

AID P - 4908

Subject : USSR/Electronics

Card 1/2 Pub. 90 - 2/10

Author : Shteyn, B. B.

Title : ~~Single sideband modulation with phase rotation systems~~

Periodical : Radiotekhnika, 6, 13-26, Je 1956

Abstract : The author explains the principles of the phase-rotation method of generating a single sideband signal with the use of 90-degree phase-shift networks and of three-phase modulation. He finds the three-phase modulation to be more advantageous than the cascade connection of 90-degree phase-shift systems or than the use of passive filters. The author explains in detail the principles of three-phase modulation and describes the experimental part of the work which confirmed the possibility of obtaining a rejection of the second sideband of more than 40 decibels. Twelve diagrams and oscillograms, 2 tables, 6 references (1946-1954) (3 Soviet).

AID P - 4908

Radiotekhnika, 6, 13-26, Je 1956

Card 2/2 Pub. 90 - 2/10

Institution : None

Submitted : Ap 13, 1955

USSR / *SHTEYN, B.B.* Radiophysics, Generation and Conversion of Radio-
Frequency Oscillations. I-3

Abs Jour : Ref Zhur - Fizika, No 5, 1957, No 12461

Author : Shteyn, B.B.

Inst : Not given

Title : Single Sideband Modulation with Separation of the Low
Frequency Spectrum.

Orig Pub : Elektrosvyaz', 1956, No 10, 3-11

Abstract : The formation of a single sideband signal can be effec-
ted with the aid of broadband phase shifters with appli-
cation of three-phase or two-phase modulation. To insure
a sufficient degree of suppression of the second sideband
(by 40 db), the accuracy of the phase shifts should be not

Card : 1/4

USSR / Radiophysics. Generation and Conversion of Radio-
Frequency Oscillations.

I-3

Abs Jour : Ref Zhur - Fizika, No 5, 1957, No 12461

Abstract : Deviations of the phase from 90° at the outputs of the phase-shifters and in the fundamental frequency band (from 70 to 700 cycles, and respectively, from 700 to 7000 cycles), do not exceed $\pm 1^\circ$ and only beyond these bands do they increase to approximately 10° upon doubling the frequency. The latter circumstance, as indicated by the author, does not lead to a deterioration of the suppression of the second sideband frequency, for as the phase shift increases, there is a corresponding reduction in the attenuation of the signal in this channel. Bibliography, 5 titles.

Card : 4/4

TERENT'YEV, B.P.; ROZENTSVEYG, I.Ye.; ~~SHTBYN, B.B.~~; SANKIN, N.M., otv.red.;
NOVIKOVA, Ye.S., red.; MAZEL', Ye.I., tekhn.red.

[Laboratory work with radio transmitting equipment] ^{Laboratory}
praktikum po radioperedaiushchim ustroistvam. Moskva, Gos.izd-vo
lit-ry po voprosam sviazi i radio, 1957. 253 p. (MIRA 11:2)
(Radio--Transmitters and transmission)

Sov/106-58-2-5/16

AUTHOR: Shteyn, B.B.

TITLE: Modern Trends in Radio Transmitter Development (Sovremennyye tendentsii v razvitii radiopeređayushchikh ustroystv)

PERIODICAL: 'Elektrosvyaz', 1958, Nr 2, pp 29 - 42 (USSR).

ABSTRACT: Among the recently developed features which contribute to improved performance of radio transmitting systems are the following: more efficient cathodes, valves with higher slope and the use of power tetrodes; automatic switching and tuning of remote installations; improved methods of grid and anode modulation for a.m. systems; wide use of grounded-grid circuits in the output stages of amplifiers; the introduction of bridge and other circuits for adding powers at high frequencies; the wider use of single-sideband systems and better arrangements for separating one sideband; the extension of the network of f.m. stations and its improved performance; increased frequency stability of the transmitters. The NII of the Ministry of Communications has developed the "Angara" driver which enables frequencies at intervals of 1 kc/s to be obtained in the range 150-1620 kc/s with an accuracy of $5 \cdot 10^{-8}$. The heart of the apparatus is a crystal oscillator working at 90 kc/s using an X-cut bar excited at its second harmonic with a Q of $2 \cdot 10^9$. The oscillator temperature is maintained at $60 \pm 0.2^\circ\text{C}$. It is mentioned

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Modern Trends in Radio Transmitting Development

that the "ageing of a quartz resonator causes a drift of about 1.10^{-6} with some types. Among new valves is mentioned the GU-22A, which when substituted for the current GU-11A in a 50 kW transmitter, lowers the energy consumption by 300 kWh in each 24-hr period. Changing over to air cooling produces a more compact assembly and simplifies servicing. Such an arrangement is used in the shortwave centre at Rugby for the 28-30 kW transmitters. Reference is made to developments in Czechoslovakia including the Tesla transmitters SRV-150 (150 kW), KUY-18/30(s.w.) and the SRV30/B (m.w.30 kW). New valves include the Telefunken RS-726 (80 kW), a Soviet tetrode rated at 10 kW with a power gain of 100, an RCA beam-power metal-ceramic triode for 600 kW in the range 4-30 Mc/s. The advantages of evaporative cooling are outlined and the Telefunken valves for 10, 35 and 120 kW using this method are mentioned. Previously published details of single- and double-sided amplifier chains used in Czech, German, British and American practice are collated with particular attention to the means adopted for the correct tuning of final stages. Combining transmitter outputs at similar or different frequencies is a valuable technique practised for many years. The contribution of A.L. Mints to the design of the Soviet 500 kW station (1931-33)

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Sov/106-58-2-5/16

Modern Trends in Radio Transmitter Development

is noted. On short waves I.Kh.Nevyazhskiy has suggested combining powers "in the ether" - a technique used by the BBC in Britain. Figures 6 and 7 show bridge circuits suggested by B.P. Terent'yev for adding the powers from symmetrical outputs. Corresponding versions for single-ended amplifiers are those of Figures 8 and 9, using, in effect, a bridged-T circuit. The most significant developments in amplitude modulation are the use of the Doherty (Figure 11) circuit and auto-anode modulation (AAM). The latter was suggested by N.G. Kruglov in 1943, and may be used in both common-cathode and common-grid circuits. The K-2 transmitter reconstructed at OPRTs has an unmodulated efficiency of 30 - 31% (previously 18.9%), a distortion coefficient of 3 - 3.5% at 1 000 c.p.s. for $m = 0.95$ and 5 - 6% at 7 000 c.p.s., noise level -42 db. It has been shown recently by Ye.P. Khmel'nitskiy that the anode circuit efficiency can be increased (from 75.8 to 88.2%) by slightly de-tuning the circuit; the modulation frequency response is practically unaffected. Since the war, more than 2 500 s.s.b. communication links have been commissioned. American practice is quoted on the favourable economics of s.s.b. operation.

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Sov/106-58-2-5/16

Modern Trends in Radio Transmitter Development

Attention is drawn to the modulation techniques reported in the appropriate issue of Proc.I.R.E.,(1956, Nr 12). Attention is drawn to the production in the USA (by RCA) of the SSB-1 60 W mobile installation providing 4 fixed frequencies between 3 and 15 Mc/s. The introduction by S.I. Tetel'baum in 1938 of optimum amplitude-phase modulation is noted. Figure 13 shows a driver for a pulse-phase modulation system. The LONIIS driver has a distortion of 0.3 - 2% and a noise level of -68 db. The 4-phase modulator due to A.D. Artym is noted. The characteristics of the British FMQ method of direct f.m. of a crystal are reported. The author thanks Prof,B.P.Terent'yev for advice. There are 13 figures and 26 references, 16 of which are Soviet, 1 Czech, 1 German and 8 English.

SUBMITTED: November 22, 1957

Card 4/4

1. Communication systems--USSR
2. Radio transmitters--Development
3. Radio transmitters--Theory

9(8)

PHASE I BOOK EXPLOITATION

SOV/3186

Shteyn, Boris Ben'yaminovich, and Nina Abramovna Chernyak

Odnopolosnaya modulyatsiya s pomoshch'yu fazovykh skhem (Single-Band Modulation by Means of Phase-Shifting Circuits) Moscow, Svyaz'izdat, 1959. 163 p.
Errata slip inserted. 7,000 copies printed.

Resp. Ed.: V.M. Rozov; Tech. Ed.: S.F. Karabilova; Ed.: L.I. Vengrenyuk.

