STENINA, T.A.

Microbiological characteristics of some soils of the Komi A.S.S.R. Izv. Komi fil. Geog. ob-va SSSR no.9:38-48 '64.
(MIRA 18:5)

STENINA, T.A.

Decomposition of plant residues in arable Podzolic soils.
Pochvovedenie no.1:95-102 Ja '64. (MIRA 17:3)

1. Komi filial Akademii nauk SSSR.

L 18994-63 EWP(q)/EWT(m)/BDS AFFTC/ASD/ESD-3 Pq-4 WH/JD/JG

ACCESSION NR: AT3002454 S/2935/62/000/000/0207/0211

72
69

AUTHOR: Gaman, V. I.; Sirotkin, A. A.; Stenina, V. M.

TITLE: Effect of As-S-I low-melt glass on current-voltage characteristics of silicon p-n junctions [Conference on Surface Properties of Semiconductors, Institute of Electrochemistry, AN SSSR, Moscow, 5-6 June, 1961]

SOURCE: Poverkhnostnyye svoystva poluprovodnikov. Moscow, Izd-vo AN SSSR, 1962, 207-211

TOPIC TAGS: low-melt glass, current-voltage characteristic, semiconductor, silicon, silicon junction

ABSTRACT: Experimental studies are described of alloyed Si junctions hot-coated with 24% As + 67% S + 9% I glass. The dielectric constant of the glass was 6.5, its $tg\delta$ was $(4.5-0.4)\times10^{-3}$ at 30-10,000 cps. Al was alloyed into n-Si with a resistivity of 10-15 ohms.cm. The junctions were dipped into the glass melt at 250-300C for 1 min, then aged for 30-50 hrs at 130-150C, then subjected

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ACCESSION NR: AT3002454

3

to tropical humidity for 75 hrs, and finally went through 3 thermal 70-min cycles -60+130C. Reverse current-voltage characteristics were determined at various stages of the above treatment. It was found that the glass acted as a getter absorbing contaminants from the surface of the junctions; that the glass was moisture-resistant and that its dielectric loss was low. "In conclusion, the authors wish to thank B. V. Makarkin for measuring the dielectric characteristics of the glass." Orig. art. has: 4 figures and 1 formula.

ASSOCIATION: Tomskiy gosudarstvenny*y universitet im. V. V. Kuyby*sheva (Tomsk State University)

SUBMITTED: 00 DATE ACQ: 15May63 ENCL: 00

SUB CODE: PH NO REF SOV: 002 OTHER: 005

Card 2/2

FRIDMAN, E.A.; STENINA, Ye.S.

Analysis of an outbreak of influenza caused by a mixed culture of virus types A_1 and C. Trudy Len.inst.epid.i mikrobiol. 17:30-35 '58. (MIRA 16:2)

1. Iz laboratorii Leningradskogo instituta epidemiologii, mikrobiologii i gigiyeny imeni Pastera, zav. E.A. Fridman.
(INFLUENZA—MICROBIOLOGY)

ANSHELES, I.M.; FRIDMAN, E.A.; STENINA, Ye.S.; KLUSHINA, T.A.; TARASOVA, Ye.F.; KHAZANSON, L.B.

Epidemiological and virological characteristics of the influenza pandemic of 1957 in Leningrad. Trudy Len.inst.epid.i mikrobiol. 17:66-77 '58. (MIRA 16:2)

1. Iz sektora epidemiologii (zav. I.M. Ansheles) i laboratorii grippa (zav. E.A. Fridman) Leningradskogo instituta epidemiologii, mikrobiologii i gigiyeny imeni Pastera, Gorodskoy sanitarno-epidemiologicheskoy stantsii i Protivogrippoznogo kabineta 39-y polikliniki Dzerzhinskogo rayona, Leningrada.
(LENINGRAD—INFLUENZA)

ANSHELES, I.M.; FRIDMAN, E.A.; KLUSHINA, T.A.; STENINA, Ye.S.; KHAZENSON, L.B.; TARASOVA, Ye.F.

Influenza pandemic of 1957 and certain epidemiological and virological characteristics of influenza in Leningrad. Vop. virus 4 no.1: Ja-F '59 (MIRA 12:4)

1. Leningradskiy institut epidemiologii, mikrobiologii i gigiyeny imeni Pastera, Leningradskaya gorodskaya sanitarno-epidemiologicheskaya stantsiya i 39-ya poliklinika.
(INFLUENZA, epidemiol.
in Russia (Rus))

FRIDMAN, E.A.; GRIGOR'YEVA-BERENSHTEYN, A.G.; STENINA, Ye.S.; KUDYAKOVA, L.I.; FILIPPOVA, G.D.; BOLDASOV, V.K.

Immunological evaluation of the effectiveness of anti-influenza vaccination in 1958-1959 '61. Trudy Len.inst.epid.i mikrobiol. 22:146-156 '61 (MIRA 16:2)

1. Iz laboratorii grippa (zav. E.A. Fridman) Leningradskogo instituta epidemiologii i mikrobiologii imeni Pastera i otdela epidemiologii (zav. A.G. Grigor'yeva-Berenshteyn) Leningradskogo nauchno-issledovatel'skogo instituta vaktsin i syvorotok.
(INFLUENZA--PREVENTIVE INOCULATION) (IMMUNITY)

81544
SOV/137-59-5-11408

18.7100
Translation from: Referativnyy zhurnal, Metallurgiya, 1959, Nr 5, p 275
(USSR)

AUTHORS: Stenkin, P.A., Lipchin, N.N.

TITLE: Application of High Heating Temperatures in Isothermal Quench-Hardening of Carbon Tool Steel

PERIODICAL: Prom.-ekon. byul. Sovnarkhoz Permsk. ekon. adm. r-na, 1958, Nr 9, pp 7 - 11

ABSTRACT: To increase stability of supercooled austenite within the range of perlite and intermediate transformations, heating for quench-hardening was carried out to higher temperatures. To avoid grain growth at high temperatures the rate of heating must exceed the rate of grain growth. Specimens of U8 steel of 10 mm cross section were heated in a salt bath at 1,000°, 1,100° and 1,200°C, were held for different lengths of time and were than quenched in oil heated to 130°C. The best results in quench-hardening were obtained after speeded-up heating in a salt bath, holding at 1,200°C for 3 sec, for 6 sec at 1,100°C and for 10 sec at

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SOV/129-59-5-16/17

AUTHORS: Lipchin N.N. (Cand.Tech.Sciences) and Sten'kin P.A. (Engineer)

TITLE: Isothermal Quenching of Carbon Steels from High Heating Temperatures (Izotermicheskaya zakalka uglerodistykh staley s vysokikh temperatur nagreva)

PERIODICAL: Metallovedeniye i Termicheskaya Obrabotka Metallov, 1959, Nr 5, pp 59-60 (USSR)

ABSTRACT: Isothermal quenching of complicated carbon steel tools from currently used heating temperatures reduces deformation considerably but it cannot be used in practice since it does not ensure the required high hardness. Therefore, for manufacturing tools of complex shape, alloy steels are used instead of carbon steels. The tools are subjected to ordinary hardening and then they are trued. For increasing the stability of super-cooled austenite of carbon steels in the range of perlitic and intermediate transformations the authors heated the specimens for hardening to more elevated temperatures so that they could apply heated media for cooling. The curve, Fig 1, shows the influence of the heating temperature of 5 mm diameter U7 steel specimens on the hardness in the case of

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Isothermal Quenching of Carbon Steels from High Heating Temperatures

quenching in oil heated to 130°C. However, the properties of steel are influenced not only by the temperature but also by the speed of heating and the duration of maintaining the specimen at the given temperature. To avoid grain growth at elevated temperatures it is necessary to apply a heating speed which is slightly higher than the speed of grain growth. This condition can be fulfilled for some tools in the case of heating in ordinary salt baths. The dependence of the change in hardness of the core of a 10 mm diameter U8-steel specimen on the duration of heating at 1000, 1100 and 1200 °C with subsequent quenching in oil heated to 130°C is graphed in Fig 2. A hardness of 60 R_c can be obtained by heating with a speed of 40°C/sec to 1200°C, 20°C/sec to 1100°C and 10°C/sec to 1000°C and holding the components at these temperatures for 0.5, 1 and 1.5 min respectively. The authors established that the heating duration of components for each 1 mm of the cross-section in the case of heating in a salt bath should be 3 sec for 1200°C, 6 sec for 1100°C and 10 sec for 1000°C.

Card 2/4 Investigations have shown that if such a regime is applied, the hardened specimens and tools will conserve

Isothermal Quenching of Carbon Steels from High Heating Temperatures

a fine grain structure. An appreciable growth of the grain was observed only in the case of 3- to 4-fold increases of the heating durations compared to those graphed in Fig 2. The deformation during hardening was measured on French type ring specimens. Thus, in the case of quenching such specimens in water after heating for 0.5 min at 1200°C, the deformation between the reference points was 0.37 mm whilst in the case of quenching in oil heated to 130°C, the corresponding deformation was 0.4 mm, i.e. 9 times lower. The hardness was 60 to 62 R_C. In the Perm' Machinery Works introduction of the method of isothermal hardening in heated oil after accelerated heating to elevated temperatures has eliminated completely rejects due to cracks in the manufacture of blades of meat cutting machines. Originally the number of rejects reached up to 30%. The here-described method is likely to be extensively used for hardening of small carbon

SOV/129-59-5-16/17

Isothermal Quenching of Carbon Steels from High Heating Temperatures

steel components and tools of complex shape which are prone to crack formation and warping.
There are 2 figures.
Note: This is a complete translation.

ASSOCIATION: Permskiy gosudarstvennyy universitet i Permskiy zavod torgovogo mashinostroyeniya (Perm' State University and Perm' Works for Consumer Goods Machinery)

Card 4/4

S/147/63/000/001/012/020
E031/E181

AUTHOR: Sten'kin, Ye.D.

TITLE: The optimum ratio of the total pressures in the mixing chamber of a by-pass jet engine

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Aviatsionnaya tekhnika, no.1, 1963, 104-115

TEXT: Initially it is assumed that $k_I = k_{II}$, where k is the adiabatic exponent and the subscripts indicate the inner (I) and the surrounding (II) gas flows at the input to the mixing chamber, respectively. The maximum positive effect of mixing is determined by the difference achieved thereby in the total temperatures of the initial flows. The maximum is achieved at an optimum ratio of the total pressures p. In this paper, this ratio is determined for a cylindrical mixing chamber. The effect of mixing is found from the ratio of the output momentum flow of the mixture to the sum of the momentum flows of the separate streams. From this, and assuming p^*_{II} and λ_{II} (the asterisk denotes isentropic ram compression and λ is the reduced velocity)

Card 1/2

are constant, a system of equations for p_I^* is established.

It was recommended by A.L. Klyachkin (NDVSh, Energetika, no.2, 1959) that, for optimum mixing, the total pressures should be equal. This is confirmed to within the approximations of this paper. Graphs of the pressure ratio for various λ_{II} are given.

The conclusions of A.L. Klyachkin are generalized by taking account of the effect of different temperature ratios and, finally, for $k_I \neq k_{II}$.

There are 6 figures.

SUBMITTED: June 11, 1962

Card 2/2

ACCESSION NR: AP4040975 S/0147/64/000/002/0088/0101

AUTHOR: Sten'kin, Ye. D.

TITLE: Optimum compression in the compressor of a bypass turbojet engine with afterburning

SOURCE: IVUZ. Aviatsionnaya tekhnika, no. 2, 1964, 88-101

TOPIC TAGS: turbojet engine, bypass turbojet engine, thrust augmentation, turbojet

ABSTRACT: The performance characteristics of a bypass turbojet engine with afterburning to a great extent depend on the degree of pressure increase ($*\pi_{kI}$) in the main gas generator. Formulas were derived in terms of engine cycle parameters for determining the optimum values of $*\pi_{kI}$ for a bypass turbojet engine with and without mixing of the flows. Use of the formulas reduces the cumbersome thermodynamic calculations currently used in selecting optimum engine parameters and is particularly recommended in cases where electronic computers are employed. Orig. art. has: 48 formulas and 5 figures.

ASSOCIATION: none

Card 1/2

ACCESSION NR: AP4040975

SUBMITTED: 06Jan64 ATD PRESS: 3049 ENCL: 00

SUB CODE: PR NO REF SOV: 003 OTHER: 002

Card 2/2

STEN'KIN, Ye.D.

Optimum compression in the compressor of a by-pass turbojet engine with a booster. Izv.vys.ucheb.zav.;av.tekh.7 no.2:88-[illegible] '64. (MIRA 17:9)

STEN'KIN, Ye.D.

Consumption and pressure characteristics of the mixing chamber of a bypass turbojet engine. Izv. vys. ucheb. zav.; av. tekh. 8 no.2:115-120 '65. (MIRA 18:5)

AUTHOR: Sten'kin, Ye. D.

B

TITLE: Input-output head characteristic of the mixing chamber, gas dynamic analysis, jet engine theory, gas dynamics, input output characteristic

SOURCE: IVUZ. Aviatsionnaya tekhnika, no. 2, 1965, 115-120

TOPIC TAGS: dual turbojet engine, mixing chamber, gas dynamic analysis, jet engine theory, gas dynamics, input output characteristic

ABSTRACT: In double turbojet engines (abbreviated DTJE) which are designed for subsonic flight speeds, a mixing chamber is normally provided. Depending on the operating mode of the engine, this chamber, just as the other units, will have a varying effect on engine efficiency. The analysis of this effect at non-rated modes (non-rated operating conditions) is shown in the article to be closely related to the characteristic of the unit (in this case, the mixing chamber), with the characteristic making possible the representation, usually in graphic form, of the fundamental thermo- and gas-dynamic peculiarities of the unit itself. Such a mixing chamber characteristic is derived in this article. The analysis deals only with the complete mixture leaving the chamber, while the problem of partial mixture is

L 50505-65

ACCESSION NR: AP5012093

not discussed in the present paper. The determination of the complete mixture temperature is considered. In the author's treatment, the mixing chamber is regarded as a particular case of an ejector with the characteristic developed on the basis of methods for the calculation of mixture parameters. The method proposed in the article, while specifically elaborated for a cylindrical mixing chamber (the type normally found in DTJE), can also be used with chambers having a variable cross section. The choice of coordinates for the representation of the characteristic is determined in this method by their suitability for a thermodynamic analysis of the DTJE. An example of such a characteristic is given in graphic form. It is analyzed for its basic peculiarities under different engine operating conditions. Orig. art. has: 10 formulas and 3 figures.

ASSOCIATION: None

SUBMITTED: 15Apr63 ENCL: 00 SUB CODE: PR

NO REF SOV: 005 OTHER: 000

L 29330-66 EWP(m)/EWP(k)/EWT(d)/EWT(l)/EWT(m)/T/EWP(w)/EWP(v) IJP(c) EM/AM/ME
ACC NR: AP6017831 SOURCE CODE: UR/0147/66/000/002/0083/0089

AUTHOR: Sten'kin, Ye. D.

