VERBOVSKIY, Grigoriy Gavrilovich, prof.; SAKHNENKO, V.L., prof., retsenzent; BEZVESEL'NYY, Ye.S., dots., kand. tekhn. nauk, otv. red.; KURILOVA, T.M., red.; ALEKSANDROVA, G.P., tekhn. red.

[Theory of mechanisms and machines]Teoriia mekhanizmov i mashin; kratkii kurs. Khar'kov, Izd-vo Khar'kov, Izd-vo Khar'kovskogo univ., 1961. 243 p. (MIRA 15:11)
(Mechanical movements) (Machinery, Kinematics of)

BEZVERSHENKO, I.A.

Effect of cortisone injections on the adenosine triphosphate and adenosine diphosphate content and the adenosinetriphosphatase activity in the cells of ascitic tumors. Ukr. biokhim. zhur. 37 no.1:70-75 '65. (MIRA 18:5)

1. Ukrainian Research Institute for Experimental and Clinical Oncology, Kiyev.

BEZVERSHENKO, I.A.; UMANSKIY, Yu.A. [Umans'kyi, IU.O.]

Mechanism of glycolysis inhibition by antineoplastic serum. Ukr. biokhim. zhur. 37 no.3:420-429 '65. (MIRA 18:7)

1. Ukrainskiy nauchno-issledovatel'skiy institut eksperimental'noy i klinicheskoy onkologii, Kiyev.

UMANSKIY, Yu.A. [Umans'kyi, IU.O.]; BEZVERSHENKO, I.A.

Effect of antimitochondrial serum on some energy metabolism indices of Guerin's carcinoma. Dop. AN URSR no.8:1088-1091 '65. (MIRA 18:8)

1. Ukrainskiy nauchno-issledovatel'skiy institut eksperimental'noy i klinicheskoy onkologii.

BEZVERSHUK, O.A.

Trends in the development of the glass and porcelain-faience industry of the Ukrainian S.S.R. Leh. prom. no.3:6-9 Jl-S '65. (MIRA 18:9)

BEZVESIL'NYY, Ye.V., inzh.

Casing bored wells with asbestos cement pipes. Gidr. i mel. 14 no.1: 48-52 Ja '63. (MIRA 16:2)

1. Nauchno-issledovatel'skiy institut sanitarnoy tekhniki Akademii stroitel'stva i arkhitektury UkrSSR.
(Ukraine--Wells) (Pipe, Asbestos-Cement)

22553
S/146/61/004/002/006/011
B124/B206

9,7000

AUTHORS: Vavilov, A. A., Bezvikonnyy, A. A., Sergeyev, E. V.

TITLE: Potentiometer-type tracking system with dynamic error compensation

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Priborostroyeniye, v. 4, no. 2, 1961, 58-66

TEXT: This paper presents the results of developing the system mentioned in the title for joint operation with a programming device performing the approximation to a given function by means of linear sections. For the total elimination of the steady dynamic error and considerable reduction of the transitional dynamic error of the tracking system it is of advantage to use compensation circuits in the main feedback and at the system input. The diagram of such a tracking system is given in Fig. 1. The tracking system contains: ПУ a programming device for linear approximation of the given function; $W_1(p)$ the elements of the main part of the tracking system; $W_{kI}(p)$ a compensating circuit at the input of the system, and $W_{kII}(p)$ a compensating circuit in the main feedback of the system. For elaboration

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Potentiometer-type tracking...

of the system it is suitable to achieve a velocity compensation of the steady dynamic error by using the compensation circuit in the main feedback of the system, and of the transitional dynamic error by using a compensation circuit connected to the input of the system. For the tracking system shown in Fig. 1, the following correlations exist between the output value x(p), the dynamic error of the system x(p), and the controlling action $x_c(p)$:

$$x(p)=\frac{W_1(p)\,[1+W_{kI}(p)]}{1+W_1(p)\,W_{kII}(p)}\,x_y(p); \qquad (1)$$

$$\Delta x(p)=\frac{1+W_1(p)\,[W_{kII}(p)-1-W_{kI}(p)]}{1+W_1(p)\,W_{kII}(p)}\,x_y(p), \qquad (2)$$

where $W_1(p) = N_1(p)/D_1(p)$ is the transmission function of the open tracking system without considering the compensation circuits, $W_{kI}(p) = N_{kI}(p)/D_{kI}(p)$ the transmission function of the compensation circuit at the input of the system, and $W_{kII}(p) = N_{kII}(p)/D_{kII}(p)$ the transmission function of the compensation circuit in the main feedback of the system. Fig. 2 shows a potentiometer-type tracking system with the amplifier EMU-3A(EMU-3A) and

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the electric motor СЛ-621 (SL-621). For the transmission function of the compensation circuit with respect to the controlling action,

$$W_{kI}(p) = u_{kI}(p)/u(p) = K_{3t}R''_4C_1p^2/[(R'_4 + R''_4)Cp + 1]$$

$$= [(R''_4/R'_4 + R''_4)(K_{3t}/T_3)T_3^2p^2]/(T_3p + 1) = (\alpha T_3^2p^2)/(T_3p + 1) \quad (5)$$

holds, where $T_3 = (R'_4 + R''_4)C_1$ is the time constant of the differentiating circuit, $\alpha = (R''_4/R'_4 + R''_4)K_{3t}/T_3$ the transmission coefficient of the compensating circuit $W_{kI}(p)$, which connects the voltage u_{kI} at the output of the compensation circuit with the controlling action to the system u, and K_{3t} the transmission coefficient of the voltage u' at the potentiometer pickup to the controlling action u. The logarithmic amplitude-frequency characteristics $L_1(\omega)$ and phase-frequency characteristics $\varphi_1(\omega)$ of the open system under consideration of the flexible and rigid feedbacks are given in Fig. 3. The low-frequency range of the simplified equivalent system determines the steady dynamic error, and the mean frequency range the

Potentiometer-type tracking...

transitional dynamic error. On the basis of the asymptotic characteristics $L_1(\omega)$ and $\varphi_1(\omega)$ shown in Fig. 3, the simplified transitional function of the system has the form $W_{1e}(p) = K/[p(Tp+1)^2]$ (8), where K is the quality of the system without consideration of the compensation circuits and T the time constant of the simplified equivalent system. In Fig. 3, the logarithmic frequency characteristics of the open system are given under consideration of the compensation circuit $W_{kII}(p)$: $L(\omega) = L_{e1}(\omega) + L_{kII}(\omega)$ and $\varphi(\omega) = \varphi_{e1} + \varphi_{kII}(\omega)$. As can be seen from these characteristics, the introduction of a compensation circuit with the time constant $T_1 = 0.5$ sec into the main feedback of the system is of no essential effect on the stability of the system. The oscillogram 4,a shows the operation of the tracking system without compensation of the dynamic error at a transmission speed $\vartheta = 1.2$ v/sec; in this case the steady error is $\Delta\bar{u}_{st} = 170$ mv and the maximum transitional dynamic error $\Delta\bar{u}_{max} = 195$ mv. Fig. 4,б shows the operation of the tracking system with compensation of the steady error by means of a compensation circuit in the main feedback of the system, 4,в

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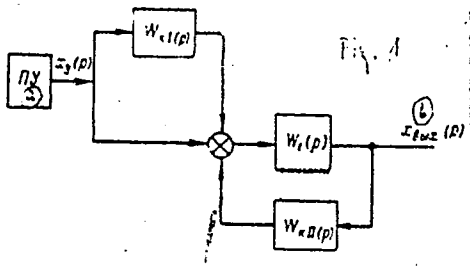
the operation of a tracking system with compensation of the steady and transitional dynamic errors for the same transmission speed of $v = 1.2$ v/sec. From Fig. 4,б results that the steady error of the tracking system practically equals zero and the maximum transitional dynamic error is $\Delta U_{max}=25$ mv. This study was recommended by the Department of Automation and Telemechanics. There are 4 figures and 4 references: 3 Soviet-bloc and 1 non-Soviet-bloc. The reference to the English-language publication reads as follows: King L. H. Reduction of Forced Error in Closed-Loop Systems. Proc. I. R. E. 1953, v. 41, No. 8, August, 4648, pp. 1037-1043.

ASSOCIATION: Leningradskiy elektrotekhnicheskiy institut im. V. I. Ul'yanova (Lenina) (Leningrad Electrotechnical Institute imeni V. I. Ul'yanov (Lenin))

SUBMITTED: December 19, 1960

Fig. 4



Legend to Fig. 1:
a) ПУ programming device
b) $x_{outp}(p)$

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L 18229-65 AFETR/ASD(a)-5/RAEM(a)/SSD/AEDC(a)/AFTC(p)/AFMDC/ESD(dp)/RAEM(d)
ACCESSION NR: AP4048292 S/0146/64/007/005/0072/0079

B

AUTHOR: Bezvikonny*y, A. A.

TITLE: Compensation of dynamic errors in a combined program-control system

SOURCE: IVUZ. Priborostroyeniye, v. 7, no. 5, 1964, 72-79

TOPIC TAGS: program control system, automatic control, automatic control design, automatic control system, automatic control theory

ABSTRACT: The possibility of compensating dynamic errors in a combined program-control system with a linearly-variable input parameter is considered. A block diagram of the servo system in question is shown in Enclosure 1. The servo included a programing device PD, two units with transfer functions $W_3(p)$ and $W_s(p)$, and a compensating loop with a transfer function $W_c(p)$. The PD device approximates the specified function by linear pieces, feeding the servo with linear voltages $x(p)$; simultaneously, PD produces a signal $px(p)$ proportional to

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L 18229-65
ACCESSION NR: AP4048292 0

the first derivative of the input parameter, which is applied to the system via the compensating unit $W_c(p)$. A simplified circuit diagram of the combined servo, including a potentiometer-function-generator PD, an electron-tube circuit, an initiating motor, a tachometer generator with a compensating differentiating circuit, a dynamoelectric amplifier, and a final electric motor, is presented. The above system was used for experimental verification. It is claimed that the introduction of a compensating loop operating on the first two derivatives of the input parameter has completely eliminated the steady-state and has greatly reduced transient dynamic errors. Orig. art. has: 4 figures and 13 formulas.

ASSOCIATION: Leningradskiy elektrotekhnicheskiy institut im. V. I. Lenina (Leningrad Electrotechnical Institute)

SUBMITTED: 21Feb64 ENCL: 01

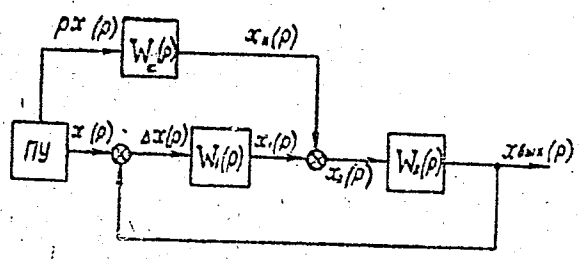
SUB CODE: IE NO REF SOV: 004 OTHER: 000

Card 2/3

L 18229-65

ACCESSION NR: AP4046292

ENCLOSURE: 01



A block diagram of a combined servo system

Card 3/3

L 42930-65 EWT(d)/EWP(v)/EWP(k)/EWP(h)/EWP(l) Pf-4

ACCESSION NR: AP5006815 S/0144/65/000/001/0066/0072

AUTHOR: Bezvikonnyy, A. A. (Aspirant of automation and telemechanics department) 15 14 13

TITLE: Compensation of dynamic errors in an analog potentiometer-type system of program control

SOURCE: IVUZ. Elektromekhanika, no. 1, 1965, 66-72

TOPIC TAGS: program control, analog program control, dynamic error, error compensation

ABSTRACT: The possibility is considered of compensating dynamic errors in a combination program-control system having a constant load and a linearly-variable input. The compensation is effected only by a circuit introduced at the system input, i.e., by transmission of perturbance over two channels; in this case, the second form of the invariance conditions can be realized in the system.

Card 1/2

L 42930-65
ACCESSION NR: AP5006815

The log-magnitude diagram and frequency response of a particular program-control system (whose principal circuit is reported) were determined. They were used to verify the theoretical results (the system transfer function with respect to the error signal, error coefficients approaching zero, etc.). It is believed that use of a compensating circuit at the system input may materially improve the dynamic performance of the system. Orig. art. has: 4 figures and 19 formulas.

ASSOCIATION: Leningradskiy elektrotekhnicheskiy institut im. V. I. Lenina (Leningrad Electrotechnical Institute)

SUBMITTED: 30Mar64 ENCL: 00 SUB CODE: DP, IE

NO REF SOV: 005 OTHER: 000

Card 2/2

BEZVODA, Frantisek, Inz.

Experience with the research unit at the Collective Farm "The 25th February" in Krechor. Vestnik CSAZV 8 no.4:183-194 '61. (EEAI 10:6)

1. Vyzkumny ustav zemedelskie ekonomiky Ceskoslovenske akademie zemedelskych ved, Praha.
(Czechoslovakia--Collective farms)

TEZKY, Antonin, promovany fyzik; BEZVODA, Vaclav, promovany geolog

Electric logging in hydrogeological boring in the Sokolov Basin. Geolog pruzkum 5 no.1:19-21 Ja '63.

1. Ustav uzite geofyziky, Brno; Katedra uzite geofyziky, Prirodovedecka fakulta, Karlova universita, Praha.

BEZWINSKA, M.

Poland/Chemical Technology. Chemical Products and Their Application -- Fertilizers, I-6

Abst Journal: Referat Zhur - Khimiya, No 2, 1957, 5060

Author: Litynski, T., Bezwinska, M.

Institution: None

Title: Calcium Silicate Slag as a Lime Containing Fertilizer

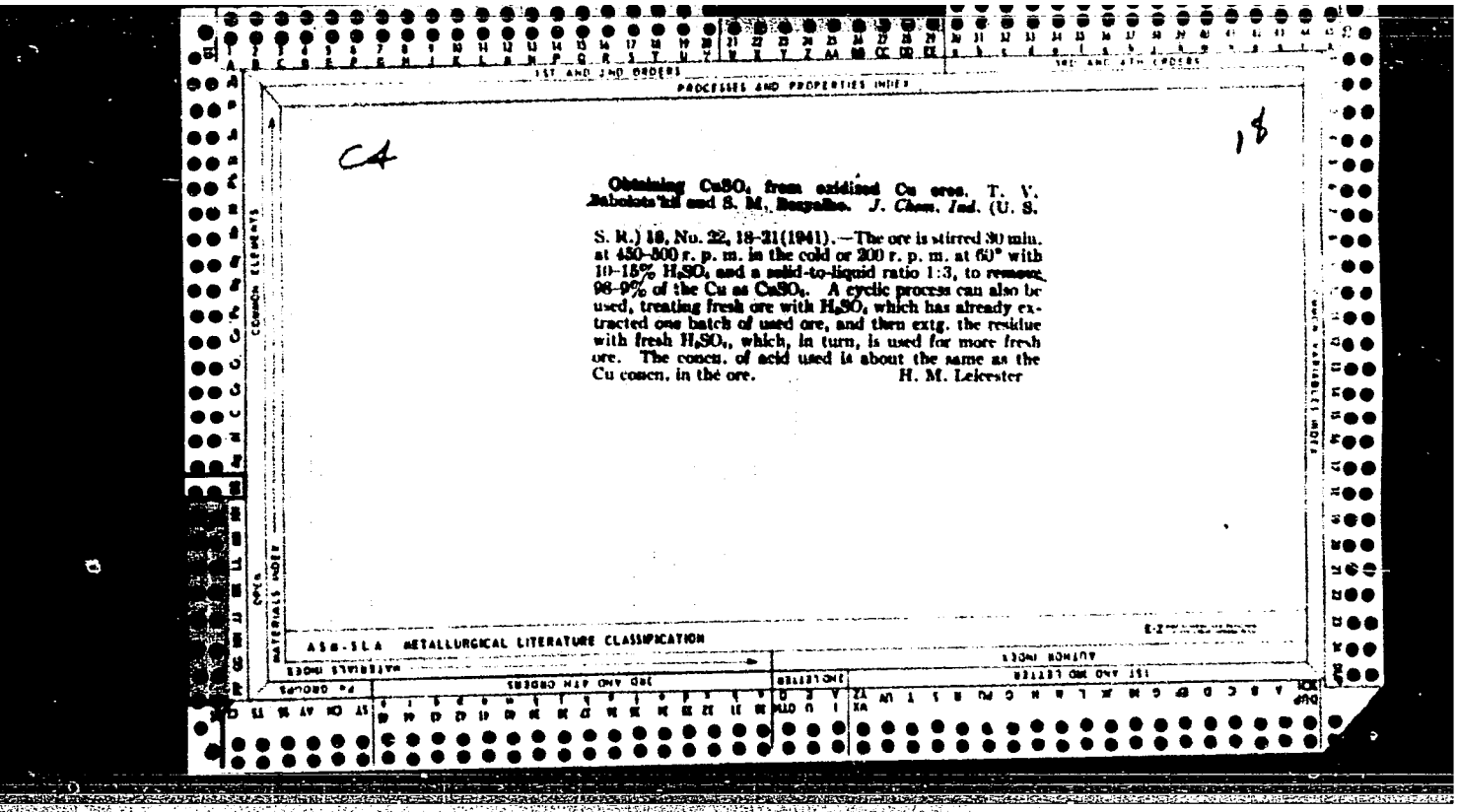
Original Publication: Przem. chem., 1956, 12, No 7, 399-400

Abstract: Growing experiments with alfalfa have shown that Ca-silicate slag, a byproduct of the production of $CaSi_2$ from CaC_2, sand, coal and lime, containing ~45% CaO as $CaSiO_3$, is a more effective lime-containing fertilizer than pure $CaCO_3$.