PURPOSE: This book is intended for specialists in the field of radio and wire communications.

COVERAGE: This book is devoted to analysis of several methods of shaping single-band signals by means of phase-shifting networks. The authors investigate the principal possibilities of separating a single side-band and present a quantitative evaluation of suppression of the second side-band. The theory of wide-band RC and LC phase-shifting devices is discussed in detail and a detailed engineering calculation of such devices is presented. Considerable experimental material which can be used in designing systems with phase networks is included in the book. In writing this book the authors drew from the work conducted at

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Single-Band Modulation (Cont.)

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the MEIS and the NIITS. They also investigated a series of problems connected with the analysis of properties, with methods of developing and using multiphase frequency conversion systems in radio and in wire communication, and broadcasting techniques. Ch. I. of the book was written jointly by the authors, ch. II and III were written by B.B. Shteyn and ch. IV by N.A. Chernyak. The authors thank V.M. Rozov, Candidate of Technical Sciences, for his help in editing the book. There are 28 references; 19 Soviet (including 3 translations) and 9 English

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Single-Band Modulation (Cont.)

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SOV/106-59-5-6/13

AUTHOR: Shteyn, B.B.

TITLE: Suppression of the Oscillations of the Non-Operative Side-Band in Phase-Filtered Systems (O podavlenii kolebaniy nerabochey bokovoy polosy v fazo-fil'trovyykh skhemakh)

PERIODICAL: Elektrosvyaz', 1959, Nr 5, pp 46-53 (USSR)

ABSTRACT: The author first reviews the third method of single side-band modulation originally described by Weaver (Proc IRE, 1956, Nr 12). The block diagram is given in Fig 1. The low-frequency input signal is converted in two balanced modulators into two output signals, having a common low frequency but a phase difference of 90°. To obtain this, a sub-carrier of frequency

$$F_0 = \frac{F_{\max} + F_{\min}}{2}$$

where F_{\max} and F_{\min} are the maximum and minimum frequencies of the input signal, is applied directly to one balanced modulator and also, after being phase-changed

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SOV/106-59-5-6/13

Suppression of the Oscillations of the Non-Operative Side-Band in Phase-Filtered Systems

by 90° , applied to the other balanced modulator. The lower sidebands of the modulator outputs are passed by filters, giving the two output signals with a phase difference of 90° . These signals are passed to two more balanced filters in which the single side-band signal is formed by modulating a high-frequency carrier f_0 and summing the outputs. Suppression of the second side-band in such a two-phase system is given approximately

$$N = \frac{2}{\sqrt{(\Delta_1 + \Delta_2)^2 + \delta^2}} \quad (4)$$

where Δ_1 and Δ_2 are the phase asymmetries in the high and low-frequency paths respectively and δ is the amplitude asymmetry. In the Weaver method, the phase shifts take place at fixed frequencies and therefore can be obtained with an accuracy $0^\circ 10' - 0^\circ 15'$. The phase asymmetry of an RC phase shifter depends, however, on the stability of the frequency F_0 applied to it,

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$$\Delta_2' = \sim \sin \Theta \frac{\Delta F_0}{F_0}$$

for $\Theta = 90^\circ$, $\Delta_2' = \frac{\Delta F_0}{F_0}$ and if the frequency instability

is $\frac{\Delta F_0}{F_0} = 10^{-3}$, then $\Delta_2' \approx 0^\circ 4'$. The stability of the

phase shifter elements Δ_2'' has a value $\Delta_2'' = 0^\circ 10' - 0^\circ 15'$ and the total low-frequency asymmetry Δ_2 will be of the order $0^\circ 15' - 0^\circ 20'$. The frequency f_0 is usually quartz stabilised and its instability is negligibly small. The phase asymmetry of the second phase shifter is therefore $0^\circ 10' - 0^\circ 15'$. Thus, the total phase asymmetry from both the high and the low-frequency paths is approximately $0^\circ 30'$. However, differences in the filter characteristics can introduce phase asymmetry but, with careful construction, the total asymmetry should not exceed 1.5° . The amplitude asymmetry depends on the operation of the four balanced modulators and the two filters in the low frequency paths. The amplitude asymmetry introduced by

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Suppression of the Oscillations of the Non-Operative Side-Band in Phase-Filtered Systems

non-linearity in the characteristics of the balanced modulators depends on the depth of modulation. The amplitude asymmetry also depends on the frequency characteristics of the filters and of the balanced modulators. Graphs of $N = \varphi(\Delta, \xi)$, where $\Delta = \Delta_1 + \Delta_2$ are given in Fig 3. With $\Delta = 0^\circ 30'$ and $\xi = 1\%$, $N = 43.9$ dB; with $\Delta = 1^\circ$ and $\xi = 1\%$, $N = 40$ dB. In general, the amplitude asymmetry is less than 2%. Weaver's experimental data showed $N = 30$ dB and Lobanov's experimental data (Ref 5) showed side-band suppression of 40 dB. The theory of the third method of formation of the single side-band can be extended to a three-phase modulation system with phase shifts of 120° . The block diagram is given in Fig 4. The principle of the circuit is similar to that of the two-phase circuit, except that the sub-carriers applied to the first two balanced modulators have a mutual phase difference of 120° . The low-frequency filters pass two low-frequency signals having the same frequency but a phase difference of 120° . These signals

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Suppression of the Oscillations of the Non-Operative Side-Band in Phase-Filtered Systems

are applied to a three-phase converter (Fig 5) which produces three low-frequency signals differing one from the other by a phase difference of 120° . These signals modulate three high-frequency carriers, which have a common frequency but differ one from the others by 120° . This system gives greater suppression of the non-operative side-band

$$N = \frac{3}{\sqrt{(\Delta_1 + \Delta_2)^2 + \delta^2}} \quad (6)$$

Finally, the author compares Weaver's systems with Villard's type of multi-phase modulation (Proc. IRE, 1956, Nr 12), the block diagram of which is given in Fig 8. For Villard's circuit, assuming that $\delta = 0$, the suppression is given by

$$N = \frac{4}{(\Delta_1 + \Delta_2)^2} \quad (7)$$

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Suppression of the Oscillations of the Non-Operative Side-Band in
Phase-Filtered Systems

Published experimental data shows that in the band
100 - 5000 c/s, $N = 47 - 55$ dB. The author expresses
thanks to Professor B.P.Terentyev who read the manuscript
and gave valuable advice. There are 8 figures and
5 references, 3 of which are Soviet and 2 English.

SUBMITTED: 5th January 1959

Card 6/6

KLYAGIN, L.Ye, prepod.; ~~SHTEYN~~, B.B., prepod.; BOGOSLOVSKIY, Yu.V.,
prepod.; KALASHNIKOV, N.I., prepod.; TEREENT'YEV, B.P.,
prepod.; ROZENTSVEYG, I.Ye., prepod.; VASIL'YEV, Ye.K.,
prepod.; PETROV, V.F., prepod.; SHUMILIN, M.S.; GALOYAN,
M.A., red.; SLUTSKIN, A.A., tekhn. red.

[Radio transmitting devices] Radioperedaiushchie ustroistva.
Moskva, Sviyaz'izdat, 1962. 710 p. (MIRA 16:4)

1. Kafedra radioperedayushchikh ustroystv Moskovskogo elektro-
tekhnicheskogo instituta svyazi (for all except Shumilin,
Galoyan, Slutskin).

(Radio--Transmitters and transmission)

SHEYN, B. YA.

VERNIK, Aleksandr Borisovich; BURMISTROV, P.I., kandidat tekhnicheskikh nauk, retsenzent; BOGUSLAVSKIY, P.Ye., kandidat tekhnicheskikh nauk, retsenzent; MEKLER, A.G., kandidat tekhnicheskikh nauk, retsenzent; NIKOLAYEVSKIY, G.M., kandidat tekhnicheskikh nauk, retsenzent; SNESAREV, G.A., kandidat tekhnicheskikh nauk, retsenzent; PINKEL'-SHEYN, B.Ye., kandidat tekhnicheskikh nauk, retsenzent; KAZAK, S.A., kandidat tekhnicheskikh nauk, redaktor; POPICHENKO, M.N., inzhener, redaktor; DUGINA, N.A., tekhnicheskiiy redaktor;

[Bridge cranes of great lifting power; design, calculation, and installation] Mostovye krany bol'shoi gruzopod'emnosti; konstruirovaniye, raschet i izgotovlenie. Moskva, Gos. nauchno-tekhn. izd-vo mashinostroit. lit-ry, 1956. (MLRA 10:2)
(Cranes, derricks, etc.)

