MANITIUS, A.

Potassium content of the blood serum in healthy men. II. Effects of venous stasis, diet and exercise; individual constancy of potassium level. Acta biochim. polon. 4 no.2:93-101 1957.

1. Z Zakładu Chemii Fizjologicznej Akademii Medycznej w Gdansku. Kierownik: Prof. dr Wlodzimierz Mozolowski.

(POTASSIUM, in blood
eff. of exper. venous insuff., high-potassium diet & exercise in men (Pol))
(BLOOD CIRCULATION
eff. of exper. venous insuff. on blood potassium in men(Pol))
(EXERCISE, eff.
on blood potassium (Pol))

MANITIUS, A.

So-called reverse hemolysis. I. Changes of inorganic ions concentration, nature of reversion. Acta biochim. polon. 4 no.4:267-275 1957.

1. Z Zakladu Chemii Fizjologicznej Akademii Medycznej w Gdansku Kierownik: prof. dr W. Moscicwski.

(HEMOLYSIS,
reverse binding of hemolysed hemoglobin, erythrocytic calcium, potassium & sodium in (Pol))
(CALCIUM, in blood,
erythrocytes, in reverse binding of hemolysed hemoglobin (Pol))
(SODIUM, in blood,
same)
(POTASSIUM,
same)

HILLER, S.; MANITIUS, A.

So-called reverse hemolysis. II. Morphological studies. Acta biochim. polon. 4 no.4:277-281 1957.

1. Z Zakladu Histologii i Embriologii Kierownik: prof. dr S. Hiller i Z Zakladu Chemii Fizjologicznej Akademii Medycznej w Gdansku Kierownik: prof. dr W. Mozolowski.

(HEMOLYSIS,
reverse binding of hemolyzed hemoglobin in solution, morphol. aspects (Pol))

MANITIUS, Andrzej

A case of acquired spontaneous agammaglobinemia. Polskie arch. med. wewn. 29 no.6:827-832 1959.

1. Z II Kliniki Chorob Wew netrznych Akademii Medycznej W Gdansku Kierownik: prof. dr med. J. Penson.
(AGAMMAGLOBINEMIA, case reports)

MANITIUS, Andrzej

Iron metabolism and its disorders during the course of idiopathic hemochromatosis. Polski tygod.lek. 15 no.20: 767-769 16 My '60.

1. Z II Kliniki Chorob Wewnetrznych A.M. w Gdansku; kierownik: prof. dr. Jakub Penson.
(IRON metab.)
(HEMOCHROMATOSIS metab.)

MANITIUS, Andrzej

Recent views on the concentration and dilution of urine. Polski tygod.lek. 15 no.31:1103-1107 1 Ag '60.

1. Z II Kliniki Chorob Wewnetrznych A.M. w Gdansku; kierownik: prof. dr Jakub Penson
(URINE)
(KIDNEY physiol.)

MANITIUS, Andrzej; LEVITIN, Howard; BECK, David; EPSTEIN, Franklin H.

Studies on the etiology of urine concentration disorders in potassium deficiency. Polskie arch. med. wewnetrz. 30 no.12: 1495 '60.

1. Z II Kliniki Chorob Wewnetrznych A.M. w Gdansku Z II Kliniki Chorob Wewnetrznych A.M. w Gdansku Kierownik: prof. dr med. J. Pensen i z Departament of Internal Medicine Yale University School of Medicine, New Haven, Connecticut.

(POTASSIUM defic) (URINE)

MANITIUS, Andrzej; LEVITIN, Howard; BECK, David; EPSTEIN, Franklin H.

Causes of impaired urine concentrating capacity in hypercalcemia caused by calciferol. Polskie arch. med. wewnetrz. 31 no.1:25-31 '61.

1. Z II Kliniki Chorob Wewnetrznych A.M. w Gdansku Kierownik: prof. dr med. J. Penson i Departament of Internal Medicine, Yale University School of Medicine, New Haven, Connecticut.

(VITAMIN D pharmacol) (CALCIUM blood) (URINE)

MANITIUS, Andrzej; MUSZKOWSKA-PENSON, Joanna; STOLARCZYK, Julian

Renal changes in multiple myeloma. Polskie arch. med. wewn. 31 no.6: 837-846 '61.

1. Z II Kliniki Chorob Wewnetrznych AMG Kierownik: prof. dr med. J. Penson i z Zakladu Anatomii Patologicznej AMG Kierownik: prof. dr med. W. Czarnocki.

(MYELOMA PLASMA CELL compl)
(ACUTE RENAL FAILURE etiol)

STOLARCZYK, Julian; MANITIUS, Andrzej

Morphological changes in collecting renal canals in antidiuresis and osmotic, alcoholic and water diuresis. Preliminary communication. Pat. polska 13 no.1:59-64 '62.

1. Z Zakladu Anatomii Patologicznej AM w Gdansku Kierownik Zakladu: prof. dr W. Czarnocki Z II Kliniki Chorob Wewnetrznych AM w Gdansku Kierownik Kliniki: prof. dr J. Penson.
(KIDNEYS anat & histol) (VASOPRESSIN pharmacol)
(DIURESIS)

(31)

Warsaw-Krakow, Przeglad Lekarski, Vol 18, Ser 2, No 4, 1962

1. "Early Diagnosis of Multiple Sclerosis. III. Motor and Other Symptoms," Wojciech CENDROWSKI of the Neurology Branch (Oddzial Neurologii) of the Psycho-neurological Institute (Psychoneurologiczny Instytut) at Pruszkow (Director: Prof. Z. KULIGOWSKI, MD); pp 173-178 (English summary).

2. "Action of Antibiotics in Habitual obstruction," D. DUKALSKA, C. LANGHEINIG, D. ROGALA, and A. MAR-KIEWICZ of the Third Clinic for Internal Diseases (III Klinika Chorob Wewnetrznych) at Bytom (Director: Prof. Dr. K. GIBINSKI) and of the Microbiology Re-search Office (Zaklad Mikrobiologii) of the Slask Medical Academy (Slaska AM (Akademia Medyczna)) at Zabrze-Rokotnica (Director: Docent Dr. Magister-Engineer J. SZAFLARSKI); pp 178-182. (English sum-mary).

3. "Erosion Treatment," Anna KOZICKA and Aleksander NOSKOWSKI of the First Clinic of Obstetrics and Fe-male Diseases (I Klinika Poloznictwa i Chorob Kobie-cych) of the Medical Academy at Lublin (Director: Prof. Dr. S. LIEBHART) and of the Wojewodztwo Special-ist Outpatient Clinic (Wojewodzka Przychodnia Spe-cjalistyczna) at Lublin (Director: Adiukt Dr. B. WLODARSKI); pp 182-188. (English summary).

4. "Most Frequent Errors in Clinical Diagnosis Resulting from Wrong Interpretation of Biological Pregnancy Reactions," Jerzy ROBACZYNSKI of the First Clinic of Obstetrics and Female Diseases of the Medical Academy in Wroclaw (Director: Docent Dr. K. NOWOSAD); pp 188-190. (English summary).

5. "Experiments of Tumor Diagnosis with the Scheller Method," Jerzy HUCZEK-GLEBOCKI, Leszek MALSKI, and Zbigniew OSTERCZY of the Third Clinic of Internal Diseases (III Klinika Chorob Wewnetrznych) of the Medical Academy in Krakow (Director: Prof. Dr. J. ALEKSANDROWICZ); pp 190-193. (English summary).

6. "Diuretic Action of Preparation F 1393 (Fovane). II. Reaction in Healthy Humans," Andrzej MANITIUS, Jad-wiga KEMPA, Konstanty LEONOWICZ, and Anna BUHOY-LIBEREK of the Second Clinic of Internal Diseases of the Medical Academy at Gdansk (Director: Prof. Dr.

Manitius, Andrzej

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001032120019-2"

POLAND

MANITIUS, Andrzej

Department of Automation and Telemechanics, Warsaw Polytechnic
(Katedra Automatyki i Telemechaniki, Politechniki Warszawskiej)

Warsaw, Archiwum automatyki i telemechaniki, No 2, April-June 1965, pp 111-127

"Optimization of a discrete compensator controlling a continuous object with random disturbaces."

POLAND

MANITIUS, Andrzej

Department of Automation and Telemechanics, Warsaw Polytechnic (Katedra Automatyki i Telemechaniki, Politechniki Warszawskiej)

Warsaw, Archiwum automatyki i telemechaniki, No 4, October-December 1965, pp 427-447

"Properties of system with discrete compensator optimal for random disturbances."

ACC NR: AP5023973 SOURCE CODE: PO/0031/65/010/002/0111/0127

AUTHOR: Manitius, Andrzej--Manitaius, A.

ORG: Department of Automation and Telemechanics, Warsaw Polytechnic Institute (Katedra Automatyki i Telemechaniki Politechniki Warszawskiej)

TITLE: Optimization of a discrete compensator controlling a continuous object with random disturbances

SOURCE: Archiwum automatyki i telemechaniki, v. 10, no. 2, 1965, 111-127

TOPIC TAGS: random noise signal, ~~perturbation~~, ~~inertial system~~, automatic control technology, ~~pressure compensation~~ optimization, computer calculation, parameter, optimal control

ABSTRACT: An analysis was made of the method of optimization of a discrete compensator for inertial object systems with time lag and both the perturbation and input signal being random. Optimization was made according to the mean square error criterion by means of Wiener's method modified by Chang and further adapted to the case considered. The z transform was used. The general course of procedure is defined by formulas, which lead to the operations performed upon compound rational functions. From certain of these formulas, it is possible to obtain the general form of the transfer function of the optimal compensator and optimal system. The structure of such a compensator is shown. Compensator parameters depend on the parameters of the object and of the signals acting on the system. Their exact determination calls

Card 1/2

L 18813-66

ACC NR: AP5023973

for digital computations. An example of the computed compensator for the specific set of parameters of the object and signals is given. The computational complexity of the method is evaluated. Orig. art. has: 5 figures and 46 formulas. [Based on author's abstract.]

SUB CODE: 12, 13/ SUBM DATE: none/ OTH REF: 003/

Card 2/2 egw

SUCHECKI, Tadeusz; MANITIUS, Andrzej

A case of severe metabolic disturbances secondary to vomiting.
Wiad. lek. 18 no.6:517-520 15 Mr '65.

POLAND

MANITIUS, Andrzej

Dept. of Automation and Telemechanics, Warsaw Polytechnic (Politechnika Warszawska, Katedra Automatyki i Telemechaniki)

Warsaw, Archiwum automatyki i telemechaniki, No 3, July/Sept 1966, pp 281-98

"Optimization of a sampled-data system with finite settling time with respect to combined stochastic-deteriministic performance indices."

L 05300-67 EWP(v)/EWP(k)/EWP(h)/EWP(l)

ACC NR: AP6031532 SOURCE CODE: PO/0031/66/011/003/0281/0299

AUTHOR: Manitius, A. -- Manitsiyus, A.

ORG: Warsaw Politechnic, Department of Automation and Telemechanics (Politechnika Warszawska, Katedra Automatyki i Telemechaniki)

TITLE: Optimization of a data sampling system with a finite duration of transient processes with respect to combined stochastic-deterministic performance indices

SOURCE: Archiwum automatyki i telemechaniki, v. 11, no. 3, 1966, 281-299

TOPIC TAGS: optimization, signal recording, linear equation, digital computer, finite automation, data sampling

ABSTRACT: Two methods are described for the synthesis of a data-sampling system with a finite duration of transient processes. The synthesis is carried out for the deterministic signals and a performance index of random signal filtration, taking into consideration a performance index connected with the transient process. The problem, formulated in the vector-matrix record, is reduced to the determination of a conditional minimum of a sum of linear and quadratic forms. The minimum conditions are described by the system of linear equations.

Card 1/2

L 05300-67

ACC NR: AP6031532

Characteristic results are presented for solving the problems with a digital computer. The properties of optimal systems are analyzed. Orig. art. has: 11 figures and 30 formulas. [Based on author's abstract]

SUB CODE: 13/ SUBM DATE: 11Jan66/ ORIG REF: 001/ OTH REF: 005/

Card 2/2 egh

MANITIUS, Jan, prof.

Modern problems regarding electric drive in the metallurgic industry and its automation. Przegl elektrotechn 37 no.10:421-422 '61.

1. Akademia Gorniczo-Hutnicza, Krakow.

(Metallurgy) (Electric driving)

MANITIUS, Jan, prof.

"Electronic capacity controllers" by T. Konopinski, J. Lucinski. Reviewed by Jan Manitius. Pomiary 8 no.10:494 O '62.

MANITIUS, Jan

Additional current losses and selection of the cathode reactor in rectifier driving gears. Przegl elektrotechn 39 no.3: 97-101 Mr '63.

1. Akademia Gorniczo-Hutnicza, Krakow.

MANITIUS, Jan

Additional losses in rectifier drive of mining machinery. Archiw gorn 9 no.2:233-242 '64.

MANITIUS, S.

Characteristics of the dynamics of an agricultural tractor.

p. 355 (Technika Motoryzacyjna) Vol. 7, no. 10, Oct. 1957, Warszawa, Poland

SO: MONTHLY INDEX OF EAST EUROPEAN ACCESSIONS (EEAI) LC, VOL. 7, NO. 1, JAN. 1958

MANITIUS, Stefan, mgr., inz.