Card 1/1

BEZYAYEV, V., polkovnik, komandir polka, voyennyy letchik 1-go klassa

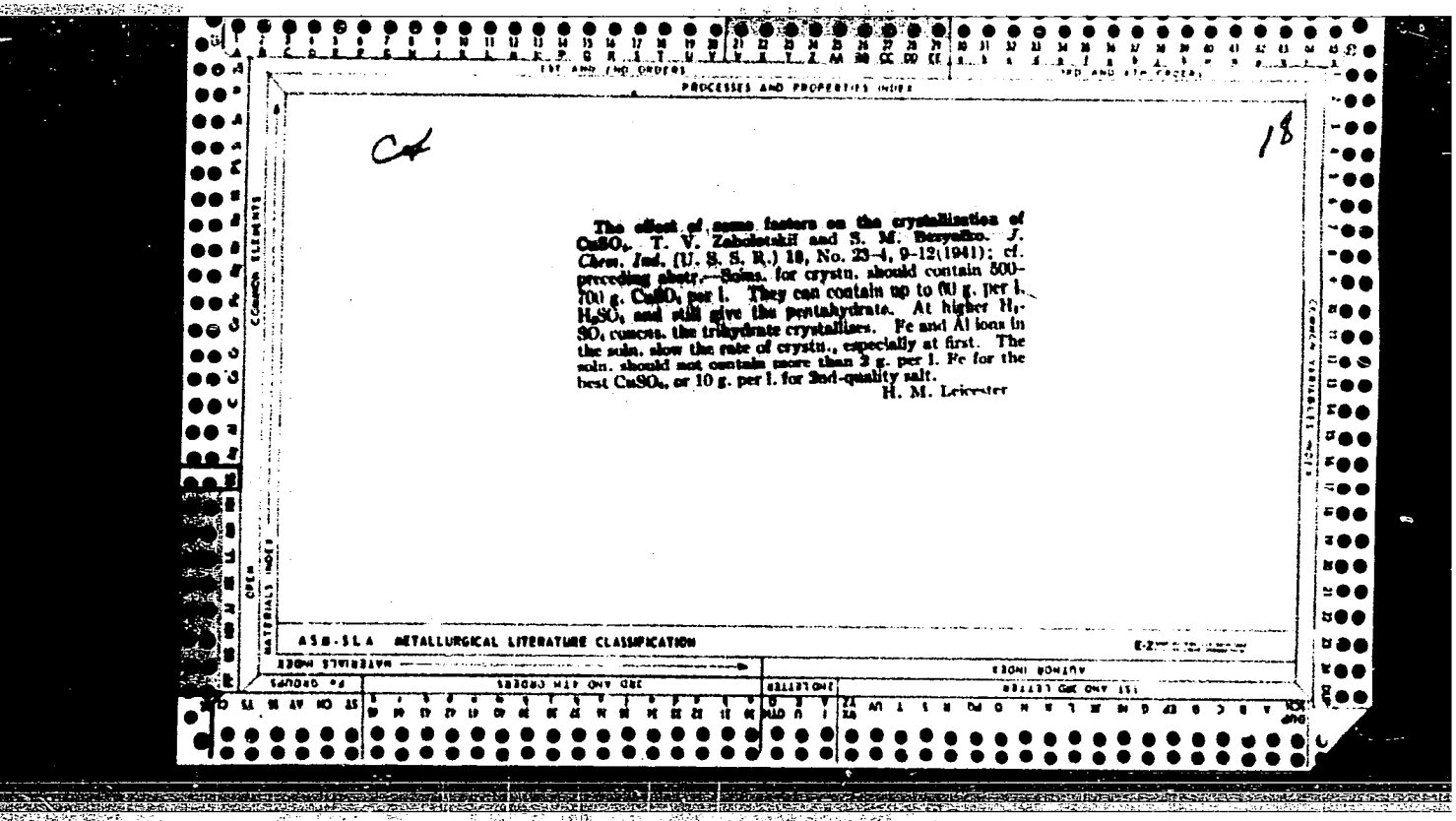
According to the rules of military aeronautics. Komm.Vooruzh.Sil 1 no.5:39-43 D '60. (MIRA 14:8)
(Russia--Air force) (Aeronautics, Military)



C4

18

Obtaining $CuSO_4$ from oxidized Cu ores. T. V. Babcock'kil and S. M., Bergallo. *J. Chem. Ind.* (U. S. S. R.) 18, No. 22, 18-21(1941).—The ore is stirred 30 min. at 450–500 r. p. m. in the cold or 200 r. p. m. at 60° with 10–15% H_2SO_4 and a solid-to-liquid ratio 1:3, to remove 98–9% of the Cu as $CuSO_4$. A cyclic process can also be used, treating fresh ore with H_2SO_4 which has already extracted one batch of used ore, and then extg. the residue with fresh H_2SO_4, which, in turn, is used for more fresh ore. The concn. of acid used is about the same as the Cu concn. in the ore. H. M. Leicester

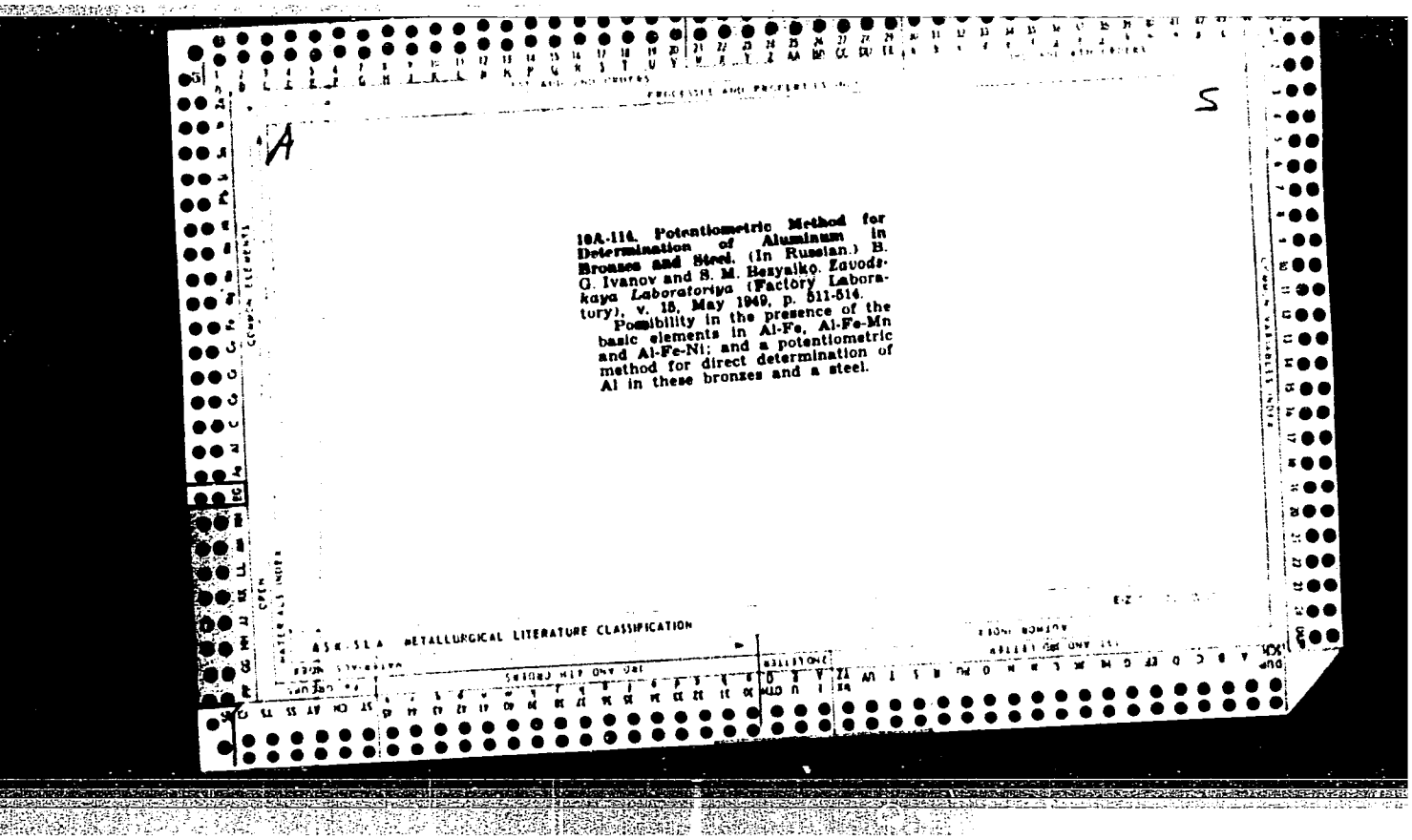


Cu

18

The effect of some factors on the crystallization of $CuSO_4$. T. V. Zabolotskiĭ and S. M. Bezyulko. *J. Chem. Ind.* (U. S. S. R.) 18, No. 23-4, 9-12(1941); cf. preceding abstr.—Solns. for crystn. should contain 500-700 g. $CuSO_4$ per l. They can contain up to 60 g. per l. H_2SO_4 and still give the pentahydrate. At higher H_2SO_4 concns. the trihydrate crystallizes. Fe and Al ions in the soln. slow the rate of crystn., especially at first. The soln. should not contain more than 2 g. per l. Fe for the best $CuSO_4$, or 10 g. per l. for 2nd-quality salt.

H. M. Leicester



10A-114. **Potentiometric Method for Determination of Aluminum in Bronzes and Steel.** (In Russian.) B. G. Ivanov and S. M. Bezyaiko. *Zavodskaya Laboratoriya* (Factory Laboratory), v. 15, May 1949, p. 511-514.

Possibility in the presence of the basic elements in Al-Fe, Al-Fe-Mn and Al-Fe-Ni; and a potentiometric method for direct determination of Al in these bronzes and a steel.

BEZYAYKO, S. M.

USSR/Metals - Titanium, Analysis Jul 50

"Photocolorimetric Determination of Titanium," B. G. Ivanov, S. M. Bezyayko

"Zavod Lab" Vol XVI, No 7, pp 875-876

166T66

Introduces method for determining titanium without preliminary separation of interfering elements, a time-consuming operation which is inconvenient in daily practice of mass control. Method may be used for analysis of steel and other materials, e.g., nickel-base alloy, discussed herein. Determination of titanium by photocolorimetric

166T66

USSR/Metals - Titanium, Analysis (Contd) Jul 50

method takes 40-45 min instead of 3-4 hr in case of using visual-colorimetric method with application of cupferron. Relative error does not exceed 3-4%.

166T66

[redacted], I. D.

[redacted] Poloniny zakarpatskoy oblasti (Gornyye Ustbishcha). Sots. Zhivotnovodstvo, 1949, No. 4, s. 72-74.

SO: LETOPIS' No. 35, 1949

BEZ'YAZYCHNYY, V.F.

Precision of the weight of castings and factors affecting it. Trakt. i sel'khozmash. no.2:40-41 F '65.

(MIRA 18:4)

1. Rostovskiy institut sel'skokhozyaystvennogo mashinostroyeniya.

BE[illegible], V.S.; KH[illegible], L.Ya.; PREOBRAZHENSKAYA, Ye.[illegible].

Polarographic determination of benzanthrone, bromobenzanthrone, and dibromobenzanthrone when present together. Zhur.anal.khim. 19 no.10: 1258-1263 '64. (MIRA 17:12)

1. All-Union Scientific Research Institute of Monocrystals, Scintillating Materials and Specially Pure Chemicals, Khar'kov.

BEZYGILY, V. P.

"Basal Metabolism as an Index to Gas Metabolism Disturbance in Various Stages of Hypertension." Cand Med Sci, Inst of Clinical Physiology, Acad Sci Ulkrainian SSR, Kiev, 1953. (RZhBiol, No 2, Jan 55)

Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (12)
SO: Sum. No. 556, 24 Jun 55

BEZYMENSKIY, Aleksandr; MIKHALKOV, Sergey; NIKULIN, Lev.

More paper for books, dear comrades! Mast. lesa 2 no.7:18-19 Jl '58. (MIRA 11:9)

(Paper industry)

ARTAMONOV, A.Ya.; BEZYKORNOV, A.I.

Durability of cutters in cutting porous ceramic metal materials. Poroshk. met. 5 no.8:108-111 Ag '65. (MIRA 18:9)

1. Institut problem materialovedeniya AN UkrSSR.

PENKIN, D. (UA3HP); BEZYMENSKIY, G. (UA3ALH)

In a pioneer camp. Radio no.5:13-14 My '62. (MIRA 15:5)
(Zvenigorod--Pioneers (Communist youth)) (Radio operators)

BEZYMENSKIY, G. (UA3ALN)

The initial steps have been taken. Radio no.10:5 O '64.
(MIRA 18:2)

1. Predsedatel' komissii po propagande radiosporta sredi shkol'-
nikov Federatsii radiosporta SSSR.

BEZYMENSKIY, G.

Short and ultrashort radio waves. Radio no.3:17-18 Mr '63.
(MIRA 16:2)

1. Predsedatel' komiteta ul'trakorotkikh voln Federatsii radiosporta SSSR.

(Radio operators) (Amateur radio stations)

BEZYMENSKIY, G.B

AUTHOR: Bezymenskiy, G., a teacher of electrical engineering, Nr 200 high school, Moscow 107-57-5-20/63

TITLE: Every High School Can Do It (Eto mozhet kazhdaya shkola)

PERIODICAL: Radio, 1957, Nr 5, p 15 (USSR)

ABSTRACT: In January 1957, an all-voluntary (samodeyatel'nyy) radio club was opened at the high school #200, Komintern rayon, Moscow. Z. Kubikh and A. Veremey spoke before students about the International Radio Contest in Karlovy Vary. Burlak, the Superintendent of the Rayon People's Education Division, spoke too. Oleg Somov is the Chief of the school radio station 077671. N.I. Tonkonogov, a retired man, supervises the radio constructor section of the club. Boris Aleshichev and Sasha Sheverdyayev, schoolboys, members of the Moscow City Radio Club, help a lot in the work of the new club. Vitya Chilikin, Oleg Somov, Yura Bazulin and others began building a battery-supplied transmitter-receiver radio station. Other persons mentioned in the article: M.V. Lebedeva, the school principal of 1956; Yu. V. Savinov, Deputy Minister, Ministry of Marine Fleet; N. A. Dubrovskaya, Superintendent of the automatic telephone exchange.