SHTEYN, E.B., ANIKANOVA, K.F., BETTS, G.E., ZHAKOVA, V.G., KOMSKAYA, N.F., KARMIN, B.K.,
PRISS, I.S., REZNIKOVSKIY, M.M. CHERNIKINA, I.A.

"Soviet Polyisoprene Rubber SKI, Similar to Natural Rubber in Structure and
Properties." Kauchuk i Rezina, No. 1, pp. 4-14, 1957

Translation 1119944

SHTEYN, F.M. (Rostov-na-Donu, 24, ul. Tel'mana, d.141, kv.3)

X-ray examination of soft tissue tumors with carbon dioxide
contrasting. Vop. onk. 9 no.11:58-62 '63. (MIRA 18:2)

1. Iz rentgenodiagnosticheskogo otdeleniya (zav.-- dotsent Ya.M.
Khan) Rostovskogo-na-Donu nauchno-issledovatel'skogo instituta
rentgenologii, radiologii i onkologii (dir.-- kand. med. nauk
A.K. Parkov).

SHTEYN, F.M.

Study of the pathological changes in the soft tissues in the
X-ray image. Vest. rent. i rad. 40 no.2s27-31 Mr-Apr '65.
(MIRA 18:6)

1. Rentgenodiagnosticheskoye obisleniye (zav.- detsent Ya.M.
Khan) Rostovskogo-na-Donu nauchno-issledovatel'skogo instituta
rentgenologii i onkologii.

SHTERN, F. S.

PHASE I BOOK EXPLOITATION

SOV/4997

Novichkov, Petr Vasil'yevich, Solomon Markovich Reyzin, and Feliks Solomonovich Shteyn

Metody bezokislitel'nogo nagreva kuznechnykh zagotovok; obsor (Methods of Scale-Free Heating of Blanks for Forging; a Survey) Leningrad, 1959. 55 p. 6,500 copies printed. (Series: Seriya Kovka i shtampovka)

Sponsoring Agency: Obshchestvo po rasprostraneniyu politicheskikh i nauchnykh znaniy RSFSR, Leningradskiy dom nauchno-tehnicheskoy propagandy, NTO Mashprom. Sektsiya obrabotki metallov davleniyem

Ed. (Title page): M.A. Kuz'min, Doctor of Technical Sciences, Professor;
Tech.Ed.: M.M. Kubneva

PURPOSE: This booklet is intended for engineers and workers in the heat-treatment and pressworking shops of machine plants.

COVERAGE: The authors discuss the various types of flame furnaces used for the heating of blanks without oxidation. Also considered are electrical methods of heating (including the use of electrolyte baths), technical and economic bases for the

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Methods of Scale-Free Heating (Cont.)

SOV/4997

selection of suitable heating installations, and safety technique. No personalities are mentioned. There are 33 references: 27 Soviet, 4 English, and 2 German.

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Sh Leyn, F.S

PLANE I BOOK EXPLOITATION 807/3718

Experimental'nyy nauchno-issledovatel'skiy institut kuznechno-pressovogo mashinostroyeniya

Issledovaniya i raschyty mashin kuznechno-atomovochego profirovstva (Studies and Calculations of Forging and Stamping Machinery) Moscow, Mashgiz, 1959. 233 p. (Series: Its: Zhornik, kniga 1) Irina slip Internad. 8,000 copies printed.

Sponsoring Agency: USSR. Gosudarstvennyy komitet po avtomatizatsii i mashinostroyeniyu.

Ed. A. I. Zol'tsev, Candidate of Technical Sciences; Ed. of Publishing House: N. S. Stepanchuk; Tech. Ed.: T. P. Soboleva; Managing Ed. for Literature on Heavy Machine Building (Mashstroi): S. Ya. Golovin; Engineer; Editorial Board: G. P. Kol'takov, Engineer; V. P. Vysokin, Candidate of Technical Sciences; N. M. Vasil'yev, Engineer; A. P. Ivanov, Engineer; I. B. Matveyev, Candidate of Technical Sciences; M. A. Mar'yanchik, Engineer; P. V. Korichkov, Engineer; B. S. Pirovichikov, Engineer; S. A. Podrez, Engineer; L. V. Rubinskaia, V. B. Ushakov; P. D. Chudakov, Candidate of Technical Sciences; and A. I. Zol'tsev.

PURPOSE: The book is intended for technical personnel and scientific workers in the metal-forming industry.

COVERAGE: This collection of 12 articles deals with current research on metal-forming operations, the design and operation of press-forming machinery, and stress and force analysis in punching and blanking operations. No personalities are mentioned. References follow each article.

TITLE OF CONTENTS

Moylakh, G. I. (Engineer). Calculation of Springs of Friction-Mak
Breaks for Crank-Driven Presses 98

The author presents a method of designing the optimum parameters of a disk-brake spring for the case where the brake efficiency (braking capacity) depends on the coefficient of friction of the lining material used. In modern press designs abrasion friction linings are used. The method of computing such brake parameters (disk spring modulus, spring rate, spring deflection, etc.) is described. The author allows for ring deformation in addition to the usual allowances for load displacement.

Repin, P. M., and L. M. Ojorn (Engineers). Ultrasonic Flaw
Detection in Fillet and Corner Welds Made by Semi-automatic and Electrode Methods 205

The article deals with practices of ultrasonic defectology. A new method of ultrasonic flaw detection in fillet and corner welds on steel plates is suggested. The essence of this method is the measurement of the coordinates of the initial and end points of the flaw as the "emitter" moves in a direction perpendicular to the weld. The relative error in this method does not exceed 15 percent. A formula for calculation is presented. The flaw-detection apparatus (UZh-7H) described in the article was designed at TsSUPTMAS. Ultrasonic vibration frequencies were adjusted to 2.5 mc. The waves from the piezoelectric vibrator traverse the steel plate in the immediate vicinity of the weld and check the quality of the seam without scratch-bruishing. Reference is also made in the article to the fillet and corner voiding of plates up to 100 mm thick at the Voronezh Heavy Press Plant. The plates are used for frames and bed elements of forging presses.

Zol'tsev, A. I. (Candidate of Technical Sciences), and D. Ya. Fobedinskiy
[Engineer]. Investigation of Shrinkage and Wear of Cold-Upsetting Dies 209

The authors discuss shrinkage and die-wear phenomena in the cold upsetting of complex-shaped upset forgings. Data on several types of Soviet-made upsetting dies, including those with carbide inserts, are presented in tables, which also show the die layout and the type of wear. The data on carbide inserts and on heat-treatment regimes are also presented in tables.

POZNYAK, L.A.; SHTEYN, F.S.; SOLTYK, V.Ya.; ABRAMOVA, V.P.

Exchange of experience. Zav.lab. 28 no.5:598 '62. (MIRA 15:6)

1. Eksperimental'nyy nauchno-issledovatel'skiy institut kuznechno-pressovogo mashinostroeniya (for Poznyak, Shteyn). 2. Institut liteynogo proizvodstva AN USSR (for Solt'yk). 3. Tsentral'nyy nauchno-issledovatel'skiy institut tekhnologii i mashinostroeniya (for Abramova).

(Metals--Testing)

POZNYAK, L.A., kand.tekhn.nauk.; SHTEYN, F.S., inzh.; ORLOVA, L.M.,
inzh.

