipment used in Soviet spectral laboratories, as well as the addresses of the distributing places where this equipment may be obtained.

Purpose: General information for designers and professional personnel of factory and institutional laboratories.

Facilities: For list of offices and shops in the USSR where laboratory equipment can be obtained, see p. 71.

No. of Russian and Slavic References: 9 (1945-51)

Available: Library of Congress.

2/2

KULIKOV, Ivan Stepanovich; POPOV, Ivan Alekseyevich; AGEYEV, N.V., redaktor;
SMIRNOV, V.F., redaktor; GOLYATKINA, A.G., redaktor; ATTOPOVICH,
M.K., tekhnicheskii redaktor.

[Using radioactive isotopes in metallurgy] Primenenie radioaktivnykh
izotopov v metallurgii. Pod nauchnoi red. N.V.Ageeva i V.F.Smirnova.
Moskva, Gos. nauchno-tekhn. izd-vo lit-ry po chernoi i tsvetnoi metal-
lurgii, 1956. 260 p. (MIRA 9:6)

1.Chlen-korrespondent AN SSSR (for Ageyev, Smirnov).
(Radioisotopes--Industrial applications) (Metallurgy)

SMIRNOV, V. I.

4309

19

4
1-RML

PHYSICAL BASIS FOR THE METHOD USING RADIOACTIVE ISOTOPES. HANDBOOK FOR PRACTICAL WORK. S. M. Riklit and V. F. Smirnov. State Publishers of Technical-Theoretical Literature. Moscow, 1956. 335p.

The book is designed for the use of engineers, chemists, biologists, and other personnel not trained in nuclear physics, to aid them in their work with radioactive indicators. The handbook explains the physical basis of the method, describes the apparatus for recording radiations, analyzes conditions under which reliable measurements can be obtained, and cites the rules which must be obeyed in work using radioactive isotopes. (R.V.J.)

RML

1/1

SMIRNOV, V. F.

2505. SOME POSSIBLE APPLICATIONS OF RADIOACTIVE ISOTOPES IN THE COAL
INDUSTRY. Smirnov, V.F. (Ugol (Coal, Moscow)), 1956, Feb., 28-34, Mar.,
28-33). The principles are explained and possible applications of gamma-ray
absorption and scattering and of neutron radiation are described. They
include investigation of underground movements of gas and water, the
determination of the density of coal in a dump and the quantity of coal
passing on a conveyor or in a piped slurry. The work of Putnam on the
determination of ash in coal is referred to. (L).

RAYSKIY, S.M., nauchnyy sotrudnik; SMIRNOV, V.F., nauchnyy sotrudnik;
SHVARTSMAN, L.A., nauchnyy sotrudnik; MALKIN, V.I., nauchnyy
sotrudnik.

"Radioisotopes in machine-building." P.E. D'iachenko, Reviewed
by S.M. Raiskii and others. Zav.lab. 22 no.6:758-759 '56.

(MIRA 9:8)

1. Fizicheskiiy institut Akademii nauk SSSR (for Rayskiy, Smirnov);
2. Tsentral'nyy nauchno-issledovatel'skiy institut chernoy metal-
lurgii.

(Radioisotopes--Industrial applications) (D'iachenko, P.E.)

SMIRNOV, V.F.

Some possible uses of radioisotopes in coal mining. Ugol'
31 no.3:28-33 Mr '56. (MIRA 9:7)
(Radioisotopes--Industrial applications)(Coal mines and
mining)

RAYSKIY, S.M.; SMIRNOV, V.F.; ZHABOTINSKIY, Ye.Ye., redaktor; TUMARKINA,
N.A., tekhnicheskiiy redaktor

[Physical principles of a method of radioactive indicators; a
practical manual] Fizicheskie osnovy metoda radioaktivnykh indikato-
rov; rukovodstvo k prakticheskim rabotam. Moskva, Gos. izd-vo
tekhniko-teoret. lit-ry, 1958. 335 p. (MLRA 9:9)
(Radioactivity)

Author: ...
Title: ...
Source: ...
Abstract: In this paper only scintillation ...
apparatus is considered, since in comparison to the gas
counter methods and apparatus there give much better results.
Effective measurement with precision is described. The
author mentions that the most intensive scintillation per
energy unit is obtained with ^{22}Na crystals. The scintilla-
tion counter with ^{22}Na crystals is described and illustrat-
ed in diagrams. The lead and corresponding directions are
given for the case of the scintillation counter. Especially
good possibilities for determination exist with this counter,
in which the crystals are in an indentation in the metal.
In scintillation counter employing liquid instead of
crystals the same effect is obtained. In an ^{22}Na -scintilla-
tion counters in which the radioactivity is discussed. The

The data was obtained by measuring the activity of ...

The ... method to be ... of ... at ... of ... There are 7 lines, ... 8.

DMOKHOVSKIY, Vladimir Vladislavovich; SMIRNOV, V.F., red.; ROMANOVA, Z.A.,
tekhn.red.

[Principles of X-ray technic] Osnovy rentgeno-tehniki. Moskva,
Gos.izd-vo med.lit-ry Medgiz, 1960. 351 p.

(MIRA 14:3)

(RADIOGRAPHY)

25055

S/080/60/033/010/002/029

D216/D306

21.4200

AUTHORS: Laskorin, B.N., and Smirnov, V.F.