AVAILABLE: Library of Congress

Card 1/1

107-58-6-14/58

AUTHOR: Bezymenskiy, G., Electrical Engineering Instructor, School Nr 200

TITLE: Moscow Students to Friends in Villages (Moskovskiye shkol'niki - sel'skim druz'yam)

PERIODICAL: Radio, 1958, Nr 6, p 11 (USSR)

ABSTRACT: The radio club of school Nr 200, Sverdlovskiy Rayon of Moscow, joined the campaign of the periodical "Radio" and contacted interested youths of the Chekhovskiy Rayon and the Moscow Oblast, concerning the establishment of radio amateur clubs in these areas.

Card 1/1 1. Radio-Amateur personnel

KOPYLOV, A. (UA3GH); BEZYMENSKIY, G. (UA3ALH)

Follow-up of articles published in our periodical. Radio no.11: 16-17 N '63. (MIRA 16:12)

1. Predsedatel' komiteta ul'trakorotkovolnovikov Federatsii radiosporta SSSR (for Bezymenskiy).

22(1) SOV/47-59-3-50/53

AUTHOR: Bezymenskiy G.B.

TITLE: In the School Radio Club

PERIODICAL: Fizika v shkole, 1959, Nr 3, pp 108-109 (USSR)

ABSTRACT: This is a summary of the activities of the radio club of the 189th school in Moscow. The club was organized in 1957 as an electrotechnical circle, the task of which was the assembly of visual aids for the physics and electric engineering courses. One of the most interesting projects was an electric switchboard, the design of which was so good that the plant "Elektropribor" has started mass production of them. Later, the members proceeded to assemble rectifiers, always combining theoretical study with practical work. They assembled half-wave and full-wave rectifiers and, subsequently, intensifiers. The greatest task to be accomplished was the design and assembly of a school ultra-short wave radio

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In the School Radio Club

station. The members requested help from the Moskovskiy gorodskoy radioklub (Moscow City Radio Club). The president of the club S.G.Karaush and his deputy M.N. Yemel'yanov gave advice and put at their disposal the transmitter-receiver "Reyd". In the assembly of the station, a four-tube intensifier was used as a modulator for the transmitter. In view of the increasing number of members, the circle was transformed into a club with a president and a council of two members. Great help has been given the club by the sponsor of the school, one of the Moscow machine building plants, with which aid the students assembled a transmitter and a receiver for a frequency of 144 megacycles. The radio station of the

In the School Radio Club

school has the call sign RA-3-KPTS. At a frequency of 38-40 megacycles, it can be heard nearly every day by radio amateurs all over the Soviet Union.

ASSOCIATION: 189-ya srednyaya shkola, Moskva (189th Secondary School, Moscow)

Card 3/3

BEZYMENSKIY, L.

22894 Ob ekonomicheskom polozhenii zapadnykh zon Germanii. Novoe vremya, 1941, No. 30, C 3-8.

SO: LETOPIS' NO. 31, 1949

BEZYMENSKIY, L.

Bezymenskiy, L. and Shmelev, N. "At the Hungarian Industrial Fair in Moscow", Novoye vremya, 1949, No. 23, p. 19-21.

SO: U-4630, 16 Sept. 53, (Letopis 'Zhurnal 'nykh Statey, No. 23, 1949).

BEZYMENSKIY, L.

At the Ruhr mines. Mast.ugl. 2 no.10:28-30 O '53. (MLRA 6:10)
(Ruhr valley--Mines) (Mines--Ruhr valley)

1. BEZYMENSKIY, L.

2. USSR (600)

4. Germany, Western - Investments, Foreign

7. "Atlantic Pact of concerns; interlacing of foreign capital in Western Germany." Reviewed by, Vop.ekon. no. 4, 1953.

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

BELYMENSKIY, L.

The Mansfeld lands. Vokrug sveta no.10:29-32 O '54. (MLRA 7:10)
(Mansfeld--Copper mines and mining) (Copper mines and mining--Mansfeld) (Eisleben--History)

BEZYMENSKIY, L.

[redacted] Germany through the eyes of the Germans. [illegible] 17 no.5:59-63 My '57. (MLRA 10:7)

(Germany, West--Photography, Journalistic)

BEZYMENSKIY, L.

Journey to outer space in pictures. Sov.foto 21 no.11:10-13 N '61. (MIRA 14:11)
(Photography) (Moscow--Exhibitions)

1. BEZYMENNYY, L.S.; FILIPPOV, B.I.

2. USSR (600)

4. Electric Power Plants

7. Determination of basic parameters for rural thermo-electric stations operating on local fuel, Eng. L.S. Bezymennyi, Eng. B.I. Filipppov, Trudy Inst.tepl. AN URSR no. 6, 1952.

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

BEZYUK, N. G. (Docent)

"Development of Cancer of the Skin Subsequent to X-Ray Epilation of the Hairy Part of the Head," Vest. Venerol. i Dermatol., No.4, 1948.

Dermato-Venereol. Clinic, Chernovits Med. Inst. and Chernovits Oblast' Oncological Hosp.

HRZYUK, N.G.; DANILENKO, A.I.

Electroencephalography in certain dermatoses. Vop. fiziol. no.6: 28-31 '53. (MLRA 8:1)

1. Otdel normal'noy fiziologii Instituta fiziologii AN USSR i klinika koshnykh i venericheskikh bolezney Kiyevskogo meditsinskogo instituta.

(SKIN, diseases,
EEG in)
(ELECTROENCEPHALOGRAPHY, in various diseases,
skin dis.)

BEZYUK, N.G., dotsent; SHASHINA, P.I., ordinator.

Effective use of novocaine block for the cervical and superior thoracic ganglia in treating erythematous chroniosepsis. Vest. ven.iderm.no.3:50 My-Je '55. (MLRA 8:10)

1. Iz Kiyevskogo kozhno-venerologicheskogo instituta.
(NOVOCAINE) (LUPUS)

BEZYUK, N. G., dotsent.

Effect of the cerebral cortex on photosensitivity of the organism. Vest. ven. i derm. no.5:47-48 S-O '55 (MIRA 9:1)

1. Iz kozhnogo otdeleniya Kiyevskoy gorodskoy bol'nitsy imeni Oktyabr'skoy revolyutsii.

(CEREBRAL CORTEX, physiology,
eff. on photosensitivity of organism)
(LIGHT
photosensitivity of skin, eff. of cerebral cortex)
(SKIN, physiology,
photosensitivity, eff. of cerebral cortex)

BEZYUK, M.G.

The word as a physiological and therapeutic factor in dermatology. Fiziol.zhur. [Ukr.] 2 no.1:18-25 Ja-F '56. (MLRA 10:1)

1. Kiivs'kiy medichniy institut imeni akademika O.O.Bogomol'tsya, kafedra dermatologii i venerologii i kafedra normal'noy fiziologii.
(SKIN--DISEASES) (THERAPEUTICS, SUGGESTIVE)

BEZYUK, N.G., dotsent ; POPOV, G.I.

Diagnostic errors and improper surgical intervention in dermato-venerology. Khirurgiia 33 no.7:128-131 Jl '57. (MIRA 10:11)

1. Iz otdela dermatologii (zav. - dotsent N.G.Bezyuk) i otdela sifilidologii (zav. - kandidat meditsinskikh nauk G.I.Popov) Kiyevskogo nauchno-issledovatel'skogo kozhno-venerologicheskogo instituta (dir. G.Ye.Koryakin)

(SKIN DISEASES, surg.
contraindic. & diag. errors)

BEZYUK, V.B., mashinist-instruktor

Some defects of the group switches of the N8 electric locomotive.
Elek.i tepl.tiaga 6 no.5:36-37 My '62. (MIRA 15:6)

1. Depo Kinel' Kuybyshevskoy dorogi.
(Electric locomotives) (Electric swithgear)

BEZYUKHOV, N. I.

1357. Bezukhov, N. I., Theory of elasticity and plasticity [Teoriya uprugosti i plastichnosti], Moscow, Gos. Izdat. Tekh.-Teor. Lit., 1953, 420 pp.

This fine course for students at Russian technical universities prepares the reader for a self-reliant study of special works from the field of elasticity and plasticity. It is of a comparatively advanced character with adequate mathematical presuppositions from the theory of matrices, tensors, and partial differential equations.

In contradistinction to other textbooks on the subject, this work contains a lot of attractive short accounts of the contemporary state in separate branches of elasticity. It also presents several fundamental results concerning some famous special problems solved in our time by the Russian savants, along with the ideas influencing their authors. And more generally, the book tells in detail of the Russian contribution to the development of the subject in question.

BEZUKHOV N. I.

Content is divided into 11 chapters with 131 subtopics. The first seven chapters deal with elasticity; then come 3 sections on plasticity; and the last chapter is devoted to a kind of mutual synthesis of elasticity with related modern branches of science (rheology, plasticity, viscoplastic flow, etc.). The text is followed by a rich register of 136 Russian literary sources, a careful nominal index, and a detailed list of matters treated.

Presentation is clear and very attractive; paper and print are excellent. There are altogether 186 exemplary figures throughout the text. A brief account of separate chapters follows. The book opens with two sections of an introductory character; they give the systems of notation applied for fundamental concepts (such as the stress and deformation components) in mathematical theory of elasticity and plasticity, formulation of basic problems occurring in this branch of science, general equations in the mechanics of solids, etc. Chap. III establishes the fundamental equations of elasticity and applies the general theory to two special cases: first to the plane problem and then to the case

Bezukhov, N. I.

of bodies of revolution with a symmetrical stress distribution.

The following main part is devoted to solving some basic problems of elasticity. Considered are the cases of pure bending and torsion, both in rectilinear and curvilinear coordinates (e.g., the well-known problems of Golovin, Galerkin, and Gadolin). Many themes of this section may serve as useful exercises for independent study.

Chaps. V and VI deal with some classical problems of elasticity where it is possible to find exact solutions. Considered are the elastic half-plane and space, Saint Venant problems of torsion, and variational methods in elasticity.

The following main part deals with several important questions tractable by means of various simplifying assumptions and approximate theories only. Attention is paid especially to the theory of plates and to twisting of bars.

Chap. VIII prepares mathematical backgrounds of plasticity in form of basic equations; section IX treats fundamental problems solvable by elementary analytical methods (pure bending and torsion, plastic equilibrium of thick-walled tubes, plastic deformations of a rotating disk, etc.). Chap. X communicates the results reached in solving some special problems of practical importance (in the first place, the research work of Sokolovskii), and the last section brings a synthesis of different methods in elasticity and related branches of the engineering science.

V Vodička, Czechoslovakia

BEZYZVESTNYKH, A.V.

Plotting the chart of cooling-pond currents. Trudy GGI no.69: 93-101 '59. (MIRA 12:6)
(Hydraulics)

BEZYZVESTNYKH, A.V.

Solution of the problem of heat exchange between a transit stream and a vortex in cooling ponds. Trudy GGI no.72:61-69 '59. (MIRA 13:6)
(Hydraulics)

BEZVZVESTNYKH, A.V.

Model studies of hudrothermal conditions in cooling reservoirs. (MIRA 14:1)
Trudy GGI no.83:47-59 '60.
(Water—Cooling)

BEZVZVESTNYKH, A.V.

Hydraulic calculation of cooling reservoir. Trudy GGI no.83:60-67 '60. (MIRA 14:1)

(Reservoir—Hydrodynamics)

BEZYZVESTNYKH, A. V. Cand Tech Sci -- "Problems of hydraulics and thermics of cooler-ponds." Len, 1961 (Min of Higher and Secondary Specialized Education RSFSR. Len Polytechnic Inst im M. I. Kalinin). (KL, 4-61, 194)

BEZYZVESTNYY, N.

We pass with confidence the milestones of the seven year plan.
Mast.ugl. 9 no.12:11 D '60. (MIRA 13:12)
(Sakhalin—Coal miners)

BEZZABOTNOV, A.S.

Soft roentgen rays in the therapy of eczema. Vest. vener. No.3:25-26 May-June 50. (CLML 19:4)

1. Of the Clinic for Skin and Venereal Diseases (Head -- Prof. N.S. Vedrov, Corresponding Member of the Academy of Medical Sciences USSR, deceased), Moscow Medical Insitute of the Ministry of Public Health RSFSR, Moscow.

BEZZABOTNOV, A.S.

ARIYEVICH, A.M., professor; BEZZABOTNOV, A.S., kandidat meditsinskikh nauk.

Certain practical problems of roentgenotherapy in mycosis of the scalp. Vest.ven.i derm. no.1:15-18 Ja-F '54. (MLRA 7:2)

1. Iz mikologicheskogo otdela (zaveduyushchiy - professor A.M. Ariyevich) TSentral'nogo kozhno-venerologicheskogo instituta (direktor - kandidat meditsinskikh nauk N.M.Turanov) Ministerstva zdravookhraneniya SSSR.
(Scalp--Diseases) (Fungi, Pathogenic) (Radiotherapy)

ARIYEVICH, A.M.,; BEZZABOTNOV, A.S.

Some practical questions on x-ray therapy of mycosis of the scalp. Vest. ven.i derm. 6:14-15 N-D '55. (MLRA 9:5)

1. Iz TSentral'nogo kozhno-venerologicheskogo instituta (dir.- N.M. Turanov) Ministerstva zdravookhraneniya SSSR.
(HEAD, dis.
scalp mycosis, ther., radiother.)
(RADIOTHERAPY, in various dis.
mycosis of scalp)
(MYCOSIS, FUNGOIDES,
scalp, radiother.)

BEZZABOTNOV, A.S.; LEBEDEV, B.M.

Treatment of discoid forms of lupus erythematosus by applications of a 10 quinacrine plaster. Sov.med. 23 no.10:142-143 O '59. (MIRA 13:2)

1. Iz otdela dermatologii (zaveduyushchiy - prof. N.S. Smelov) TSentral'nogo nauchno-issledovatel'skogo kozhno-venerologicheskogo instituta (direktor N.M. Turanov) Ministerstva zdravookhraneniya RSFSR.

(LUPUS therapy)
(QUINACRINE therapy)

ARIYEVICH, A.P.; [illegible]

Current state of [illegible] the treatment of patients [illegible] types of [illegible]. rad. 7 no.4:42-48 J '62. (MIRA 17:8)

1. Iz TSentral'nogo kozhno-[illegible] Ministerstva zdravookhraneniya [illegible].

BRAYTSEV, A.V.; BEZZABOTNOV, A.S.

Effect of radioactive isotopes in some dermatoses. Med. rad. 7 no.9:51-55 S '62. (MIRA 17:8)

1. Iz TSentral'nogo kozhno-venerologicheskogo instituta Ministerstva zdravookhraneniya RSFSR.

BEZZABOTNOV, A.S.; SAVKINA, G.D.