ORG: none

TITLE: Simultaneous flow of two gas streams through a reaction nozzle

SOURCE: IVUZ. Aviatsionnaya tekhnika, no. 2, 1966, 83-89

TOPIC TAGS: turbojet, bypass turbojet, afterburner, jet mixing

ABSTRACT: The mixing chambers in bypass turbojet engines are comparatively short (1 to 2 chamber diameters). Therefore, mixing is not complete since a chamber length of 4 to 5 chamber diameters is required for complete mixing. This problem was analyzed under the assumption that the flow takes place without loss in total pressure and that at below critical flow velocities the pressure at the exit section equals the external pressure. The analysis based on Lyapunov's theorem for the flow stability yielded a formula which correlates the flow parameters of both streams. This formula showed that in the exit section, one stream is always subsonic while the other is supersonic. The formula can be used for designing mixing chambers of bypass turbojet engines or for afterburner mixing chambers. Orig. art. has: 16 formulas and 3 figures. [PV]

SUB CODE: 21/ SUBM DATE: 18Jan65/ ORIG REF: 006/ OTH REF: 003/ ATD PRESS: 5012

Card 1/1 UDC: 629.194.33

LEBEDEV, P.T.; USOVICH, A.T.; CHEPUROV, K.P., prof.; KAL'CHENKO, M.M., aspirant; MATUSEVICH, V.F., doktor veterin. nauk; STEN'KO, A.S., mladshiy nauchnyy sotrudnik; LAKHMYTKINA, A.N., aspirant; GRISHCHENKO, N.F.; ORLOV, A.I., veterinarnyy vrach (Arkhangel'skaya obl.); PROSTYAKOV, A.P., kand. biolog. nauk; KOVYNDIKOV, M.S., kand. veterin. nauk; ARIFDZHANOV, K.A., kand. veterin. nauk

Veterinary experiments. Veterinariia 41 no.4:101-111 Ap '64.
(MIRA 17:8)

1. Sibirskiy nauchno-issledovatel'skiy veterinarnyy institut (for Lebedev, Usovich). 2. Poltavskiy sel'skokhozyaystvennyy institut (for Chepurov, Kal'chenko). 3. Ukrainskiy nauchno-issledovatel'skiy institut zemledeliya (for Matusevich, Sten'ko, Lakhmytkina). 4. Chernigovskaya oblastnaya veterinarnaya laboratoriya (for Grishchenko). 5. Ukrainskiy nauchno-issledovatel'skiy institut eksperimental'noy veterinarii (for Prostyakov, Fortushnyy, Kovyndikov). 6. Uzbekskiy nauchno-issledovatel'skiy veterinarnyy institut (for Arifdzhanov).

L 26145-66 EWT(m)/EWA(d)/EWP(t)/EWP(z) IJP(c) JD/JW

ACC NR: AT6014331 SOURCE CODE: UR/2529/62/000/070/0106/0123

AUTHOR: Stenko, B. P.

33
B+1

ORG: none

TITLE: Thermal phenomena during the process of shear forming 18

SOURCE: Kazan. Aviatsionnyy institut. Trudy, no. 70, 1962. Aviatsionnaya tekhnologiya i organizatsiya proizvodstva (Aviation engineering and organization of production), 106-123

TOPIC TAGS: metal forming, shear forming, hydroforming

ABSTRACT: Thin-wall shells in the shape of a body of revolution are frequently used in aircraft and aerospace vehicles. Manufacture of such shells by conventional methods is both difficult and expensive, especially when heat- and oxidation-resistant steels and alloys with poor machinability are involved. A new method of "shear forming" appears to be much simpler and more economical. In shear forming, specific pressures of 300 kg/mm^2 and higher are used and initial preforms can be up to 40 mm thick. Wide use of this method is delayed by a lack of theoretical and experimental studies which would provide a basis for establishing the optimal conditions of the process, designing equipment and tools, and expanding the number of materials and parts which can be processed. The department of aircraft construction at Kazan' Aviation Institute, under the leadership of Professor M. I. Lysov, is presently studying the

Card 1/2

L 26145-66

ACC NR: AT6014331

process of shear forming to obtain the data needed for designing technological processes. These studies include investigation of the stress and strain states of formed parts, depending on the material used and the forming conditions; investigations of force factors and thermal processes; and testing cooling and lubrication methods. This article is a report on a theoretical analysis of thermal phenomena taking place in the formed part and formed tool. A series of equations is derived and used to calculate the temperature fields in a formed part of cylindrical shape and in a forming roller. Orig. art. has: 9 figures and 39 formulas. [DV]

SUB CODE: 13/ SUBM DATE: 04Nov61/ ORIG REF: 002/ ATD PRESS: 4251

Card 2/2

L 00601-66 EWT(1)/EWT(m)/EWP(t)/EWP(k)/EWP(b)/EWA(c) JD/WW

ACCESSION NR: AR5018953 UR/0276/65/000/007/V027/V027
621.983.4

SOURCE: Ref. zh. Tekhnologiya mashinostroyeniya. Svodnyy tom, Abs. 7V202

AUTHOR: Stenko, B. P. 44,55

TITLE: Measuring the forces arising during power spinning and ironing 19, 44,55

CITED SOURCE: Tr. Kazansk. aviats. in-ta, vyp. 84, 1964, 85-94 44,55

TOPIC TAGS: power spinning, ironing, roller contact surface, surface projection

TRANSLATION: The report considers a program for defining the contact surface projected area for spinning rollers with a conical radial section. It is noted that the shape and dimensions of the contact surface and its projection depend on such parameters as the roller indentation depth t, feed S, the roller angle-of-taper φ, and their correlations. Formulas are given for calculating projections at S larger, smaller, or equal to $t \cdot \mathrm{ctg}\varphi$. The author describes experimental procedure and equipment (machine tool, mandrel, spring dynamometer with resistance strips and instrumentation). Bibl. with 3 titles, 5 illustrations. S. Kolesnikov

Card 1/2

L 00601-66

ACCESSION NR: AR5018953

0

SUB CODE: IE ENCL: 00

Card 2/2

L 16105-66 EWP(k)/EWT(1)/EWT(m)/EWA(d)/EWP(t) JD/HW

ACC NR: AT6003155 SOURCE CODE: UR/2529/64/000/084/0085/0094

33

AUTHOR: Stenko, B. P.

32

ORG: Kazan Aviation Institute (Kazanskiy aviatsionnyy institut)

B+1

TITLE: On the question of determining stresses in the process of forced precision pressing of parts

14,44,55

SOURCE: Kazan. Aviatsionnyy institut. Trudy, no. 84, 1964. Aviatsionnaya tekhnologiya i organizatsiya proizvodstva (Aviation technology and production management), 85-94

TOPIC TAGS: metal pressing, metalworking, metalworking machine, metal stamping, metal forming, steel/ U8A steel

ABSTRACT: Considerations in determining stresses occurring in the process of forced rotational pressing of precision parts are developed. Emphasis is placed on determining the effect on the process of such parameters as V - the rate of rotation, S - the feed rate, f - the press coefficient, and others. The resultant stress P is the product

$$P = q \cdot F,$$

2

where q is the mean unit tool pressure, and F is the contact area between the tool

Card 1/2

L 16105-66
ACC NR: AT6003155

and the part. This product may be written in a form suited to defining stress components as related to area projections on coordinate planes. A method of determining the projected areas of contact surface for press rollers with conical radial profiles is developed. Circumferential deformations are ignored as radial and longitudinal distortions are emphasized. Geometrical equalities for an example case are given. Special testing equipment was designed and constructed for studying the process. The equipment consisted of a dynamometer with a press roller, a press mandrel, and instrumentation. Each major component of the test equipment is described. The system was tested and checked out with the preparation of a roller of U8A steel. Some details of temperature-measuring instrumentation are given. Orig. art. has: 27 equations and 5 figures.

SUB CODE: 13/ SUBM DATE: 010ct63/ ORIG REF: 003

Card 2/2

KHAYET, G.L., kand.tekhn.nauk; STEN'KO, D.A., inzh.; BRUSILOVSKIY, B.A., inzh.

Experience of the Novo-Kramatorsk Machinery Plant (Kramatorsk) in hard-facing large parts by rolling with rolls. [Trudy] TSNIITMASH 91:76-94 '59. (MIRA 12:8)
(Hard facing) (Kramatorsk--Machinery industry)

STEN'KO, D.A.

25(2,5) PHASE I BOOK EXPLOITATION SOV/2885

Tsentral'nyy nauchno-issledovatel'skiy institut tekhnologii i mashinostroyeniya

Povysheniye prochnosti elementov konstruktsiy i detaley mashin (Increasing the Strength of Constructional and Machine Elements) Moscow, Mashgiz, 1959. 210 p. (Series: Its: Sbornik) 4m. 9.2) 5,500 copies printed.

Ed. (Title page): I. V. Kudryavtsev, Doctor of Technical Sciences. Professor; Ed. (Inside book): A. G. Nikitin, Engineer; Tech. Ed.: V. D. El'kind; Managing Ed. for Literature on Transport Machine Building (Mashgiz): K. A. Ponomarev, Engineer.

PURPOSE: This collection of articles is intended for designers, process engineers, and scientific research workers in the machine-building industry.

COVERAGE: The collection contains papers dealing with experimental work done recently by TsNIITMASh. The experiments are concerned with the practical use of surface work hardening in industry. Industrial practices intended to increase the strength and service life of machine parts and constructional elements are discussed. Several articles are devoted to problems of increasing the fatigue strength of machine parts by work hardening. Industrial practices of NKMZ in Kramatorsk in external burnishing of large machine parts are presented. Tools and fixtures used in surface work hardening are described. No personalities are mentioned. References follow each article.

Khayet, G. I. (Candidate of Technical Sciences), D. A. Stenko, and B. A. Brusilovskiy, (Engineers). Practice at the Novo-Kramatorskiy mashinostroitel'nyy zavod (Kramatorsk New Machine-building Plant) in External Burnishing of Large Machine Parts With Rollers 76

The technique of conducting experiments, the geometry of the tool, the principles of selecting the burnishing regime, and the devices used are described and discussed. A table with diagrams of burnished machine parts and data on effects of burnishing is presented.

Kudryavtsev, I. V., and M. A. Balabanov (Candidate of Technical Sciences). Work Hardening of Stepped Shafts by Fillet Peening 111

Results of fatigue tests on stepped steel shafts are analyzed. Comparisons are drawn between shafts work-hardened by fillet peening and shafts not subjected to any work-hardening process. Fillet peening was accomplished on a milling machine with a special attachment having a spring-actuated striking pin with a spherically rounded end.

Barats, A. I. (Engineer). Increasing the Life of Metallurgical-Machinery Parts by External Burnishing With Rollers 123

Constructions of the burnishing devices used are described, and some problems connected with the technique of burnishing are discussed. Results of testing burnished surfaces in operation are presented.

KOYRE, V.Ye., kand.tekhn.nauk; STEN'KO, D.A.

Using roll burnishing for improving the macrogeometry of large part surfaces. Vest.mashinostr. 45 no.11:46-47 N '65. (MIRA 18:12)

STENKO I I

PHASE I BOOK EXPLOITATION SOV/5921

Akademiya nauk SSSR. Institut fizicheskoy khimii

Problemy kinetiki i kataliza. [t.] 10: Fiziko-khimiya kataliza (Problems of Kinetics and Catalysis. [Vol.] 10: Physics and Physico-Chemistry of Catalysis) Moscow, Izd-vo AN SSSR, 1960. 461 p. Errata slip inserted. 2,600 copies printed.

Eds.: S.Z. Roginskiy, Corresponding Member of the Academy of Sciences USSR, and G.V. Kryukov, Candidate of Chemistry; Ed. of Publishing House: A.A. Bendriker; Tech. Ed.: G.A. Astaf'yeva.

PURPOSE: This collection of articles is addressed to physicists and chemists and to the community of scientists in general interested in recent research on the physics and physical chemistry of catalysis.

COVERAGE: The articles in this collection were read at the conference on the Physics and Physical Chemistry of Catalysis organized by the Otdel khimicheskikh nauk AN SSSR (Section of Chemical Sciences, Academy of Sciences USSR) and by the Academic Council on the problem of "the scientific bases for the selection of catalysts." The Conference was held at the Institute fizicheskoy khimii AN SSSR (Institute of Physical Chemistry of the AN USSR) in Moscow, March 20-23, 1954. Of the great volume of material presented at the conference, only papers not published elsewhere were included in this collection.

TERENT'YEVA, M.V. [TSierents'eva, M.V.]; LOBACH, T.Ya.; STEN'KO, L.Ya. [Stsian'ko, L.IA.]

Content of basic microelements in some varieties of fruit and berry crops of White Russia. Vestsi. AN BSSR. Ser. biial. nav. no.4:46-51 '64. (MIRA 18:12)

STENKO, M. I. Cand. Med. Sci.

Dissertation: "Clinical and Laboratory Data for Evaluating the Effectiveness of Treating Infected Wounds with Gramicidin and Other Theraputic Preparations." Central Inst. for Advanced Training of Physicians. 8 Jul 47.

SO: Vechernyaya Moskva, Jul, 1947 (Project #17836)

KOST, Ye.A., prof.; STENKO, M.I.

"Blood picture and its clinical significance" by D. N. IAnovskii. Reviewed by E. A. Kost, M.I. Stenko. Probl. gemat. i perel. krovi 4 no.6:59-61 Je '59. (MIRA 12:8)
(BLOOD) (IANOVSKII, D.N.)

STEN'KO, Mikhail Ivanovich; MAMYSH, A.I.; LISAKOVSKIY, I.N.

[The oldest in the South; outline history of the Taganrog Ship Repair Plant]Stareishii na IUge; ocherk istorii Taganrogskogo sudoremontnogo zavoda. Rostov-na-Donu, Rostovskoe knizhnoe izd-vo, 1961. 126 p. (MIRA 16:2)
(Taganrog--Ships--Maintenance and repair)

BORISOV, V.I.; STEN'KO, M.N.; SHIROKHIKH, D.P.

Shortcomings of a zoology trial textbook ("Zoology"; textbook for secondary schools by V.F. Natali. Reviewed by V.I. Borisov, M.N. Sten'ko, D.P. Shirokikh). Biol. v shkole no.5:93 S-O '58. (MIRA 11:11)

1. Krasnodarskiy pedagogicheskiy institut.
(Zoology--Study and teaching) (Natali, V.F.)

STEN'KO, Yu. M., mladshiy nauchnyy sotrudnik

Data concerning temporature drops connected with air conditioning on ships. Mor.flot 19 no.1:22-23 Ja '59. (MIRA 12:3)

1. Moskovskiy nauchno-issledovatel'skiy institut gigiyeny i sanitarii im. F.F.Erismana.

(Ships--Air conditioning)

STEN'KO, Yu.M., mladshiy nauchnyy sotrudnik

Basis of hygienic factors of temperature and humidity of the aid in cabins of ships sailing in tropical waters. Gig. i san. 25 no. 5:38-43 My '60. (MIRA 13:10)

1. Is TSentral'noy nauchno-issledovatel'skoy laboratorii gigiyeny vodnogo transporta.
(SHIPS—AIR CONDITIONING)

POPOV, Garri Sergeyevich; RASTORGUYEV, Petr Vasil'kevich; STEN'KO, Yuriy Mikhaylovich; NOVIKOV, Teodor Nikitovich; BARKOV, G.D., red.; BONDAREV, G.I., kand. med. nauk, red.; MOSHAROVA, T.P., red.izd-va; TIKHONOVA, Ye.A., tekhn. red.