Ship propeller reduction gears. Pt. 3.: Planetary gears. Bud okretowe Warszawa 7 no.1:10-13 '62.

1. Centralne Biuro Konstrukcji Okretowych Gdansk.

(Ship propulsion) (Gearing)

MANITIUS, Stefan, mgr., inz.

Ships propeller gearing. Bud okret 7 no.4:124-126 Ap '62.

1. Centralne Biuro Konstrukcji Okretowych Nr. 1, Gdansk.

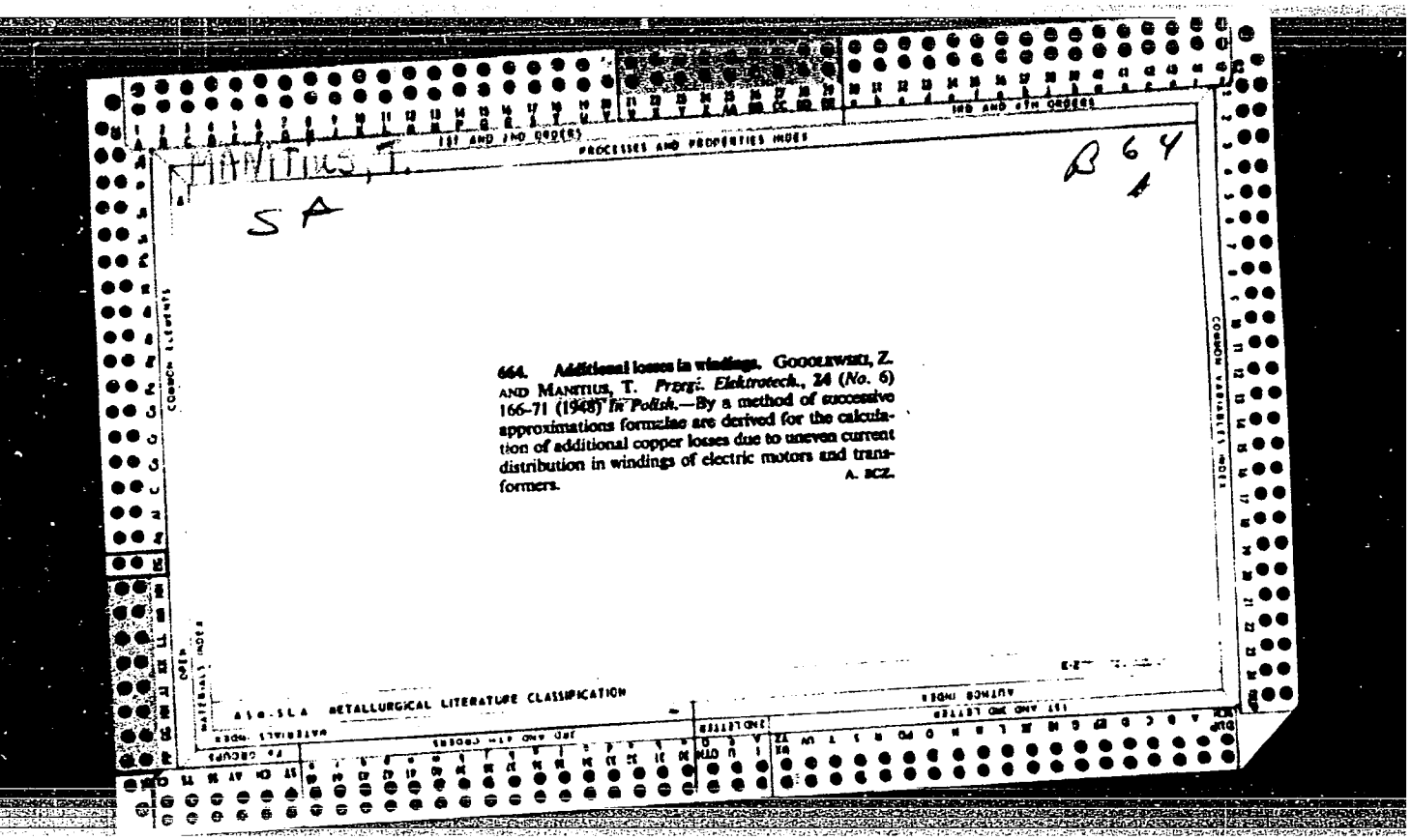
MANITIUS, Stefan, mgr.inz.

Ship gear of propeller propulsion. Pt.5. The exploitation of the gear. Bud okretowe Warszawa 7 no.6:193-194 Je '62.

PACZESNIAK, Jerzy, prof. mgr inz.; MANITIUS, Stefan, mgr inz.

Results of inspecting and testing the prototype tanker B 70 with carrying capacity of 19,000 T DW. Bud okretowe Warszawa 7 no.10:322-326 O '62.

1. Centralne Biuro Konstrukcji Okretowych Nr 1, Gdansk.



664. **Additional losses in windings.** GOGOLEWSKI, Z. AND MANITIUS, T. *Przgl. Elektrotech.*, 24 (*No.* 6) 166-71 (1948) *In Polish.*—By a method of successive approximations formulae are derived for the calculation of additional copper losses due to uneven current distribution in windings of electric motors and transformers.
A. SCZ.

L 05300-67 EWP(v)/EWP(k)/EWP(h)/EWP(l)

ACC NR: AP6031532 SOURCE CODE: PO/0031/66/011/003/0281/0299 41 41 B

AUTHOR: Manitius, A. -- Manitsiyus, A.

ORG: Warsaw Politechnic, Department of Automation and Telemechanics (Politechnika Warszawska, Katedra Automatyki i Telemechaniki)

TITLE: Optimization of a data sampling system with a finite duration of transient processes with respect to combined stochastic-deterministic performance indices

SOURCE: Archiwum automatyki i telemechaniki, v. 11, no. 3, 1966, 281-299

TOPIC TAGS: optimization, signal recording, linear equation, digital computer, finite automation, data sampling

ABSTRACT: Two methods are described for the synthesis of a data-sampling system with a finite duration of transient processes. The synthesis is carried out for the deterministic signals and a performance index of random signal filtration, taking into consideration a performance index connected with the transient process. The problem, formulated in the vector-matrix record, is reduced to the determination of a conditional minimum of a sum of linear and quadratic forms. The minimum conditions are described by the system of linear equations.

Card 1/2

L 05300-67

ACC NR: AP6031532

Characteristic results are presented for solving the problems with a digital computer. The properties of optimal systems are analyzed. Orig. art. has: 11 figures and 30 formulas. [Based on author's abstract]

SUB CODE: 13/ SUBM DATE: 11Jan66/ ORIG REF: 001/ OTH REF: 005/

Card 2/2 egh

L 33141-66 EWP(c)/EWP(v)/EWP(k)/EWP(h)/EWP(t)/ETI/EWP(l) IJP(c) JD/EM

ACC NR: AP6024571 SOURCE CODE: RU/0017/65/000/003/0135/0138

34

AUTHOR: Maniu, Al. (Engineer); Kremer, H. (Engineer)

ORG: [Maniu] Polytechnical Institute, Brasov (Institutul Politehnic); [Kremer] "METROM" Works, Brasov (Uzinele "METROM")

TITLE: Manufacture of converter blades

SOURCE: Metalurgia, no. 3, 1965, 135-138

TOPIC TAGS: petroleum industry, petroleum engineering

ABSTRACT: A discussion of the technical conditions and manufacturing technology of converter blades for the oil industry made of AM-63, with emphasis on the methods and conditions used at the Metrom Works of Brasov. Orig. art. has: 4 figures and 1 table. [Based on author's Eng. abst.] [JPRS]

SUB CODE: 13, 05 / SUBM DATE: none

Card 1/1 UDC: 665.54.041.498:66.063

0915 2204

L 42977-66 EWP(v)/T/EWP(k)/EWP(b)/EWP(t) IJP(c) HM/JD
ACC NR: AP6008358 SOURCE CODE: RU/0017/65/000/001/0001/0001

AUTHOR: Hilmu, L. (Engineer); Maniu, Al. (Engineer) 16 B

ORG: [Hilmu] Metrom Works, Brasov (Uzinele Metrom); [Maniu] Polytechnical Institute, Brasov (Institutul politehnic)

TITLE: Cu-Cr alloys for electric resistance welding electrodes

SOURCE: Metalurgia, no. 1, 1965, 1

TOPIC TAGS: chromium containing alloy, copper alloy, welding electrode, resistance welding, tensile strength, electric conductivity, cold working

ABSTRACT: The authors discuss the advantages and proper treatment of Cu-Cr alloys for resistance welding electrodes. Thermically treated and cold-hammered Cu-Cr alloys containing 0.5 to 1 percent Cr have a tensile strength of 58 kilograms per millimeter and electrical conductivity of nearly 80 percent that of pure copper, even after heating to 400 degrees centigrade. The necessary hardness (at least 130 kilograms per millimeter) can be supplied by proper hardening-tempering followed by 50 percent cold hammering. Orig. art. has: 5 figures and 4 tables. [JPRS]

SUB CODE: 11, 13 / SUBM DATE: none / OTH REF: 002
Card 1/1 hs UDC: 669.35'26:621.791.042

MANIU, G.; POTOP, P.; POPESCU, N.

Evaporation with immersed burner, and its application in inorganic chemical industry. Note II. Evaporation of NaCl brine and lyes of sodium chromate and sodium carbonate. p. 562

REVISTA DE CHIMIE. (Ministerul Industriei Petrolului si Chemiei si Asociatia Stiintifica a Inginerilor si Tehnicienilor din Romania) Bucuresti, Rumania, Vol. 10, no. 10, Oct. 1959

Monthly List of East European Accessions (EEAI) LC, Vol. 9, no. 2, August 1959

Uncl.

PAUNESCU-PODEANU, A.; BERINDE, L.; MANESCU, N.; MANIU, I.; DANCAU, G.; BALTACEANU, O.

Rheumo-tuberculous states. Probl. reumat.,Bucur. 4:55-71 1956.

(TUBERCULOSIS, complications
rheumatic disord., pathogen. & incidence)
(RHEUMATISM, etiol. & pathogen.
tuberc., incidence & mechanism)

PAUNESCU-PODEANU, A., Prof.; MANIU, I., dr.; BALTACEANU, O., dr.; KRAUS, N., dr.; CZERNICK, I., dr.

The phenomenon of hemoclasia and allergy in pathogenesis of some of the complications of gastric resection. Med. int., Bucur. 4 no. 8:1104-1111 Dec 56.

(GASTRECTOMY, complications
pathogen., allergy & hemoclasia)
(ALLERGY
in etiol. of post-gastrectomy digestive & resp. disord.)
(BLOOD DISEASES
hemoclasia in etiol. of post-gastrectomy compl.)

RUMANIA/Human and Animal Physiology. The Nervous System. V

Abs Jour: Ref. Zhur-Biol., No 6, 1958, 27380.

Author : A. Păunescu-Podeanu, Oct. Baltaceanu, D. Maior, I. Dinu and I. Maniu.

Inst :

Title : Histamine-Induced Headaches. Minor Forms, Those Not Undergoing Treatment, Unrecognized and Incorrectly Diagnosed Cases.

Orig Pub: Viata med., 1957, 4, No 3, 3-12.

Abstract: No abstract.

Card : 1/1

PAUNDESCU-PODEANU,A.; MANIU,I.

Liver cirrhosis and cardiac insufficiency (An analytical study of the aggravating, decompensatroy action of cardio-circulatory insufficiency on compensated liver cirrhosis). Probl. card., Bucur. 4:97-105 '59.
(LIVER CIRRHOSIS, complications)
(HEART FAILURE,CONGESTIVE,complications)

MANIU, Tiberiu, ing.

Aggregates for cementation. St si Teh Bucur 15 no.6:5 Je '63.

1. Technological Institute for Machine Construction and Electrotechnical Engineering.

MANIU, Tiberiu, ing.

Modern rolling girders. St si Teh Buc 15 no.10:28 [illegible] '63.

BAGDZIUS, B., otv. red.[deceased]; CUKERZIS, J., red.; LAPINSKAITE, J., red.; MANIUKAS, J., red.; KAMINSKIENE, L., red.

[Hydrobiological studies of Dukstas area lakes] Duksto ezeru hidrobiologiniai tyrimai. Gidrobiologicheskie issledovaniia Dukshtasskikh ozer. Vilnius, Leidykla "Mintis," 1964. 146 p. [In Lithuanian and Russian] (MIRA 18:2)

1. Lietuvos TSR Mokslu Akademija, Vilna. Zoologijos ir parazitologijos institutas.

MANIYA G. M.

"Statistical Evaluation of the Law of Distribution (Generalization of the Criterion of Academician A. N. Kolmogoroz)." Thesis for degree of Cand. Physico-mathematical Sci. Sub 30 Oct 49, Moscow City Pedagogical Inst imeni V. P. Potemkin,

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

MANN, H. M.