Treatment of some forms of cheilitis with Bucky's rays. Vest. derm. i ven. 38 no.9:41-44 S '64. (MIRA 18:4)

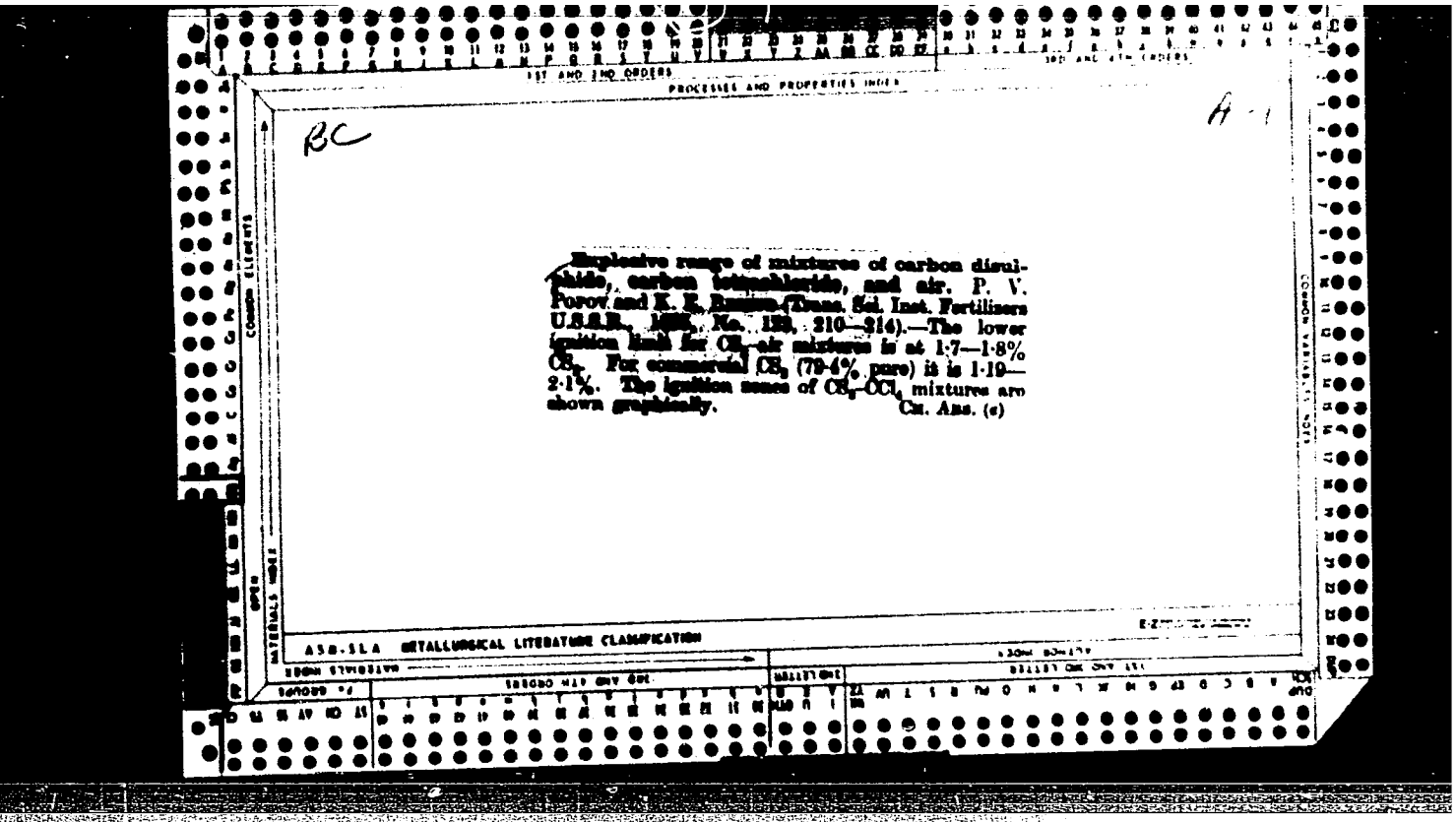
1. Kafedra kozhnykh i venericheskikh bolezney (zav. - prof. B.M. Pashkov) Moskovskogo meditsinskogo stomatologicheskogo instituta Ministerstva zdravookhraneniya RSFSR i kozhnyy otdel (zav. - prof. N.S.Smelov) TSentral'nogo kozhno-venerologicheskogo instituta (dir. - dotsent N.M.Turanov) Ministerstva zdravookhraneniya SSSR, Moskva.

BEZZABOTNOV, M. M.; MALOV, A. N.; Engs.

Plywood

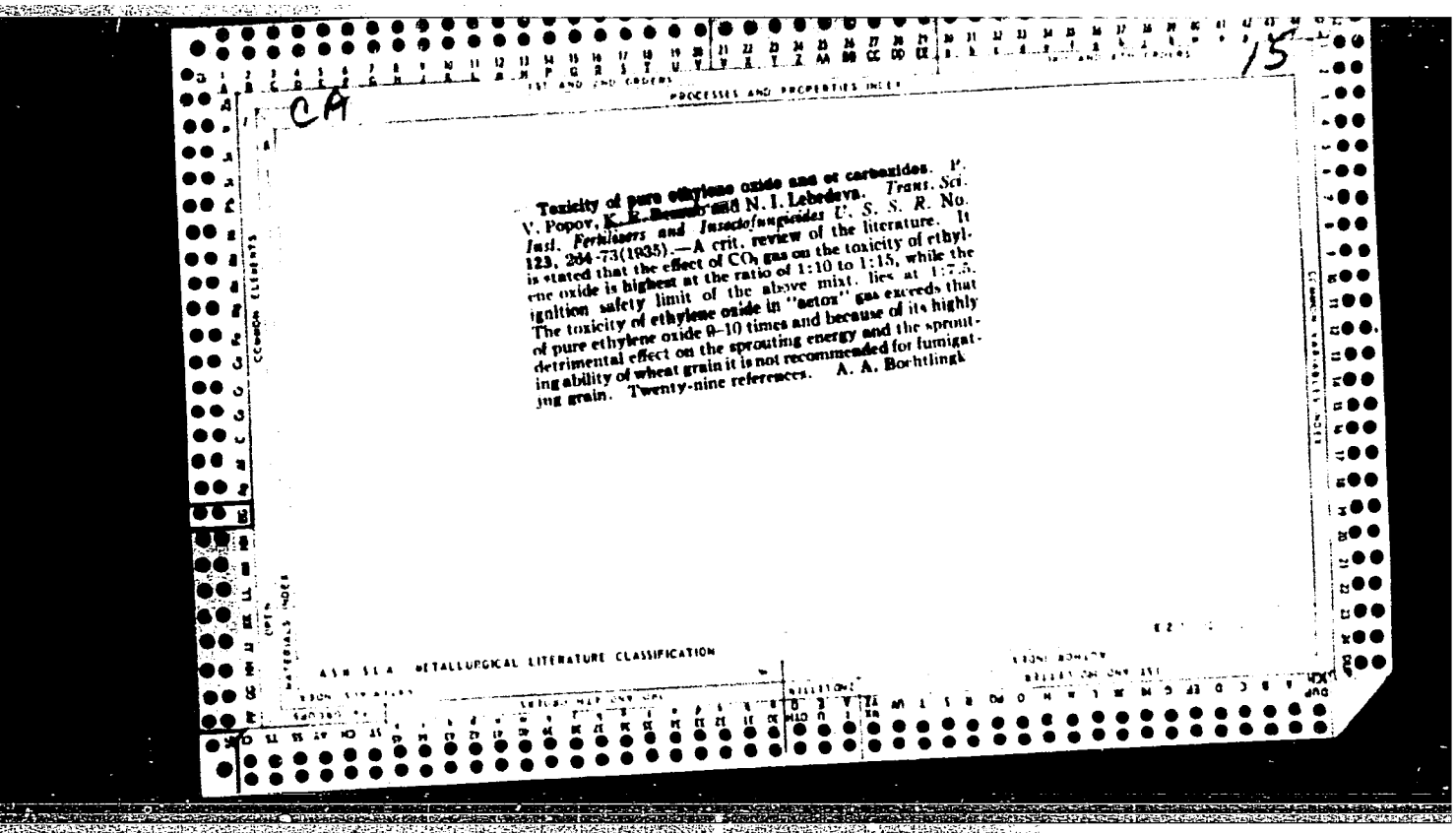
Reinforced plywood "arktilit." Gidr. stroi. 22, No. 1, 1953.

Monthly List of Russian Accessions, Library of Congress, June 1953. Uncl.



Explosive range of mixtures of carbon disulphide, carbon tetrachloride, and air. P. V. Popov and K. E. Ramm (Trans. Sci. Inst. Fertilisers U.S.S.R., 1933, No. 130, 210—214).—The lower ignition limit for CS_2–air mixtures is at 1·7—1·8% CS_2. For commercial CS_2 (79·4% pure) it is 1·19—2·1%. The ignition zones of CS_2–CCl_4 mixtures are shown graphically. Cu. Abs. (e)

A58-5LA METALLURGICAL LITERATURE CLASSIFICATION

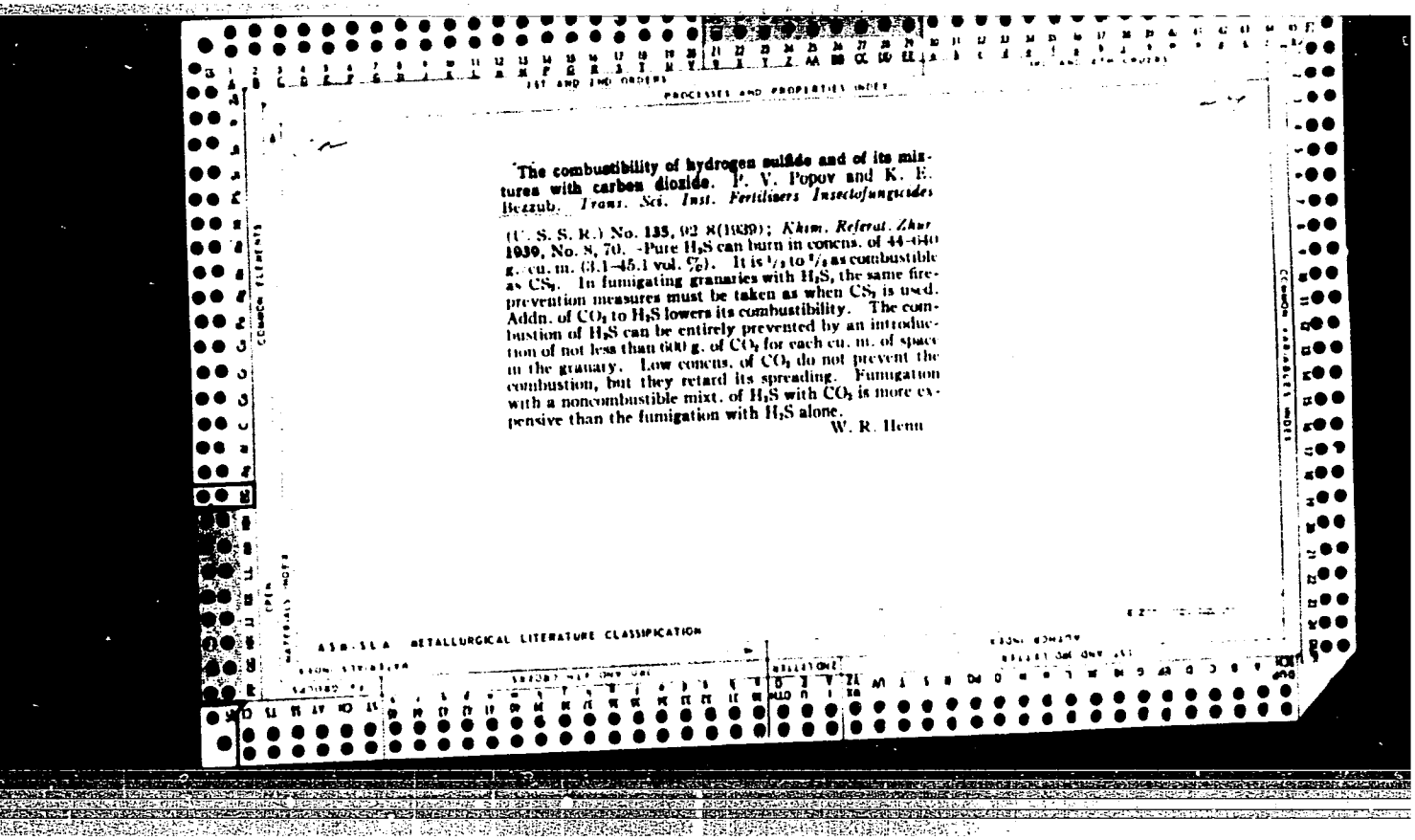


CA

15

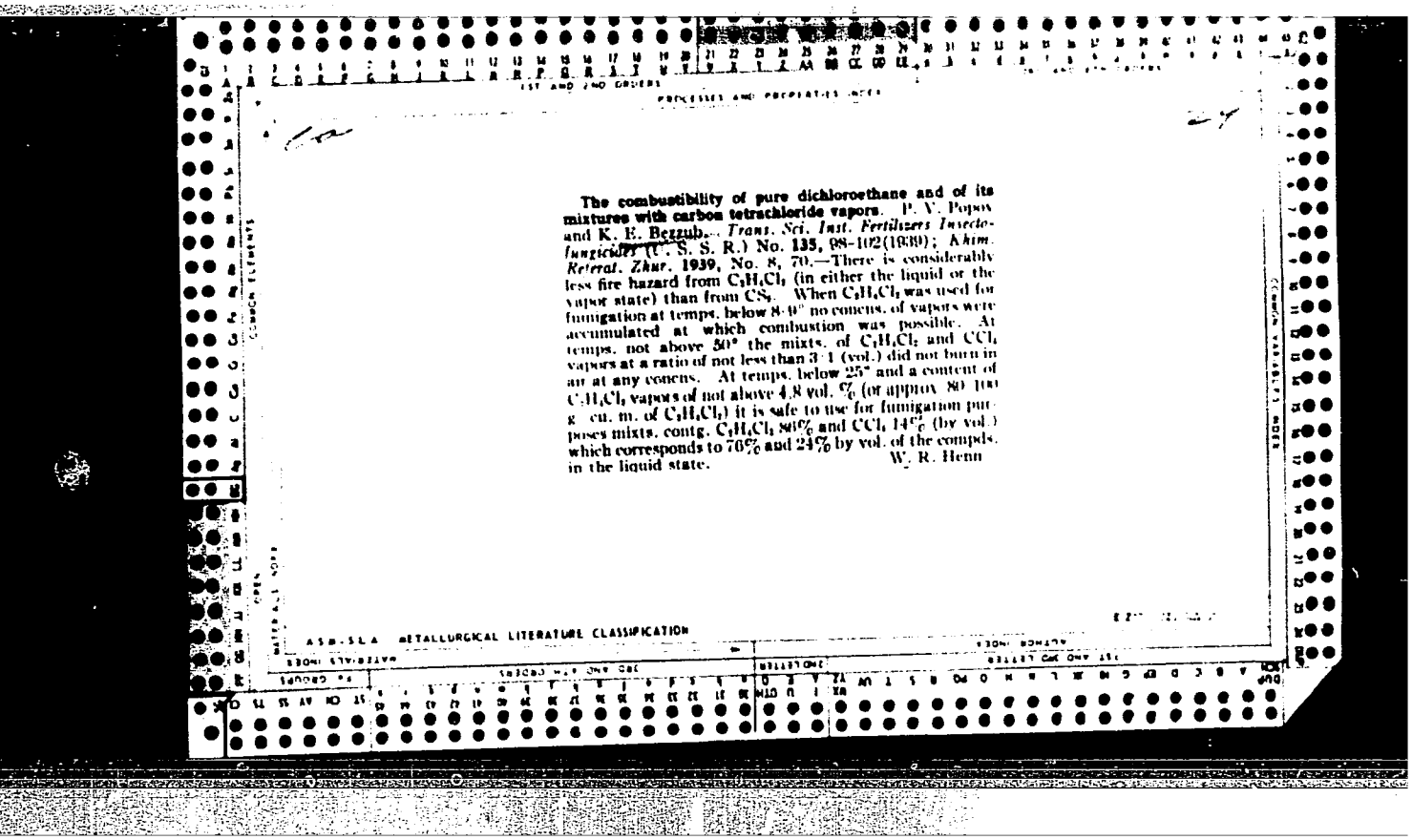
Toxicity of pure ethylene oxide and of carbonides. P. V. Popov, K. E. Beznik and N. I. Lebedeva. *Trans. Sci. Inst. Fertilizers and Insectofungicides U. S. S. R.* No. 123, 264-73(1935).—A crit. review of the literature. It is stated that the effect of CO_2 gas on the toxicity of ethylene oxide is highest at the ratio of 1:10 to 1:15, while the ignition safety limit of the above mixt. lies at 1:7.5. The toxicity of ethylene oxide in "aetox" gas exceeds that of pure ethylene oxide 9–10 times and because of its highly detrimental effect on the sprouting energy and the sprouting ability of wheat grain it is not recommended for fumigating grain. Twenty-nine references. A. A. Boehtlingk