[Medical handbook for the ship's captain] Meditsinskii spravochnik kapitana. Pod obshchei red. G.D.Barkova. Moskva, Izd-vo "Morskoi transport," 1963. 213 p. (MIRA 16:5)

1. Direktor TSentral'noy nauchno-issledovatel'skoy laboratorii gigiyeny vodnogo transporta (for Barkov).
(MEDICINE, NAVAL—HANDBOOKS, MANUALS, ETC.)

KRASNOV, M.L., prof.; SIVOSHINSKIY, D.S., dotsent; ZIANGIROVA, G.G.; VYALOVA, Ye.V.; STEN'KO, Z.L.

Results of three year's use of radioactive isotopes in the diagnosis of intraocular tumors. Trudy TSIU 71:107-112 '64. (MIRA 18:6)

1. Kafedra glaznykh bolezney (zav. prof. M.L. Krasnov), kafedra meditsinskoy radiologii (zav. prof. V.K. Modestov) TSentral'nogo instituta usovershenstvovaniya vrachey i Moskovskaya glaznaya klinicheskaya bol'nitsa.

STENKOVSKAYA, M. L.

USSR/Cultivated Plants - Potatoes. Vegetables. Melons. M-3

Abs Jour : Ref Zhur - Biol., No 20, 1958, 91662

Author : Stenkovskaya, M. L.

Inst : Omsk Agricultural Institute.

Title : Irrigation of Potato in Suburban Zone.

Orig Pub : S. kh. Sibiri. 1957, No 12, 40-43.

Abstract : In its 1954-1956 experiments the Agricultural Department of Omsk Agricultural Institute used Early Rose and Berlichingen potato varieties. The dates of watering and the irrigation rates varied depending on the quantity and distribution of atmospheric precipitation during the vegetative period. For the Early Rose variety in the Fall, before planting, a thorough drenching was given at approximately 1000 m^3 per hectare, which provided 300 m^3 per hectare more water reserve before full sprouting then on

Card 1/2

STENKOVSKAYA, M. L., Cand Agric Sci (diss) -- "The significance of certain agronomic procedures in the irrigation of early and late potatoes in the suburban zone of the city of Omsk". Omsk, 1960. 21 pp (Abstracts of Dissertations Submitted at Omsk Agric Inst im S. M. Kirov), 120 copies

(KL, No 12, 1960, 129)

STSENTKOV, Yu. V.

"A Method of Ultrasonic Absorption Measurement in Solids."

paper presented at 4th All-Union Conf. on Acoustics, Moscow, 26 May - 2 Jun 58.

VRSEK, J., inz.; BENES, F., inz., CSc.; SZABO, A., inz.; STENO, J., inz.

Problems of continuous casting of low-carbon steels. Hut listy 18 no.11:773-779 N'63.

1. Vyzkumny ustav hutnictvi zeleza, Praha (for Vrsek and Benes)
2. Svermove zeleziarne, Podbrezova (for Szabo and Steno).

STENO, M.

Osteopoikilosis. Bratisl. lek. listy 45 no.2:108-112
31 Ja '65

1. Ortopedicka klinika lek. fak. Univerzity Komenskeho v Bratislave (veduci - akademik J.Cervenansky).

HURAJ, [illegible], M.

Trauma to the spine in orthopedic work. Acta chir. orthop. traum. Cech. 31 no.4:313-318 Ag '64.

1. Ortopedicka klinika lekarskej fakulty University Komenskeho v Bratislave (prednosta prof. dr. J. Cervenansky).

STENOVIC, M.

"The market for raw materials."

p. 1098 (Tekstil) Vol. 6, no. 12, Dec. 1957
Zagreb, Yugoslavia

SO: Monthly Index of East European Accessions (EEAI) LC. Vol. 7, no. 4, April 1958

STEPAN, J.,dr.

Medical profession and public authority. Cesk. zdrav. 12 no.5: 240-246 My'64

1. Vyzkumny ustav organizace zdravotnictvi v Praze.

STENPURINA, Z. K.

Cand Agr Sci - (diss) "Effect of sulfur of feed on the wool productivity of fine-fleeced sheep." Krasnodar, 1960. 23 pp; (Ministry of Agriculture RSFSR, Kuban' Agr Inst); 150 copies; price not given; (KL, 7-61 sup, 253)

IATAN, Nicolaie, ing.; LANDES, V., ing.; ILINA, I., ing.; CIOCIRLIE, S., ing.; MITROFAN, A.; POPA, M., ing.; MIHAILA, Gh.; POPA, Septimiu, ing.; PASARE, P.; STENSCHI, C., ing.

Considerations on the quality of the equipment used for casting steel ingots in Rumania. Metalurgia constr mas 14 no.11:976-983 N '62.

1. Institutul de cercetari metalurgice (for Iatan, Landes, Ilina). 2. Uzina "Victoria" Calan (for Ciocirlie, Mitrofan). 3. Intreprinderea metalurgia Aiud (for Popa, M., Mihaila). 4. Combinatul siderurgic Hunedoara (for Popa, Septimiu; Pasare). 5. Combinatul siderurgic Resita (for Stenschi).

KEIENTEY, B.; STENSZKY, Z.; CZOLLNER, F.; MESZAROS, Z.SZIAVIK, L.

Pharmacological study of acetylated morphine derivatives. Kiserletes orvostud. 10 no.1:25-35 Feb 58.

1. Debreceni Orvostudomanyi Egyetem Gyogyszertani Intezete es Tiszavasvari Alkaloida Gyar..
(MORPHINE, related cpds.
acetyl deriv., pharmacol. & tox. (Hun))

S/[illegible]

KELENTEY, B.; STENSZKY, E.; CZOLLNER, F.; SZIAVIK, L.; MESZAROS, Z.

Preparation and pharmacological properties of N-oxides of opium alkaloids. Kiserletes orvostud. 10 no.1:70-77 Feb 58.

1. Debreceni Orvostudomanyi Egyetem Gyogyszertani Intezete im es Tiszavasvari Alkaloida Gyar.

(OPIUM
N-oxides of opium alkaloids, prep., chem. properties, pharmacol. & tox. (Hun))

STENSZKY, Ernone, Dr.; ASZODI, Lili, Dr.; CSOBAN, Gyorgy, Dr.

Can antibiotics be bound to serum protein fractions? I. Orv. hetil. 100 no.2:70-71 11 Jan 59.

1. A Hajdu-Biharmegyei Tanacs Korhaza (igazgato-foorvos: Manyi Geza dr.) Megyei Verkonzervalo Allomasanak, Debrecen (osztalyvezeto-foorvos: Aszodi Lili dr.) es a Hajdusagi Gyorgyszergyar Biologiai Kutato Laboratoriumanak (osztalyvezeto: Csoban Gyorgy dr.) kozlemenye.

(SERUM ALBUMEN
binding of penicillin, exper. in vivo & in vitro (Hun))
(PENICILLIN
binding by serum albumin, exper. in vivo & in vitro (Hun))

ASZODI, Lili, Dr.; STENSZKY, Ernone, Dr.; BOT, Gyorgy, Dr.

Serum phosphohexose-isomerase studies in blood donors. Orv. hetil. 100 no.6:213-214 8 Feb 59.

1. A Hajdu-Biharmegyei Tanacs Korhaza (igazgato foorvos: Menyi Geza dr.) Megyei Verkonzervalo Allomasanak (osztalyvezoto foorvos: Aszodi Lili dr.) es a Debreceni Orvostudomanyi Egyetem Korelettani Intezenek (igazgato: Kesztyus: Lorand dr. egyet. tanar) kozlemenye.

(BLOOD TRANSFUSION
donors, blood phosphohexoisomerase determ. in screening for prev. of post-transfusion hepatitis (Hun))
(HEPATITIS, etiol. & pathogen.
blood transfusion, prev. value of screening of donors by determ. of blood phosphohexoisomerase activity (Hun))
(ISOMERASES, in blood
phosphohexoisomerase determ. in screening of blood donors for prev. of post-transfusion hepatitis (Hun))

VAJDA, Istvan, dr.; ASZODI, Lili, dr.; HAJDU, Bela, dr.; STENSZKY, Ernone, dr.; BARZO, Pal, dr.; HORVATH, Endre, dr.

Familial relations of acquired hemolytic anemia. Magy.belorv.arch. 13 no.4:121-124 Ag '60.

1. A Hajdu-Bihar Megyei Tanacs Korhaza (Igazgato: Dr. Manyi Geza) I. sz. Belosztalyanak (Foorvos: Dr. Vajda Istvan), Megyei Verkonzervalo Allomasanak (Foorvos: Dr. Aszodi Lili) es az Orszagos Vertranszfuzios Szolgalat Kozponti Kutato Intezetenek (Igazgato: Dr. Hollan Zsuzsanna) kozlemenye.
(ANEMIA, HEMOLYTIC genetics)

HORVATH, Endre; ASZODI, Lili; STENSZKY, Ernone; PAVAY, Agnes

Determination of incomplete anti-A and anti-B antibodies in group O pregnant subjects and in high-titer group O blood donors. Kiserletes orvostud. 13 no.3:245-250 Je '61.

1. Orszagos Verellato Szolgalat Kozponti Kutato Intezete es Hajdu-Bihar megyei Tanacs Korhaz Verellato Osztalya.

(BLOOD GROUPS) (PREGNANCE blood)

LAZAR, Jozsef, dr.; STENSZKY, Erno, dr.; HAJDU, Bela, dr.

Quantitative determination of gastric acidity without a tube. Orv. hetil. 102 no.18:830-832 30 Ap '61.

1. Megyei Tanacs, Korhaza, Debrecen.

(GASTRIC JUICE)

STENY, YA., KOLCHIN, A. M., PANCHENKOV, G. M. and MALAKHOV, V. F.

"Die massenspektrometrische Isotopenanmalyse an Bor auf der Grundlage der Thermionem-Emmission."

Report presented at the 2nd Conf. On Stable Isotopes
East German Academy of Sciences, Inst. of Applied Physical Material
Leipzig, GDR 30 Oct - 4 Nov 1961

KARTASHOV, T.M., eloktrik; STENYANSKIY, V.N., elektrik

New automatic control system for electrodes for carbide kilns. Suggested by T.M.Kartashov, V.N.Stenianskii. Rats. i izobr. predl. v stroi. no.15:64-66 '60. (MIRA 13:9)

1. Zaporozhskiy zavod metallokonstruktsiy Ukrglavstal'konstruktsii Ministerstva stroitel'stva USSR, g. Zaporozh'ye, poselok 13.
(Electrodes)

STENYK, V.V.

S

USSR / Human and Animal Morphology (Normal and Pathological).
Cardiovascular System.

Abs Jour : Ref Zhur - Biol., No 21, 1958, No 97084

Author : Stenyk, V.V.

Inst : Lvov Oblast Scientific Society of Anatomists, Histologists and Embryologists

Title : Arterial Blood Supply of the Cerebellum of the Dog by Direct and Collateral Blood Circulation.

Orig Pub : Sb. nauchn. rabot. L'vovsk. obl. nauchn. o-vo anatomov, gistol. i embriol., 1958, vyp. 1, 21-25

Abstract : It was shown on 6 dogs of both sexes that the cerebellum is supplied by three pairs of cerebellar arteries (CA): oral (superior), dorso-lateral (anterior-inferior) and ventro-lateral (posterior-inferior), departing from the basilar and vertebral arteries. All 3 pairs of CA anastomose richly between themselves, forming, on the surface of the cerebellum, a dense fine network. Changes of CA after simultaneous bilateral exclusion of vertebral

Card 1/2

30

STENYK, V.V.

Angioarchitectonic of the cerebellym following experimental ligation of the common carotid arteries in rabbits [with summary in English]. Biul.eksp. biol. i med. 45 no.3:114-117 Mr'58 (MIRA 11:5)

1. Iz kafedry anatomii L'vovskogo meditsinskogo instituta. Predstavlena deystvitelnym chlenom AMN SSSR S.A. Sarkisovym.

(ARTERIES, CAROTID, physiology
eff. of ligation of common on cerebellar vasc. system (Rus))
(CEREBELLUM, blood supply,
eff. of ligation of common carotid arteries in rabbits (Rus))

STENYK, V.V. (L'vov, ul. Serafimovicha, 11, kv.2)

The Department of Normal Anatomy at the Lvov Medical Institute. Arkh.anat.gist.i embr. 37 no.12:100-103 D '59. (MIRA 13:5)
(ANATOMY educ.)

STENYK, V.V. (L'vov, ul. Serafimovicha, 11, kv. 2)

Arterial blood supply of the dentate nucleus of the rabbit cerebellum in direct and collateral circulation. Arkh.anat. gist.i embr. 39 no.7:80-83 Jl '60. (MIRA 14:5)

1. Kafedra anatomii (zav. - prof. A.P.Lyubomudrov) L'vovskogo meditsinskogo instituta.
(CEREBELLUM--BLOOD SUPPLY)

STENYK, V.V. (L'vov, ul. Serafimovicha, 11, kv.2)

Angioarchitectonics of the optic thalamus of the rabbit in direct and collateral blood circulation. Arkh. anat. gist. i embr. 45 no.11:93-97 N '63. (MIRA 17:8)

1. Kafedra anatomii (zav. - prof. A.P. Lyubomudrov) L'vovskogo meditsinskogo instituta.

STENYUKOVA, A.Ya. (Leningrad)

Preoperative oxygen therapy for patients with acquired heart defects. Grud. khir. 6 no.4:117-118 Jl-Ag '64.

(MIRA 18:4)

STEPACHENOK-RUDNIK, G.I.; SHIPITSYNA, G.K.; RODIONOVA, I.V.

Comparative examination of the chemical structure of Mycobacteria tuberculosis with various virulence. Zhur. mikrobiol., epid. i immun. 40 no.1:44-48'63. (MIRA 16:10)

1. Iz Instituta epidemiologii i mikrobiologii imeni Gamalei AMN SSSR.

KONOPA, Jerzy; LEDOCHOWSKI, Zygmunt; NAZARKIEWICZ, Teresa; FALKOWSKI, Leonard; STENZEL, Jan; PIKIEL, Leonard

Studies on antineoplastic properties of Poria obliqua. I. General data and in vitro studies. Nowotwory 11 no.3/4:393-400 '61.