Selecting optima temperatures for the hardening of certain die
steels. Metalloved. i term. obr. met. no.10:45-50 0 '62.
(MIRA 15:10)

1. Eksperimental'nyy nauchno-issledovatel'skiy institut
kuznechno-pressovogo mashinostroyeniya.
(Tool steel—Hardening)

L 15264-65 EWT(m)/EWA(d)/EWP(t)/EWP(k)/EWP(b) Pf-l: MJW/JD/HW/JT
ACCESSION NR: AT4048349 S/3000/64/000/009/0044/0051

AUTHOR: Poznyak, L. A. (Candidate of technical sciences); Shteyn, F. S. (Engineer);
Yesenkova, M. V. (Engineer) 3

TITLE: Development of conditions for the heat treatment of steels EI944 and EI945,
used for cold stamping machines

SOURCE: Moscow. Eksperimental'nyy nauchno-issledavatel'skiy institut kuznechno-
pressovogo mashinostroyeniya. Nauchnyye trudy*, no. 9, 1964, Shtampovyye stali;
sostav, svoystva, termicheskaya obrabotka (Tool steels; composition, properties and
heat treatment), 44-51

TOPIC TAGS: steel mechanical property, steel heat treatment, stamp steel, cold
stamping/steel EI944, steel EI945

ABSTRACT: Samples of steels EI944 and EI945 of known chemical composition were
tested for ability to withstand pressures above 160 kg/mm² during cold stamping.
Samples were quenched from no more than 1150-1160C, cooled in oil, and tempered at no
more than 550-560C. Quenching was carried out to a secondary hardness at the highest
temperatures at which the samples retained a small grain. Data on hardness and the
coarseness of the grain are presented both tabularly and graphically and compared with

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L 15264-65

ACCESSION NR: AT4048349

2

curves for other steels. Tempering at various temperatures and pressures showed the plastic deformation of EI944 and EI945 to be significantly less than that of previously used steels. Therefore, steels EI944 and EI945 may be used to make stamping machines which operate at low and medium temperatures. For optimal working properties of a steel used for cold stamping, the primary hardness must be obtained by tempering at temperatures between 180-200C, at stresses of 20-40 joule/cm² for EI944 and 40-60 joule/cm² for EI945 in a nitrate bath, three times in one hour. "Steels EI944 and EI945 were produced under the auspices of VNIIPP." Orig. art. has: 8 graphs and 4 tables.

ASSOCIATION: Experimental'ny*y nauchno-issledovatel'skiy institut kuznechno-pressovogo mashinostroyeniya, Moscoe (Experimental Scientific Research Institute of Foundry Machinery)

SUBMITTED: 00

ENCL: 00

SUB CODE: MM

NO REF SOV: 004

OTHER: 000

Card 2/2

POZNYAK, L.A., kand. tekhn. nauk; ORLOVA, L.M., inzh.; YEVSTRATOVA, V.M., inzh.;
SHTEYN, F.S., inzh.; SHKATOV, A.P., inzh.

Microstructure of certain die steels for the cold and hot forming
of metals and alloys. [Nauch. trudy] ENIKMASHa no.9:73-127 '64.
(MIRA 17:11)

SHTEYN, F.Ye.

Subcutaneous oxygen injection and resort factors in treating
neurasthenia. Vrach.delo no.8:865 Ag '58 (MIRA 11:8)

1. Nervnoye otdeleniye Lermontovskogo kurorta v Odesse.
(NEURASTHENIA)
(OXYGEN--THERAPEUTIC USE)

USSR / Zooparasitology - Other Parasites

G-4

Abs Jour: Ref Zhur-Biol., No 9, 1958, 38629.

Author : Shteyn, G. A.

Inst : Not given.

Title : Orthonectid Genus Rhopalura Giard of Some Mollusks
in the Barents Sea.

Orig Pub: Uchen. zap. Karelo-Fin. un-ta, 1953, 5, No 3, 171-
206.

Abstract: A description of Rh. elongata sp. n., Rh. major
sp. n., Rh. murmanica sp. n. and Rh. litoralis sp.
n. of lamellibranchia, gastropoda, and scaphopoda
mollusks from the Murmansk littoral of the Barents
Sea. Comparative feature charts of all known spe-
cies of Rhopalura and charts of their propagation
by hosts. Some data on orthonectid morphology and
evolution.

Card 1/1

30

SHTEYN, G.A.

Materials on the study of parasites of fishes in Baltic states.
Uch.zap.Len.un. no.172:177-184 '54. (MLRA 10:3)

1.Kafedra zoologii bespozvonovnykh Leningradskogo ordena Lenina
gosudarstvennogo universiteta.
(Baltic states--Infusoria) (Parasites--Fishes)

SRTEYN, G.A.

Life cycle of *Plagiorchis multiglandularis* Semenov, 1927 (Trematoda,
Plagiorchidae) [with summary in German]. Trudy Len. ob-va est. 73
no.4:213-217 '57. (MIRA 11:6)

1. Kafedra zoologii bespozvonochnykh Leningradskogo universiteta.
(Karelia--Trematoda) (Parasites--May flies)

SHTEYN, G. A.

"Materials on the Ecology of the Benthonic Anthropoda Gregarines in
Some of the Karelian Lakes."

Tenth Conference on Parasitological Problems and Diseases with Natural
Reservoirs, 22-29 October 1959, Vol. II, Publishing House of Academy of
Sciences, USSR, Moscow-Leningrad, 1959.

Institute of Cytology of the USSR Academy of Sciences, Leningrad

AUTHOR: Shteyn, G. A. SOV/20-127-6-50/51

TITLE: On the Problem of Life Cycle and Habitation Conditions of the Nematode Rhabdochona denudata (Dujardin, 1845)

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 127, Nr 6, pp 1320-1321 (USSR)

ABSTRACT: In summer 1954 and 1955, the author detected spirally wound nematode larvae 1.5 to 3 mm long in the body of the ephemeral flies Heptagenia sp. and Ephemerella sp. (Lake Syamozero, Kareliya ASSR). Their structure is described (Fig 1). These parasites of ephemeral flies were determined, according to the morphological features, as the larva stage of the species mentioned in the title (subgroup of Spirurata). The species mentioned was found in fish in the above-mentioned lake in amounts of 3.3 to 23.1%. This is an indirect proof of the correctness of determination. The intermediate hosts of the said nematode are not yet known although the larva of Heptagenia sp. was reported from the USA as an experimental intermediate host (Ref 1). The two species of ephemeral flies mentioned at the beginning have, in Lake Syamozero, apparently an unequal importance as intermediate hosts. Heptagenia was infected at 21.8%, whereas

Card 1/2

SOV/20-127-6-50/51

On the Problem of Life Cycle and Habitation Conditions of the Nematode
Rhabdochona genudata (Dujardin, 1845)

Ephemerella was only affected at 1.9%. Affection in individual places of the lake was also unequal. This was due to currents on the one hand, to a higher oxygen content and lower temperatures in the surf zone, on the other. S. S. Shul'man supplied data on the fish parasites of Lake Syamozero. There are 1 figure and 4 references, 3 of which are Soviet.

ASSOCIATION: Institut tsitologii Akademii nauk SSSR (Institute of Cytology of the Academy of Sciences USSR). Konchezerskaya agrobiologicheskaya stantsiya Petrozavodskogo gosudarstvennogo universiteta (Konchezerskaya Agrobiological Station of Petrozavodsk State University)

PRESENTED: May 11, 1959, by Ye. N. Pavlovskiy, Academician

SUBMITTED: April 28, 1959

Card 2/2

SHUMY, G. A., Zool Fiz Sci — (also) "Data on the parasitology of hem-
thelminths of certain fishes in Karelin," Leningrad, 1960, 17 pp (Len-
ingrad State Univ im A. A. Zhdanov) (KL, 35-60, 124)

SHTEYN, G.A.

Cytological study of the different stages in the life cycle of gregarines from dragonfly larvae. *Tsitologiya* 2 no.1:74-87 Ja-F '60. (MIRA 13:5)

1. Laboratoriya tsitologii odnokletochnykh organizmov Instituta tsitologii AN SSSR, Leningrad. (GREGARINIDA) (PARASITES--DRAGON FLIES)

SHTEYN, G.A.

Gregarines parasitic in aquatic arthropods of Karelian lakes. Zool.
zhur. 39 no.8:1135-1144 Ag '60. (MIRA 13:8)

1. Institute of Cytology, U.S.S.R. Academy of Sciences, Leningrad.
(Karelia--Sporozoa) (Parasites--Arthropoda)

SHTEYN, G. A. (LENINGRAD)

"Cytochemical study of some stages of lifecycle of polycystic gregarines."
(In Russian.)

Report presented at the 13th Annual meeting and 1st International Conference
of Society of Protozoologists, Prague, 22-31 Aug 61

SHTEYN, G.A.

Systematics of Urceolariidae (Infusoria, Peritricha).
Zool. zhur. 40 no.8:1137-1142 Ag '61. (MIRA 14:8)

1. Institute of Cytology, U.S.S.R. Academy of Sciences
(Leningrad).
(Infusoria) (Parasites—Fishes)

GINETSINSKAYA, Tatyana A.; SHTEYN, G. A.