ASM SLA METALLURGICAL LITERATURE CLASSIFICATION



The combustibility of hydrogen sulfide and of its mixtures with carbon dioxide. P. V. Popov and K. E. Bezzub. *Trans. Sci. Inst. Fertilisers Insectofungicides* (U. S. S. R.) No. 135, 92-8(1939); *Khim. Referat. Zhur* 1939, No. 8, 70. Pure H_2S can burn in concns. of 44-46.0 g. cu. m. (3.1–45.1 vol. %). It is $\frac{1}{3}$ to $\frac{1}{5}$ as combustible as CS_2. In fumigating granaries with H_2S, the same fire-prevention measures must be taken as when CS_2 is used. Addn. of CO_2 to H_2S lowers its combustibility. The combustion of H_2S can be entirely prevented by an introduction of not less than 600 g. of CO_2 for each cu. m. of space in the granary. Low concns. of CO_2 do not prevent the combustion, but they retard its spreading. Fumigation with a noncombustible mixt. of H_2S with CO_2 is more expensive than the fumigation with H_2S alone.

W. R. Henn



The combustibility of pure dichloroethane and of its mixtures with carbon tetrachloride vapors. P. V. Popov and K. E. Bezzub. *Trans. Sci. Inst. Fertilizers Insecticides (U. S. S. R.) No.* **135**, 98–102(1939); *Khim. Referat. Zhur.* **1939**, No. 8, 70.—There is considerably less fire hazard from $C_2H_4Cl_2$ (in either the liquid or the vapor state) than from CS_2. When $C_2H_4Cl_2$ was used for fumigation at temps. below 8–9° no concns. of vapors were accumulated at which combustion was possible. At temps. not above 50° the mixts. of $C_2H_4Cl_2$ and CCl_4 vapors at a ratio of not less than 3:1 (vol.) did not burn in air at any concns. At temps. below 25° and a content of $C_2H_4Cl_2$ vapors of not above 4.8 vol. % (or approx. 80–100 g. cu. m. of $C_2H_4Cl_2$) it is safe to use for fumigation purposes mixts. contg. $C_2H_4Cl_2$ 86% and CCl_4 14% (by vol.) which corresponds to 76% and 24% by vol. of the compds. in the liquid state. W. R. Henn

BEZZUBENKO, A.A.; PESHCHEVITSKIY, B.I.

Problem of the existence of a trivalent aquoion of gold. Izv. Sib.otd.AN SSSR no.8:62-67 '61. (MIRA 14:8)

1. Institut neorganicheskoy khimii Sibirskogo otdeleniya AN SSSR, Novosibirsk.
(Gold) (Complex ions)

CHERNYAYEV, I.I.; ZHELIGOVSKAYA, N.N.; KANTER, T.M.; BEZZUBENKO, A.A.

Possibility of transeffects in complex compounds of bivalent copper. Zhur.neorg.khim. 7 no.3:472-478 Mr '62. (MIRA 15:3)
(Copper compounds)

KULEV, N.; BEZZUBENKO, B.

Modernization of the drive of the automatic hamburger shaper. Mias.ind. SSSR 33 no.3:46-47 '62. (MIRA 15:7)

1. Semipalatinskiy myasokombinat.
(Meat industry—Equipment and supplies)

ACCESSION NR: AR4027702 S/0276/64/000/002/B173/B173

SOURCE: RZh. Tekhnologiya mashinostroyeniya, Abs. 2B1036

AUTHOR: Bezzubenko, N. K.; Semko, M. F.

TITLE: Choice of the geometric parameters of mineraloceramic reamers

CITED SOURCE: Tr. Khar'kovsk. politekhn. in-ta, v. 46, no. 8, 1963, 127-134

TOPIC TAGS: mineral ceramic reamer, cutting edge, annular groove, optimum angle, band wear, band width calibration, micro-chipping, radial force

TRANSLATION: Experiments in determining the optimum geometric parameters of mineral-ceramic reamers were made on a lathe. The plan approach angle φ was determined by testing the heardness of the cutting edge in machining parts with inside annular grooves. In reamers with phi = 45° failure of the top occurred after 2,000 bites in those with phi = 30° after 3,000; the least wear of the calibrating band was shown by reamers with phi = 20° (in milling grooveless bushings); this angle size is recommended as optimum. It was found that the back rake angle gamma, equal to 0°, is optimum for mineral — ceramic reamers.

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Card

ACCESSION NR: AR4027702

The relief angle in the plane normal to the main cutting edge $alpha_2$ was determined by the resistance of the reamers, the highest being shown by those with $alpha_2$ 8--10°. The graph of the dependence of the wear on the band upon the back angle of the tooth in radial cross-section shows that the optimum value of the relief angle of calibrating part $alpha_k$ is 6°. Narrow calibrating bands lower the resistance of the tooth and increase the wear as a result of microchipping; a broad band results in more intensive wear due to growth in the radial forces of elastic deformation and the friction forces. The optimum width was found to be 0.5--0.6 mm. Four illustrations, bibliography of 5 titles. S. Pinchuk.

DATE ACQ: 24Mar64 SUB CODE: ML ENCL: 00

Card 2/2

BEZZUBENKO, N.K., inzh.

Machining steel rings on A 945 and 3317 grinding machines.
Shor. st. CHPI no.9:57-61 '58. (MIRA 11:10)
(Grinding and polishing) (Piston rings)

25 [illegible] 000

80017

S/121/60/000/04/02/008

AUTHORS: Proskuryakov, Yu.G., Bezzubenko, N.K., Verkhoturov, V.Ya.

TITLE: High-Speed Gear Hobbing With Hard-Alloy Fitted Hobs

PERIODICAL: Stanki i Instrument, 1960, No 4, pp 18 - 22

TEXT: In order to carry out investigations of high-speed finishing worm hobbing, assembling hobs (three varieties) with inserted blades, fitted with hard-alloy plates, were designed and manufactured. The first type of hob design with a module of 9 mm is shown in Figure 1. The authors give a description of the hob construction, the body of which is made of 45Kh grade steel, heat-treated up to a hardness of RC 30 - 45. Figure 2 shows the hob bits, fitted with the T5K10 grade hard alloy. The durability tests of the hobs, fitted with hard-alloy bits, and carried out in co-operation with the Chelyabinsk Polytechnic Institute and the Chelyabinsk Tractor Plant had an aim to determine the optimum of hard-alloy blades and to investigate the character of their wear under various operating conditions. The hard-alloy grades T15K6 and T5K10 were tested by machining the reducer gear, made of 12KhNZA grade steel, and the skew-teeth flywheel rim, made of 40Kh grade steel, both of the S-100 tractor. The tests showed that the bits made of T15K6 grade alloy are easily

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High-Speed Gear Hobbing With Hard-Alloy Fitted Hobs

destroyed by the chipping-off of large specks. Therefore, all further tests were made with the T5K10 grade alloy. Tests carried out with bits without chamfer at the front surface did not show any positive results. An investigation of the wear of blades showed that wear is both of a molecular and of mechanical character, i.e. that in most cases macro-particles are breaking off at the beginning and then, after some time, micro-particles are chipping off. Experimental graphs and functions were plotted in order to determine the optimum rear angles. The tests established that the durability of hobs is mainly limited by wear of the rear surfaces. Figure 3 shows an experimentally obtained graph of the ratio: cutter durability/cutting speed. Based on the tests, a cutting speed within the range of 140 - 160 m/min is recommended. The tests to determine the effects of feed on the cutter durability were carried out at a cutting speed of 142 m/min with feeds of 0.75, 1.0, 2.0 and 2.5 mm/rev. Figure 4 shows the function of hard-alloy hobs plotted against the feed (in logarithmic coordinates). By way of analytical treatment it is possible to obtain from the graphs the following empirical formulae for the rating of durability: for a feed of s = 1 ÷ 2 mm/rev - $T = \frac{275}{s^{0.33}}$ min.;

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High-Speed Gear Hobbing With Hard-Alloy Fitted Hobs

for a feed of $s > 2$ mm/rev - $T = \frac{2900}{s^{3.75}}$ min. From these functions follows that small feeds (up to 1.5 mm/rev) are not to be recommended. The treatment of the test data made it possible to develop the general function for the determination of cutting speed during high-speed gear milling in the form of

$$v = \frac{9.500}{T^{0.74} s^{0.33}} \text{ m/min.}$$

This formula is correct for a feed range of $s = 1 \div 2$ mm/rev for an assumed dulling criterion of the blades at the rear surface of $h_d = 0.5$ mm, if the T5K10 grade hard alloy is being used for the machining of material with a strength limit of $\sigma_B = 75$ kg/mm^2. For other machining conditions the authors state the correction factors. If the feed is higher than 2 mm/rev the cutting speed formula is:

$$v = \frac{100\ 000}{T^{0.74} s^{3.75}} \text{ m/min,}$$

although a higher feed than 2.0 mm/rev is not advisable. Figure 5 shows the distribution of wear over the teeth and that 21 blades took part in the

High-Speed Gear Hobbing With Hard-Alloy Fitted Hobs

machining of parts by the ChPI-1 cutter. In order to elucidate the possibility of obtaining the necessary machining precision another two varieties of hobs were designed. Figure 6 shows the type ChPI-2, the construction of which is described by the authors in detail. The basic geometric parameters of both the types ChPI-2 and ChPI-1 and their manufacturing allowances are the same. The setting control of the blades is effected by checking the wobble along the blade tip with the aid of an indicator. The double-cut hard-alloy milling cutter FS-3 (third variety) is designated for the machining of gears with a module of 4.25 mm. Figure 7 shows this type of cutter of which a detailed description is given. The accuracy of machined gears was checked by measuring the deviation of the intercenter distance when being turned by one tooth and one revolution. It was found that, within the durability limits of the cutter, the deviations of the intercenter distance remained practically constant. The surface finish of the machined part was checked by every fifth tooth and, as it is shown in Figure 8, it was found that the surface of the machined teeth gradually deteriorates as the wear of the cutter increases, and, at a given moment, the surface quality becomes more or less stable. The authors draw the following

High-Speed Gear Hobbing With Hard-Alloy Fitted Hobs

conclusions from their investigations: 1) High-speed finishing milling of cylindrical gears by assembling hobs equipped with hard-alloy bits is very efficient, and machining time could be reduced by 3.5 times while machining the flywheel rim of the S-100 tractor, and twice when machining the reducer gear of the same tractor. 2) Assembling hobs fitted with hard-alloy bits ensure a third class accuracy for gear hobbing on serial machine tools. 3) A surface finish of the fifth or sixth class can be obtained. 4) With high-speed finishing gear hobbing it is expedient to use the T5K10 grade hard alloy. The optimum angle of the hard-alloy blades at the front surface is 0°, that of the chamfer = 5°. 5) High-speed gear hobbing can be effected with the aid of machine tools of present serial design without considerable modernization. If new high-efficiency hobbing machines are designed, the authors recommend an increased driving power (by 40 - 50%), increased spindle rotation speed, rigidity and vibration resistance of the whole unit. The ENIMS together with the "Komsomolets" Plant developed the new 5312 and 5314 models of gear cutting machines which are not yet industrially approved. 6) Production costs of hobs are still too high and should be reduced by corresponding organization of the manufacturing process. Four graphs, 4 diagrams, 2 Soviet and 2 English references.

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S/123/62/000/016/011/013
A004/A101

AUTHORS: Bezzubenko, N. K., Semko, M. F.

TITLE: Reaming with mineral-ceramic reamers

PERIODICAL: Referativnyy zhurnal, Mashinostroyeniye, no. 16, 1962, 60, abstract 16B362 ("Tr. Khar'kovsk. politekhn. in-ta", 1951, v. 35, 157 - 170)

TEXT: A new method of fastening mineral-ceramic bits to the reamer body has been developed, viz. gluing with epoxy-base resin glues. The gluing method ensures a high strength of joint and makes it possible to work out a simple and convenient tool design. A brief description is given of a 4-tooth reamer with glued-on ЦМ-332 (TsM-332) bits. These reamers were tested on the 1K62 universal lathe in machining Ст45 (St45) grade steel parts of 35 mm length, 120 mm O.D., diameter to be machined - 43 mm, v = 108 m/min, s = 0.43 mm/rev and t = 0.2 mm, and 18 - 36 cast-iron parts of 180 - 196 HB hardness, 100 mm long, 95 mm O.D., diameter to be machined 50 mm, v = 200 m/min, s = 0.6 mm/rev, t = 0.2 mm in the first pass and v = 250 m/min, s = 0.6 mm/rev and t = 0.07 mm in the second pass. The blanks being machined were clamped in the chuck, the reamer in the tail stock spindle. The tests showed that in machining steel and cast iron with mineral-ceram-

S/123/62/000/016/011/013
A004/A101

Reaming with mineral-ceramic reamers

ic reamers the wear shows most pronounced on the reamer cutting blade. In machining cast iron, scratches are appearing across the calibrating blade which have a pitch equal to the feed, these scratches being transformed to notches (grooves) in the course of the operation. The surface finish of steel parts is superior to that of cast-iron parts. The authors present data on the machining quality and sharpening of the reamers. There is 1 reference.

E. Dymova

[Abstracter's note: Complete translation]

Card 2/2

BEZZUBENKOVA, A. P.

USSR/Biology - Microbiology

Card 1/1 Pub. 22 - 41/47

Authors : Krasil'nikov, N. A., Memb. Corresp., Ac. Sc., USSR, and Bezzubenkova, A. P.