1. Z Katedry Technologii Srodkow Leczniczych Politechniki Gdanskiej Kierownik: prof. dr Z. Ledochowski Z Zakladu Anatomii Patologicznej Akademii Medycznej w Gdansku Kierownik: prof. dr med. W. Czarnocki Z Pracowni Nr 8 Zakladu Syntezy Organicznej PAN w Gdansku Kierownik: prof. dr Z. Ledochowski.

(ANTINEOPLASTIC AGENTS pharmacol) (FUNGI)

NAZAREWICZ, Teresa; LEDOCHOWSKI, Zygmunt; KONOPA, Jerzy; STENZEL, Jan; PIKIEL, Leonard; FALKOWSKI, Leonard; WISNIEWSKI, Henryk

Studies on antineoplastic properties of Poria obliqua. II. Studies on the effect of Poria obliqua on the growth of transplanted tumors in animals. Nowotwory 11 no.3/4:401-411 '61.

1. Z Zakladu Anatomii Patologicznej Akademii Medycznej w Gdansku Kierownik: prof. dr med. W. Czarnocki z Katedry Technologii Srodkow Leczniczych Politechniki Gdanskiej Kierownik: prof. dr Z.Ledochowski i z Pracowni Nr 8 Zakladu Syntezy Organicznej Polskiej Akademii Nauk Kierownik: prof. dr Z. Ledochowski.
(ANTINEOPLASTIC AGENTS pharmacol) (FUNGI)

621.316.5.066.6

4113. Contact bounce. J. STRNZL. *Elektrotech. Obzor*, 42, *No.* 10, 547–50 (1953) In Czech.

The problem of contact bounce is treated as the direct central impact of two imperfectly elastic bodies. The solution of the differential equation of the problem so posed is straightforward. Imperfect elasticity of the real materials can be allowed for by means of a correction constant. B. F. KRAUS

STENZL, J. Czechoslovakia

Formaenderungen elektrischer Kontakte durch Abnuetzung

SO: DT Elektrotechnik, Feb 1956, Uncl.

STENZL, J.

STENZL. J. Nikola Tesla. p. 70.

Vol. 12, no. 2, Feb. 1957
ELEKTROTECHNIK
TECHNOLOGY
Czechoslovakia

So: East European Accession, Vol. 6, No. 5, May 1957

MITITELU, C., ing.; HARABAGIU,M., chim.; STENZLER, R., ing.

Quality, control, statistics, suggestions for possible application in paper manufacture. Cel hirtie 11 no.8: 285-295 Ag'62.

Stenzlova, A.

1/4

[illegible]

Country: Czechoslovakia

Academic Degrees: [illegible]

Affiliation: [illegible] I Clinic of Internal Medicine (I. vnitrni klinika) [in Olomouc]. Head: Professor P. LUKL, MD.

Source: Prague, Vnitrni Lekarstvi, No 4, Apr 61, pp 433-439

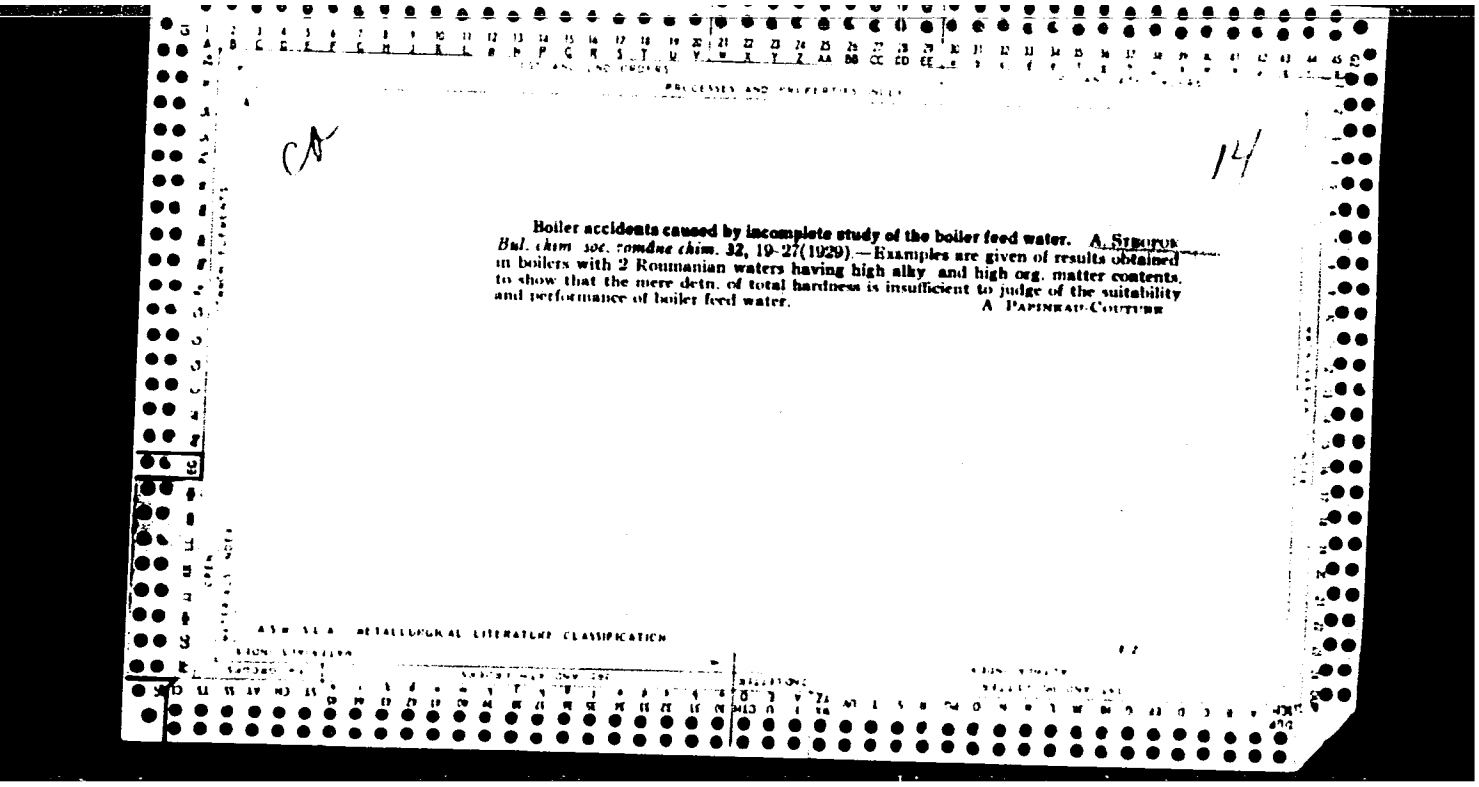
Data: "[illegible] Osteodystrophy with Multiple Skeletal Pseudo-Fractures."

Co-authors:

[illegible], A. Pathological Institute (Patologicko-anatomicky ustav) of PU [PALACKEHO University; PALACKY University), Olomouc.

[illegible]OVA, L. Pathological Institute, etc.

GPO 981[illegible]



CA

14

Boiler accidents caused by incomplete study of the boiler feed water. A. Sirotin. *Bul. chim. soc. romîne chim.* **32**, 19–27(1929).—Examples are given of results obtained in boilers with 2 Roumanian waters having high alky. and high org. matter contents, to show that the mere detn. of total hardness is insufficient to judge of the suitability and performance of boiler feed water.
A. Papineau-Couture

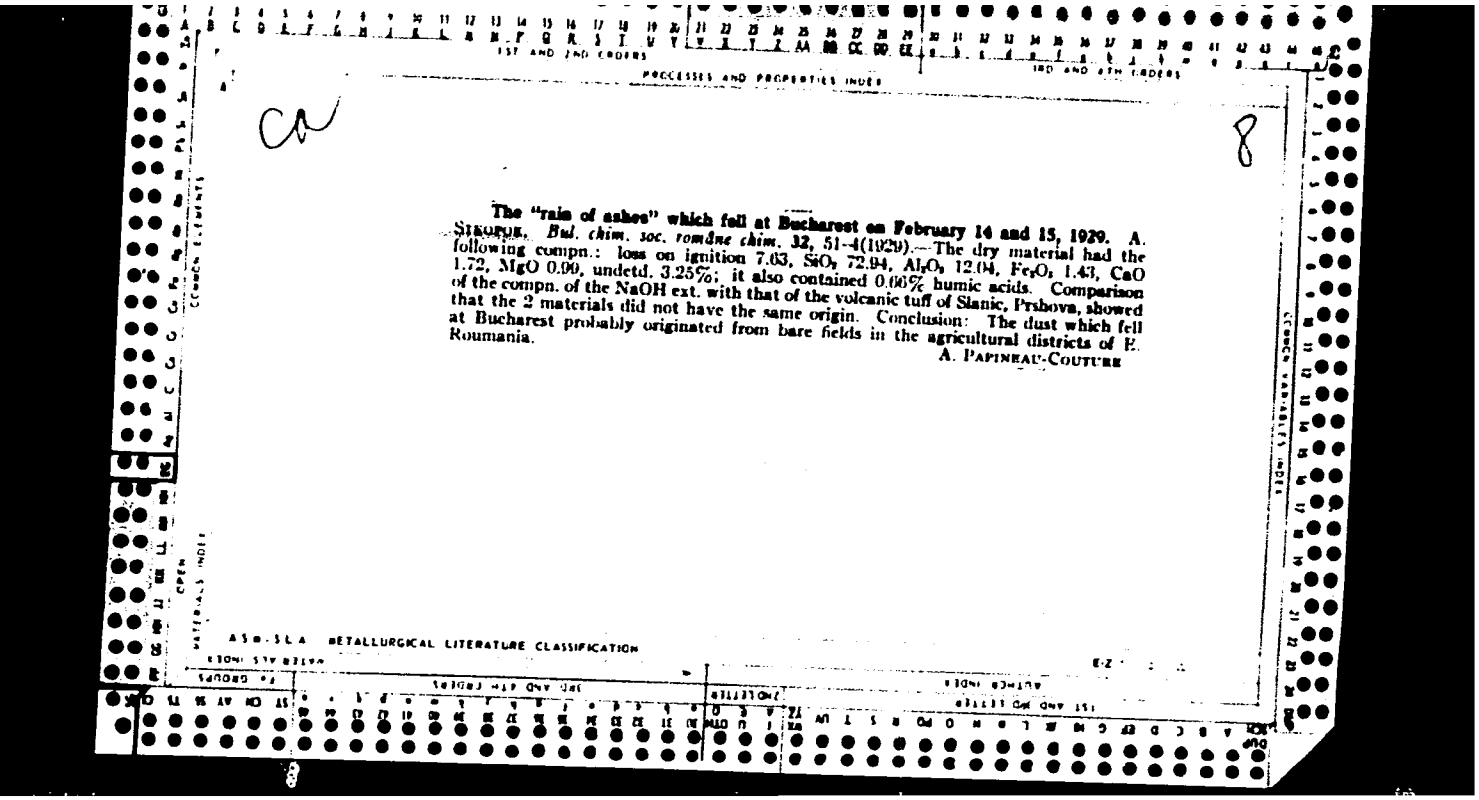
PROCESSES AND PROPERTIES INDEX

B

A-1

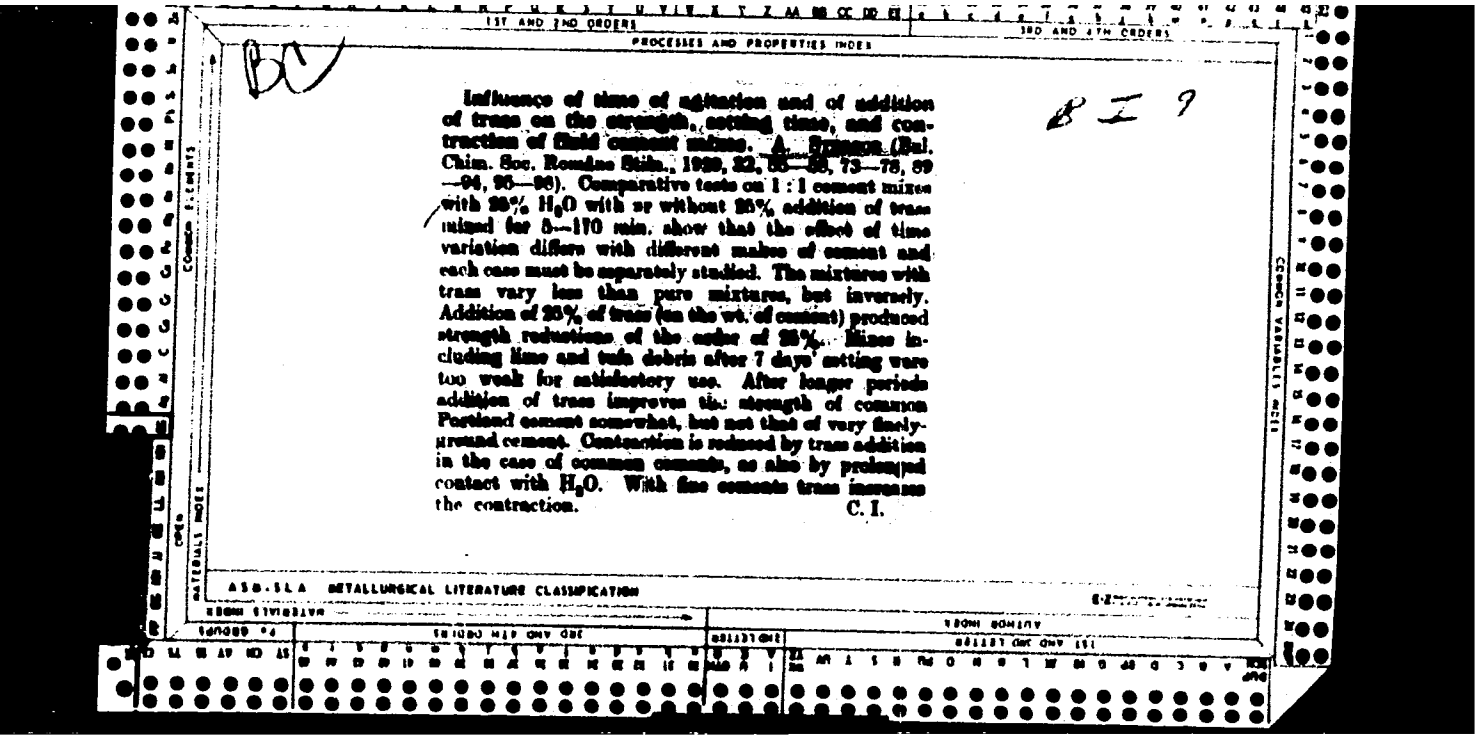
Determination of soluble silica in volcanic tuffs. A. [illegible] (Bul. Chim. pura apl. Bucharest, 1930, 32, 37–44; Chem. Zentr., 1932, i, 710; cf. this vol., [illegible]).—Extraction with 10% Na_2CO_3 + 1% $NaOH$ or 1% $NaOH$ gives vals. which vary according to the fineness of the material and the duration of treatment. Al_2O_3 and Fe_2O_3 are also dissolved. L. S. T.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



The "rain of ashes" which fell at Bucharest on February 14 and 15, 1929. A. Sirodus, *Bul. chim. soc. romîne chim.* **32**, 51–4(1929).—The dry material had the following compn.: loss on ignition 7.03, SiO_2 72.94, Al_2O_3 12.04, Fe_2O_3 1.43, CaO 1.72, MgO 0.99, undetd. 3.25%; it also contained 0.66% humic acids. Comparison of the compn. of the NaOH ext. with that of the volcanic tuff of Slanic, Prshova, showed that the 2 materials did not have the same origin. Conclusion: The dust which fell at Bucharest probably originated from bare fields in the agricultural districts of E. Roumania.