Marlyn G. M. Generalization of the criterion of A. N. Kolmogorov for an estimate for the law of distribution for empirical data. Doklady Akad. Nauk SSSR (N.S.) 69, 495–497 (1949). (Russian)

Let $x_1, \cdots, x_n$ be independent identically distributed chance variables with the distribution function $F(x)$. Let $S_n(x)$ be the sample (empirical) distribution function. Define

$$D_n^+(\theta_1, \theta_2) = \sup_{\theta_1 \le F(x) \le \theta_2} [S_n(x) - F(x)].$$

$$D_n(\theta_1, \theta_2) = \sup_{\theta_1 \le F(x) \le \theta_2} |S_n(x) - F(x)|.$$

Two theorems are stated without proof. (1) Let $F(x)$ be continuous, $\theta_1^{(n)} = m_1/n = \theta_1 + o(n^{-\frac{1}{2}})$, and $\theta_2^{(n)} = m_2/n = \theta_2 + o(n^{-\frac{1}{2}})$, $0 < \theta_1 < \theta_2 < 1$. Then

$$\lim_{n\to\infty} P\{D_n^+(\theta_1^{(n)}, \theta_2^{(n)}) \le \lambda/\sqrt{n}\} = \frac{1}{2\pi(1-R^2)^{\frac{1}{2}}} \int_a^b \int_{-\infty}^{a'} \exp\left[-\tfrac{1}{2}\theta(z_1, z_2)\right] dz_1 dz_2$$

$$- e^{-2\lambda^2} \frac{1}{2\pi(1-R^2)^{\frac{1}{2}}} \int_{-\infty}^{b'} \int_{-\infty}^{a'} \exp\left[-\tfrac{1}{2}\theta(z_1, z_2)\right] dz_1 dz_2,$$

$$a = \frac{\lambda}{[\theta_1(1-\theta_1)]^{\frac{1}{2}}}, \quad b = \frac{\lambda - 2\lambda\theta_1}{[\theta_1(1-\theta_1)]^{\frac{1}{2}}}, \quad a' = \frac{\lambda - 2\lambda\theta_1}{[\theta_1(1-\theta_1)]^{\frac{1}{2}}},$$

$$b' = \frac{\lambda - 2\lambda(1-\theta_2)}{[\theta_2(1-\theta_2)]^{\frac{1}{2}}}, \quad R = [\theta_1(1-\theta_2)]^{\frac{1}{2}}/[\theta_2(1-\theta_1)]^{\frac{1}{2}},$$

$$\theta(z_1, z_2) = (1-R^2)^{-1}[z_1^2 + 2Rz_1z_2 + z_2^2],$$

$$\theta(z_1, z_2) = (1-R^2)^{-1}[z_1^2 - 2Rz_1z_2 + z_2^2].$$

(2) Under the conditions of theorem 1,

$$\lim_{n\to\infty} P\{D_n(\theta_1^{(n)}, \theta_2^{(n)}) \le \lambda/\sqrt{n}\} = \frac{1}{2\pi(1-R^2)^{\frac{1}{2}}} \int_{-b}^{b} \int_{-a'}^{a'} \exp\left[-\tfrac{1}{2}\theta(z_1, z_2)\right] dz_1 dz_2$$

$$- \pi^{-1}(1-R^2)^{-\frac{1}{2}} \sum_{k=1}^{\infty} (-1)^{k-1} e^{-2k^2\lambda^2}$$

$$\times \int_{-\alpha_k}^{\alpha_k} \int_{-\beta_k}^{\beta_k} \exp\left[-\tfrac{1}{2}\theta(z_1, z_2)\right] dz_1 dz_2,$$

$$\alpha_k = (\lambda - 2k\lambda\theta_1)/[\theta_1(1-\theta_1)]^{\frac{1}{2}},$$

$$\beta_k = [\lambda - 2k\lambda(1-\theta_1)]/[\theta_2(1-\theta_2)]^{\frac{1}{2}}.$$

It is possible that a misprint has occurred and that one of the θ's in (2) should be θ. The reviewer has not checked this, but it could be checked by specialization and comparison with Kolmogoroff's known result.

J. Wolfowitz.

Source: Mathematical Reviews, Vol. 11 No. 4

MANIYA, G.M.

Practical application of evaluating maximum bilateral deviations of an empirical distribution curve in a given interval of growth of the theoretical law. Soob.AN Gruz.SSR 14 no.9:521-524 '53. (MLRA 7:5)

1. Goriyskiy gosudarstvennyy pedagogicheskiy institut im. N.M.Baratashvili. Predstavleno deystvitel'nym chlenom Akademii V.D.Kupradze. (Frequency curves)

MANIYA, G. M.

Call Nr: AF 1108825

Transactions of the Third All-union Mathematical Congress (Conv.) Moscow, Jun-Jul '56, Trudy '56, V. 1, Sect. Rpts., Izdatel'stvo AN SSSR, Moscow, 1956, 237 pp.

There are 2 references, 1 of which is USSR, 1 a translation into Russian.

Card 40/80

MANIYA, G.M.

Quadratic error in evaluating the density of normal two-dimensional distribution by sampling data. Soob. AN Gruz. SSR 20 no.6:655-658 Je '58. (MIRA 11:10)

1.AN Gruzinskoy SSR, vychislitel'nyy tsentr, Tbilisi.
Predstavleno akademikom I.N. Vekua.
(Distribution (Probability theory))

32516
S/044/61/000/011/039/049
C111/C444

16.6100 (2403)

AUTHOR: Maniya, G. M.

TITLE: The quadratic error in the estimation of the density of the normal distribution according to the data of a selection

PERIODICAL: Referativnyy zhurnal, Matematika, no. 11, 1961, 15, abstract 11V68. (Tr. Vychisl. tsentra. AN Gruz SSR, 1960, 1, 75-96

TEXT: Let $f(x)$ be the density of the normal distribution with the mathematical expectation a and the dispersion σ^2; let x_1, x_2, ... x_n be a selection from the general totality with the density $f(x)$; let $\bar{x}$ and s^2 be selection means and selection dispersion;

$$\tilde{f}(x) = \frac{1}{s\sqrt{2\pi}} e^{-\frac{(x-\bar{x})^2}{2s^2}}.$$

It is shown that there is

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32516
S/044/61/000/011/033/047
C111/C444

The quadratic error in the estimation...

$$E\,\tilde{f}(x)=f(x)\left\{1+\frac{1}{12n}\left[3\left(\frac{x-a}{\sigma}\right)^4-18\left(\frac{x-a}{\sigma}\right)^2+32\right]\right\}+O\left(\frac{1}{n^2}\right)$$

$$D\,\tilde{f}(x)=\frac{f^2(x)}{16n}\left[24\left(\frac{x-a}{\sigma}\right)^4-24\left(\frac{x-a}{\sigma}\right)^2+11\right]+O\left(\frac{1}{n^2}\right).$$

The limit distribution of the variable

$$\psi(\bar{x},\,s)=\int_{-\infty}^{\infty}\left[f(x)-\tilde{f}(x)\right]^2\,dx$$

is investigated. It is proved that there is

$$\lim_{n\to\infty} P\left\{n\psi(\bar{x},s)<t\right\}=\frac{2}{\pi}\int_0^{\pi/2}\left[1-\exp\left(-\frac{8\sqrt{\pi}\,t}{3+\sin^2\varphi}\right)\right]d\varphi$$

This limit distribution is put down in tables.

[Abstracter's note: Complete translation.]

Card 2/2

MANIYA, G.M.

Notes on nonparametric estimation of the density of two-dimensional distribution. Soob. AN Gruz. SSR 27 no.4:385-390 O '61. (MIRA 15:1)

1. Akademiya Nauk Gruzinskoy SSR, Vychislitel'nyy tsentr, Tbilisi. Predstavleno chlenom-korrespondentom AN Gruzinskoy SSR L.P. Gokiyeli.
(Distribution (Probability theory))

MANIYA, G.M.

Quadratic evaluation of the divergence of densities of normal two-dimensional distribution according to sampling data. Trudy Vych.tsentra AN Gruz.SSR 2:153-211 '62. (MIRA 16:1)
(Forms, Quadratic) (Mathematical statistics)

MANIYA, G.M.

Transactions of the 6th Conf. on Probability Theory and Mathematical Statistics and of the Symposium on Distributions in Infinite-Dimensional Spaces held in Vil'nyus, 5-10 Sep '60. Vil'nyus Gospolitizdat Lit SSR, 1962. 493 p. 2500 copies printed

MANIYA, G.M.

Quadratic error in estimating the normal distribution densities from two samples. Trudy Vych. tsentr. AN Gruz. SSR 4:213-216 '64 (MIRA 17:6)

MANK, Antoni; GORSKI, Bronislaw, mgr inz.

Post for radiometric measurements of scintillators. Prace Inst teletechn 3 no.1:109-110 '59.

MAŃK, Antoni

82271
P/046/60/005/03/04/006

21.5200

AUTHOR: Mańk, Antoni; Malesa, Jan

TITLE: Comparative Measurements of Organic Scintillation Crystals 19

PERIODICAL: Nukleonika, 1960, Vol. 5, No 3, pp 149 - 156

TEXT: The authors describe methods applied in measuring the relative efficiency of organic scintillation crystals, which were used to establish the quality of scintillation crystals worked out at Zakład Nowych Technologii (Department of New Technologies) of the Instytut Tele- i Radiotechniczny (Telecommunications and Radio Engineering Institute) in Warsaw. The article starts with a general description of properties characteristic to scintillation crystals, and an explanation of the coefficient of energy conversion and the amplitude efficiency. Efficiency measurements can be performed by three methods: 1) differential distribution of the gamma radiation spectrum, 2) integral distribution of the gamma radiation spectrum and 3) the mean current method. A comparison of differential distribution curves for various scintillation crystals shows that an amplitude which has half the value of the Compton front ordinate is most favorable for a test. This criterion is used by nuclear enterprises in specifying

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P/046/60/005/03/04/006

Comperative Measurements of Organic Scintillation Crystals

the efficiency of scintillation crystals manufactured by the company. The method of differential distribution of electric pulses was used in establishing the properties of scintillation crystals, worked out by the Institute of Telecommunications and Radio Engineering. The primary standard was a plastic scintillation crystal NE 102, with an anthracene reference efficiency of 65%, made by nuclear enterprises. British (6256B) and Soviet (FeU-19) photomultipliers were used with maximum spectral sensitivity at 4,100 Å. The measuring circuit comprised: a proportional amplifier with an input circuit time constant of 1 microsecond, a single-channel pulse amplitude analyzer with a channel width of 1 v and a decatron electric pulse converter. Gamma irradiation of the scintillation crystals was performed by means of ^{137}Cs with an activity of about 0.5 μc. For comparison, all three methods were used in testing 8 samples with varying efficiencies. The efficiencies of scintillation crystals as measured by different methods are presented in Table 1. The efficiency figures vary (in comparison with the primary standard NE 102 = 1) from 0.55 to 0.86 for differential distribution, from 0.61 to 0.84 for the integral distribution, and from 0.52 to 0.80 for the mean current method. The deviations obtained by the three

Card 2/3

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P/046/60/005/03/04/006

Comperative Measurements of Organic Scintillation Crystals

different methods did not exceed 10%. The authors conclude that the differential distribution method should be given preference in technological tests. At the close the authors acknowledge the cooperation of Master of Engineering T. Florkowski and Master L. Górski, workers of Katedra Fizyki II (Chair of Physics II) of the Akademia Górniczo-Hutnicza (Mining and Metallurgical Academy) in Kraków. There are 4 graphs, 1 table and 9 references: 5 Polish, 1 German, 1 English, 1 French and 1 Soviet.

ASSOCIATION: Instytut Tele- i Radiotechniczny (Institute of Telecommunications and Radio Engineering), Warsaw

SUBMITTED: January 1960

Card 3/3

MANK, Antoni, mgr

Gain modulation of photomultipliers by voltage variations in the dynode. Prace Inst teletechn 6 no.2:97-103 '62.

KAMIER, Jacek, mgr inz.; KUCIA, Henryk, mgr inz.; MANK, Antoni, mgr fiz., adiunkt

Computer for colorimetric data. Prace Inst teletechn 6 no.3: 25-38 '62.

1. Instytut Tele - i Radiotechniczny, Warszawa, Pracownia Pomiarow Kolorymetrycznych.

MANK, A., mgr

An objective luminance meter. Przegl telekom 34 no.10:317-318 O '62.

MANK, A.Ia.

Occurrence of American sparrow hawk in the Baltic region. Ornitologiia no.7:479 '65. (MIRA 18:10)

ACCESSION NR: AT4036066 S/2781/63/000/003/0237/0250

AUTHORS: Azovskiy, Yu. S.; Guzhovskiy, I. T.; Mazalov, Yu. P.; Mank, V. V.; Safronov, B. G.; Churayev, V. A.