TITLE: Extraction of uranium from phosphoric acid solutions

PERIODICAL: Zhurnal prikladnoy khimii, v. 33, no. 10, 1960,
2172 - 2179

TEXT: One of the methods of ore treatment is extraction with organic compounds preferably with the ester of phosphoric acid. The suggested use of mono- and dibutylphosphoric acid was followed by dialkylphosphoric acids and alkylamines of the dialkylphosphoric acid in particular di(2-ethylhexyl)phosphoric acid and trialkylphosphin oxide and also di- and trialkylamines, whose different structures were investigated. After treating the ore with phosphoric acid, the acid retains a quantity of uranium which could be extracted by the alkyl product of orthophosphoric, pyrophosphoric, dithiophosphoric acid and also alkylphosphin oxides. The esters of these acids could be produced by three main methods, of which the authors have chosen the interaction of phosphorous pentoxide and

Card 1/6

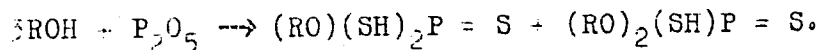
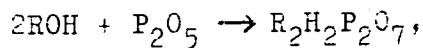
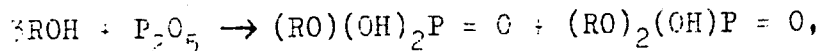
25055

S/080/60/033/010/002/029
D216/D306

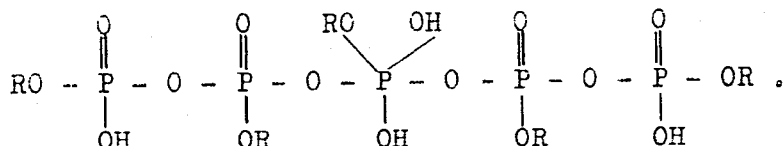
X

Extraction of uranium ...

pentasulphide with alcohols



The x-ray analysis of phosphorous pentoxide in the solid phase has thrown some light on possible ways of reaction, i.e. initially alkylpolyphosphate ester is formed of various structure, e.g.



It was established that with a molar proportion of alcohol to phosphoric anhydride equal to three, the products of reaction appeared

Card 2/6

25055

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D216/D306

Extraction of uranium ...

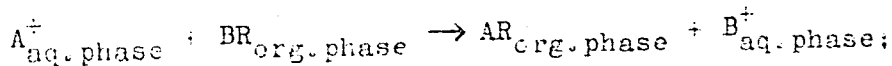
as mono- and dialkylphosphoric esters in equal molar quantities, with a molar proportion of alcohol to anhydride equal to two dialkylpyrophosphoric acid is formed preferably with a mixture of a large numbers of products of the reaction. In such cases the composition of the products of reaction of alcohol with phosphorous anhydride and also pentasulphide is determined by the relative proportion of reacting components, time and temperature of reaction, the nature of solvent, and moisture content of reacting components. To study the process of uranium extraction from phosphoric solutions a number of these compounds were synthesized and used. The results show that mono- and dialkylorthophosphoric acid, dialkylpyrophosphate and dithiophosphoric acid could be used as extracting agents. The distribution of uranium between phases depends on phase composition, concentration of extracted metal and acidity. The process of sorbtion by cationite and extraction with alkylphosphoric acid appeared to obey some law. Since sorbtion could be treated as the distribution of ions between two phases, one of which is solid the process in simple form could be written as:

Card 3/6

X

29055
S/C80/60/033/C10/002/029
D216/D306

Extraction of uranium ...



where A^+ and B^+ - molar concentration in solution, and R - base of sorbent. The equilibrium constant could be written as:

$$k_1 = \frac{a_{AR} \cdot a_{B^+}}{a_{AR} \cdot a_{A^+}}$$

where a_{AR} , a_{BR} - activities of ions A^+ and B^+ in ionite, a_{A^+} , a_{B^+} - activities of these ions in solution. After transformation the so-called Freydlikh equation is obtained:

$$m_{AR} = k(m_{BR})^p,$$

where m_{AR} - number of moles of A on 1 kg of ionite, m_{BR} - number of moles of B in 1 liter of solution, p, k - empirical coefficients, where $p < 1$. In the case of distribution between two immisible pha-

Card 4/6

25055

S/080/60/033/010/002/029

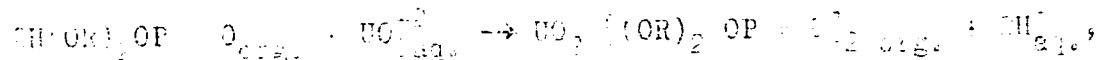
D216/D506

Extraction of uranium ...

ses it could be written

$$C_{org} = KC_{aq.}$$

where C_{org} - concentration of distributed component in org. phase, $C_{aq.}$ - in aqueous phase, K - distribution coefficient. The extraction of uranium with alkylphosphoric acids proceeds according to:



where R - radical of extracting reagent. The process of uranium extraction from phosphoric acid with, for instance, diisobutylpyrophosphoric ester is then described. The extraction was done in a stage mixer settler of the horizontal type. The uranium concentration in the organic phase was 88.5 g and in the aqueous solution 1.5 mg/l. The aqueous solution after removing aluminum was used as a phosphate fertilizer. The organic extract containing 3 - 4 g/l of uranium was treated with HF to precipitate uranium which was

Card 5/6