"Okologische gesetzmässigkeiten in der bildung der parasitenfauna bei evertebrata."

report submitted for 1st Intl Cong, Parasitology, Rome, 21-26 Sep 1964.

Dept. of Zoology of Invertebrates, Leningrad State Univ, University Quay 7/9.

SHTEYN, I., kand. tekhn. nauk

Experimental construction of new types of built-up roofs.
Zhil. stroi. no.1:17-19 '64. (MIRA 18:11)

ABRAGAM, S., inzhener; SHTEYN, I., inzhener.

Innovators in railroad engineering. Stroitel' no.12:
5-7 D '56.

(MIRA 10:2)

(Railroad engineering) (Bridges--Construction)

SHTEYN, I. I.

SUBJECT: USSR/Construction Materials 23-7/8

AUTHOR: ^hSteⁿ, I. I. (Rus. Equiv.-Shteyn, I.I.)

TITLE: Investigation of Atmospheric Resistance of Some Kinds of Non-Roll Protective Coverings for Prefabricated Roof Panels (Issledovaniye atmosferoustoychivosti nekotorykh vidov bezrulonnykh pokrytiy dlya sbornyykh krysh)

PERIODICAL: Izvestiya Akademii Nauk Estonskoy SSR, Seriya Tekhnicheskikh i Fiziko-Matematicheskikh Nauk, 1957, #3, pp 283, 288 (USSR)

ABSTRACT: The Institute of Construction and Building Materials of the Estonian Academy of Sciences developed several variants of prefabricated roofs for large-scale housing construction using large panels. Problems of improving their atmospheric resistance and water-tightness by means of surface protection and volumetric improvement of concrete were investigated. Results of these investigations were as follows:

1. Bituminous covering with aluminum suspension and bitumen-cement covering proved to be the most atmospheric resistant among those considered;
2. The atmospheric resistance of protective surface coat-

Card 1/3

23-3-7/8

TITLE:

Investigation of Atmospheric Resistance of Some Kinds of
Non-Roll Protective Coverings for Prefabricated Roof Panels
(Issledovaniye atmosferoustoychivosti nekotorykh vidov
bezrulonnykh pokrytiy dlya sbornykh krysh)

ings of concrete samples made with solutions of silico-organic
substances proved to be considerably lower than that cited in
special literature. Therefore, the application of methyl-
trichlorsilicane and silicon ethyl ether is not recommended;

3. Concrete with admixtures of naphtha soap and densely
vibrated concrete tested 1.5 months after their manufacturing,
proved to be more water-proof than cement-sand tiles.

4. The application of tar paper upon oil shale bitumen for
protection of reinforced-concrete panels of prefabricated roofs
is not recommended without special measures protecting its
surface, because its atmospheric resistance is the lowest in
comparison with all other coverings investigated.

The article contains 2 diagrams, 1 graph and 2 tables. There
are 6 references all Slavic.

Card 2/3

23-3-7/8

TITLE: Investigation of Atmospheric Resistance of Some Kinds of
Non-Roll Protective Coverings for Prefabricated Roof Panels
(Issledovaniye atmosferoustoychivosti nekotorykh vidov
bezrulonnykh pokrytiy dlya sbornykh krysh)

ASSOCIATION: Institute of Construction and Building Materials of the Estonian
Academy of Sciences

PRESENTED BY:

SUBMITTED: On 18 April 1957

AVAILABLE: At the Library of Congress.

Card 3/3

SHTEYN, I.I.

Moisture cycle of heated roofs of industrial buildings in the
Estonian S.S.R. Prom. stroi. 42 no.10:39-41 0 '64. (MIRA 17:11)

SETEYN, I. I.: Master Tech Sci (diss) -- "Industrial loft roofs in the residential construction of the Estonian SSR and methods of providing for their atmospheric stability". Moscow, 1958. 15 pp (Acad Construction and Architecture USSR), 175 copies (KL, No 4, 1959, 128)

KHAR'KOV, Nikolay Yeliseyevich, inzh.; ZAGL', Otto Andreyevich, inzh.; SHTEYN, Illarion Iosifovich, inzh.; MURASHKO, V.V., red.

[New developments in the manufacture of prestressed reinforced concrete] Novoe v izgotovlenii predvaritel'-no napriazhennogo zhelezobetona. Odessa, Maiak, 1965. 56 p. (MIRA 18:12)

1. Trest "Chernomorskorgtekhstroy" (for all except Murashko).

L 10998-66

SOURCE CODE: UR/0105/65/000/003/0091/0091

ACC NR: AP6001979

AUTHOR: Veshenevskiy, S. N.; Voronetskiy, B. B.; Gus'kov, P. S.; Klimov, D. Yu.;
Maslennikov, L. V.; Pashkov, M. V.; Petrov, I. I.; Sokolov, I. I.; Stepanov, Yu. V.;
Turovskaya, P. G.; Khechumyan, A. P.; Tsein, V. S.; Shteyn, I. M.

24
B

ORG: none

TITLE: Professor K. V. Urnov

SOURCE: Elektrichestvo, no. 3, 1965, 91

TOPIC TAGS: scientific personnel, academic personnel

ABSTRACT: Konstantin Vasilevich Urnov died on 11 December 1964 after a serious illness. He was a distinguished scientist and one of the oldest electro-polygraphists. He was born in 1907 and graduated from the Ivanovskiy Polytechnic Institute in 1929, after which he continued to work on the Board of Electric Installations for the next 25 years. His outstanding contribution was to relate successfully the activities of industry with those of the higher educational institutions. His name is closely linked to the development of domestic polygraphic machinery. He was imaginative, creative and bold. Since 1935 he was also engaged in teaching and scientific research work at the Moscow Power Institute and the Moscow Polygraphic Institute where he set up a course on "Electric Drives and Automation of Polygraphic Machines". He is the author of over 30 inventions and published works, including one book. He was a scientist-communist, a man of great knowledge, a good colleague and friend. Orig. art. has: 1 figure. [JPRS]

SUB CODE: 05 / SUBM DATE: none

UDC: 621.313.1/3

Card 1/1

ROYZEN, S.S., kand.tekhn.nauk; SHTEYN, I.M., inzh.

Automatic control of the electric drive of a continuous reduction
pipe-rolling mill. Elektrichestvo no.1:82-85 Ja '61. (MIRA 14:4)

1. Gosudarstvennyy proyektnyy institut Tyazhpromelektroproyekt.
(Automatic control)
(Pipe mills--Electric driving)

VESHENEVSKIY, S.N.; VORONETSKIY, B.B.; GUS'KOV, P.S.; KLIMOV, D.Yu.;
MASLENNIKOV, L.V.; PASHKOV, M.V.; PETROV, I.I.; SOKOLOV, I.I.;
STEPANOV, Yu.V.; TUROVSKAYA, P.G.; KHECHUMAN, A.P.; TSEIN, V.S.;
SHTEYN, I.M.

Professor Konstantin Vasil'evich Urnov, 1907-1964; obituary.
Elektrichestvo no.3:91. Mr '65. (MIRA 18:6)

S/105/61/000/001/006/007
B012/B059

AUTHORS: Royzen, S. S., Candidate of Technical Sciences,
Shteyn, I. M., Engineer

TITLE: Automation of the Electric Drive of a Continuous Reducing
Pipe Rolling Mill

PERIODICAL: Elektrichestvo, 1961, No. 1, pp. 82-85

TEXT: The present article is the description of the automation of a 140-type continuous reducing rolling mill with 20 rolling sets. A device for precise speed measurement was installed in the rolling mill since the theory of rolling in continuous pipe rolling mills is not yet sufficiently elaborated and safe set-speed tolerance and admissible speed drop are not known. In working out the system of automatic speed control, a speed deviation of 0.5% maximum and an error of the speed measuring device of 0.2% maximum were assumed. Fig. 1 represents an AC-tachogenerator developed especially for the rolling mill under consideration. The transformer operates according to the principle of the Maxwell-connection shown in Fig. 2a. The contactless transformer (Ref. 1, author's certificate

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Card 1/5

Automation of the Electric Drive of a
Continuous Reducing Pipe Rolling Mill

S/105/61/000/001/006/007
B012/B059

No. 113220 of the class 21a⁴ 71) shown in Fig 2b was used in the electric drive of the rolling mill. The layout of the electrical drive is shown in Fig. 3. The chief advantage of this system with a frequency-tachogenerator is the fact that the current in the feedback coil of the magnetic amplifier is the initial quantity of the transformer device and that this current is proportional to not only the frequency but also the feeder voltage. Magnetic amplifiers are reversible. Maximum power of the output stage is about 600 watts. Two preceding stages increased the rapid action of the magnetic amplifier and made drive stabilization easier. Fig. 4 shows a diagram of the device for precise speed measurement. The measuring method with inter-frequency-standards allowed a considerable reduction of the error. The authors point out that a final word on the expedient use of this kind of drive for continuous pipe rolling mills can be spoken only after the end of the investigations in the mill. There are 4 figures and 2 Soviet references.