TITLE: Inductive conical plasmoid source

SOURCE: Konferentsiya po fizike plazmy* i problemam upravlyayemogo termoyadernogo sinteza. 3d, Kharkov, 1962. Fizika plazmy* i problemy* upravlyayemogo termoyadernogo sinteza (Plasma physics and problems of controlled thermonuclear synthesis); doklady* konferentsii, no. 3. Kiev, Izd-vo AN UkrSSR, 1963, 237-250

TOPIC TAGS: plasmoid, plasma source, plasma radiation, plasma research, microwave plasma, charged particle concentration, plasma density, ionized plasma

ABSTRACT: An inductive plasmoid source with a conical single-turn coil was investigated, and the plasmoids produced by it were studied

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ACCESSION NR: AT4036066

by recording the visible radiation of the plasmoids with a photomultiplier and by recording the plasmoid currents with magnetic probes. The plasmoid velocity was determined from the Doppler effect produced when microwave radiation is reflected from the front of the plasmoid. The charged-particle density in the plasmoid was determined by the microwave-signal "cutoff" method (I. S. Shpigel', ZhETF, 36, 411, 1959), and the mass composition of the plasmoid was determined with a Thomson mass analyzer (parabola method). The conclusions drawn from the results are as follows: 1. The sources produce hydrogen plasmoids with density exceeding 2×10^{14} cm^{-3} at an average velocity 3×10^5 m/sec (450 eV) and a total number of particles 10^{19} (approximately 0.5 cm^3). The total plasmoid energy is of the order of 1,000 J (25% of the energy fed to the coil and 8% of the capacitor-bank energy). The currents circulating in the plasmoids are of the order of 10^4 A and attenuate far away from the source. The plasma impurities amount to about 10% (only 1% in the front part of the plasmoid) and the plasmoid length is relatively

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ACCESSION NR: AT4036066

large (6--8 meters). The source efficiency can be increased by preionization of the neutral gas. "The authors are grateful to Ye. F. Malayev for help in the erection of the apparatus, to I. Yu. Adamov, A. I. Skibenko, and V. I. Privezentsev for measuring the particle density, and to V. S. Voytsena for useful advice in the mass analysis of the plasmoids. Orig. art. has: 10 figures, 1 formula, and 2 tables.

ASSOCIATION: None

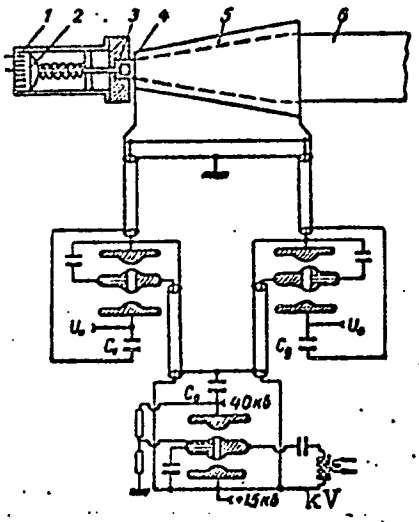
SUBMITTED: 00 DATE ACQ: 21May64 ENCL: 01

SUB CODE: ME NR REF SOV: 008 OTHER: 011

Card 3/4

ACCESSION NR: AT4036066

ENCLOSURE: 01



Schematic diagram of installation:

1 - valve coil, 2 - valve anvil,
3 - teflon gasket, 4 - valve cap,
5 - conical coil, 6 - glass tube

Card 4/4

AZOVSKIY, Yu.S.; GUZHOVSKIY, I.T.; MAZALOV, Yu.P.; MANK, V.V.; SAFRONOV, B.G.; CHURAYEV, V.A.

Conical induction source of plasma bunches. Zhur. tekh. fiz. 33 no.10:1149-1158 O '63. (MIRA 16:11)

TAPASEVICH, Yu.I.; OVCHARENKO, F.D., akademik; MATYASH, I.V.; MANK, V.V.; TORYANIK, A I.

Nuclear magnetic resonance of the protons of water adsorbed on montmorillonite. Dokl. AN SSSR 156 no. 4:926-928 Je '64. (MIRA 17:6)

1. Institut obshchey i neorganicheskoy khimii im. N.S.Kurnakova AN UkrSSR i Fiziko-tekhnicheskiy institut nizkikh temperatur AN UkrSSR. 2. AN UkrSSR (for Ovcharenko).

SEROV, Ya.A., kand.tekhn.nauk; MANKE, G.K., inzh.; BOYKOV, V.V., inzh.

Increasing the strength of bore rods. Gor.zhur. no.1:58-60 Ja '65.
(MIRA 18:3)

1. Vostochnyy nauchno-issledovatel'skiy gornorudnyy institut (for Serov, Manke). 2. Kuznetskiy mashinostroitel'nyy zavod (for Boykov).

DOLECKI, Jerzy; MANKA, Helmuth

Phenol removal from bituminous oils. Proglemy proj hut maszyn 10 no.2:55-63 F '62.

1. Koksoprojekt, Zabrze.

KOZLOWSKI, Jan; MANKA, Helmut

Tubular furnaces in the coke-chemical industry. Probl proj hut maszyn 11 no.2:39-49 F '63.

1. Koksoprojekt, Zabrze.

MANKA, Helmut

Designing tube furnace[illegible] problemy proj konstr maszyn 11 no.3: 278-286 '63

1. Koksoprojekt, Gliwice.

MANKA, Helmut

Method of obtaining fuel gases by gasifying natura. oil. Problemy proj hut maszyn 13 no.3:65-72 Mr '65.

1. Koksoprojekt, Zabrze.

MANKA I.

Novsie poznatky vcasnej diagnozy gynekologickych karcinomov. /Newer methods in early diagnosis of genital cancer in women/
Sloven lekar 12:7 July 50 p. 387-90.

1. Of the State Institute for Research and Treatment of Tumors in Bratislava (Head--William Thurzo, M.D.).
CLML Vol. 20, No. 2 Feb 1951

MANKA, I.; KLAUBER, E.

Unreliability of pain test for malignancy. Bratisl. lek. listy 33 no.8:587-590 1953. (CLML 25:5)

1. Of the Institute of Oncology, Bratislava.

MANKA, I; MUNGYEROVA, G.

An unusual finding after a not recognized perforation of the uterus. Brat.lek.listy 35, Vol.2 no.4:210-212. 31 Aug '55.

1. Z. Gyn.odd. Onkologickeho ustavu v Bratislave, prednosta primar dr. E. Klauber, z Laboratoriia experimentalnej cytologie SAV v Bratislave, prednosta akademik SAV I. Stanek.

(UTERUS, perforation
in diag.curettage, recognized during later ovarial surg.)

MANKA, I., MUDr.; BARDOS, Augustin, MUDr. (Bratislava, Zochova 5.)

Conservative treatment of postoperative recurrence of relative incontinence with dondren. Cesk. gyn. 24[38] no.5:369-372 June 59.

1. I. gyn.-por. klinika LFUK v Bratislave, prednosta prof. Dr. S. Stefanik.
(URINATION DISORDERS, ther.
granugenol oil prep. in postop. incontinence in women (Cz))
(SCLEROSING SOLUTIONS, ther. use
granugenol oil prep. in postop. incontinence in women (Cz))

MANKA, I.; ZILAK, O.

Relaxants in our gynecological practice. Cesk. gyn. 28 no.5: 343-347 Je '63.

1. I zen. a por. klin. lek. fak. UK v Bratislave, prednosta prof. dr. S. Stefanik.
(GYNECOLOGY) (DECAMETHONIUM COMPOUNDS)
(TUBOCURARINE) (GALLAMINE TRIETHIODIDE)
(SUCCINYLCHOLINE) (LAPAROTOMY)

MANKA, I.

Simultaneous presence of carcinoma of the cervix and extra-uterine pregnancy. Cesk. gynek. 43 no.10:762-763 D '64

1. Vysk. ustav onkologicky v Bratislave.

MANKA, I.

Controlled colpomicroscopy in the diagnosis of precancerous conditions and in early stages of cancer of the cervix of the uterus. Bratisl. lek. listy 45 no.6:378-384 30 S '65.

1. Katedra onkologie a radiologie Lek. fak. Univerzity Komenskeho v Bratislave (veduci doc. MUDr. V. Thurzo) clen kor-sp. Slovenskej akademie vied.

MANKA, J.,

Manka J., Wojdasiewicz W. Potassium Guaiacol Sulphonates as Impregnating Media for Leather.

„Tiokole jako środki impregnacyjne do skóry". Przegląd Skórzany. No. 7, 1953, pp. 161--163, 1 tab.

It has been ascertained that thiocols (potassium guaiacol sulphonates) LP-2, LP-3 and ZL-109 with thio end groups and differing in molecular weight only, are eminently suitable for impregnating leather. LP-2 thiocol must, since it has, contrary to LP-3 and ZL-109 thiocols, a particularly high viscosity (400 poise at 25°C), be diluted, prior to use, by means of methyl-ethyl ketone and toluene. Polymerisation takes place, in the case of LP-2, in the presence of isopropylene isoperoxide and, in the case of LP-3 and ZL-109, in the presence of furfural and acetone of lead. The authors specify a method for impregnating leather by means of thiocols and draw attention to its advantages.

MANKA J.

Distr: 4E2c(J)

15

Gutta-percha from the root cortex of Euonymus verrucosus. Józef Manka (Inst. Przemysłu Skórzanego, Warsaw). *Prace Inst. Przemysłu Skórzanego* 1, 37-57(1955) (English summary).—Samples (60 g.) of the root cortex of *E. verrucosus* (I) were extd. in the grain size range from 0.5 to 5.0 mm. with 800 ml. of trichlorethylene (II), C_6H_6, or aviation (b. 55–100°) or extn. (b. 60–120°) gasolines in a 1-l. Soxhlet app. (III), or in 2-l. 3-necked Witt's flask (IV) with stirrer (150 r.p.m.). I, graining 1.5–3.0 mm., extd. with II in III for 8 hrs.), yielded 14.10% of gutta percha (V) (with respect to a ; dry cortex) contg. V hydrocarbons (VI) 63.81–77.61%. I, graining 1.0–1.5 mm., extd. with C_6H_6 and II in IV for 14 hrs., yielded 14.02, and 17.67% of V contg. VI 87.40 and 60.02%, resp. Analysis of V obtained in a gave: moisture 1.08–6.77; ash 0.23–0.61; gasoline (b. above 100°)-insol. substances 0.36–5.71%. A. S.

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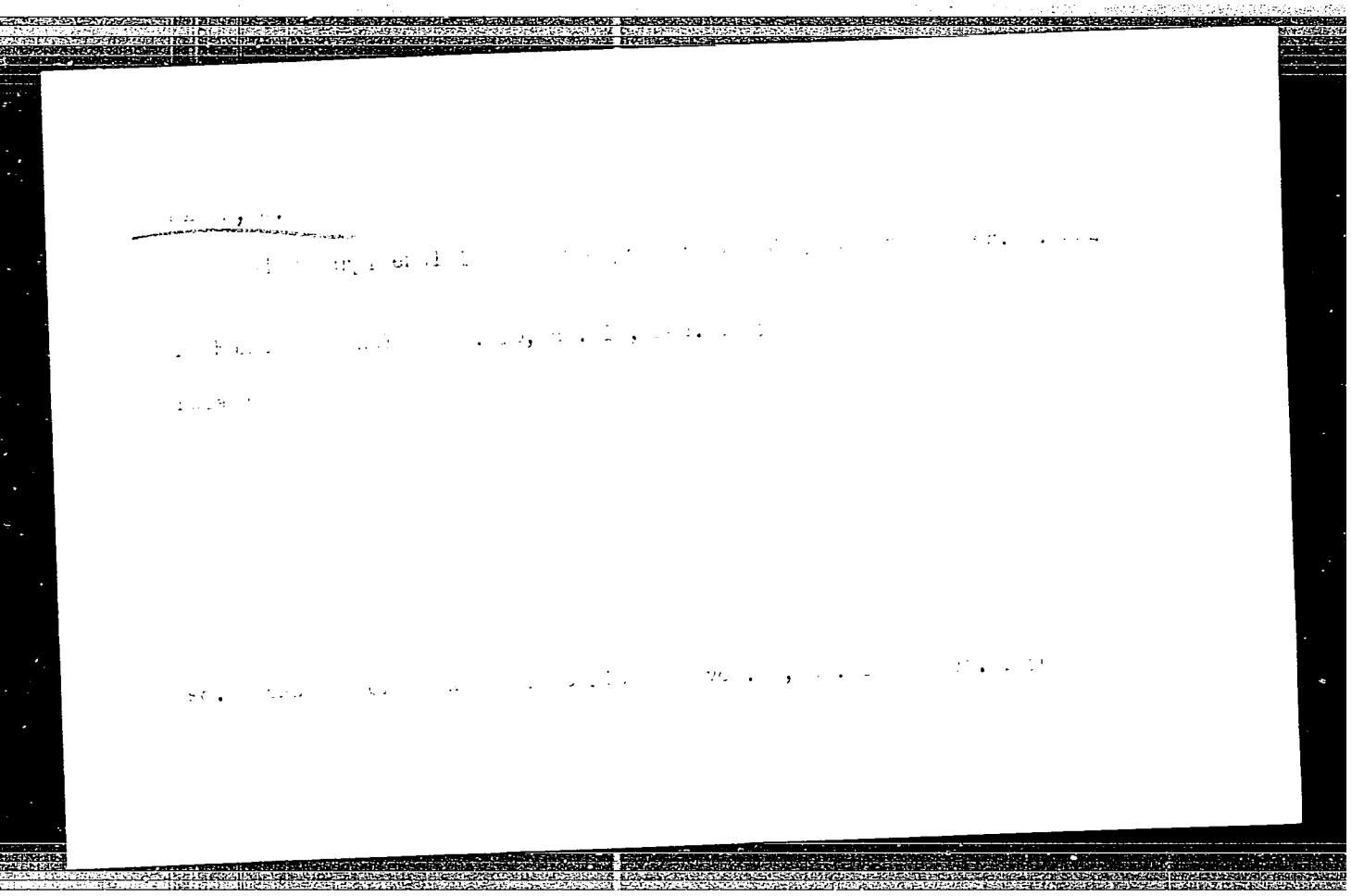
1

MANKA, JOZEF

Terephthalic acid from p-xylylene chloride. Józef Manka, Henryk Tomaszewski, and Marek Wajnryb. (Inst. Petroleum, Kędz. Poland). *Zeszyty Nauk. Politech. Łódz.* No. 9, *Chem.* No. 3, 31-43(1965) (English summary).—The oxidation of p-$C_6H_4(CH_2Cl)_2$ (I) to p-$C_6H_4(CO_2H)_2$ (II) by HNO_3 of various concns. was studied. With 19.1, 28.8, and 35.0% HNO_3, resp., were obtained mixts. of I and II (and by-products) contg. 41.7, 56.7, and 59.7% II, and with actual yields of 26.6, 40.2, and 42.3% II, resp. With 71.7% HNO_3, the yields were better. Presumably this is not an effect of the concn. alone; the b.p. of the concd. HNO_3 also makes it possible to run the reaction at 117-21°. Samples were taken every 30 min. in reactions which lasted 1-3 hrs. It was possible to obtain a mixt. of I + II contg. 60% II, and by repeated oxidation this value could be pushed up to about 80%. This process can be further improved by first hydrolyzing the I with a H_2O-I ratio of 3:1, then oxidizing the hydrolysis products in 2 steps with 43.7 and 84% HNO_3, resp., and $HgCl_2$ as catalyst. Thus are obtained final products contg. over 90% II, with an actual yield of about 60% II. These products can be esterified without any trouble according to Ullman and Schläpfer [*Ber.* 37, 2003(1904)]. 27 references.