A. Papineau-Couture



PROCESSES AND PROPERTIES INDEX

1ST AND 2ND ORDERS

3RD AND 4TH ORDERS

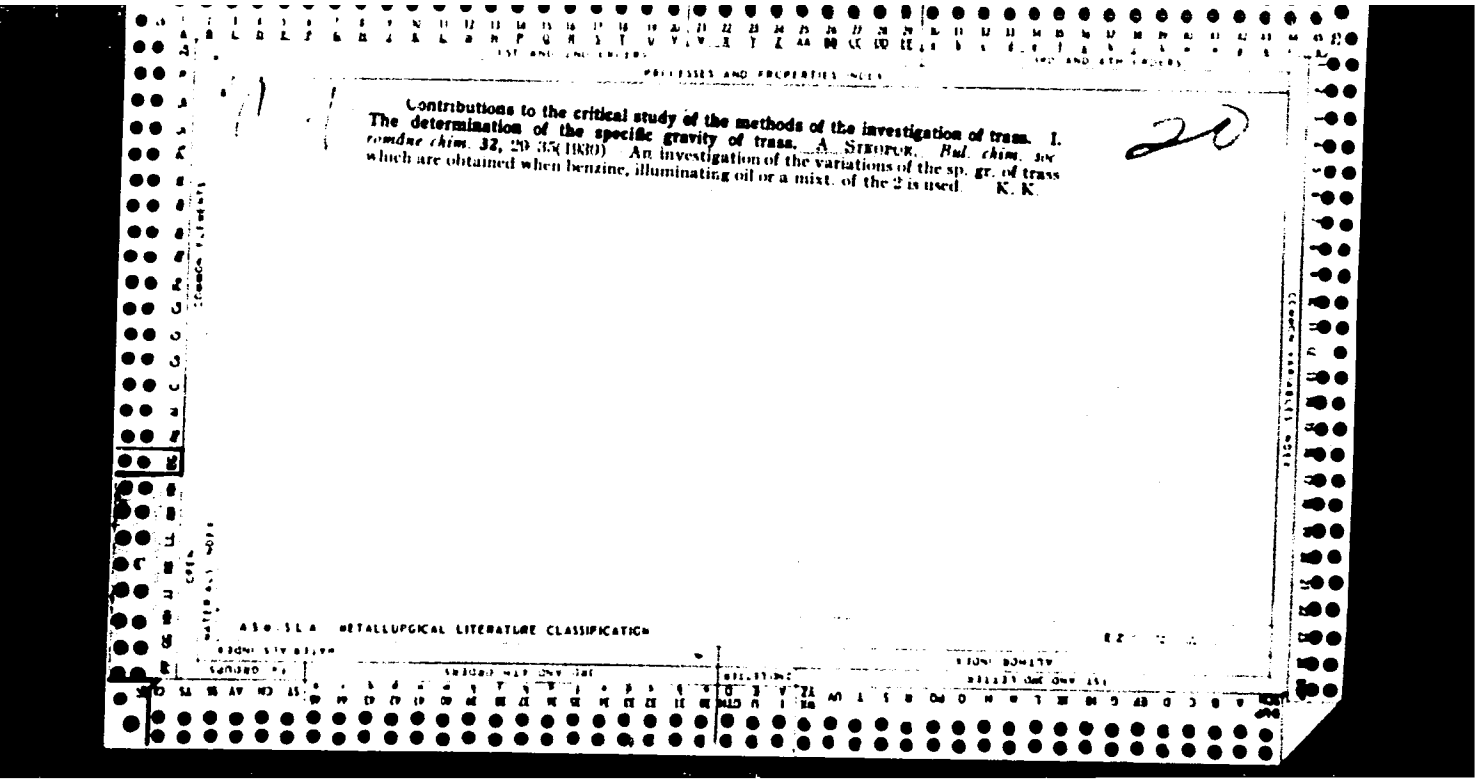
BC

BI 9

Influence of time of agitation and of addition of trass on the strength, setting time, and contraction of field cement mixes. A. Brisson (Bul. Chim. Soc. Roumine Stiin., 1939, 22, 65—70, 73—78, 89—94, 95—96). Comparative tests on 1 : 1 cement mixes with 20% H_2O with or without 25% addition of trass mixed for 5—170 min. show that the effect of time variation differs with different makes of cement and each case must be separately studied. The mixtures with trass vary less than pure mixtures, but inversely. Addition of 25% of trass (on the wt. of cement) produced strength reductions of the order of 25%. Mixes including lime and tufa debris after 7 days' setting were too weak for satisfactory use. After longer periods addition of trass improves the strength of common Portland cement somewhat, but not that of very finely-ground cement. Contraction is reduced by trass addition in the case of common cements, as also by prolonged contact with H_2O. With fine cements trass increases the contraction.

C. I.

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION



Contributions to the critical study of the methods of the investigation of trass. I. The determination of the specific gravity of trass. A. Stroescu. *Bul. chim. inc romîne chim.* **32**, 29-35(1930). An investigation of the variations of the sp. gr. of trass which are obtained when benzine, illuminating oil or a mixt. of the 2 is used. K. K.

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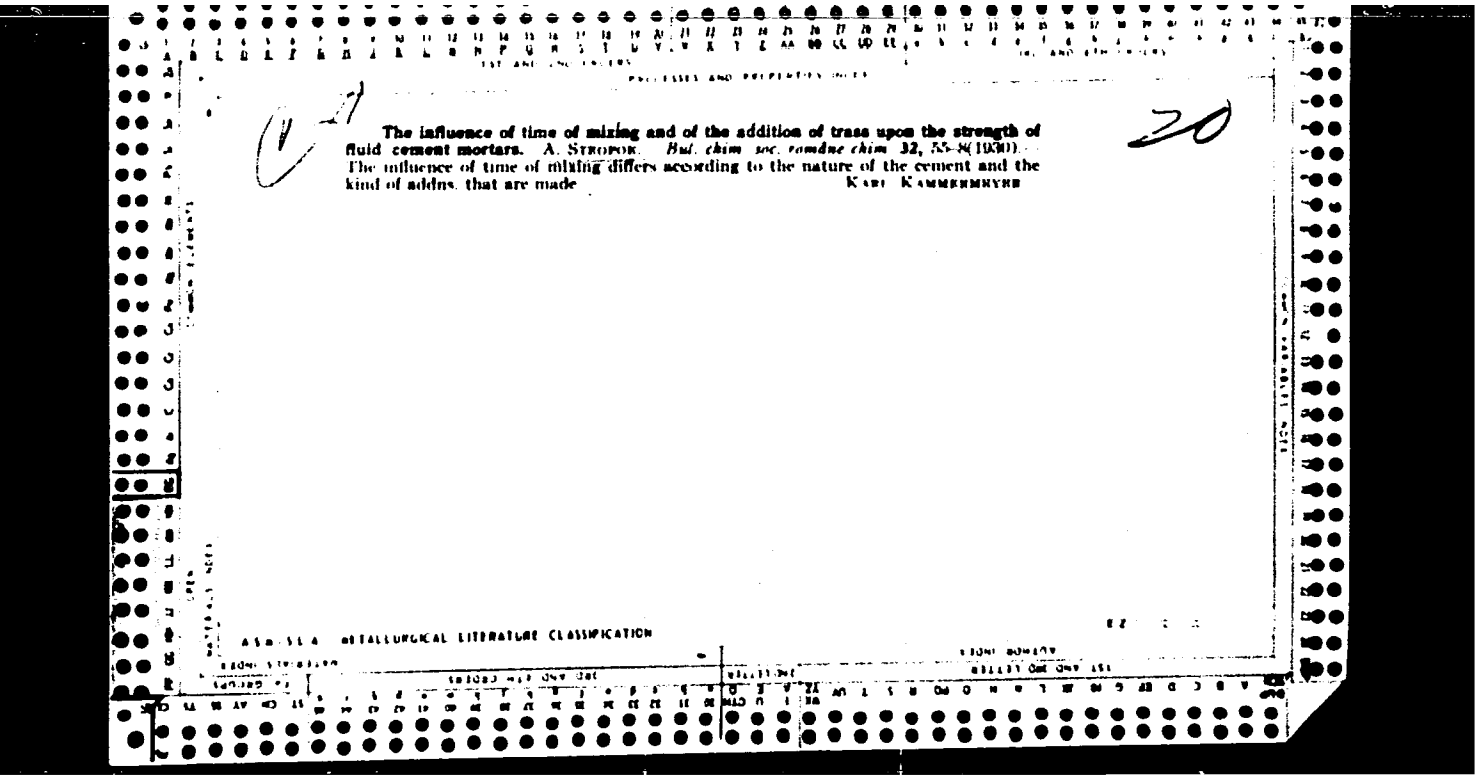
A50-51A METALLURGICAL LITERATURE CLASSIFICATION

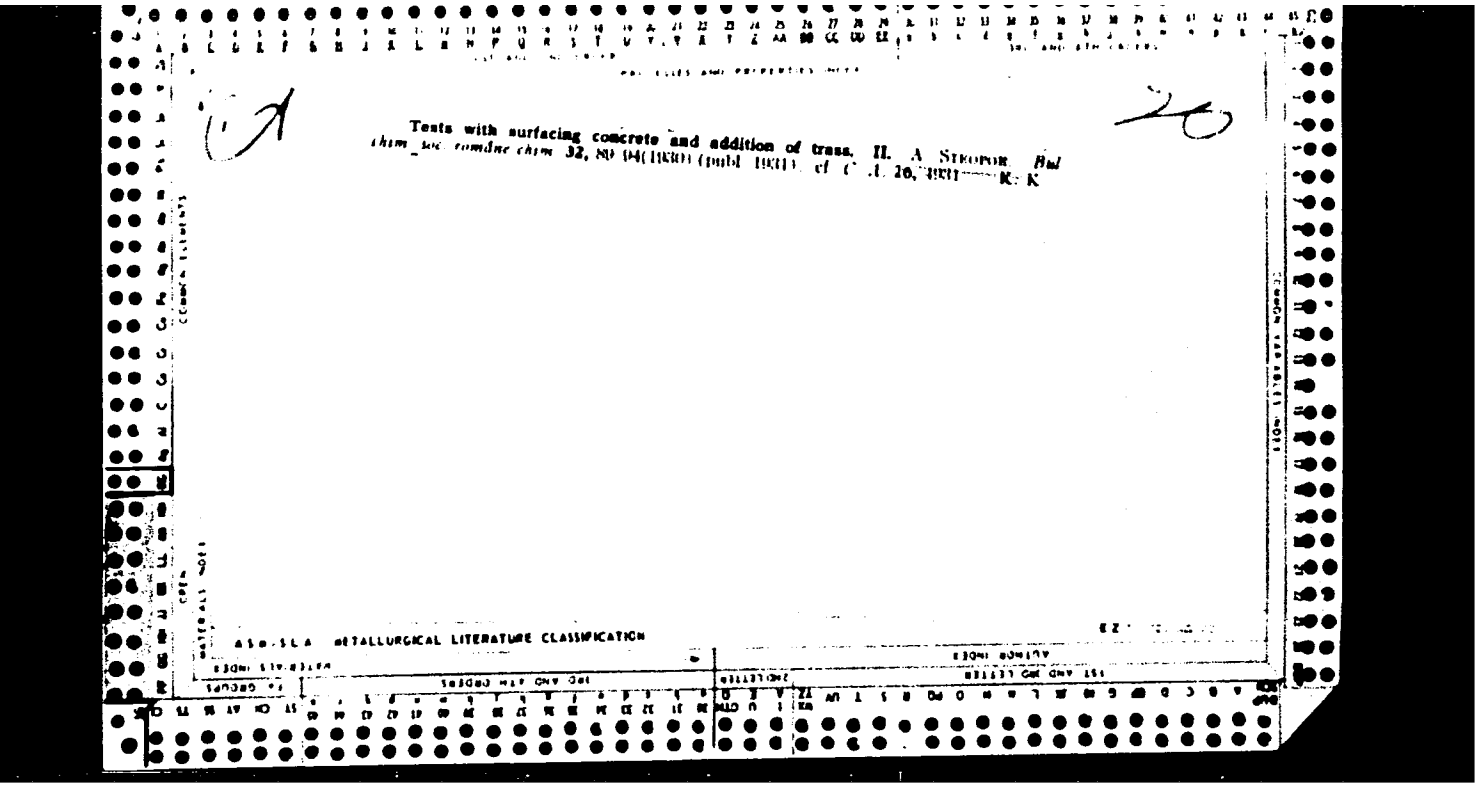
Critical studies on the determination of silica in volcanic tufa. A. Sikorov. *Bul. chim. soc. romane chim.* **32**, 37-41 (1930); cf. C. A. **26**, 1552. Full details are given of expts. which show that the attempt to det. *sol.* SiO_2 by extn. with alk. solns. is likely to result in erroneous conclusions. W. T. H.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