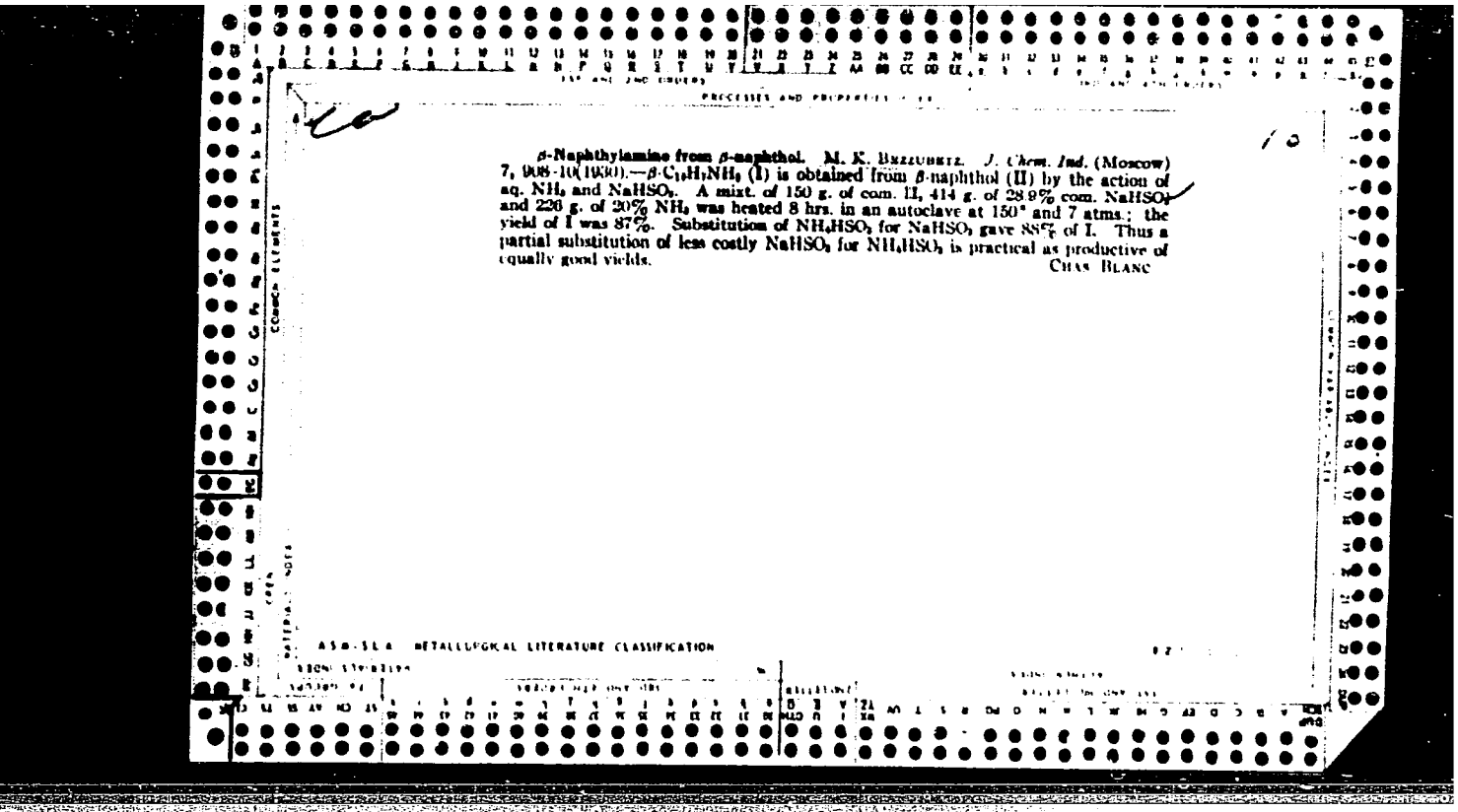
Title : Effect of bacteria on the assimilation of organic substances by plants

Periodical : Dok. AN SSSR 101/6, 1127 - 1130, Apr. 21, 1955

Abstract : It was established experimentally that many microorganism of the soil provide plants not only with mineral elements during the mineralization of plant and animal residues but also with different organic substances - products of natural metabolism. The importance of soil microflora on the assimilation of organic antibiotics by plants is explained. Two USSR references (1952-1953). Tables; graphs; illustration.

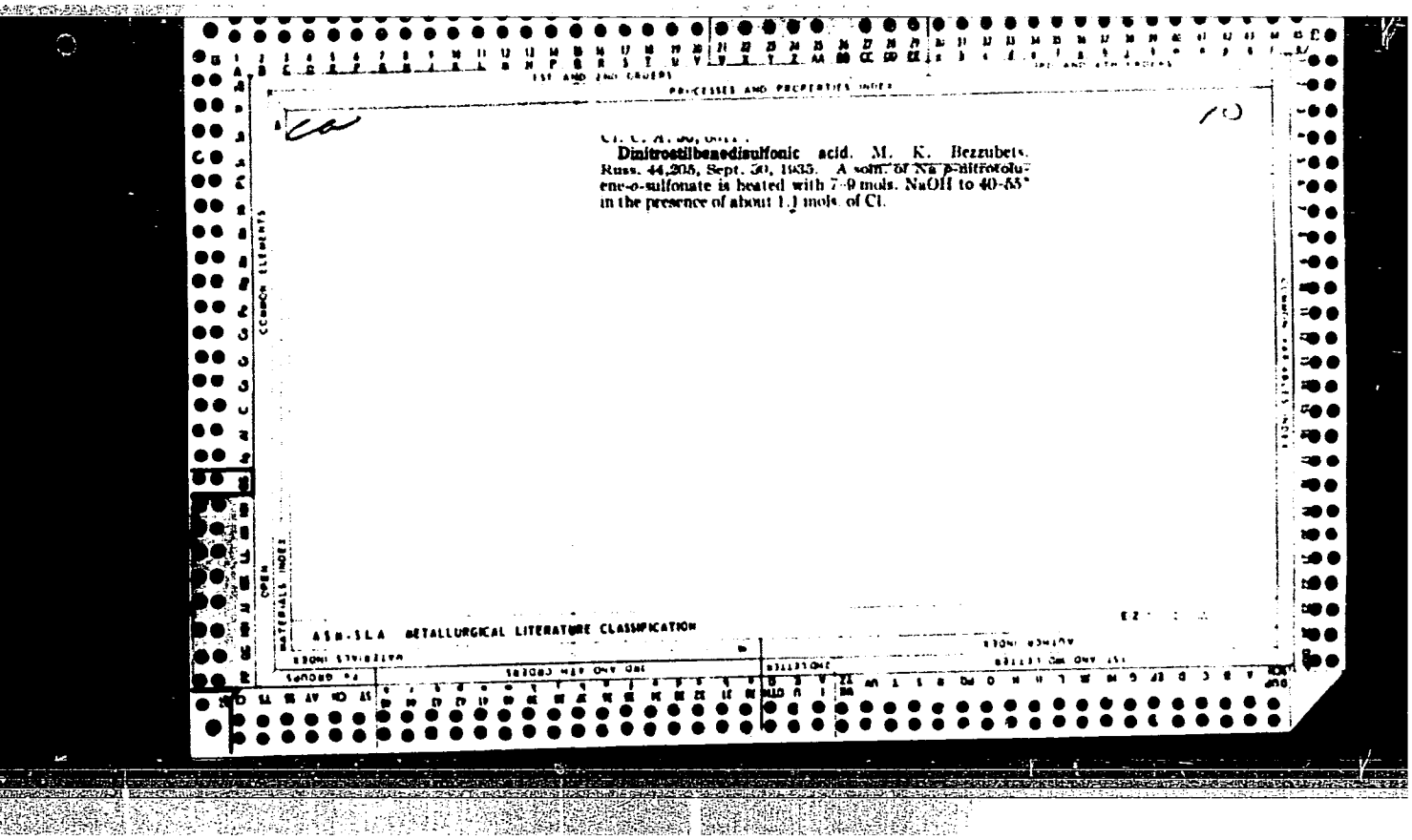
Institution : .....

Submitted : January 15, 1955



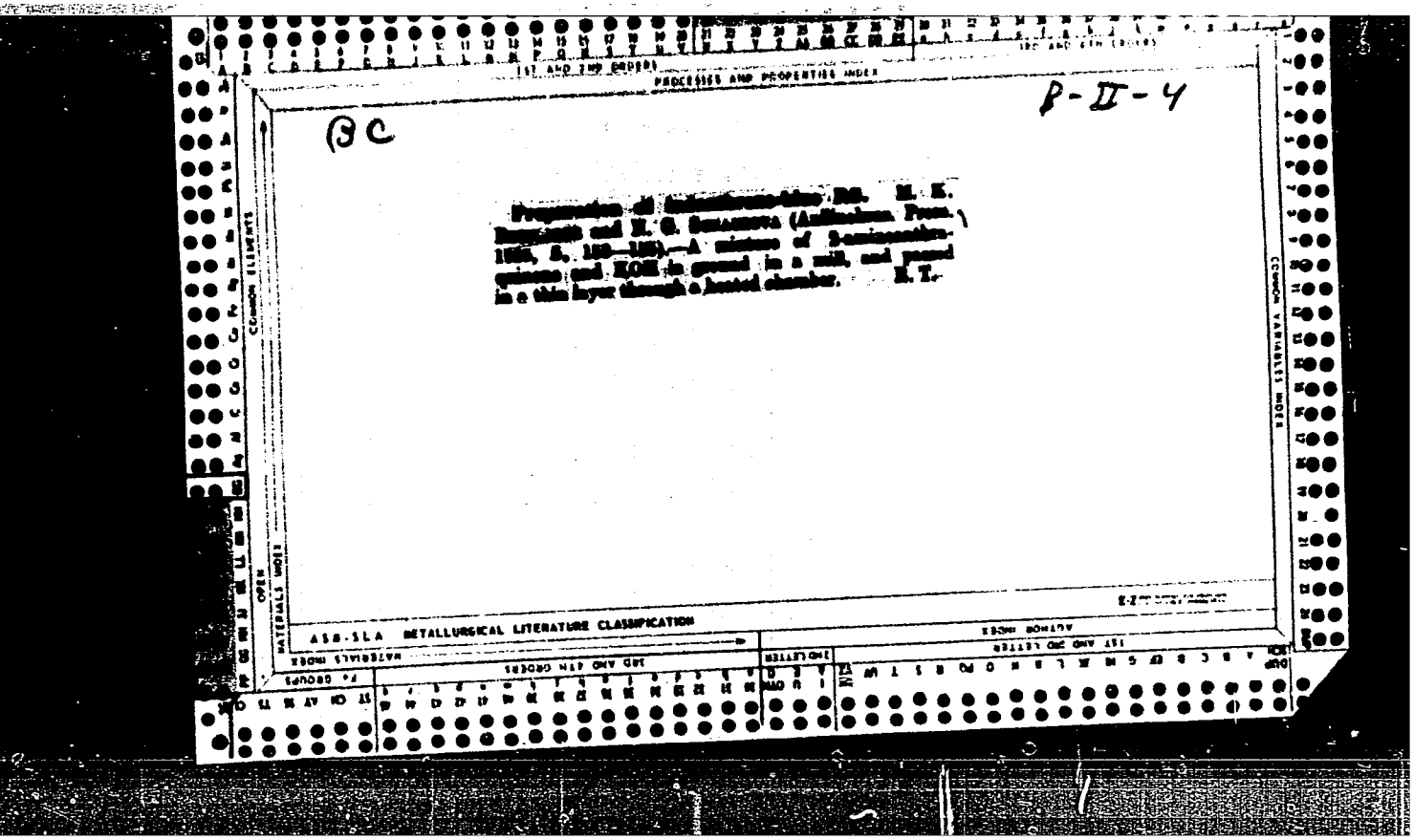
β-Naphthylamine from β-naphthol. M. K. Brzzubrtz. *J. Chem. Ind.* (Moscow) 7, 908-10(1930).—β-$C_{10}H_7NH_2$ (I) is obtained from β-naphthol (II) by the action of aq. NH_3 and $NaHSO_3$. A mixt. of 150 g. of com. II, 414 g. of 28.9% com. $NaHSO_3$ and 226 g. of 20% NH_3 was heated 8 hrs. in an autoclave at 150° and 7 atms.; the yield of I was 87%. Substitution of NH_4HSO_3 for $NaHSO_3$ gave 88% of I. Thus a partial substitution of less costly $NaHSO_3$ for NH_4HSO_3 is practical as productive of equally good yields.