Werner Jacobson



MANKA, J.

The manufacture of artifical facings for bootlegs.

P. 194,(Przeglad Skorzany. Vol. 11, no. [illegible], Aug. 1956, Lodz, Poland)

Monthly Index of East European Accessions (EEAI) LC. Vol. 7, no. 2, Feb. 1958

SNAJD, V., prof.; ANTOS, J.; LUKAS, V.; BOUDA, J.; BARDOS, A.; MANKA, J.; HAJEK, A.; PACIN, Z.; SKACEL, K.; STIKSA, E.; SIKL, O.; SKODA, V.

Clinical aspects of carcinoma of the endometrium. Cesk. gynek. 27 no.3:173-177 Ap '62.

1. I gyn. klin. fak. vseob. lek. KU v Praze, prednosta prof. MUDr. K. Klaus.

(UTERUS NEOPLASMS)

MANKA, Karol; GIERCZAK, Maria

Some new species and forms of fungi. Prace nauk rŏln i lesn 15 no.2:119-130 '63.

1. Katedra Fitopatologii Lesnej, Wyzsza Szkola Rolnicza, Poznan.

MANKA, Karol

Experiments in further improvement of the modified Warcup method of isolating fungi from the soil. Prace nauk roln i lesn 17 no.1: 29-45 '64.

1. Department of Forest Phytopathology, College of Agriculture, Poznan.

MANKA, T.

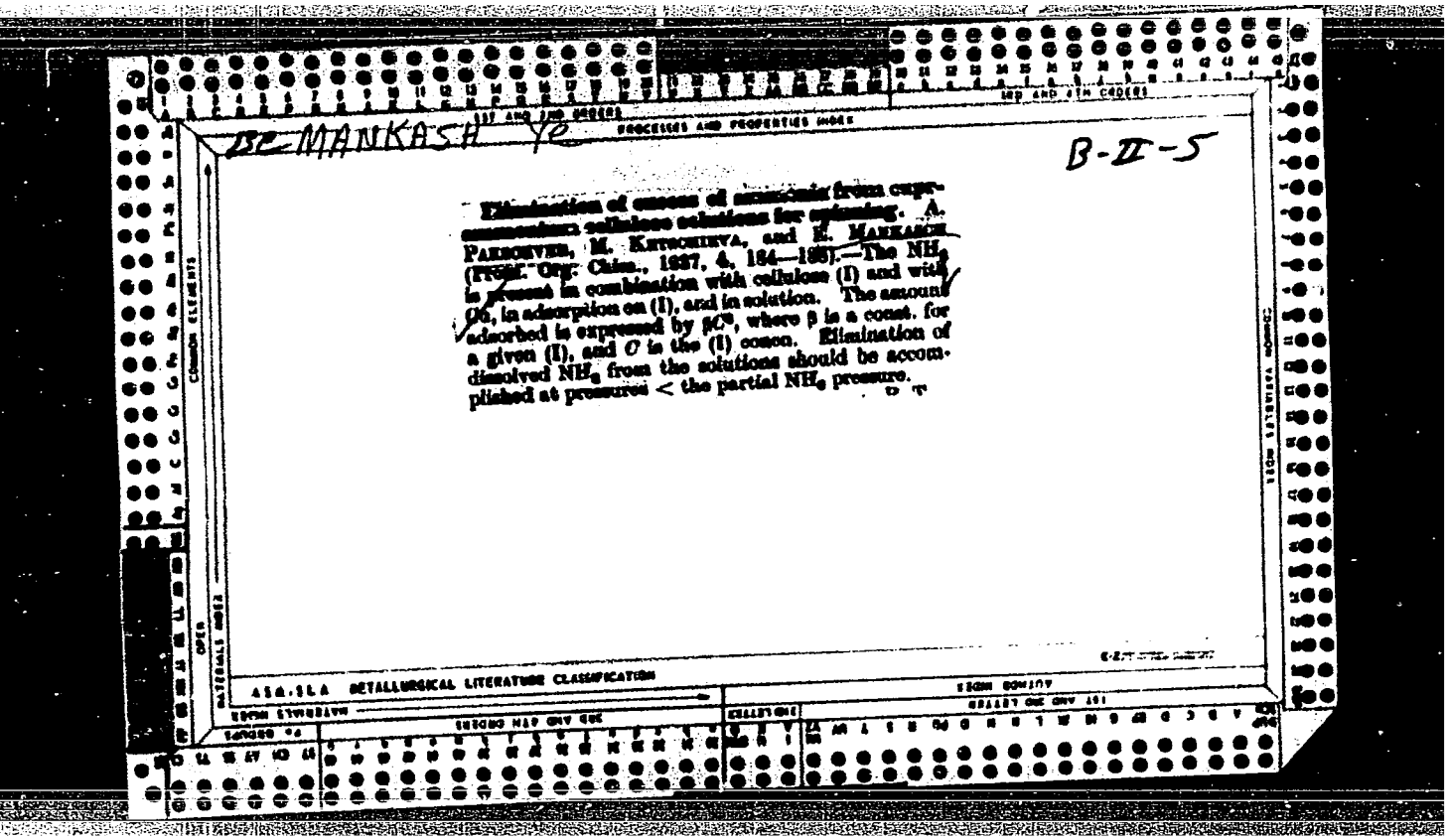
"Radio Communication in Sports Aeronautics" p. 55 (KRIDLA VLASTI, No. 3, February, 1954, Praha, Czechoslovakia).

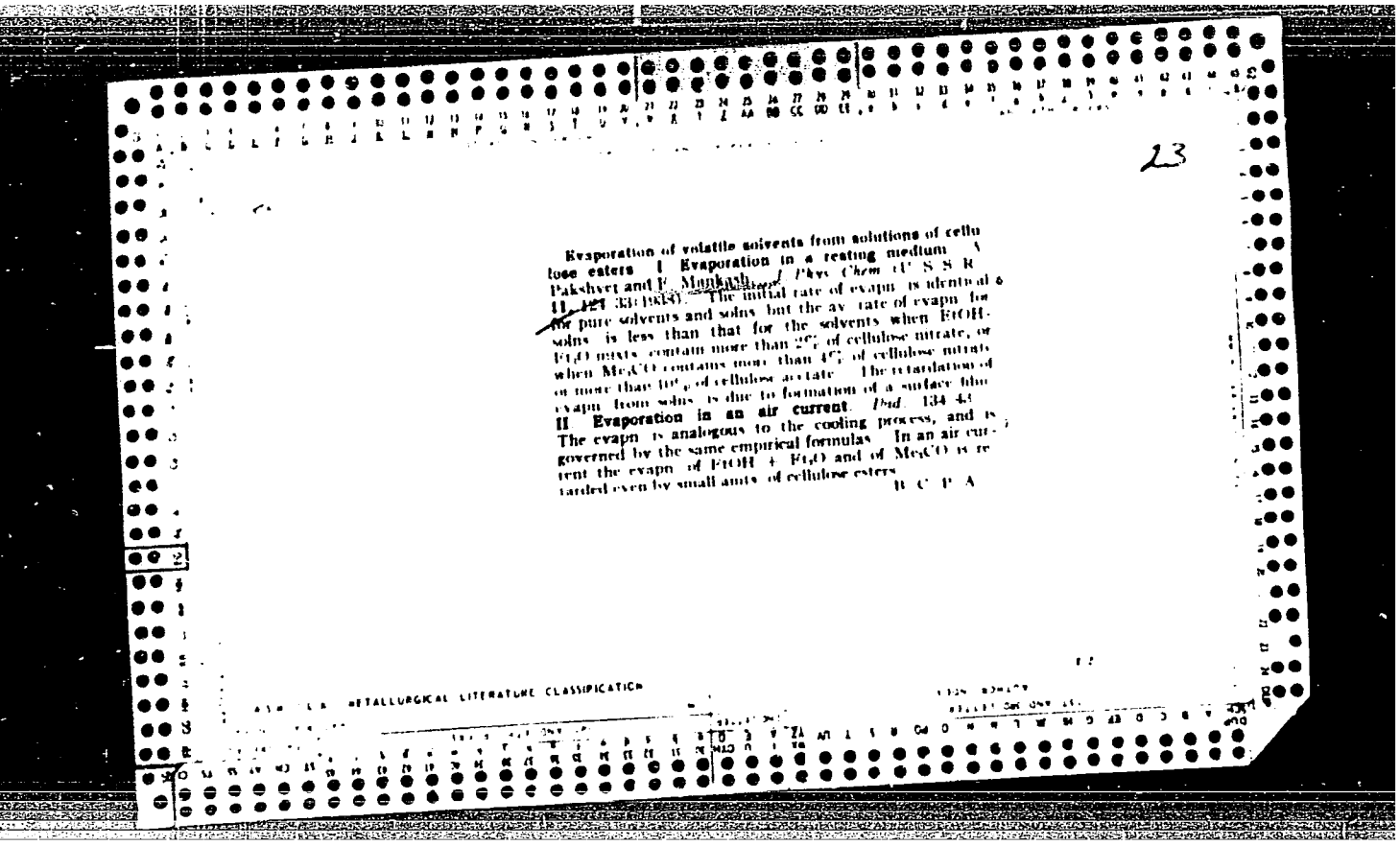
SO: Monthly List of East European Accessions, LC, Vol. 3, No. 5, May 1954, Unclassified

MANKA, T., inz.; SILOVSKY, K., inz.; TESAR, S., inz.

Design of the basic equipment for production of the VUS-62 prestressed railroad sleepers. Inz stavby 11 no.6:218-223 Je '63.

1. Vyskumny ustav stavebnictva, Bratislava (for Manka). 2. Katedra pruznosti a pevnosti, Slovenska vysoka skola technicka, Bratislava (for Silovsky and Tesar).