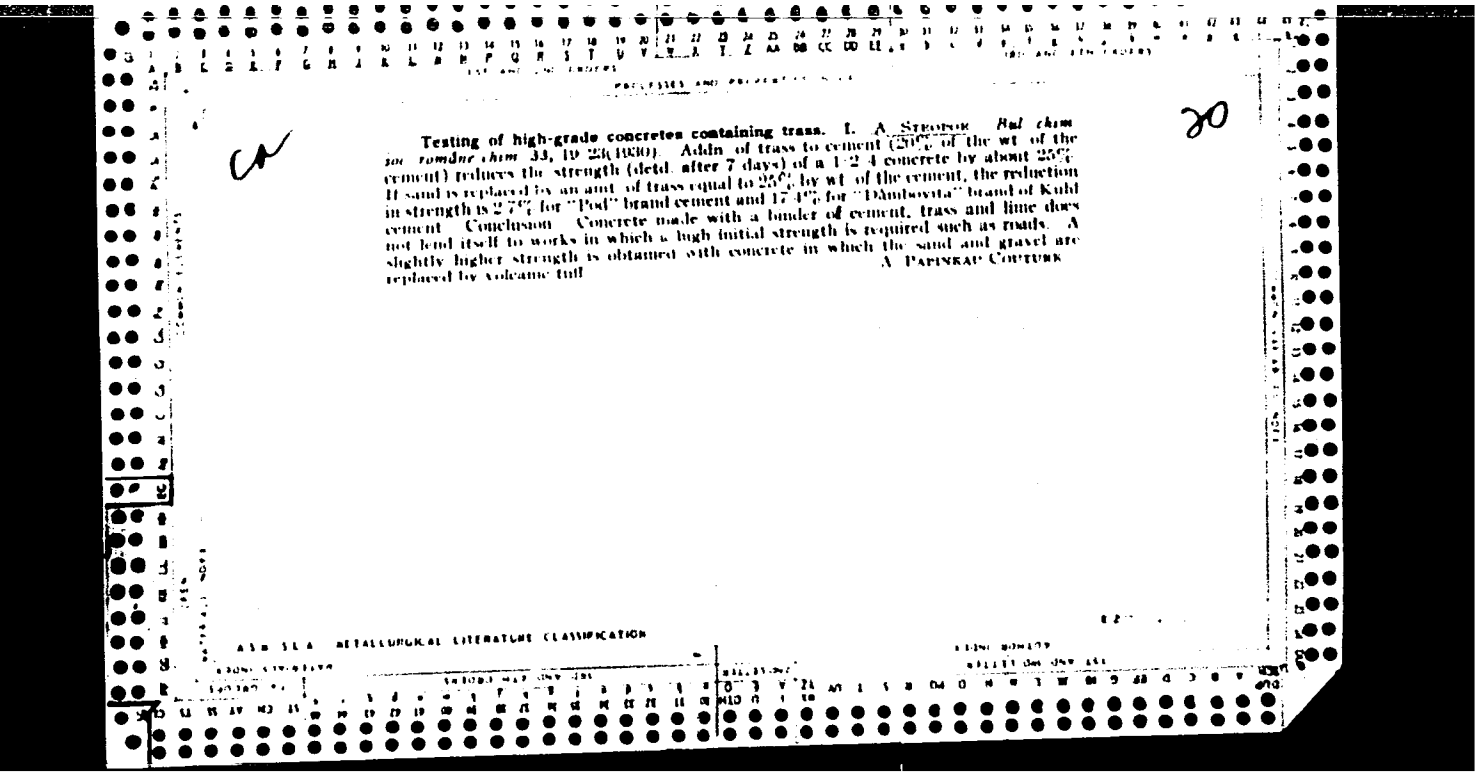
The influence of time of mixing and of the addition of trass upon the strength of fluid cement mortars. A. Stropok. *Bul. chim soc. romdne chim* 32, 55-8(1930). The influence of time of mixing differs according to the nature of the cement and the kind of addns. that are made. Karl Kammermeyer

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



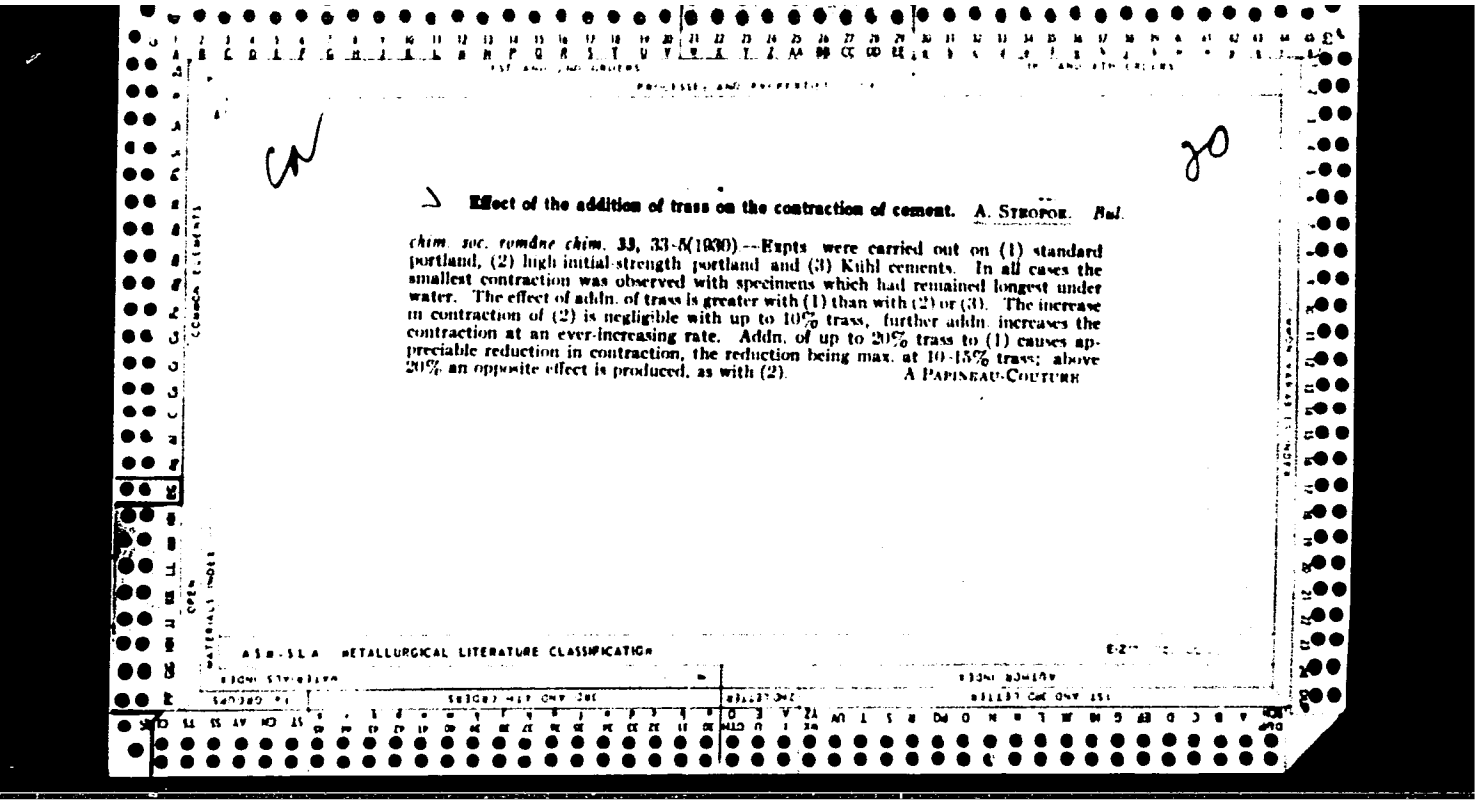
Tests with surfacing concrete and addition of trass. II. A. Stroppe. *Bul chim. soc. romîne chim.* 32, 89-94(1930) (publ. 1931). cf. *C. A.* 26, 3881.—K. K.

A10-SLA METALLURGICAL LITERATURE CLASSIFICATION

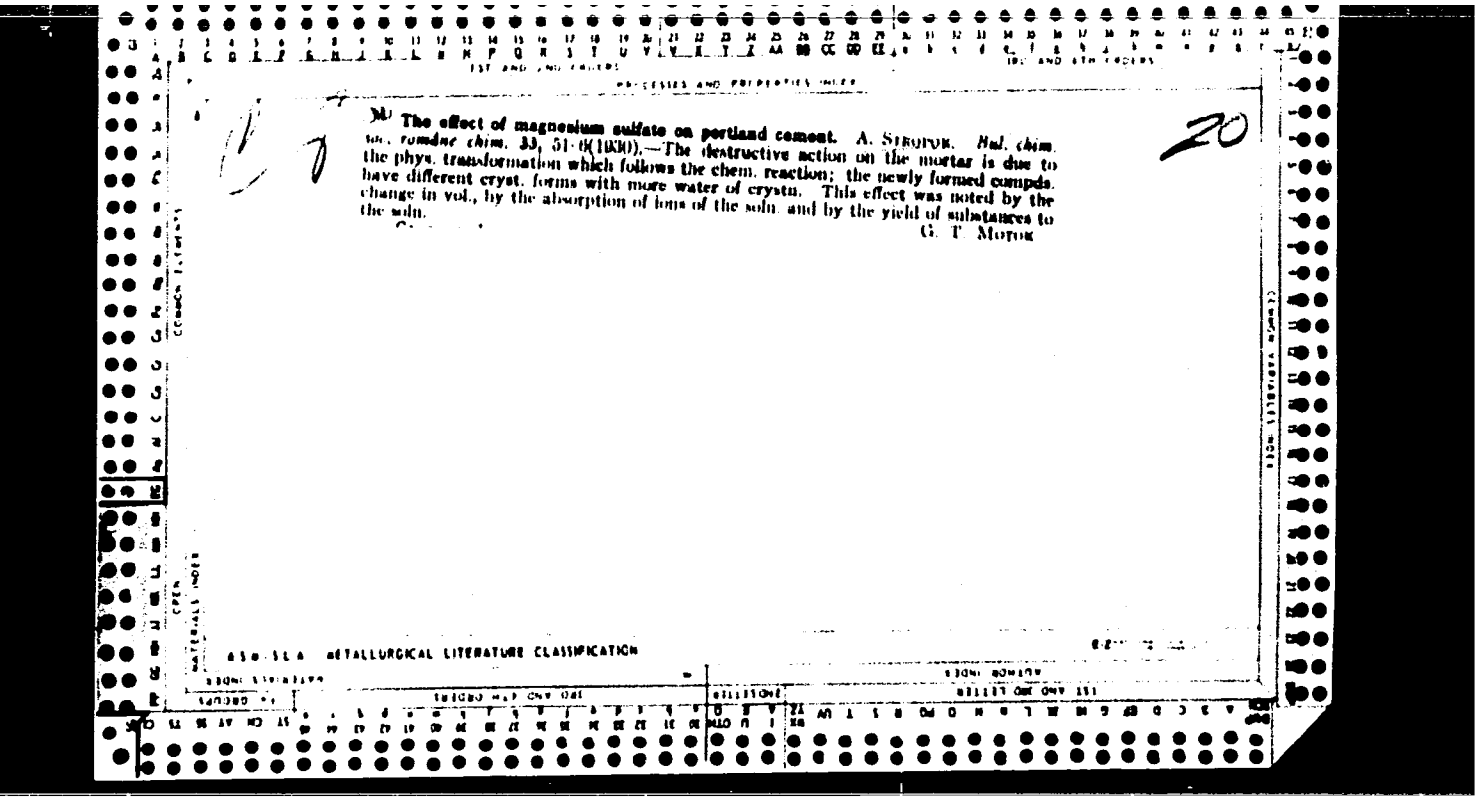


Testing of high-grade concretes containing trass. I. A Stroitok *Bul chim soc romdne chim* 33, 19-23(1930). Addn of trass to cement (25% of the wt of the cement) reduces the strength (detd after 7 days) of a 1:2:4 concrete by about 25%. If sand is replaced by an amt of trass equal to 25% by wt of the cement, the reduction in strength is 2.7% for "Pod" brand cement and 17.4% for "Dimbovita" brand of Kuhl cement. Conclusion: Concrete made with a binder of cement, trass and lime does not lend itself to works in which a high initial strength is required such as roads. A slightly higher strength is obtained with concrete in which the sand and gravel are replaced by volcanic tuff.

A Parinkat Couturier

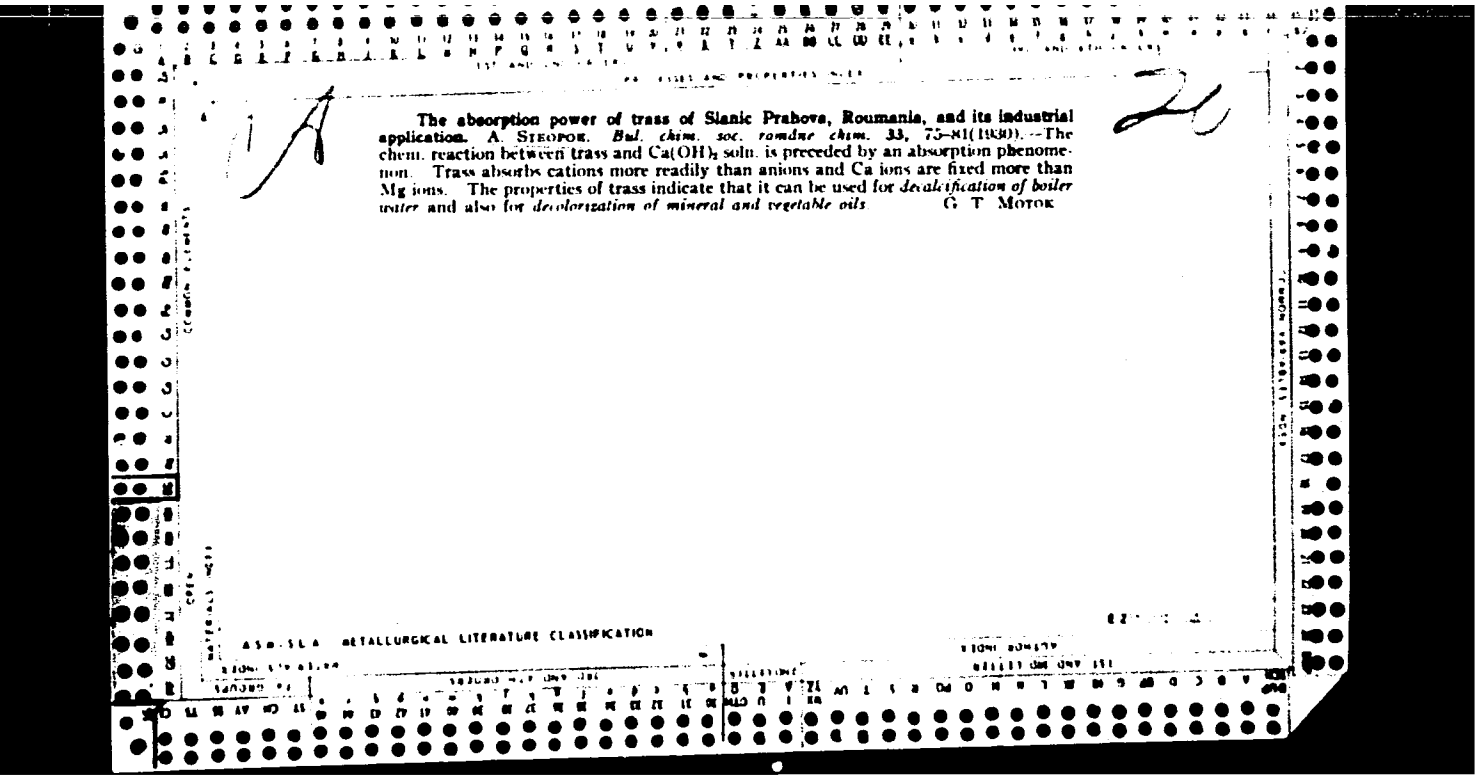


Effect of the addition of trass on the contraction of cement. A. Stropor. *Bul. chim. soc. romîne chim.* **33**, 33-8(1930)--Expts were carried out on (1) standard portland, (2) high initial-strength portland and (3) Kühl cements. In all cases the smallest contraction was observed with specimens which had remained longest under water. The effect of addn. of trass is greater with (1) than with (2) or (3). The increase in contraction of (2) is negligible with up to 10% trass, further addn. increases the contraction at an ever-increasing rate. Addn. of up to 20% trass to (1) causes appreciable reduction in contraction, the reduction being max. at 10-15% trass; above 20% an opposite effect is produced, as with (2).
A Papineau-Couture