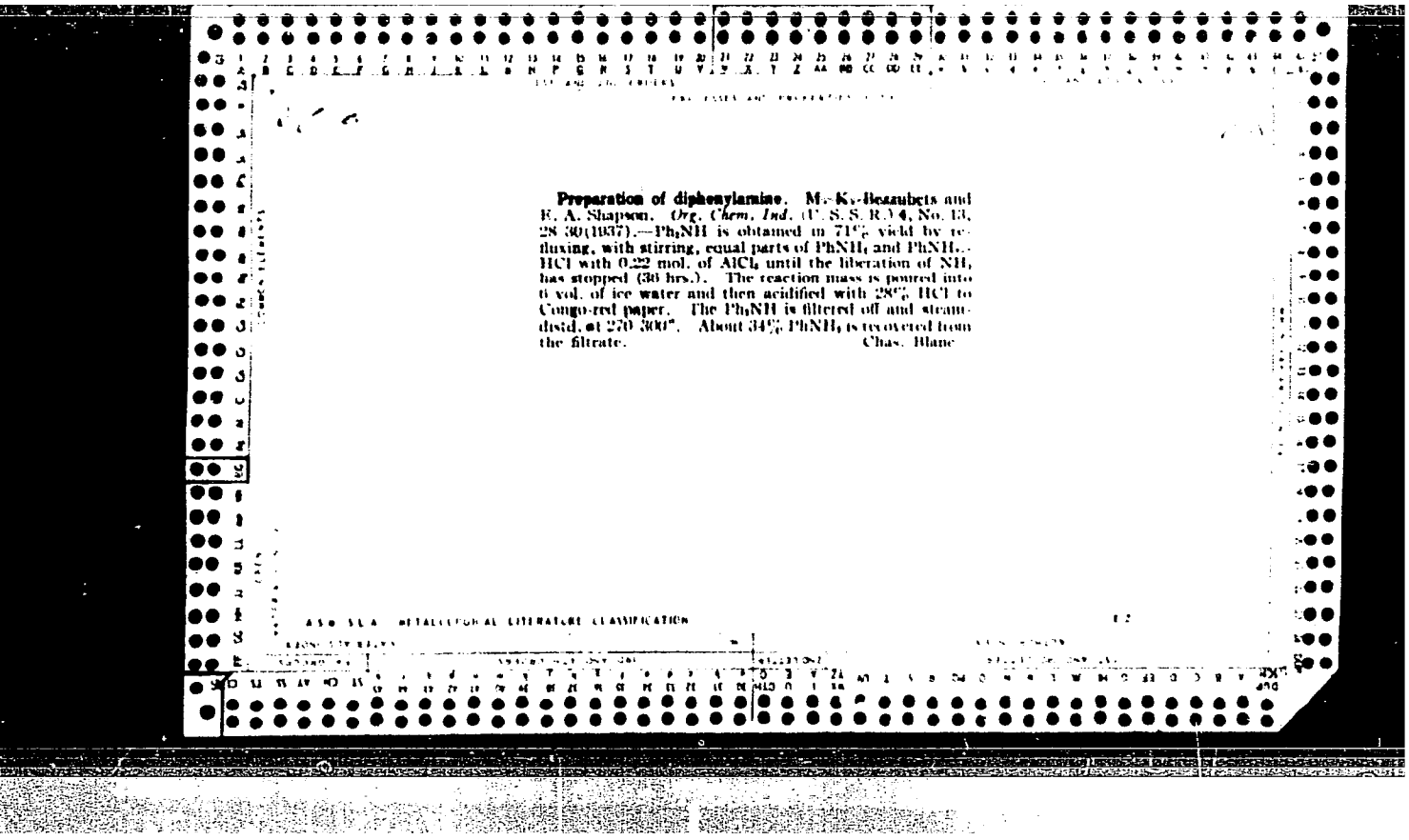
Chas Blanc



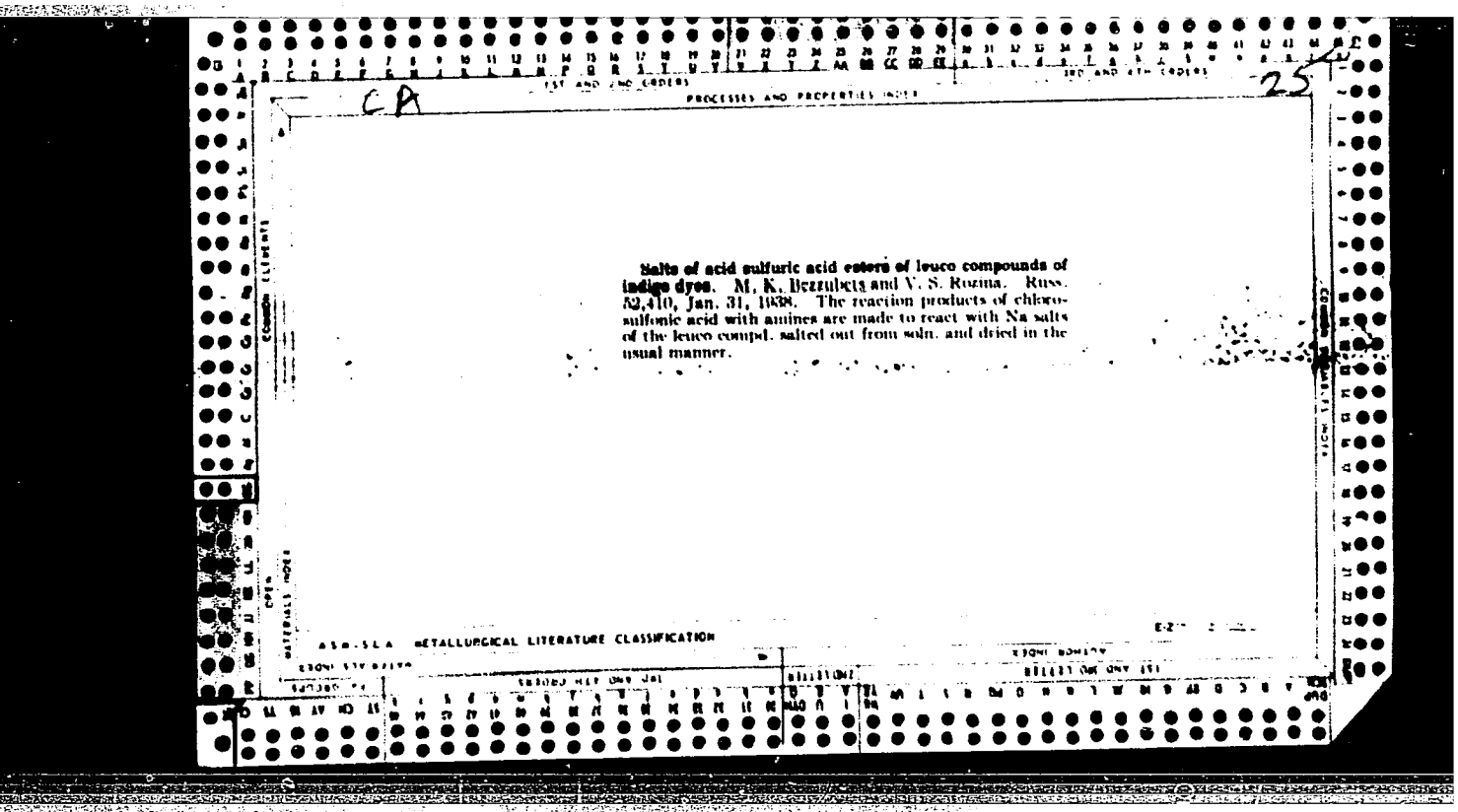
Dinitrostilbenedisulfonic acid. M. K. Bezzubets. Russ. 44,205, Sept. 30, 1935. A soln. of Na p-nitrotoluene-o-sulfonate is heated with 7–9 mols. NaOH to 40–55° in the presence of about 1.1 mols. of Cl.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION





Preparation of diphenylamine. M. Ky-Bezzubets and E. A. Shapeon. *Org. Chem. Ind.* (U. S. S. R.) 4, No. 13, 28–30(1937).—Ph_2NH is obtained in 71% yield by refluxing, with stirring, equal parts of $PhNH_2$ and $PhNH_2$·HCl with 0.22 mol. of $AlCl_3$ until the liberation of NH_3 has stopped (30 hrs.). The reaction mass is poured into 6 vol. of ice water and then acidified with 28% HCl to Congo-red paper. The Ph_2NH is filtered off and steam-distd. at 270–300°. About 34% $PhNH_2$ is recovered from the filtrate. Chas. Blanc

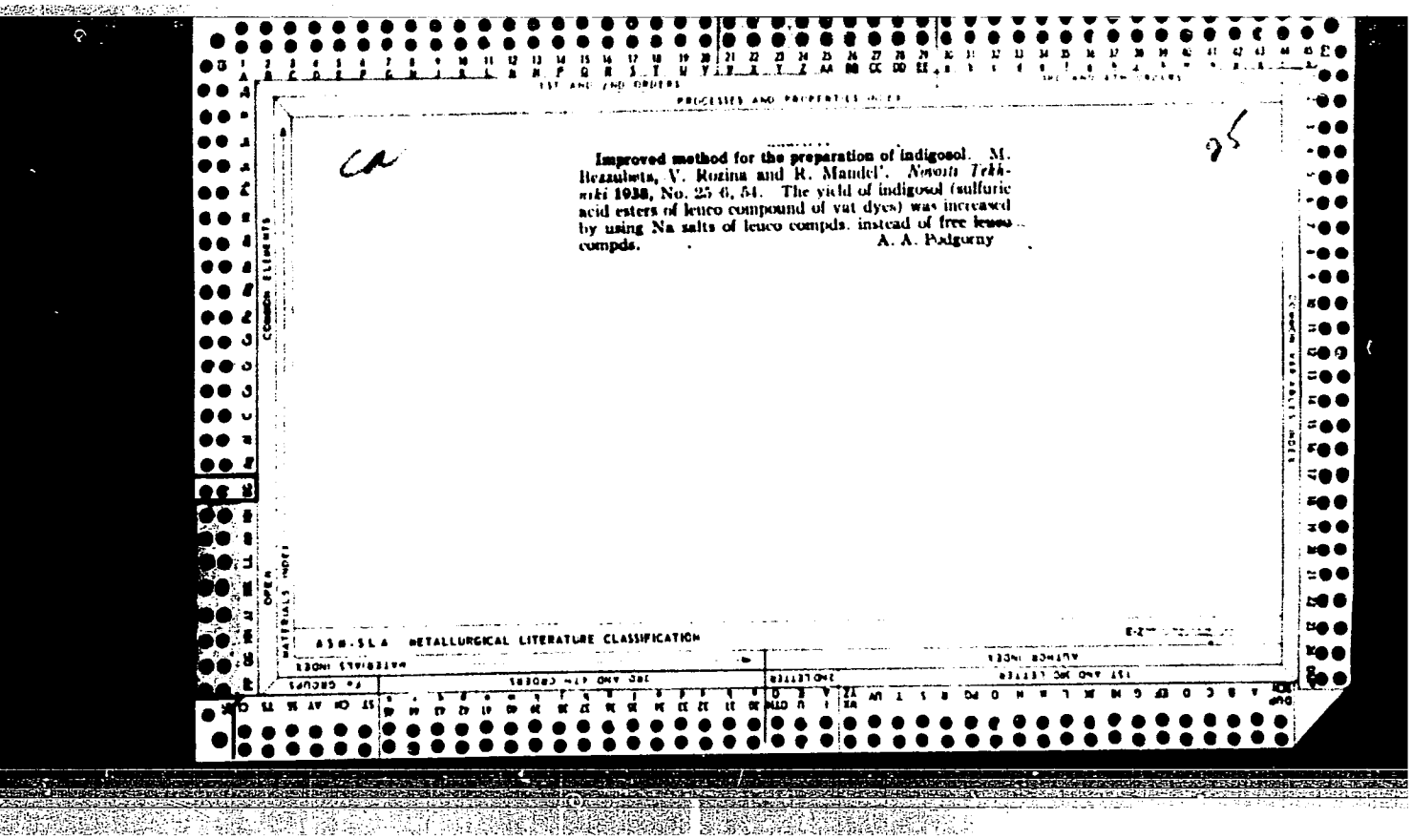


CA

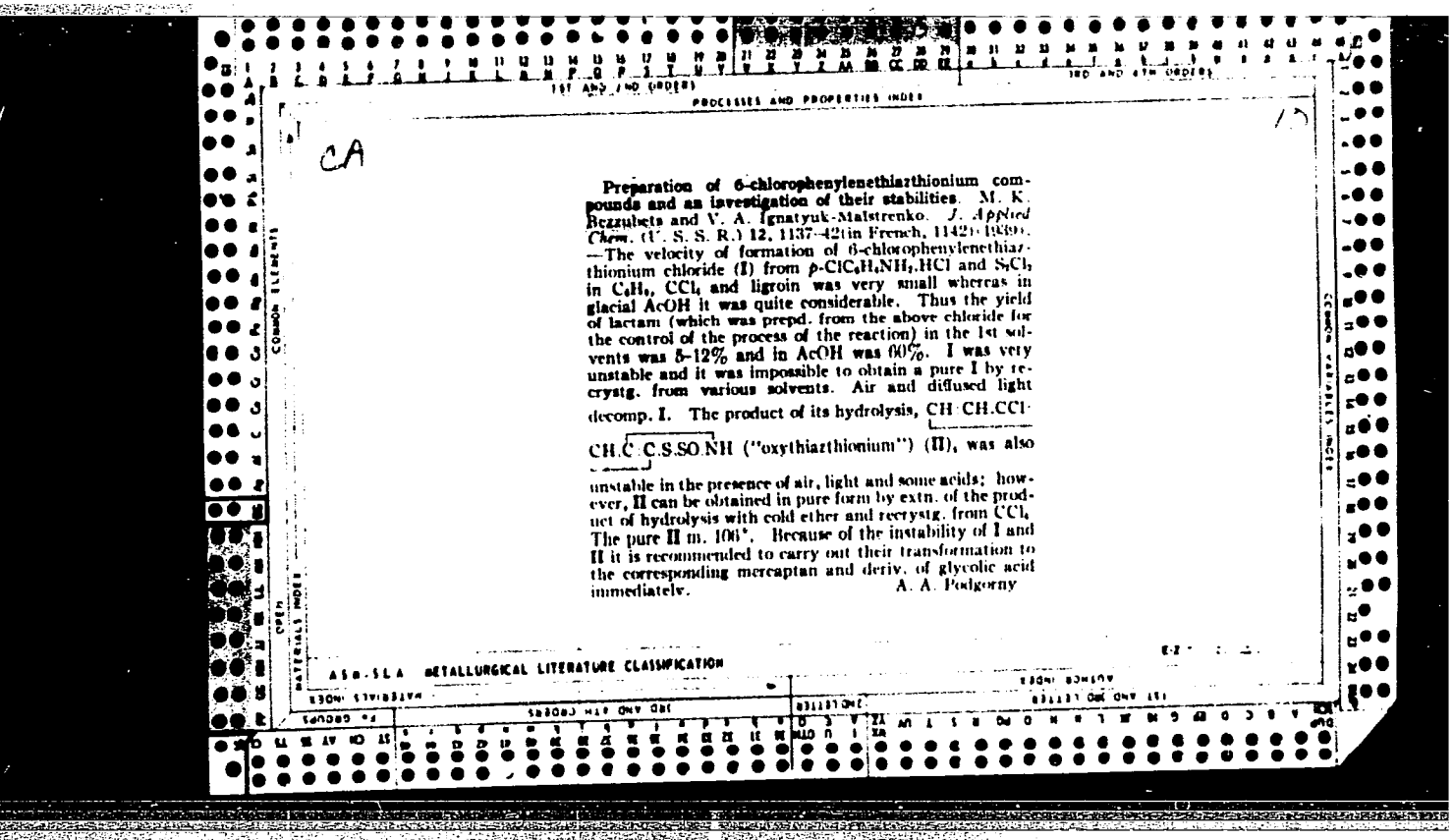
25

Salts of acid sulfuric acid esters of leuco compounds of indigo dyes. M. K. Bezzubets and V. S. Rozina. Russ. 52,410, Jan. 31, 1938. The reaction products of chloro-sulfonic acid with amines are made to react with Na salts of the leuco compd. salted out from soln. and dried in the usual manner.

A.S.M.-S.L.A. METALLURGICAL LITERATURE CLASSIFICATION



Improved method for the preparation of indigosol. M. Brazauskas, V. Rozina and R. Mandel'. *Novosti Tekhniki* **1938**, No. 25 6, 54. The yield of indigosol (sulfuric acid esters of leuco compound of vat dyes) was increased by using Na salts of leuco compds. instead of free leuco compds. A. A. Padgorny

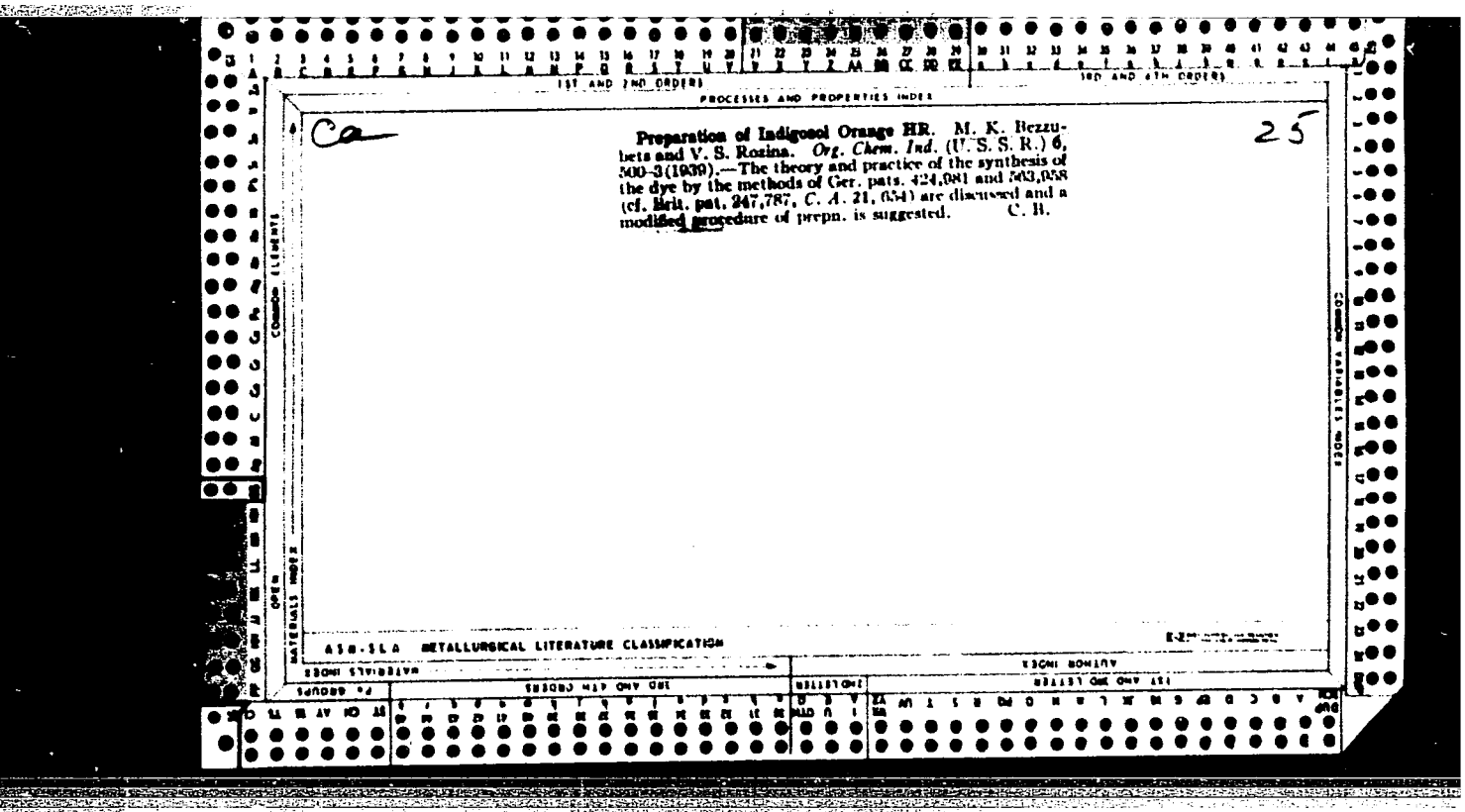


PROCESSES AND PROPERTIES INDEX

CA

Preparation of 6-chlorophenylenethiazthionium compounds and an investigation of their stabilities. M. K. Bezzubets and V. A. Ignatyuk-Malstrenko. *J. Applied Chem.* (U. S. S. R.) 12, 1137–42(in French, 1142)(1939). —The velocity of formation of 6-chlorophenylenethiazthionium chloride (I) from *p*-$ClC_6H_4NH_2$.HCl and S_2Cl_2 in C_6H_6, CCl_4 and ligroin was very small whereas in glacial AcOH it was quite considerable. Thus the yield of lactam (which was prepd. from the above chloride for the control of the process of the reaction) in the 1st solvents was 8–12% and in AcOH was 60%. I was very unstable and it was impossible to obtain a pure I by recrystg. from various solvents. Air and diffused light decomp. I. The product of its hydrolysis, CH·CH.CCl·CH.C·C.S.SO.NH ("oxythiazthionium") (II), was also unstable in the presence of air, light and some acids; however, II can be obtained in pure form by extn. of the product of hydrolysis with cold ether and recrystg. from CCl_4. The pure II m. 106°. Because of the instability of I and II it is recommended to carry out their transformation to the corresponding mercaptan and deriv. of glycolic acid immediately. A. A. Podgorny