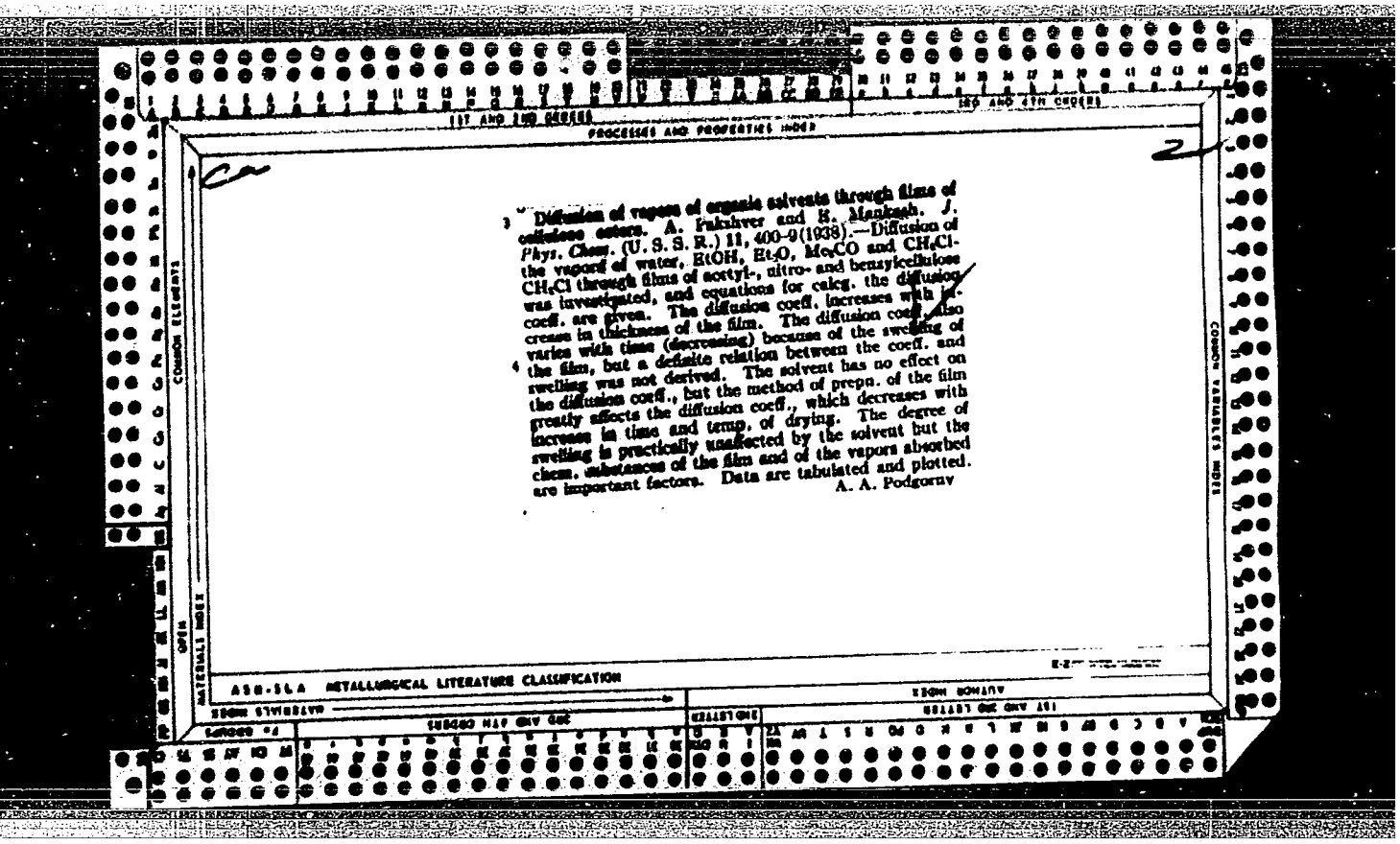




23

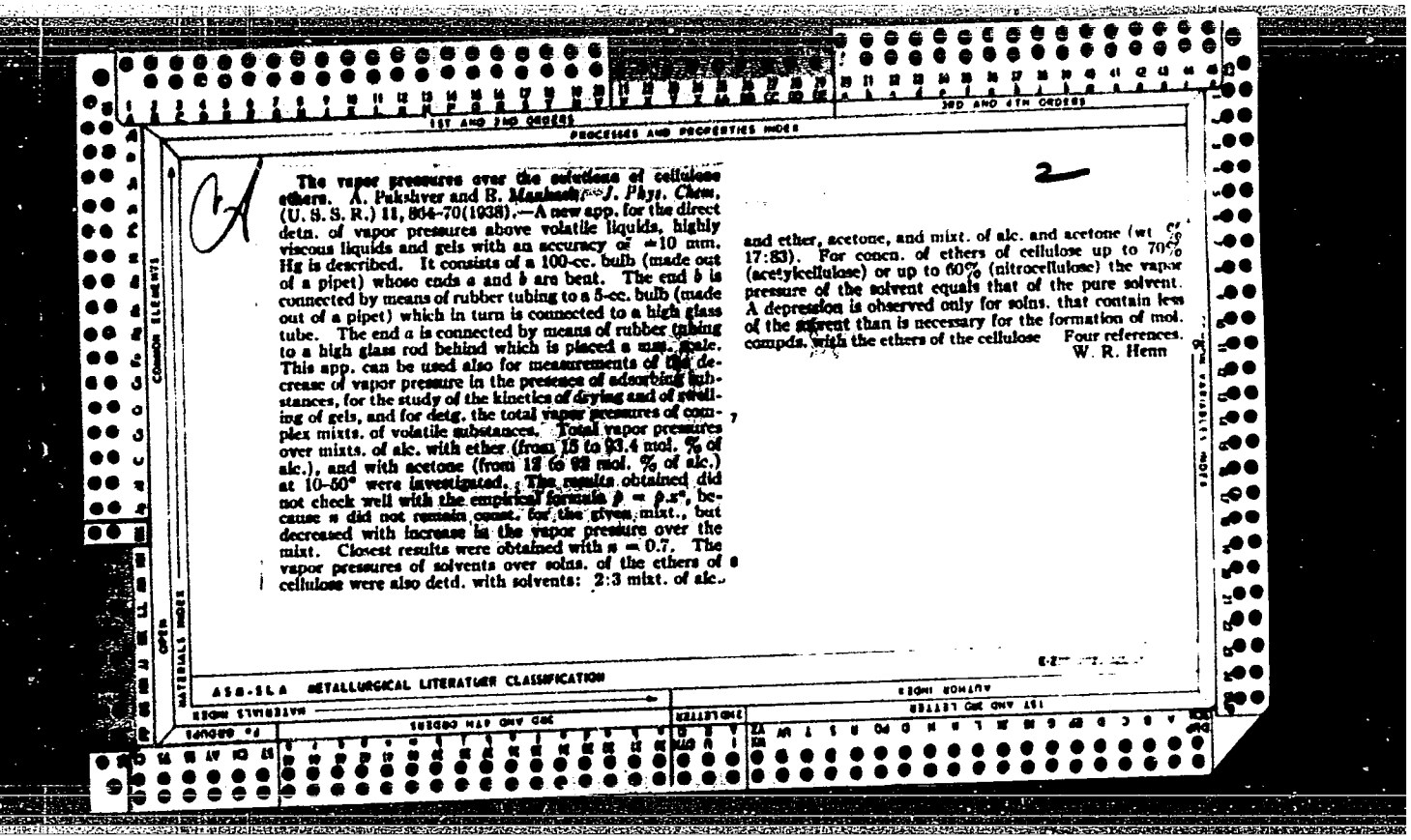
Evaporation of volatile solvents from solutions of cellu
lose esters I Evaporation in a resting medium A
Pakshver and F Munkath J Phys Chem (U S S R
11 121 33(1938) The initial rate of evapn is identical f
for pure solvents and solns but the av rate of evapn fo
solns is less than that for the solvents when EtOH-
H2O mixts contain more than 2% of cellulose nitrate, or
when MeCO contains more than 4% of cellulose nitrate
or more than 10% of cellulose acetate The retardation of
evapn from solns is due to formation of a surface film
II Evaporation in an air current Ibid 134 43
The evapn is analogous to the cooling process, and is
governed by the same empirical formulas In an air cur-
rent the evapn of EtOH + H2O and of MeCO is re
tarded even by small amts of cellulose esters
B C P A

METALLURGICAL LITERATURE CLASSIFICATION



Diffusion of vapors of organic solvents through films of cellulose esters. A. Fukuhver and B. Mankush. *J. Phys. Chem.* (U. S. S. R.) 11, 400–9(1938).—Diffusion of the vapors of water, EtOH, Et_2O, Me_2CO and CH_2Cl-CH_2Cl through films of acetyl-, nitro- and benzylcellulose was investigated, and equations for calcg. the diffusion coeff. are given. The diffusion coeff. increases with decrease in thickness of the film. The diffusion coeff. also varies with time (decreasing) because of the swelling of the film, but a definite relation between the coeff. and swelling was not derived. The solvent has no effect on the diffusion coeff., but the method of prepn. of the film greatly affects the diffusion coeff., which decreases with increase in time and temp. of drying. The degree of swelling is practically unaffected by the solvent but the chem. substances of the film and of the vapors absorbed are important factors. Data are tabulated and plotted.