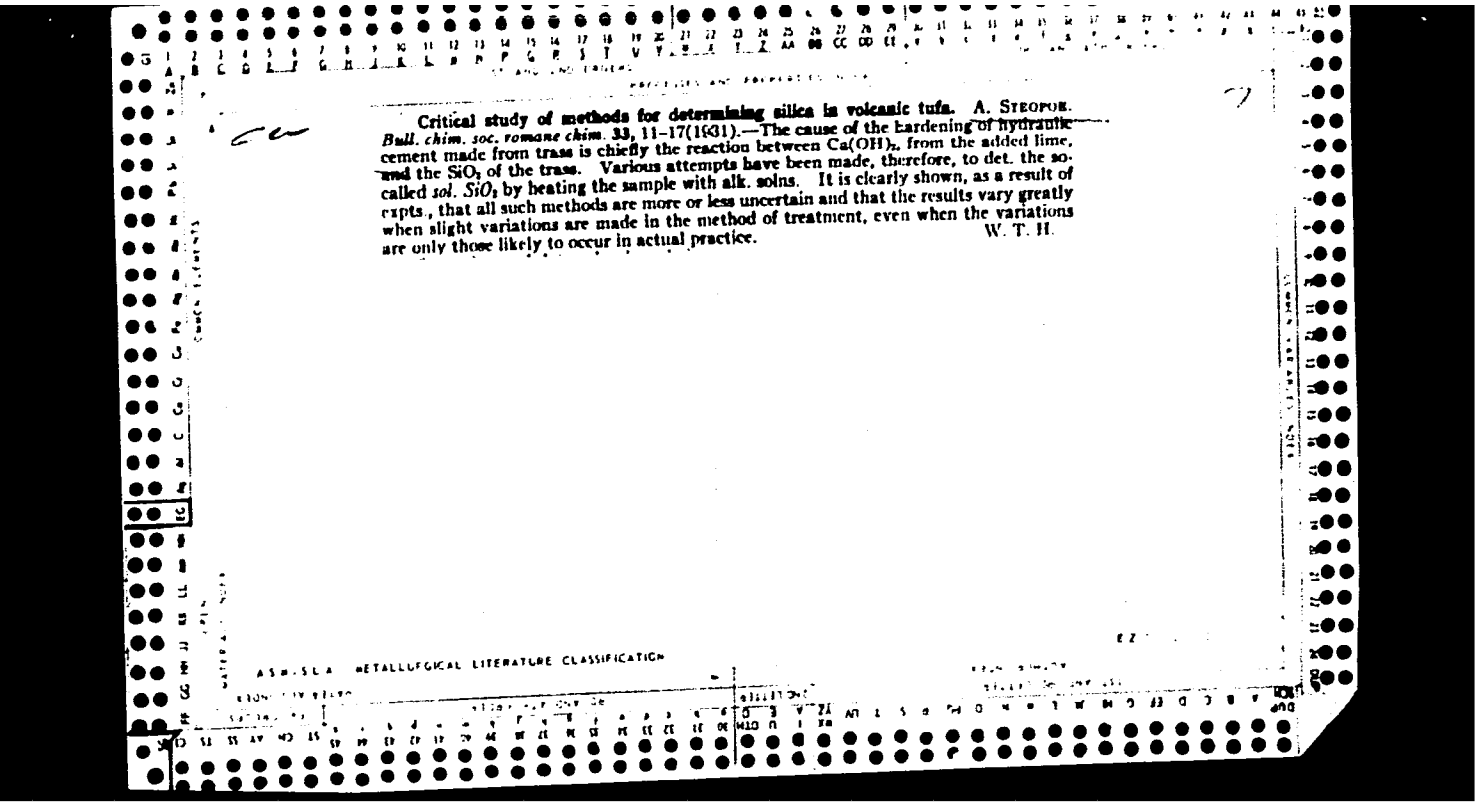
The effect of magnesium sulfate on portland cement. A. Stoyos. *Bul. chim. soc. romîne chim.* 33, 51–6(1930).—The destructive action on the mortar is due to the phys. transformation which follows the chem. reaction; the newly formed cmpds. have different cryst. forms with more water of cryst. This effect was noted by the change in vol., by the absorption of ions of the soln. and by the yield of substances to the soln.

G. T. Morgan

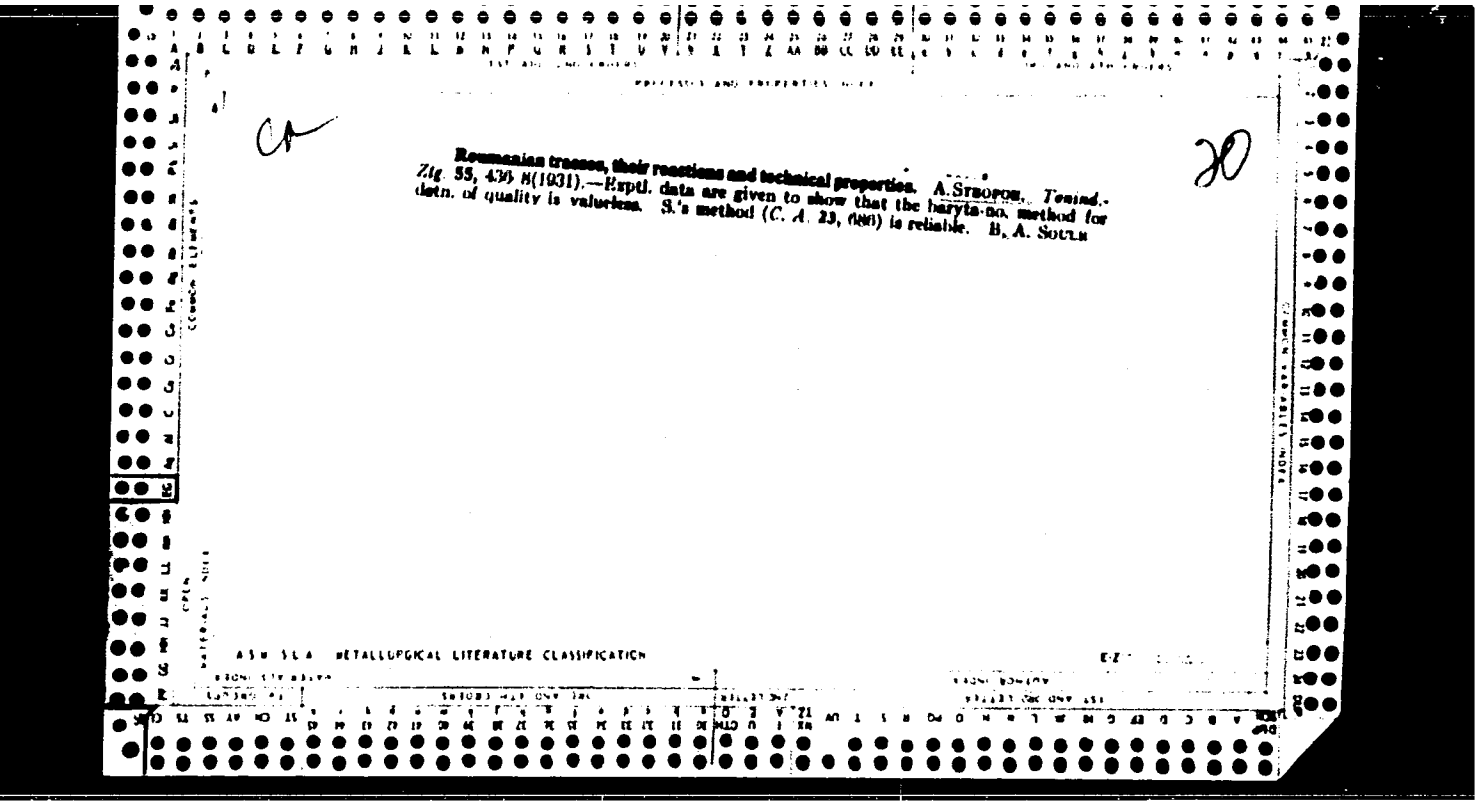


The absorption power of trass of Slanic Prahova, Roumania, and its industrial application. A. Steopoe. *Bul. chim. soc. romdne chim.* 33, 75–81(1930).—The chem. reaction between trass and $Ca(OH)_2$ soln. is preceded by an absorption phenomenon. Trass absorbs cations more readily than anions and Ca ions are fixed more than Mg ions. The properties of trass indicate that it can be used for *decalcification of boiler water* and also for *decolorization of mineral and vegetable oils.* G. T. Motok

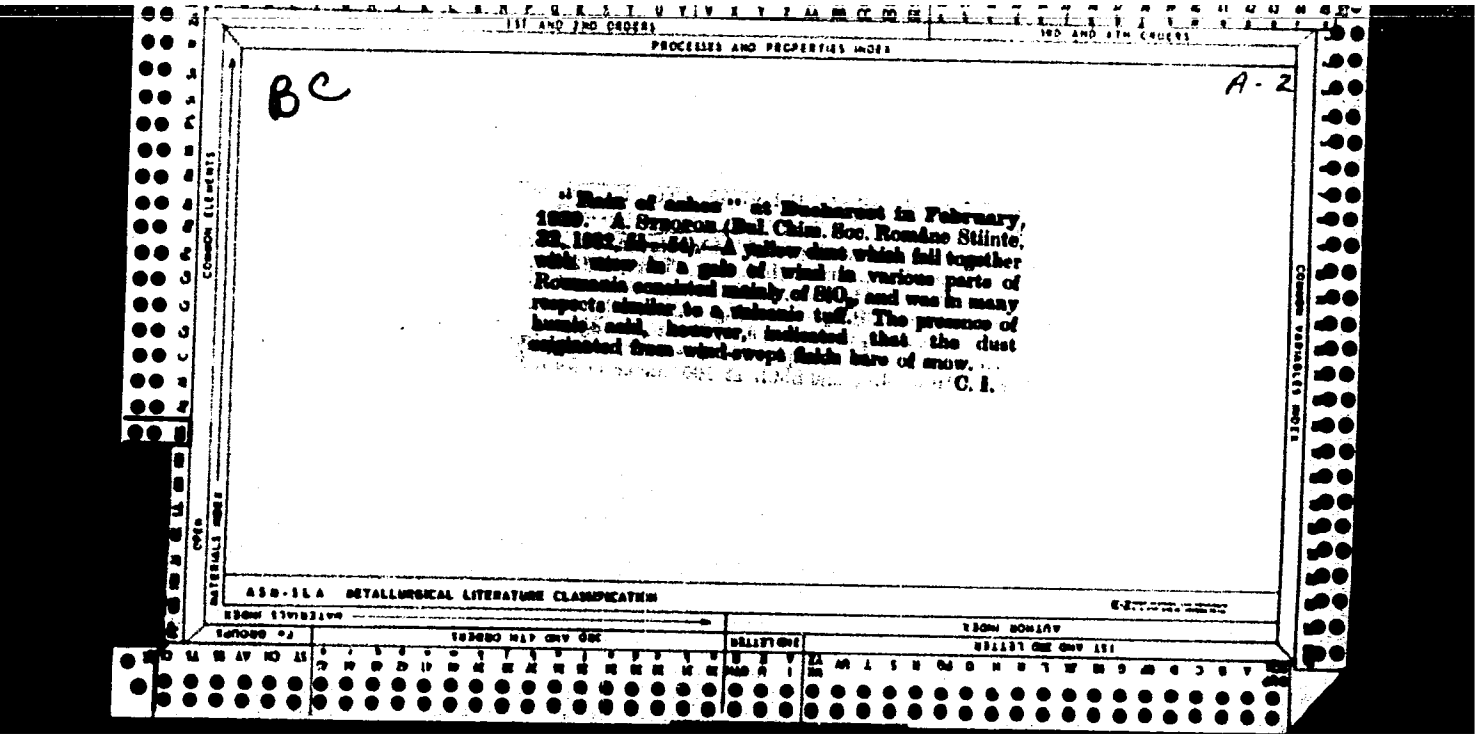
ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



Critical study of methods for determining silica in volcanic tufa. A. Steopoe. *Bull. chim. soc. romane chim.* 33, 11–17(1931).—The cause of the hardening of hydraulic cement made from trass is chiefly the reaction between $Ca(OH)_2$, from the added lime, and the SiO_2 of the trass. Various attempts have been made, therefore, to det. the so-called *sol.* SiO_2 by heating the sample with alk. solns. It is clearly shown, as a result of expts., that all such methods are more or less uncertain and that the results vary greatly when slight variations are made in the method of treatment, even when the variations are only those likely to occur in actual practice. W. T. H.

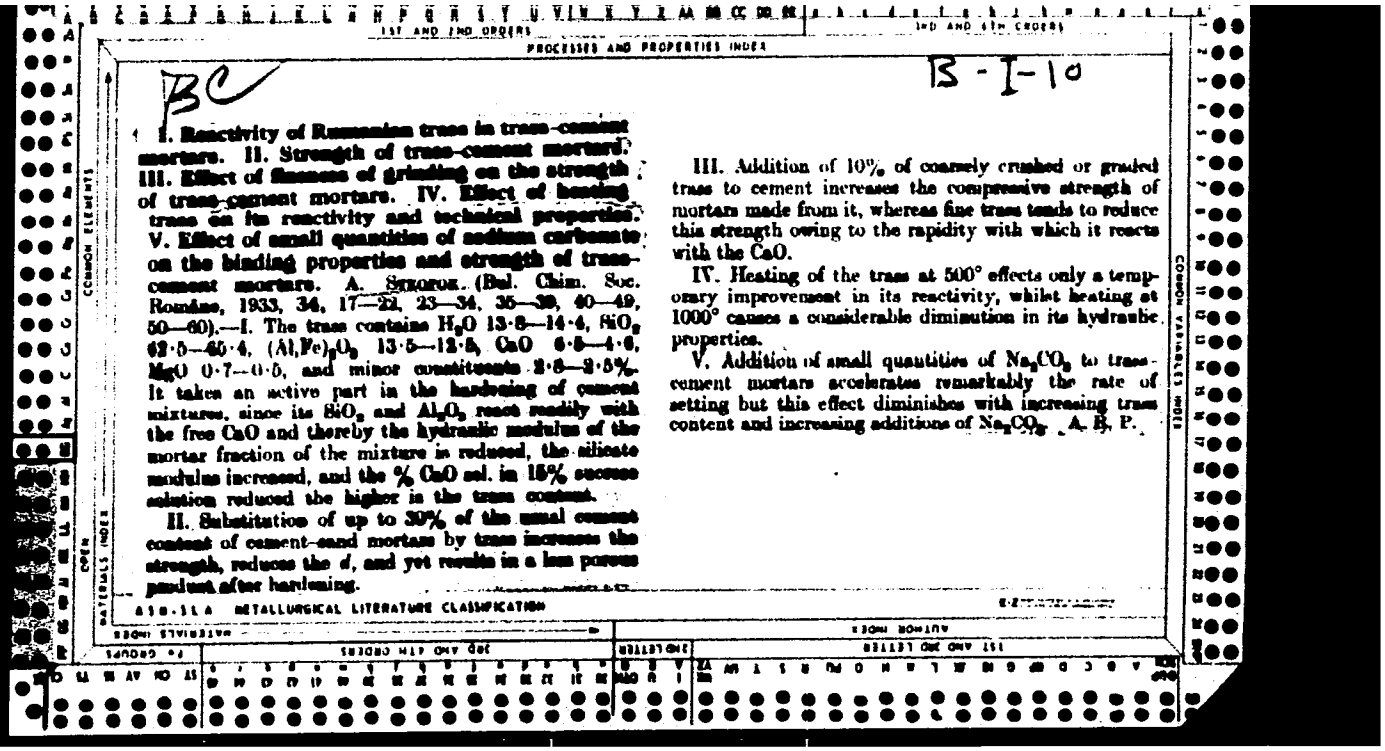


Rumanian tresses, their reactions and technical properties. A. Strooper. *Textil.-Ztg.* 55, 436 *ff*(1931).—Exptl. data are given to show that the haryta-no method for detn. of quality is valueless. S.'s method (*C. A.* 23, 680) is reliable. B. A. Soule



"Rain of ashes" at Bucharest in February, 1930. A. Spurgeon (Bul. Chim. Soc. Romane Stiinte, 32, 1932, 63–64).—A yellow dust which fell together with snow in a gale of wind in various parts of Roumania consisted mainly of SiO_2 and was in many respects similar to a volcanic tuff. The presence of humic acid, however, indicated that the dust originated from wind-swept fields bare of snow.