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



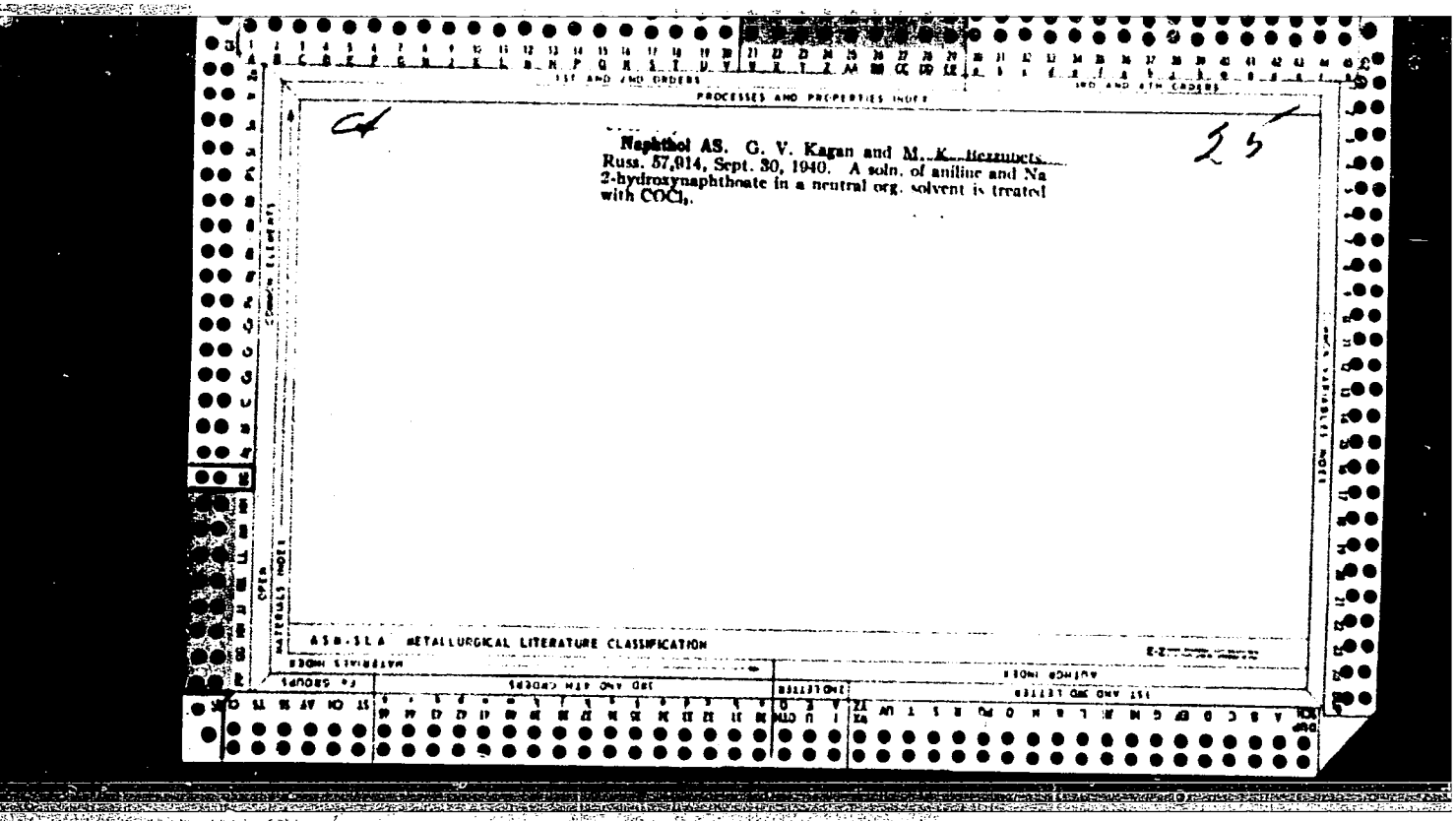
PROCESSES AND PROPERTIES INDEX

Ca

25

Preparation of Indigosol Orange HR. M. K. Bezzubets and V. S. Rozina. *Org. Chem. Ind.* (U. S. S. R.) **6**, 500-3 (1939).—The theory and practice of the synthesis of the dye by the methods of Ger. pats. 424,081 and 503,058 (cf. Brit. pat. 247,787, *C. A.* **21**, 654) are discussed and a modified procedure of prepn. is suggested. C. B.

A 51.8-51.A METALLURGICAL LITERATURE CLASSIFICATION



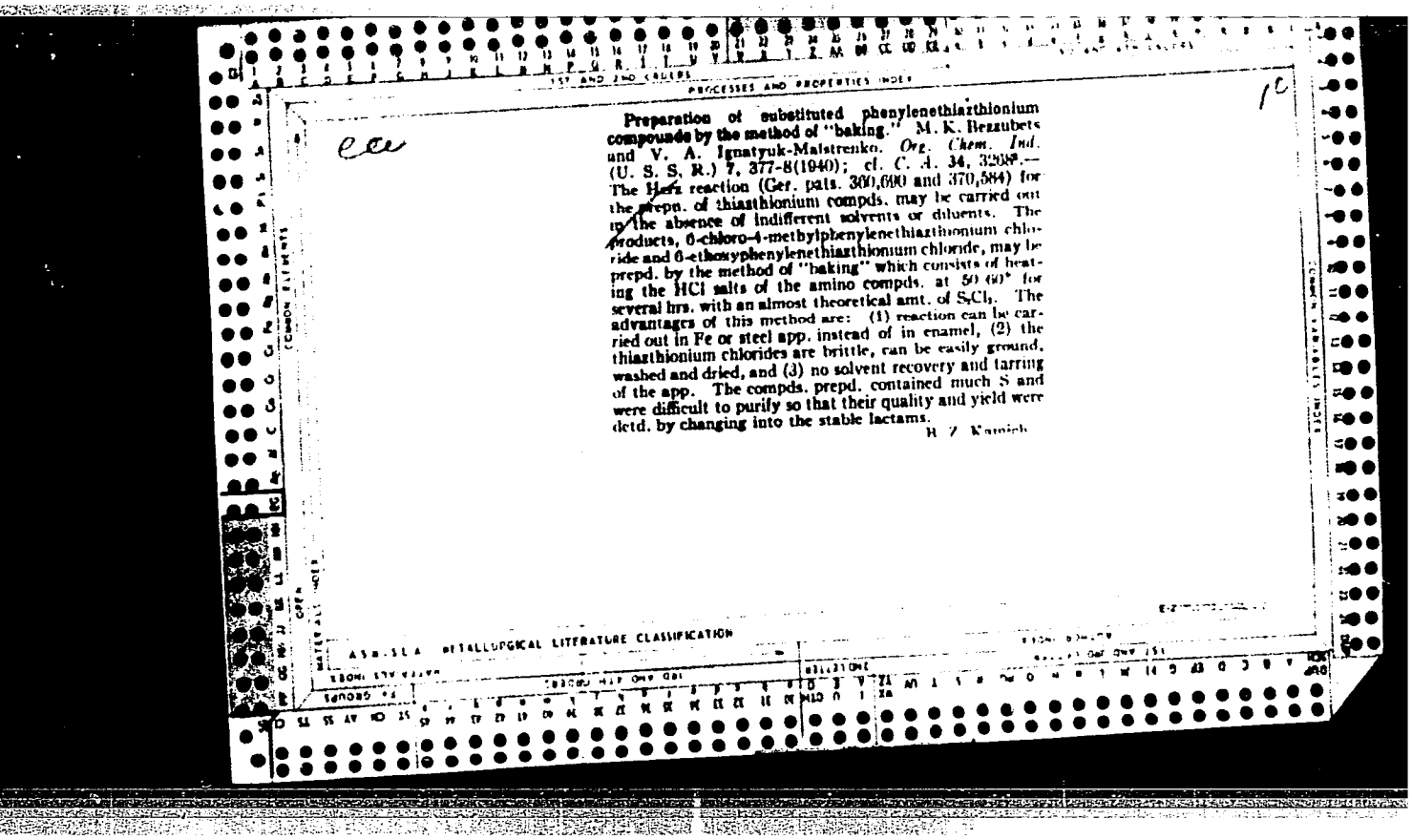
PROCESSES AND PROPERTIES INDEX

C4

25

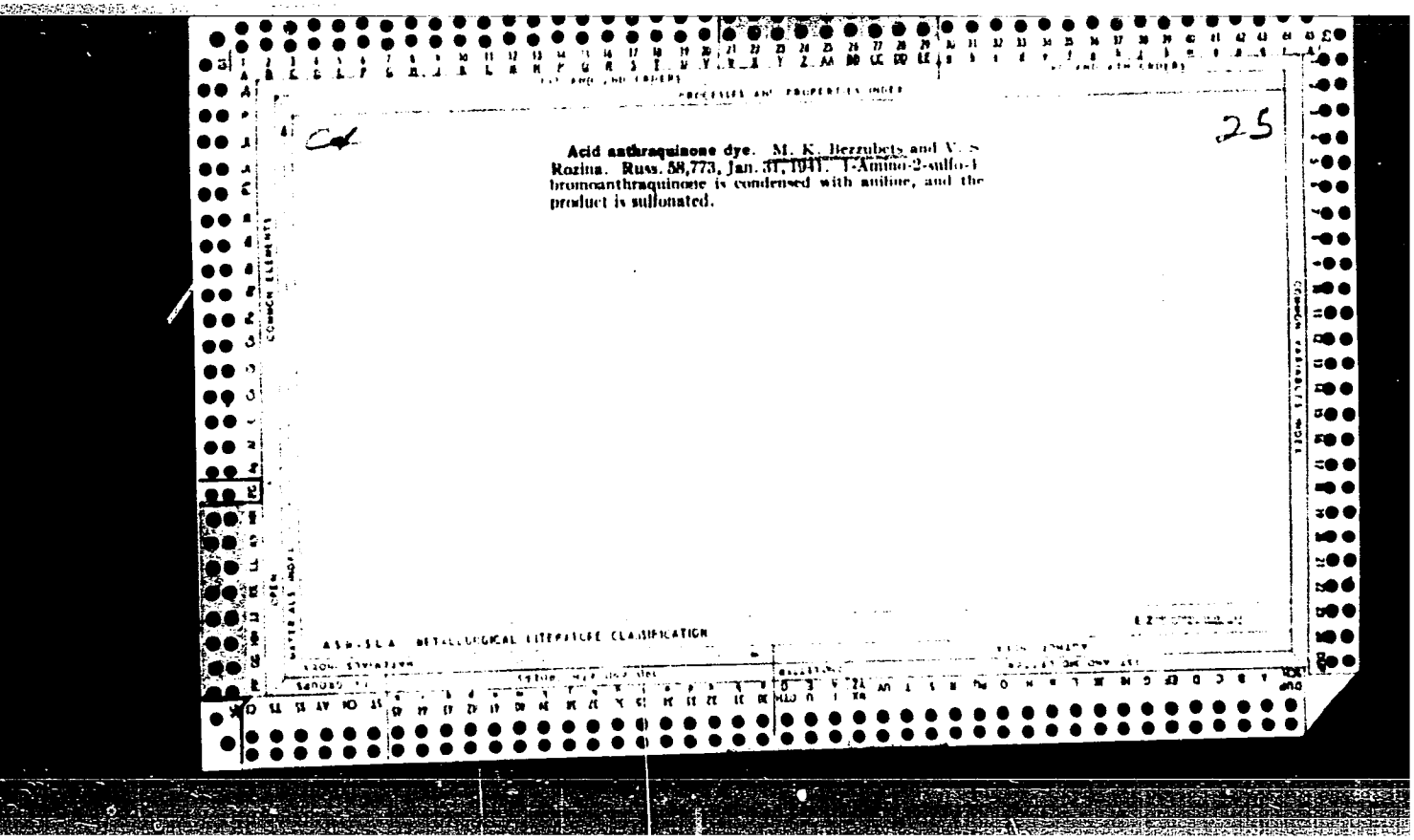
Naphthol AS. G. V. Kagan and M. K. Bezrunets. Russ. 57,914, Sept. 30, 1940. A soln. of aniline and Na 2-hydroxynaphthoate in a neutral org. solvent is treated with $COCl_2$.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



Preparation of substituted phenylenethiazthionium compounds by the method of "baking." M. K. Bezzubets and V. A. Ignatyuk-Malstrenko. *Org. Chem. Ind.* (U. S. S. R.) 7, 377-8(1940); cf. *C. A.* 34, 3208⁸.—The Herz reaction (Ger. pats. 369,690 and 370,584) for the prepn. of thiazthionium compds. may be carried out in the absence of indifferent solvents or diluents. The products, 6-chloro-4-methylphenylenethiazthionium chloride and 6-ethoxyphenylenethiazthionium chloride, may be prepd. by the method of "baking" which consists of heating the HCl salts of the amino compds. at 50-60° for several hrs. with an almost theoretical amt. of S_2Cl_2. The advantages of this method are: (1) reaction can be carried out in Fe or steel app. instead of in enamel, (2) the thiazthionium chlorides are brittle, can be easily ground, washed and dried, and (3) no solvent recovery and tarring of the app. The compds. prepd. contained much S and were difficult to purify so that their quality and yield were detd. by changing into the stable lactams.

H. Z. Kamich



Acid anthraquinone dye. M. K. Berzubets and V. S. Rozina. Russ. 58,773, Jan. 31, 1941. 1-Amino-2-sulfo-4-bromoanthraquinone is condensed with aniline, and the product is sulfonated.