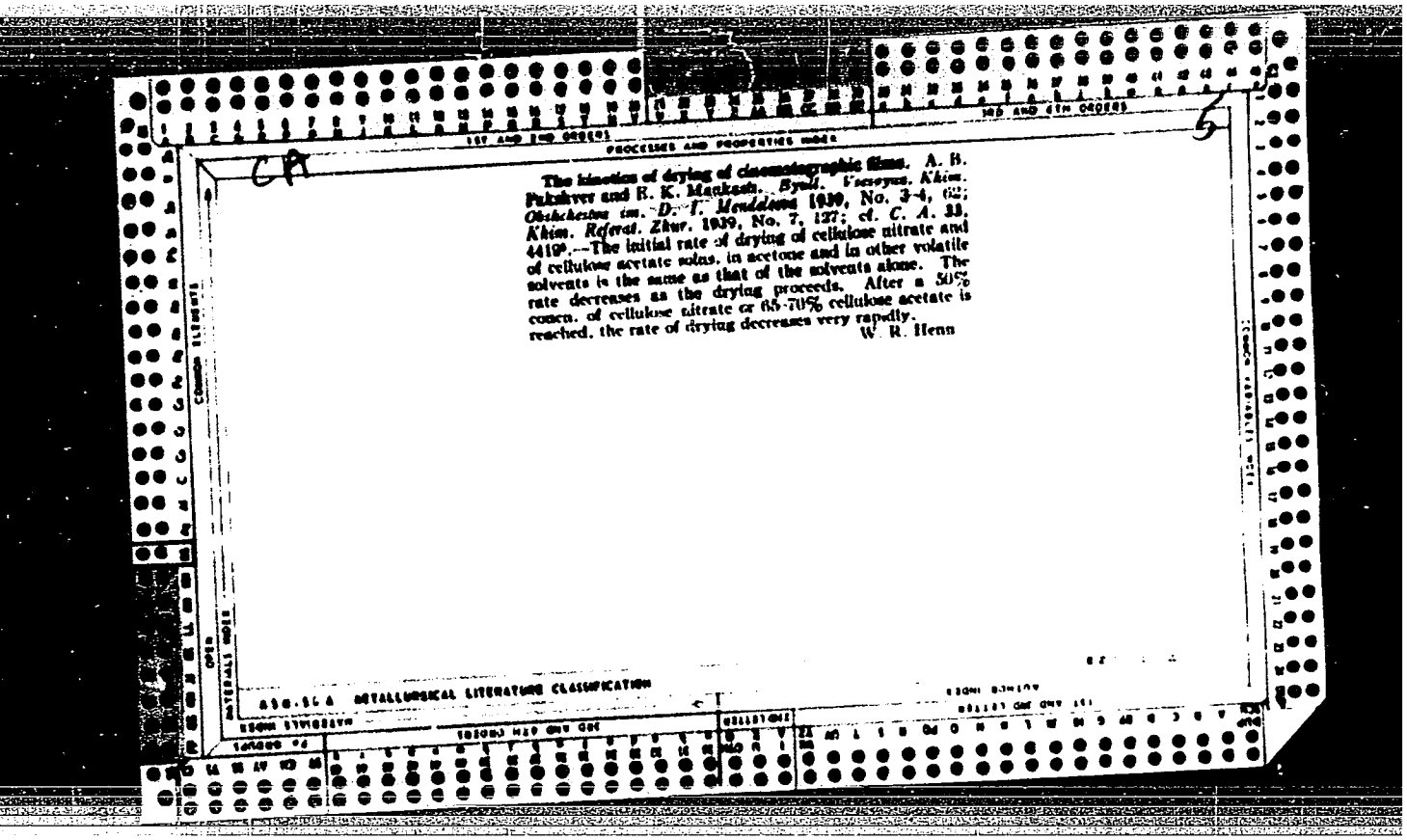
A. A. Podgorny



PROCESSES AND PROPERTIES INDEX

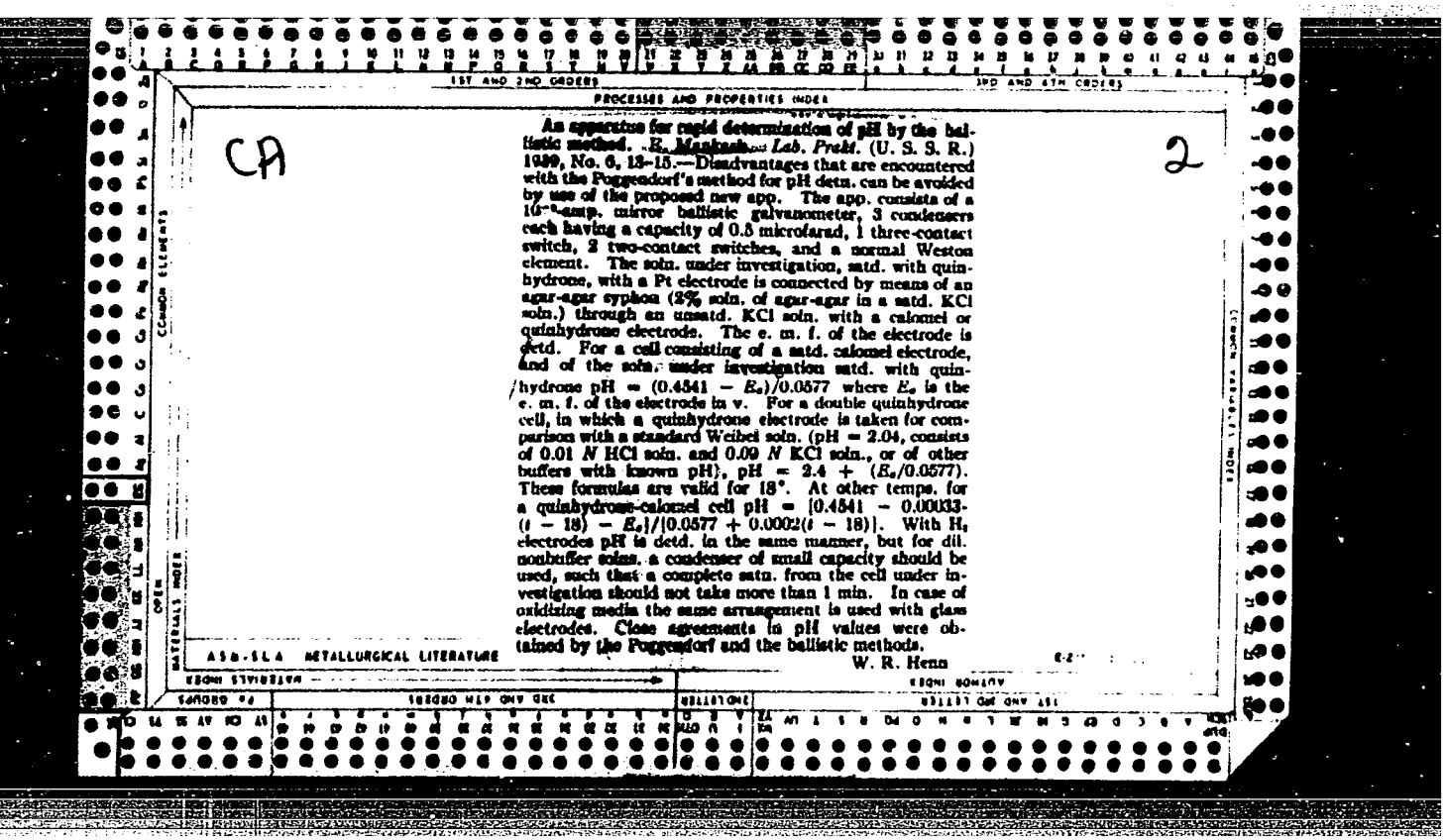
The vapor pressures over the solutions of cellulose ethers. A. Pukshver and B. Mashkovich. *J. Phys. Chem.* (U. S. S. R.) 11, 864-70(1938).—A new app. for the direct detn. of vapor pressures above volatile liquids, highly viscous liquids and gels with an accuracy of ±10 mm. Hg is described. It consists of a 100-cc. bulb (made out of a pipet) whose ends *a* and *b* are bent. The end *b* is connected by means of rubber tubing to a 5-cc. bulb (made out of a pipet) which in turn is connected to a high glass tube. The end *a* is connected by means of rubber tubing to a high glass rod behind which is placed a mm. scale. This app. can be used also for measurements of the decrease of vapor pressure in the presence of adsorbing substances, for the study of the kinetics of drying and of swelling of gels, and for detg. the total vapor pressures of complex mixts. of volatile substances. Total vapor pressures over mixts. of alc. with ether (from 15 to 93.4 mol. % of alc.), and with acetone (from 12 to 92 mol. % of alc.) at 10-50° were investigated. The results obtained did not check well with the empirical formula $p = p_s x^n$, because n did not remain const. for the given mixt., but decreased with increase in the vapor pressure over the mixt. Closest results were obtained with $n = 0.7$. The vapor pressures of solvents over solns. of the ethers of cellulose were also detd. with solvents: 2:3 mixt. of alc. and ether, acetone, and mixt. of alc. and acetone (wt. 17:83). For concn. of ethers of cellulose up to 70% (acetylcellulose) or up to 60% (nitrocellulose) the vapor pressure of the solvent equals that of the pure solvent. A depression is observed only for solns. that contain less of the solvent than is necessary for the formation of mol. compds. with the ethers of the cellulose. Four references.
W. R. Henn

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION



CA

The kinetics of drying of cinematographic films. A. B. Pakshver and R. K. Mankash. *Byull. Vsesoyuz. Khim. Obshchestva im. D. I. Mendeleeva* 1939, No. 3-4, 62; *Khim. Referat. Zhur.* 1939, No. 7, 127; cf. *C. A.* 33, 4419.—The initial rate of drying of cellulose nitrate and of cellulose acetate solns. in acetone and in other volatile solvents is the same as that of the solvents alone. The rate decreases as the drying proceeds. After a 50% concn. of cellulose nitrate or 65-70% cellulose acetate is reached, the rate of drying decreases very rapidly.
W. R. Henn



PROCESSES AND PROPERTIES INDEX

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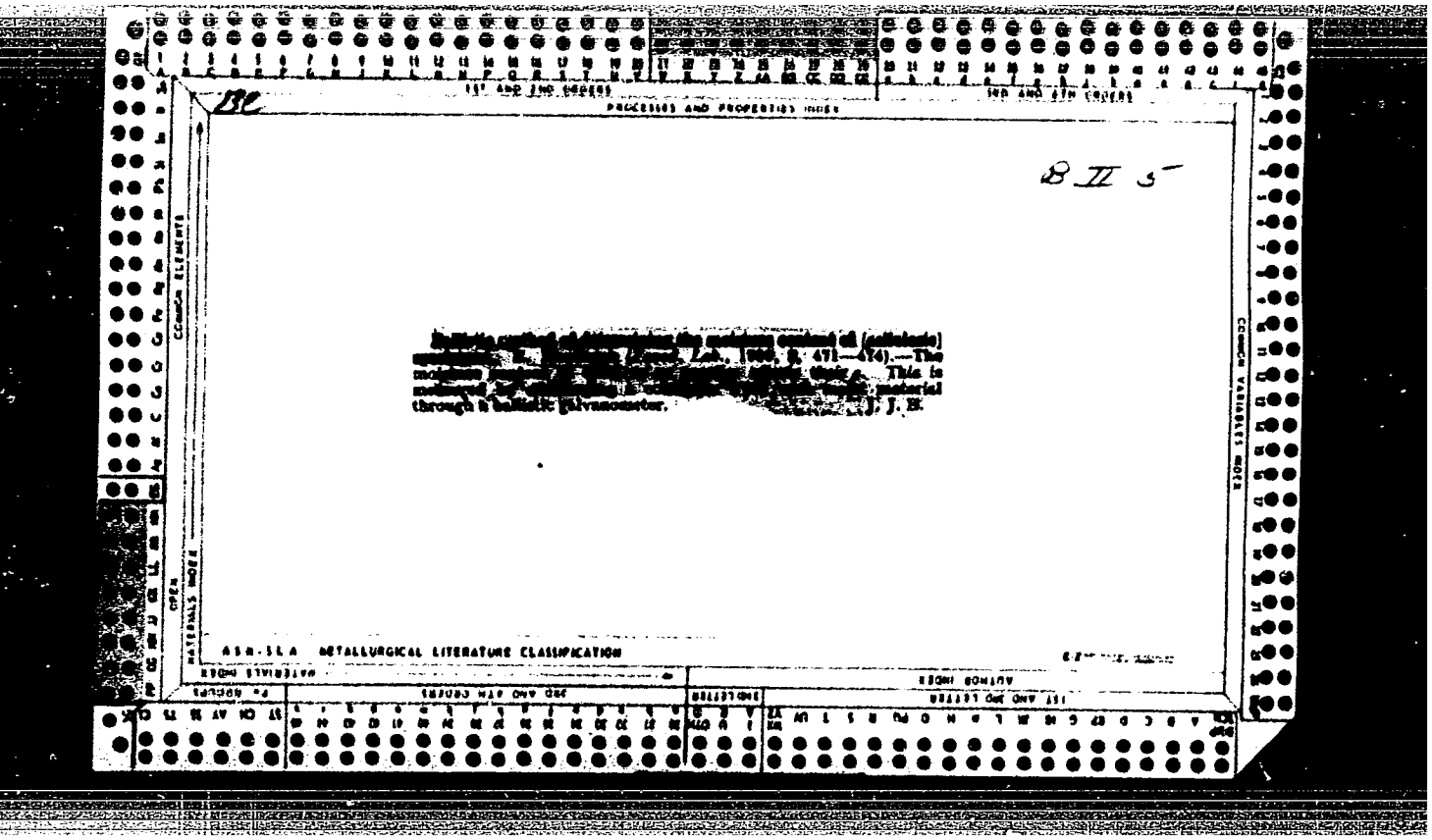
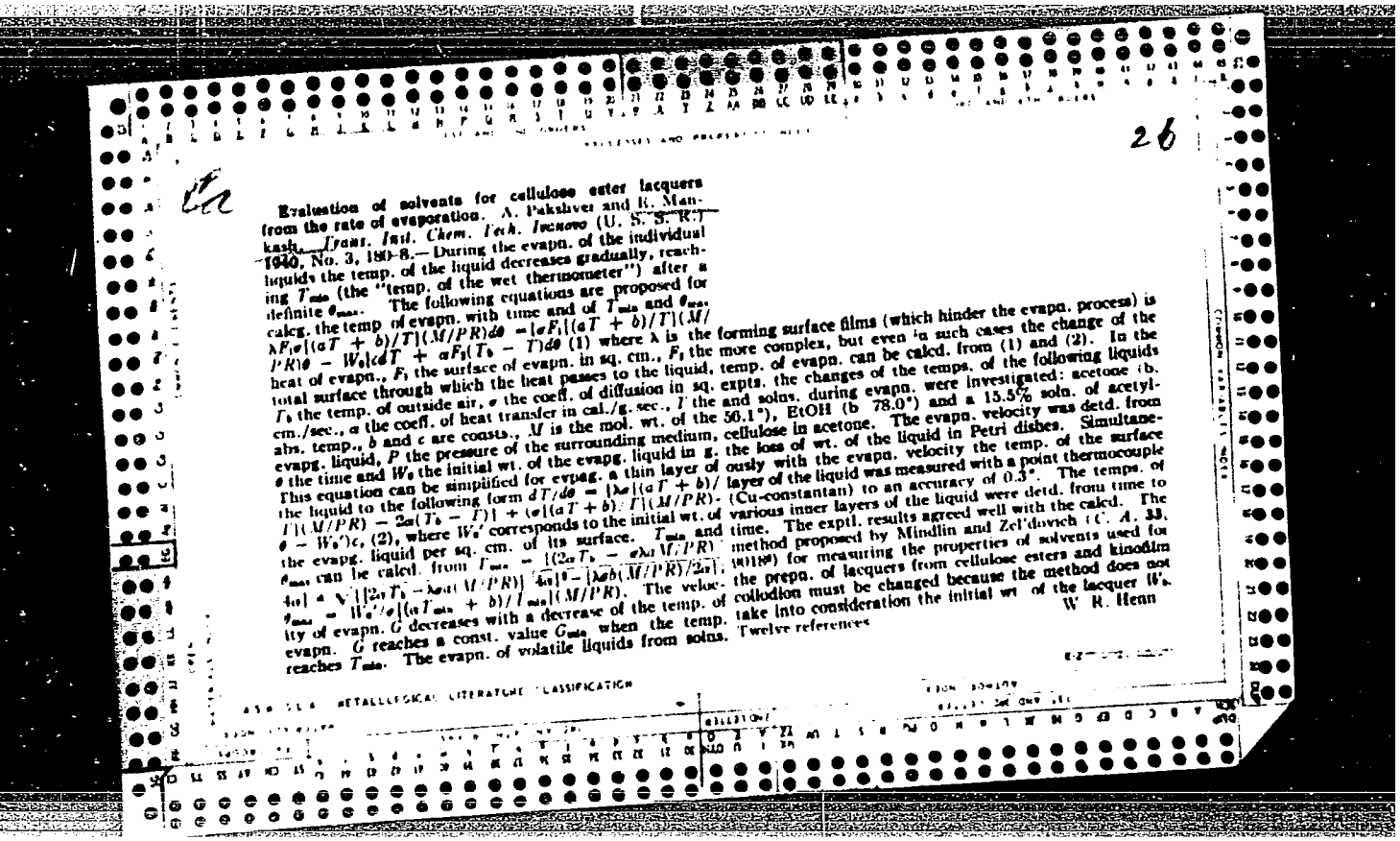
An apparatus for rapid determination of pH by the ballistic method. E. Manbach. *Lab. Prakt.* (U. S. S. R.) 1939, No. 6, 13–15.—Disadvantages that are encountered with the Poggendorf's method for pH detn. can be avoided by use of the proposed new app. The app. consists of a 10^{-9}-amp. mirror ballistic galvanometer, 3 condensers each having a capacity of 0.5 microfarad, 1 three-contact switch, 2 two-contact switches, and a normal Weston element. The soln. under investigation, satd. with quinhydrone, with a Pt electrode is connected by means of an agar-agar syphon (2% soln. of agar-agar in a satd. KCl soln.) through an unsatd. KCl soln. with a calomel or quinhydrone electrode. The e. m. f. of the electrode is detd. For a cell consisting of a satd. calomel electrode, and of the soln. under investigation satd. with quinhydrone pH = $(0.4541 - E_x)/0.0577$ where E_x is the e. m. f. of the electrode in v. For a double quinhydrone cell, in which a quinhydrone electrode is taken for comparison with a standard Weibel soln. (pH = 2.04, consists of 0.01 *N* HCl soln. and 0.09 *N* KCl soln., or of other buffers with known pH), pH = $2.4 + (E_x/0.0577)$. These formulas are valid for 18°. At other temps. for a quinhydrone-calomel cell pH = $[0.4541 - 0.00033(t - 18) - E_x]/[0.0577 + 0.0002(t - 18)]$. With H_2 electrodes pH is detd. in the same manner, but for dil. nonbuffer solns. a condenser of small capacity should be used, such that a complete satn. from the cell under investigation should not take more than 1 min. In case of oxidizing media the same arrangement is used with glass electrodes. Close agreements in pH values were obtained by the Poggendorf and the ballistic methods.