ASSOCIATION: GPI Tyazhpromelektroproyekt

SUBMITTED: April 11, 1960

Card 2/5

VOLKOV, P.I.; MYSYUTIN, D.K.; DOBSHITS, M.L., red.; SHEYN, I.V., red.;
GUSEV, K.M., tekhn. red.

[Beacons of transportation construction; a collection of sketches of communist labor brigades at transportation construction projects] Maiaki transportnogo stroitel'stva; sbornik ocherkov o brigadakh kommunisticheskogo truda na transportnykh stroikakh. Moskva, Orgtransstroi, 1961. 270 p. (MIRA 15:2)

(Construction workers)

SHTEYN, I. Ya
MAKAROV, G.N., kandidat tekhnicheskikh nauk; ZHITOV, B.N., inzhener;
SHASHKOVA, T.D., inzhener; SHTEYN, I.Ya., inzhener;
GILYAZETDINOV, L.P., inzhener.

Preliminary heat treatment of coals for coking. Koks i khim.
no.4:12-17 '57. (MLRA 10:5)

1. Moskovskiy khimiko-tehnologicheskii institut imeni
D.I. Mendeleeva.
● (Coal--Carbonization)

UCHIYAMA, YA, G. AND SHIBUYA, I. B.

"Tung Contraction in Mammals," Dok, AN, 50, No. 6, 1947.

SHMEYN, L.B.

Studies on active tonus of the lungs with bilateral water manometry.
Ark. pat., Moskva 15 no. 1:45-50 Jan-Feb 1953. (CML 24:2)

1. Of the Department of Experimental Pathology (Head -- Prof. R. L. Perel'man), Leningrad Tuberculosis Institute imeni A. Ya. Shternberg (Director -- Docent A. D. Semenov).

SHTEYN, L. B.

SHTEYN, L. B. -- "The Appearance of Active Tonus of the Lungs Under Experimental Conditions." Min Health RSFSR. Leningrad Sanitary-Hygiene Medical Inst. Leningrad, 1955. (Dissertation for the Degree of Candidate in Medical Sciences).

So.: Knizhnaya Letopis', No. 6, 1956.

SHTEYH, L.B.

Role of the reflex mechanism in open traumatic pneumothorax.
Vrach.delo no.12:1269-1271 D '56. (MIRA 12:10)

1. Otdel eksperimental'noy patologii (zav. - prof.L.R.Perel'-
man) Leningradskogo tuberkuleznogo instituta.
(PNEUMOTHORAX) (RESPIRATION)

L 34090-66

ACC NR: AP6025467

SOURCE CODE: UR/0108/66/021/004/0040/0048

AUTHOR: Terent'yev, B. P. (Active member); Shteyn, B. B. (Active member); Filippov, V. V. (Active member); Kokin, L. B. (Active member)

43
B

ORG: Scientific-Technical Society of Radio Technology and Electrocommunications in A. S. Popov (Nauchno-tekhnicheskoye obshchestvo radiotekhniki i elektrosvyazi)

TITLE: Suppression of harmonics in radio transmitters with symmetrical transformers

SOURCE: Radiotekhnika, v. 21, no. 4, 1966, 40-48

TOPIC TAGS: electric transformer, radio transmitter, harmonic analysis, electric capacitance, electronic component

ABSTRACT: An analysis of the possibility of weakening single-cycle harmonics in a transmitter by connection of symmetrical transformer between the coupling condenser and the antenna feeder. The expression for the transmission coefficient of the transformer is analyzed. Experimental material is presented. Proper design of the transformer used can not only suppress the higher harmonics, but also reduce the influence of paracitic capacitance between windings. The parameters of the transformer suggested (compare schematics below with and without) are such that normal loading of the transformer is retained in the operating frequency range. A. P. Nosov, O. V. Bobov, Yu. B. Shumov, V. V. Furduyev and V. K. Alekseyev took part in the carrying out of the experimental measurements. Orig. art. has: 15 figures and 16 formulas. [JPRS: 36,087]

SUB CODE: 09 / SUBM DATE: 14Dec64 / ORIG REF: 003

Card 1/1

UDC: 621.396.61

0976 0843

DRAGUNOV, V.I.; YEGOROV, V.Ye.; SHTEYN, L.F.

Pre-Upper Paleozoic reefs and reef formers as indicators of the tectonic activity in the northwestern margin of the Central Siberian Plateau. Geol. i geofiz. no.1:72-84 '63. (MIRA 16:4)

1. Vsesoyuznyy nauchno-issledovatel'skiy geologicheskii institut, Leningrad.

(Central Siberian Plateau—Geology, Structural)
(Central Siberian Plateau—Reefs)

SHTEYN, L.L., inzh.

Experimental analysis of hydraulic resistance in the valves of
piston expanders. Trudy VNIKIMASH no.9:144-150 '65.

(MIRA 18:6)

AUTHOR: Shteyn, L.M. SOV/68-58-8-14/28

TITLE: Methods of Utilisation of Gas and Tar Obtained During the Coking of Coal Tar Pitch (Puti ispol'zovaniya gasa i smoly, poluchayemykh pri koksovaniy peka)

PERIODICAL: Koks i Khimiya, 1958, Nr 8, pp 39 - 40 (USSR)

ABSTRACT: The utilisation of the above products is discussed. It is pointed out that scrubbing of benzol from the gas on the Zaporozh'ye and N. Tagil Works should be introduced. The gas from the Kemerovo Coking Works should be passed to the Kemerovo nitrogen-fertilisers works for synthetic purposes, while from the Zaporozh'ye and N. Tagil Works to metallurgical works (as the gas is free from sulphur compounds). Some research work should be carried out on the utilisation of the gas for hydrogenating purposes.

ASSOCIATION: Kemerovskiy sovnarkhoz (Kemerovo sovnarkhoz)

Card 1/1 1. Coal tar--Applications 2. Coal gas--Applications
 3. Pitch--Processing

5(4).

SOV/78-4-5-2/46

AUTHORS: Krasnov, K. S., Shteyn, L. M.

TITLE: The Bond Energy in the Molecules of the Halides of Alkali Metals
(Energiya svyazi v molekulakh galogenidov shchelochnykh metallov)

PERIODICAL: Zhurnal neorganicheskoy khimii, 1959, Vol 4, Nr 5,
pp 963-968 (USSR)

ABSTRACT: The binding energy W in molecules of the halides of alkali metals was calculated at 0° according to the formula by Rittner (Ref 4):

$$W = \varphi + Ae^{-r/q} \dots \frac{c}{r^6} + \frac{hv_0}{2}, \quad (1)$$

$$\varphi = \dots \frac{e^2}{r} \dots \frac{e^2(a_1+a_2)}{2r^4} \dots \frac{2e^2a_1a_2}{r^{\ddagger}} \quad (2)$$

Card 1/4 where $Ae^{-r/q}$ denotes the repulsion energy; $\frac{c}{r^6}$.. the energy

SOV/78-4-5-2/46

The Bond Energy in the Molecules of the Halides of Alkali Metals

are in good agreement. Bond energies of the alkali halides are given by table 1. The differences between theoretical and thermo-chemical values in the binding energy are discussed. The repulsion coefficients for chlorides and fluorides and the following average repulsion coefficients for all alkali halides were determined: NaCl - $q = 0.332$; KCl - $q = 0.343$; RbCl - $q = 0.355$; CsCl - $q = 0.370$; NaBr - $q = 0.346$; KBr - $q = 0.374$ and NaI - $q = 0.384$. The coefficient q increases from chloride to iodide and from sodium salt to cesium salt. The q values found are higher than those calculated by Rice and Klemperer (Ref 13). There are 1 table and 13 references, 6 of which are Soviet.