W. R. Henn

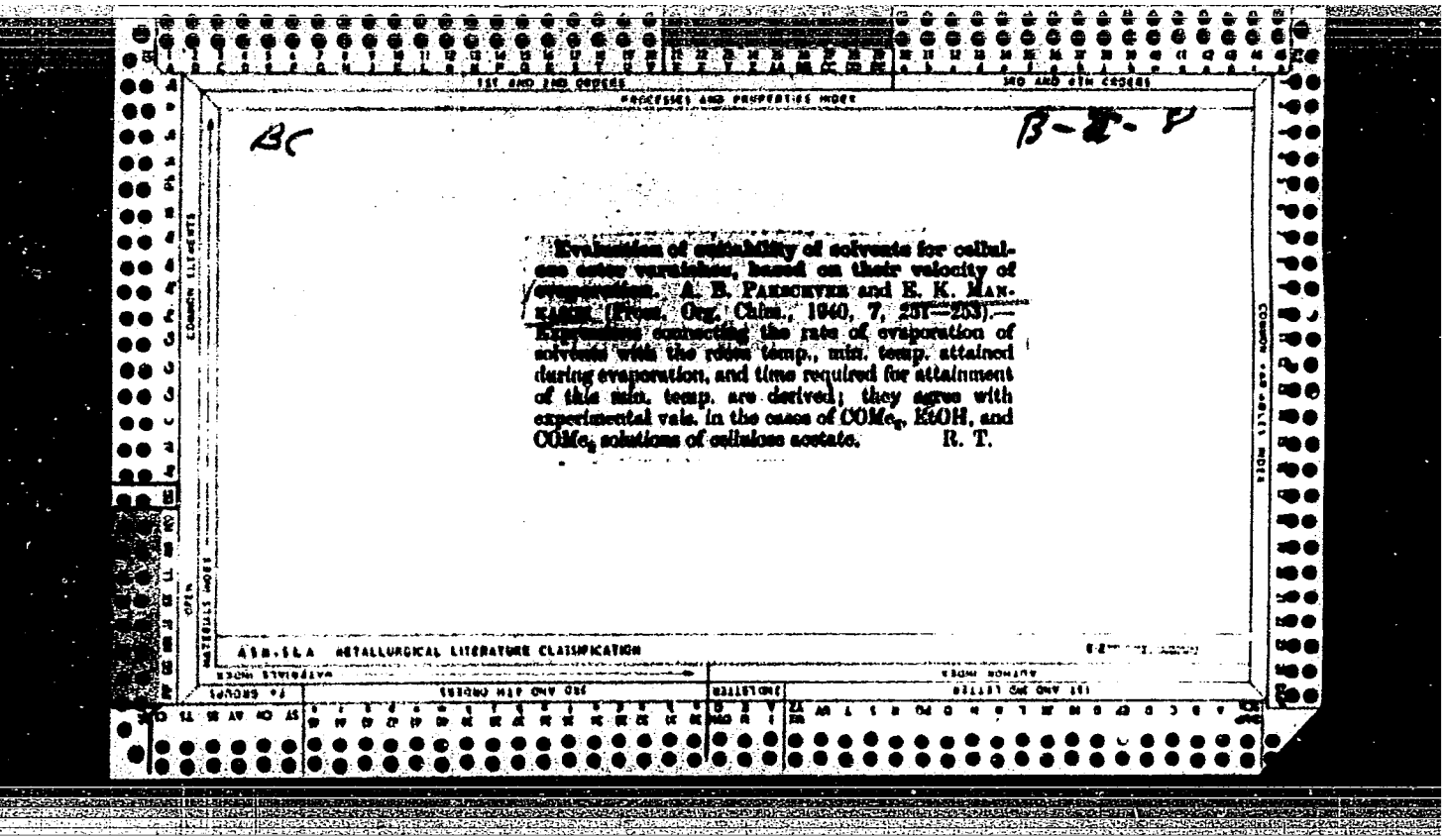
ASM-SLA METALLURGICAL LITERATURE





Evaluation of solvents for cellulose ester lacquers from the rate of evaporation. A. Pakshver and K. Mankash. *Trans. Inst. Chem. Tech. Ivanovo* (U. S. S. R.) 1940, No. 3, 180–8.— During the evapn. of the individual liquids the temp. of the liquid decreases gradually, reaching T_{min} (the "temp. of the wet thermometer") after a definite θ_{max}. The following equations are proposed for calcg. the temp of evapn. with time and of T_{min} and θ_{max}. $\lambda F_1\sigma[(aT + b)/T](M/PR)d\theta = [\sigma F_1[(aT + b)/T](M/PR)\theta - W_0]cdT + \alpha F_2(T_0 - T)d\theta$ (1) where λ is the heat of evapn., F_1 the surface of evapn. in sq. cm., F_2 the total surface through which the heat passes to the liquid, temp. of evapn. can be calcd. from (1) and (2). In the T_0 the temp. of outside air, σ the coeff. of diffusion in sq. expts. the changes of the temps. of the following liquids cm./sec., α the coeff. of heat transfer in cal./g. sec., T the and solns. during evapn. were investigated: acetone (b. abs. temp., b and c are consts., M is the mol. wt. of the 56.1°), EtOH (b 78.0°) and a 15.5% soln. of acetylevapg. liquid, P the pressure of the surrounding medium, cellulose in acetone. The evapn. velocity was detd. from θ the time and W_0 the initial wt. of the evapg. liquid in g. the loss of wt. of the liquid in Petri dishes. Simultane- This equation can be simplified for evpag. a thin layer of ously with the evapn. velocity the temp. of the surface the liquid to the following form $dT/d\theta = [\lambda\sigma][(aT + b)/$ layer of the liquid was measured with a point thermocouple $T](M/PR) - 2\alpha(T_0 - T)] + (\sigma[(aT + b)\cdot T](M/PR)$- (Cu-constantan) to an accuracy of 0.3°. The temps. of $\theta - W_0')c$, (2), where W_0' corresponds to the initial wt. of various inner layers of the liquid were detd. from time to the evapg. liquid per sq. cm. of its surface. T_{min} and time. The exptl. results agreed well with the calcd. The θ_{max} can be calcd. from $T_{min} = [(2\alpha T_0 - \sigma\lambda a)M/PR)$ method proposed by Mindlin and Zel'dovich (C. A. 33, $4\alpha] + \sqrt{[(2\alpha T_0 - \lambda\alpha a(M/PR)]^2 - [\lambda\sigma b(M/PR)/2\alpha]^2}$, (1939) for measuring the properties of solvents used for $\theta_{max} = W_0'/\sigma[(aT_{min} + b)/T_{min}](M/PR)$. The velocity the prepn. of lacquers from cellulose esters and kinodlim of evapn. G decreases with a decrease of the temp. of collodion must be changed because the method does not evapn. G reaches a const. value G_{min} when the temp. take into consideration the initial wt of the lacquer W_0. reaches T_{min}. The evapn. of volatile liquids from solns. Twelve references

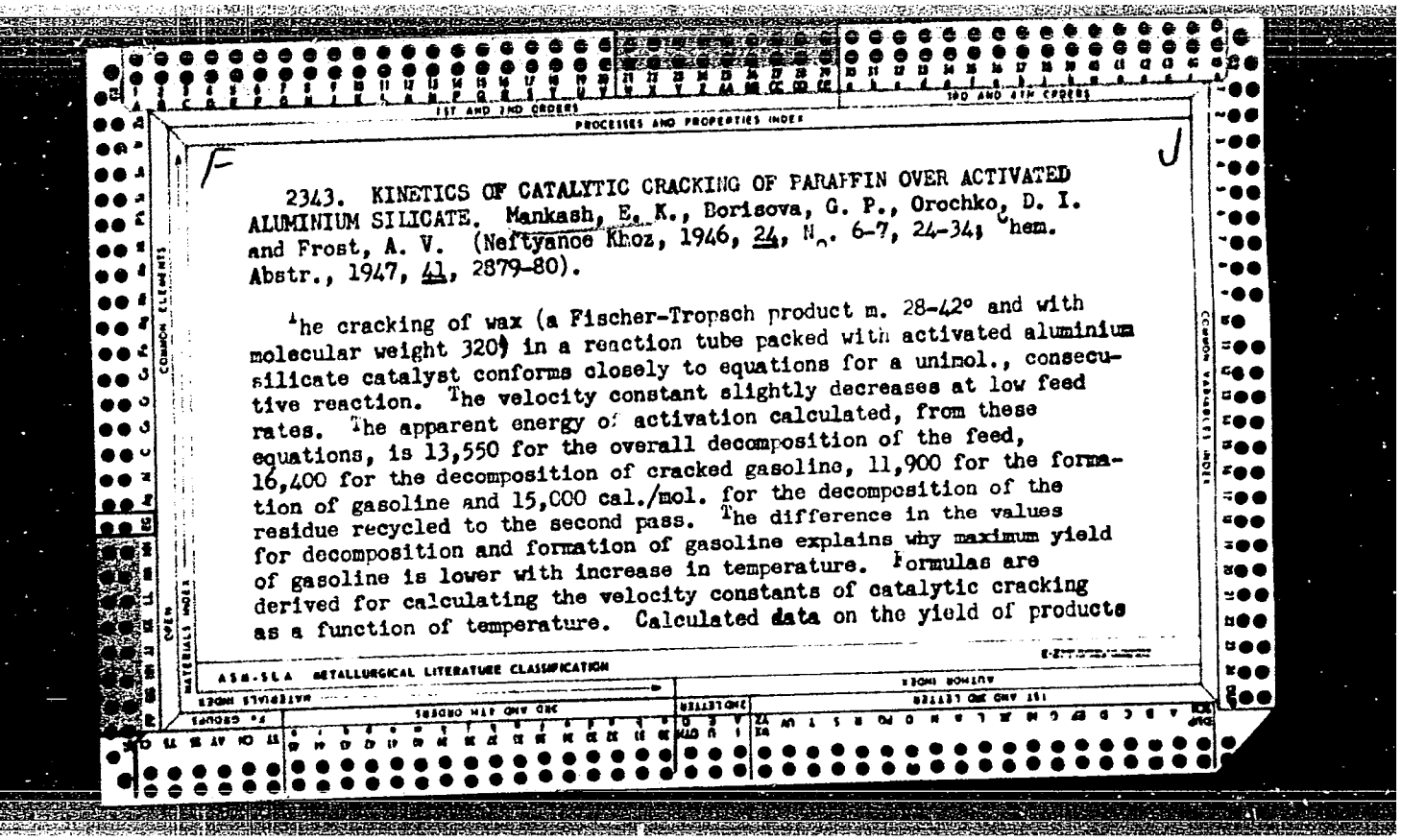
W. R. Henn



BC

B-2-V

Evaluation of suitability of solvents for cellulose ester varnishes, based on their velocity of evaporation. A. B. Paschkyss and E. K. Mantschik. (Kunst. Org. Chim., 1940, 7, 251—253).—Expressions connecting the rate of evaporation of solvents with the room temp., min. temp. attained during evaporation, and time required for attainment of this min. temp. are derived; they agree with experimental vals. in the cases of $COMe_2$, EtOH, and $COMe_2$ solutions of cellulose acetate. R. T.



PROCESSES AND PROPERTIES INDEX

F J

2343. KINETICS OF CATALYTIC CRACKING OF PARAFFIN OVER ACTIVATED ALUMINIUM SILICATE. Mankash, E. K., Borisova, G. P., Orochko, D. I. and Frost, A. V. (Neftyanoe Khoz, 1946, 24, No. 6-7, 24-34; Chem. Abstr., 1947, 41, 2879-80).

The cracking of wax (a Fischer-Tropsch product m. 28-42° and with molecular weight 320) in a reaction tube packed with activated aluminium silicate catalyst conforms closely to equations for a unimol., consecutive reaction. The velocity constant slightly decreases at low feed rates. The apparent energy of activation calculated, from these equations, is 13,550 for the overall decomposition of the feed, 16,400 for the decomposition of cracked gasoline, 11,900 for the formation of gasoline and 15,000 cal./mol. for the decomposition of the residue recycled to the second pass. The difference in the values for decomposition and formation of gasoline explains why maximum yield of gasoline is lower with increase in temperature. Formulas are derived for calculating the velocity constants of catalytic cracking as a function of temperature. Calculated data on the yield of products

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and the optimal volumetric velocity corresponding to maximum gasoline yield are tabulated along with experimental values. They agree fairly well.

MANKASH, Ye. K.

USSR/Chemistry - Polyamide Fibers Apr 51

"Kinetics of the Heterogeneous Hydrolysis of Polyamide Fibers in Acids," Ye. K. Mankash, A. B. Pakshver, Chemicotech Inst, Ivanovo

"Zhur Fiz Khim" Vol XXV, No 4, pp 468-474

Gives eq describing heterogeneous acid hydrolysis of polyamide and cellulose fibers. Eq permits estn of mol structure of high polymer fibers. Mol structure det susceptibility of fiber to hydrolysis. Lists series of fiber types according to deg of mol orientation as indicated from kinetics of hydrolysis.

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