ASSOCIATION: Ivanovskiy khimiko-tehnologicheskii institut
(Ivanovo Chemical-technological Institute)

Card 3/4

VATCHENKO, G. [Vatchenko, H.]; OGRYZKINA, O. [Ohryzkina, O.];
STRUCHKOVA, N.; KHANIAS-NIBO, M.; CHERNYKH, O.; CHUMACHENKO, V.;
SHEVCHENKO, G. [Shevchenko, H.]; DEMERDZHI, D., red.; SHTEYN, M.,
red.; KOLOMOYTSEVA, F., tekhn.red.

[Dnepropetrovsk; reference-guidebook] Dnepropetrova'k; dovidnyk
putivnyk. Vyd.2., vypravlene i dop. Dnepropetrovs'k. Dnipro-
petrovs'ke knizhkove vyd-vo, 1959. 300 p. (MIRA 13:8)

1. Dnepropetrovskiy gosudarstvennyy istoricheskiy muzey (for all,
except Demerdzhi, Shteyn, Kolomoitseva).
(Dnepropetrovsk---Guidebooks)

SHTEYN, M.A.; LEYBOSHITS, A.A.

Results of increasing water well boring. Razved.i okh.nedr
21 no.1:48-52 Ja-F '55. (MLRA 9:12)

(Boring) (Water, Underground)

~~SHEYN, M.A.~~

Well capping for using underground water in fine-grained sands.
Mat. VSEGEI no.20:119-137 '56. (MLRA 10:8)
(Water, Underground) (Wells)

ANTIPIN, V.I.; BUDANOV, N.D.; KOTLUKOV, V.A.; LEYBOSHITS, A.M.;
PROKHOROV, S.P.,, kand.geol.-miner.nauk; SIRMAN, A.P.;
FALOVSKIY, A.A.; SHTEYN, M.A.; BASKOV, Ye.A.; BOGATKOV,
Ye.A.; GANEYEVA, M.M.; ZARUBINSKIY, Ya.I.; IL'INA, Ye.V.;
KATSIYAYEV, S.K.; KOMPANIYETS, N.G.; NELYUBOV, L.P.;
PONOMAREV, A.I.; REZNICHENKO, V.T.; RULEV, N.A.; TSELIGOROYA,
A.I.; ALSTER, R.K.; SHVETSOV, P.F.; VYKHODTSEV, A.P.; KOTOVA,
A.I.; KASHKOVSKIY, G.N.; LOSEV, F.I.; ROMANOVSKAYA, L.I.;
PROKHOROV, S.P.; MATVEYEV, A.K., dots., retsenzent; CHEL'TSOV,
M.I., inzh., retsenzent; KUDASHOV, A.I., otv. red.; PETRYAKOVA,
Ye.P., red. izd-va; IL'INSKAYA, G.M., tekhn. red.

[State of flooding and conditions for the exploitation of coal-
bearing areas in the U.S.S.R.] Obvodnennost' i usloviia eksplu-
atatsii mestorozhdenii ugol'nykh raionov. Pod nauchn. red.
S.P.Prokhorova. Moskva, Gosgortekhzdat, 1962. 243 p.

(MIRA 15:7)

1. Moscow. Vsesoyuznyy nauchno-issledovatel'skiy institut gidro-
geologii i irzhenernoy geologii. 2. Kafedra geologii i geo-
khimii goryuchikh iskopayemykh Moskovskogo Gosudarstvennogo
universiteta (for Matveyev).

(Coal geology) (Mine water)

SAFRONOV, Fedot Grigor'eyvich, kandidat istoricheskikh nauk; RYABOV, N.I.,
nauchnyy redaktor; SHEFYN, M.G., nauchnyy redaktor; TSYBYKTAROVA,
D.S., redaktor; KAYDALOVA, M.D., tekhnicheskiy redaktor

Erofei Pavlovich Khabarov. [Khabarovsk] Khabarovskoe knizhnoe
izd-vo, 1956. 31 p. (MIRA 10:7)
(Khabarov, Erofei Pavlovich, 17th cent.)

SHTEYN, M.Ye. (Moskva)

Design of composite logical devices. Izv. AN SSSR. Tekh. kib.
no.4:70-76 JI-Ag '65. (MIRA 12:11)

L 65228-65 EWT(d)/EED-2/EWP(1) IJP(c) BB/GG

ACCESSION NR: AP5021852

UR/0280/65/000/004/0070/0076

AUTHOR: ⁴⁴Shteyn, M. Ye. (Moscow)

38
B

TITLE: The design of combination logic devices ^{16C, 44}

SOURCE: AN SSSR. Izvestiya. Tekhnicheskaya kibernetika, no. 4, 1965, 70-76

TOPIC TAGS: logic design, Boolean function, computer programming, logic circuit, algorithm, coding

ABSTRACT: An important step in the automation of the design of digital devices is the solution of the canonical problem of Boolean function minimization and the solution of the problem of optimum design of combination logical devices. The calculation of the set of all simple implicants of the Boolean function may require a substantial memory and long computer time even in the case of problems with the number of independent variables exceeding 10. Consequently, it would be useful if approximate estimates are made of the number of implicants and shortcuts discovered in sorting during the establishment of the set of all simple implicants. This paper presents the methodology of the use of certain codes characterizing implicants of Boolean functions for the estimate of the number of implicants. The author proposes also a universal method for the ordering of implicants which reduces the amount of sorting during the establishment of the shortened disjunctive

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normal form (dnf) of the function. The programming of the pertinent algorithms shows that on modern digital computers, using ordering, the time needed for obtaining the shortened dnf's can be reduced by 1 to 2 orders of magnitude. The same algorithm may be used for ordering implicants according to indexes. The methods proposed may prove useful in the study of various minimization methods based on the information concerning the implicants' codes, codes of their differences and indexes, and the quantitative estimate of their basic characteristics. Orig. art. has: 23 formulas.

ASSOCIATION: None

SUBMITTED: 13 July 64

ENCL: 00

SUB CODE: DP

NO REF SOV: 004

OTHER: 003

Card

JK
2/2

SHTEYN, N.I., inzh.

First year with our own machinery. Mekh.sil'hosp. 10 no.2:
10-11 F '59. (MIRA 12:6)

1. Kolkhoz "Pridniprovs'ki" Nikopol'skogo rayona, Dnepropetrov-
skoy oblasti. (Agricultural machinery)

SHEYN, N.I.

Experience in the organization of machinery repair on the
collective farm. Mekh. sil'. hosp. 11 no.6:19-20 Je '60.
(MIRA 13:11)

1. Glavnyy inzhener kolkhoza "Aurora," Nikopol'skogo rayona,
Dnepropetrovskoy oblasti.
(Nikopol' district--Agricultural machinery--Maintenance and Repair)

9.1700

S/169/62/000/007/088/149
D228/D307

AUTHOR: Shteyn, N. I.

TITLE: Some problems in the calculation of an antenna system for an automatic wind radio-gage (APUB)(ARIV)

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 7, 1962, 11, abstract 7B60 (Tr. N.-i. in-ta gidrometeorol. priborostr., no. 7, 1959, 52-54)

TEXT: Formulas are given for calculating the main parameters of two forms of dipole antenna. In one case both the dipole's halves are mutually perpendicular but do not intersect (the crossing directions); in the second case one half-dipole is a continuation of the other. In both cases the diameters of the half-dipoles and their lengths are different, which complicates the problem. A description is given of the method of calculating the distribution of current in the antenna, the input resistance, the effective height, and the radiation resistance. [Abstracter's note: Complete translation.]

VB

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SHTEYN, N. I.

DECEASED

1963/1

c. 1961

ELECTRONICS

See ILC

GRINMAN Isaak Grigor'yevich. Prinimali uchastiye: SAKBAYEV, Zh.M.;
BLYAKH, G.I.; SHAGI-SULTAN, I.Z.; SIRAZUTDINOVA, Zh.A.;
SHTEYN, N.S.; YERMAGAMBETOV, S.B.; KOZLOV, G.S. [deceased];
IVANOV, L.G.; OSHCHENSKIY, V.M.; DZHASYBEKOVA, E.K.;
NURGALIYEVA, Kh. PRESNYAKOV, A.A., doktor tekhn. nauk,
otv. red.; ALEKSANDRIYSKIY, V.V., red.

[Automation of nonferrous metal ore dressing processes]
Avtomatizatsiia protsessov obogashcheniia rud tsvetnykh me-
tallov. Alma-Ata, Izd-vo AN Kaz.SSR, 1964. 213 p.

(MIRA 17:10)

1. Laboratoriya elektroniki i avtomatiki Instituta yadernoy
fiziki AN Kaz.SSR (fo all except Grinman, Presnyakov,
Aleksandriyskiy).

TADZHIBAYEVA, M.M.; SHTEYN, P.I.

Psychotic recrudescence in the course of the circular form of
schizophrenia during the puerperal period. Trudy Dush. med. inst.
61:107-123 '63. (MIRA 17:5)

SHTEYN, R.L., inzh.; SALASHENKO, V.V., inzh.

Automation of a mazut pumping system. Energetik 11 no.10:
24-25 0 '63. (MIRA 16:11)

38897

S/125/62/000/007/011/012
D040/D113

1.2300

AUTHOR: Shteyn, R.O.

TITLE: Argon arc welding of tungsten

PERIODICAL: Avtomaticheskaya svarka, no. 7, 1962, 95-96

TEXT: Electric contacts made of sintered tungsten, crucibles with 2 mm thick walls and 280 mm long muffles with 1.5 mm thick walls of rolled tungsten were welded in experiments at the Institut elektrosvariki im. Ye.O.Patona (Electric Welding Institute im. Ye.O.Paton). Welding was conducted in a vacuum chamber evacuated to $5 \cdot 10^{-2}$ mm of mercury and filled with argon, with the use of direct polarity d.c. and tungsten electrodes. The welded joints are illustrated and the welding current and voltage, arc length, and electrode diameter used for different joints are given in a table. Preheating was employed in some cases to prevent cracking. The contacts were filled with copper and successfully passed tests; crucibles with longitudinal and annular welds were tested in a vacuum at 2000°C, and all welds were sound. Contact rings of sintered molybdenum were welded to the muffles. Fabrication by welding is simpler than the

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Argon arc welding of tungsten

S/125/62/000/007/011/012
D040/D113

method in which press forged billets are turned, and subsequently sintered in a vacuum, or sprayed and sintered; welded muffles were three times as durable as sintered ones. There are 3 figures and 1 table.

K

Card 2/2

KORENYUK, Yu.M.; SHTEYN, R.O.

Mechanical properties of welded joints in BrB2 bronze. Avtom.
svar. 15 no.6:94 Je '62. (MIRA 15:5)
(Bronze--Welding)

SHTEYN, R.O.

Argon-arc welding of tungsten. Avtom. svar. 15 no.7:95-96 JI '62.
(MIRA 15:7)

(Tungsten--Welding)

L 53990-65

EWT(m)/EWP(i)/EWP(v)/T/EWP(t)/EWP(k)/EWP(b)/EWA(c) Pf-4

IJP(c) JD/HM/JG

ACCESSION NR: AP5015509

UR/0286/65/000/008/0042/0042
621.791.75

AUTHOR: Rabkin, D. M.; Shteyn, R. O.; Busharin, V. A.; Gushchina, A. V. 29
B

TITLE: Method of fusion welding silver to steel. Class 21, No. 170135 18

SOURCE: Byulleten'izobreteniy i tovarnykh znakov, no. 8, 1965, 42

TOPIC TAGS: welding, silver to steel welding 16

ABSTRACT: This author certificate introduces a method of fusion welding silver to steel. To improve the weld quality, either a copper layer is deposited before welding on the steel or a copper-clad steel plate is joined to the steel. [ND] 27 18

ASSOCIATION: none

SUBMITTED: 28Feb64

ENCL: 00

SUB CODE: MM

NO REF SOV: 000

OTHER: 000

ATD PRESS: 4021

Card 1/1

SHTEYN, S.A.

Change in reflex activity during ether anesthesia and local
anesthesia. Trudy 1-go MMI 3:102-118 '57. (MIRA 14:5)
(ANESTHESIA) (REFLEXES)

14(5)

SOV/112-59-5-9631

Translation from: Referativnyy zhurnal. Elektrotehnika, 1959, Nr 5, p 169 (USSR)

AUTHOR: Shteyn, S. A., Fershtenfel'd, A. A., Mednis, E. F., and
Kritskiy, Ye. L.

TITLE: Comparative Tests of Various Methods of Automatic Control for Ball Mills

PERIODICAL: Obogashcheniye rud, 1957, Nr 6, pp 55-66

ABSTRACT: Three methods of automatic control of mill operation were tested at the Noril'sk concentrating plant: constant weight of feed, constant noise, and constant circulating load; the tests were conducted from January, 1956, to April, 1957. A short description and a comparison of the above control methods are given. Seventeen illustrations.

A.A.S.

Card 1/1

SITEYN, S.G.

DECEASED 1995

Medicine

See ILC

L 38472-66 EWT(d)/EWT(m)/EWP(w)/I/EWP(t)/EII/EWP(k) LJP(c) JH/EM/HW/JG/JD

ACC NR: AP6019497 (A) SOURCE CODE: UR/0129/66/000/006/0003/0007

AUTHOR: Shteyn, S. G.; Sukhovarov, V. F.; Butkevich, L. M.

50
47
B

ORG: Siberian Physico-technical Institute (Sibirskiy fiziko-tekhnicheskii institut)

TITLE: Recovery of the elastic modulus in type EI702 alloy

SOURCE: Metallovedeniye i termicheskaya obrabotka metallov, no. 6, 1966, 3-7

TOPIC TAGS: elastic modulus, high alloy steel, Young modulus/
EI702 high alloy steel

ABSTRACT: The alloy under consideration has the following composition: 35.6% nickel; 12% chromium; 1.5% aluminum; 3% titanium; 0.8% manganese; 0.33% silicon; 0.025% carbon; remainder iron. The Young modulus was determined by the dynamic method. The value of the modulus was calculated by the formula:

$$E = 0,9463184 \cdot 10^{-8} \frac{l}{t^2} \rho v^2,$$

where l is the length of the sample; t is its thickness; ρ is the density of the material; v is the vibration frequency of the sample. The absolute value of the modulus was determined with an error of

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UDC: 669.14.018.58:539.32

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ACC NR: AP6019497

3

0.8-1.5%. The change in the modulus was studied with stepwise annealing of the samples which had been previously quenched in water and had also been subjected to cold working by rolling. Based on the experimental data, a figure shows the dependence of the Young modulus on the annealing temperature for alloy EI702 previously deformed by 40%, and a second figure shows the same for a hardened alloy. As expected, deformation noticeably lowers the Young modulus. Another figure illustrated the Young modulus as a function of the annealing temperature of samples which had been deformed by rolling by 20%, after ageing at different temperatures. Orig. art. has: 5 figures.

SUB CODE: 11/ SUBM DATE: none/ ORIG REF: 004/ OTH REF: 001

Card 2/2 pb

SHTEYN, T.A.

FA 66T88

USSR/Medicine - Pneumonia
Medicine - Measles

Mar/Apr 1948

"The Pathological Anatomy of Pneumonia Relative to Focal Infections in Children," T. A. Shteyn, Path Anat Dept, Vasil Ostrov Children's Infectious Diseases Hospital, 7 pp

"Arkhir Pathologii" Vol X, No 2

Reports study of 50 cases of pneumonia, most of which occurred with scarlet fever, diphtheria, and measles in children. Treats pathology of infections from streptococcus, pneumococcus, the Loeffler bacillus, and of amicrobic lung infections relative to measles. Includes summary and analysis. Submitted 1946.

66T88

SHTEYN, V.G.

Efficient record blanks for testing. Izv.tekh. no.6:73-76 N-D
'56. (MLRA 10:1)

(Testing--Forms, blanks, etc.)

SHTEYN, V.G., inzhener.

Automatic heat-control instruments. Mashinostroitel' no.3:5-8
Mr '57. (MLRA 10:5)

(Thermostat)

SHTEYN, V.G., inzhener.

Chemical techniques for marking instruments and parts by rubber
stamps. Mashinostroitel' no.6:40-41 Je '57. (MIRA 10:7)
(Marking devices)