C. I.



PROCESSES AND PROPERTIES INDEX

BC

B-I-10

I. Reactivity of Rumanian trass in trass-cement mortars. II. Strength of trass-cement mortars. III. Effect of fineness of grinding on the strength of trass-cement mortars. IV. Effect of heating trass on its reactivity and technical properties. V. Effect of small quantities of sodium carbonate on the binding properties and strength of trass-cement mortars. A. Szegvos. (Bul. Chim. Soc. Romîne, 1933, 34, 17—22, 23—34, 35—39, 40—49, 50—60).—I. The trass contains H_2O 13·6—14·4, SiO_2 42·5—45·4, $(Al,Fe)_2O_3$ 13·5—12·5, CaO 6·5—4·6, MgO 0·7—0·5, and minor constituents 2·8—2·5%. It takes an active part in the hardening of cement mixtures, since its SiO_2 and Al_2O_3 react readily with the free CaO and thereby the hydraulic modulus of the mortar fraction of the mixture is reduced, the silicate modulus increased, and the % CaO sol. in 15% sucrose solution reduced the higher is the trass content.

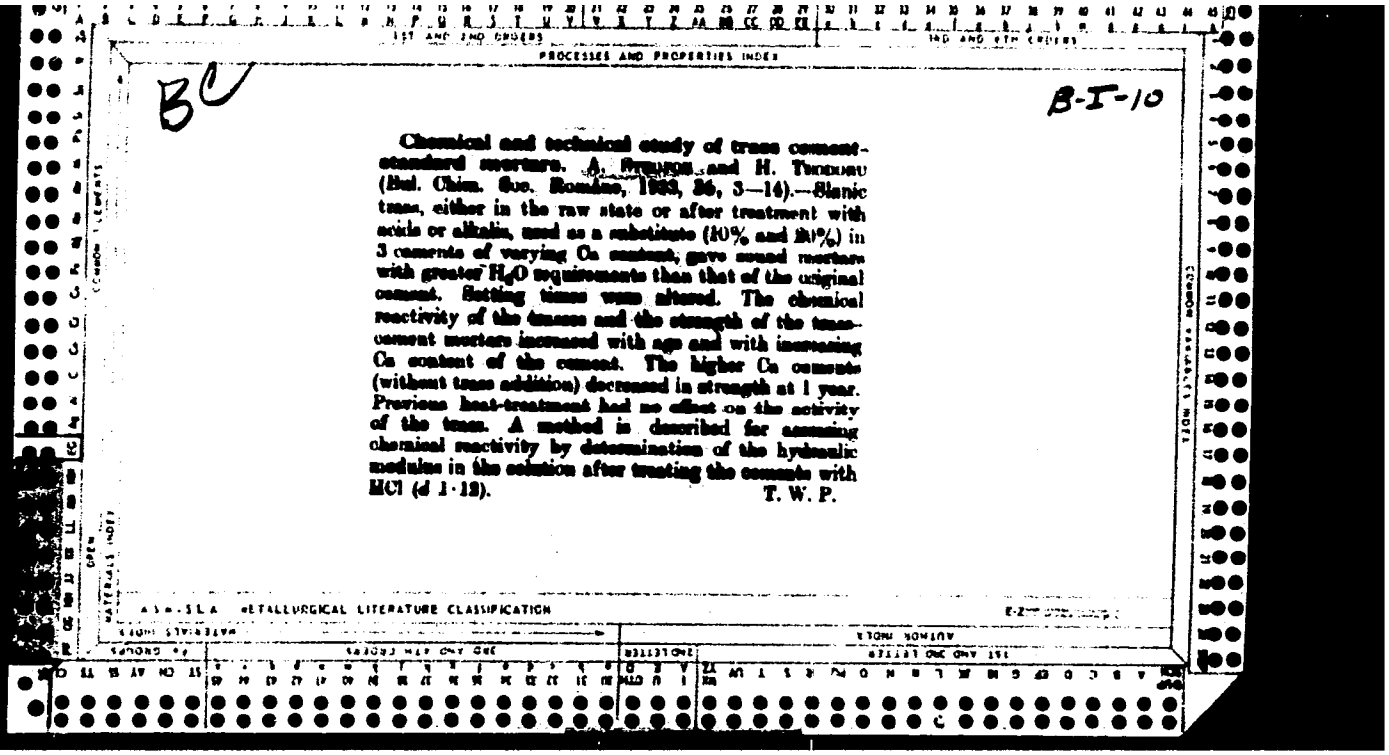
II. Substitution of up to 30% of the usual cement content of cement–sand mortars by trass increases the strength, reduces the d, and yet results in a less porous product after hardening.

III. Addition of 10% of coarsely crushed or graded trass to cement increases the compressive strength of mortars made from it, whereas fine trass tends to reduce this strength owing to the rapidity with which it reacts with the CaO.

IV. Heating of the trass at 500° effects only a temporary improvement in its reactivity, whilst heating at 1000° causes a considerable diminution in its hydraulic properties.

V. Addition of small quantities of Na_2CO_3 to trass-cement mortars accelerates remarkably the rate of setting but this effect diminishes with increasing trass content and increasing additions of Na_2CO_3. A. B. P.

A58.11A METALLURGICAL LITERATURE CLASSIFICATION

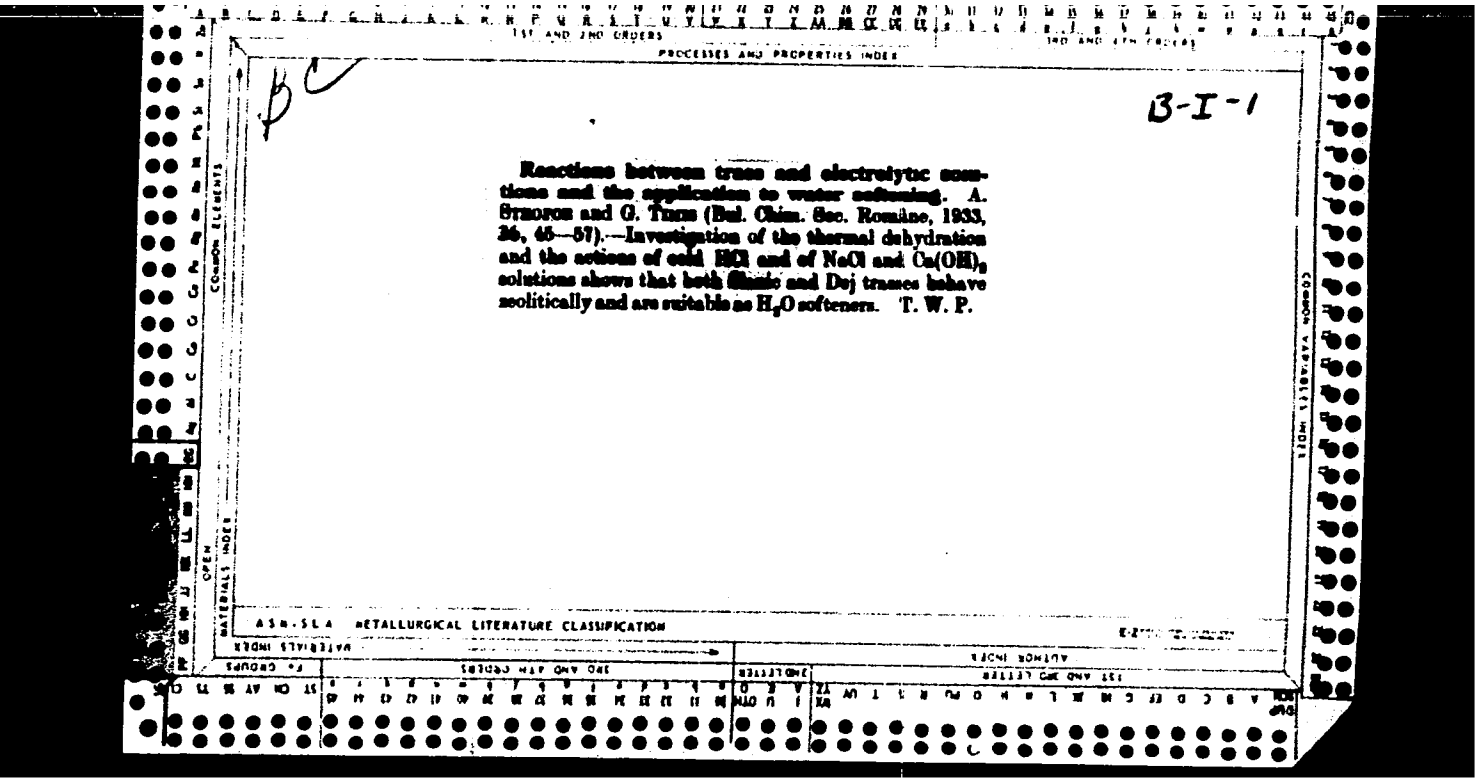


BC

B-I-10

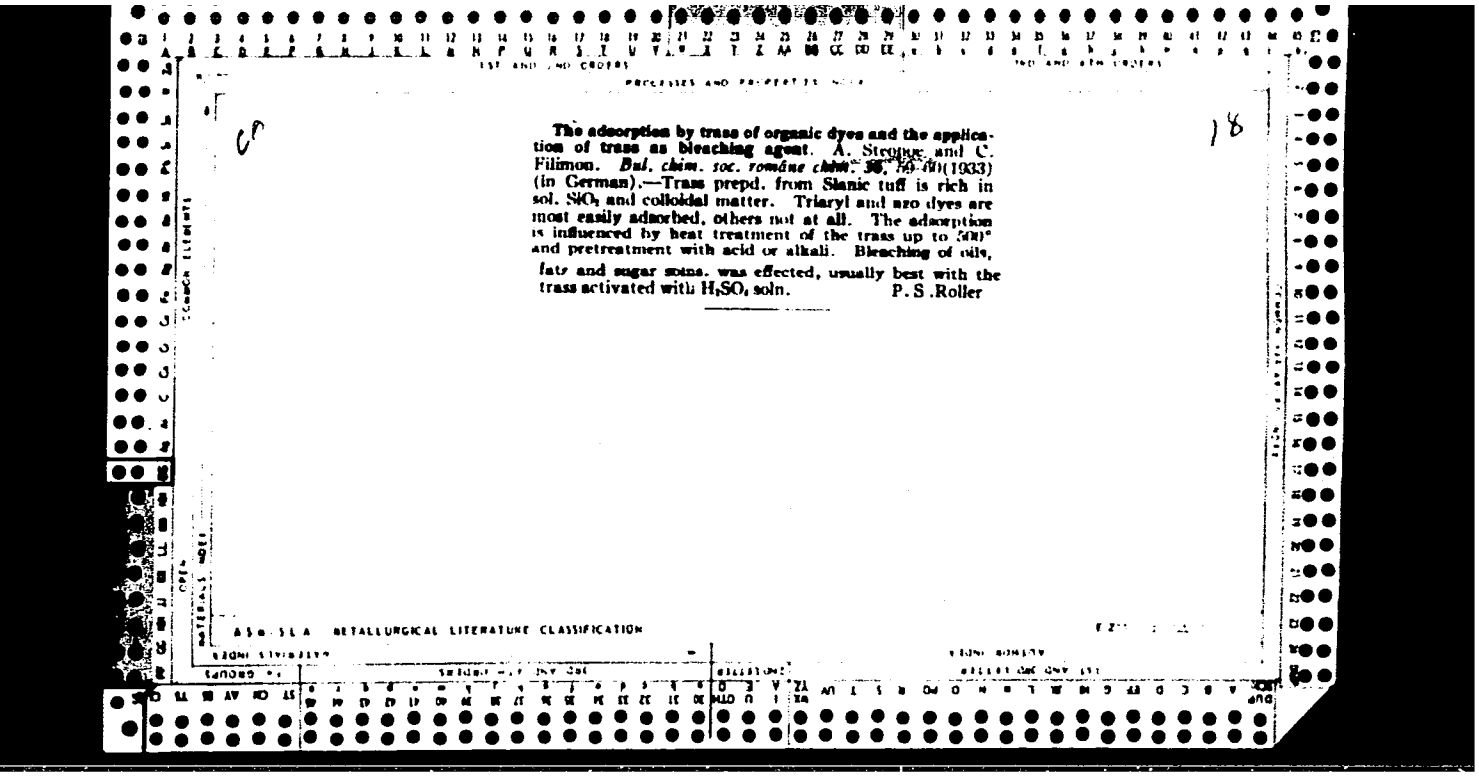
Chemical and technical study of trass cement-standard mortars. A. [illegible] and H. Theodoru (Bul. Chim. Soc. Romîne, 1943, 36, 3—14).—Slanic trass, either in the raw state or after treatment with acids or alkalis, used as a substitute (10% and 20%) in 3 cements of varying Ca content, gave sound mortars with greater H_2O requirements than that of the original cement. Setting times were altered. The chemical reactivity of the trasses and the strength of the trass-cement mortars increased with age and with increasing Ca content of the cement. The higher Ca cements (without trass addition) decreased in strength at 1 year. Previous heat-treatment had no effect on the activity of the trass. A method is described for assessing chemical reactivity by determination of the hydraulic modulus in the solution after treating the cements with HCl (cf. I, 13).

T. W. P.

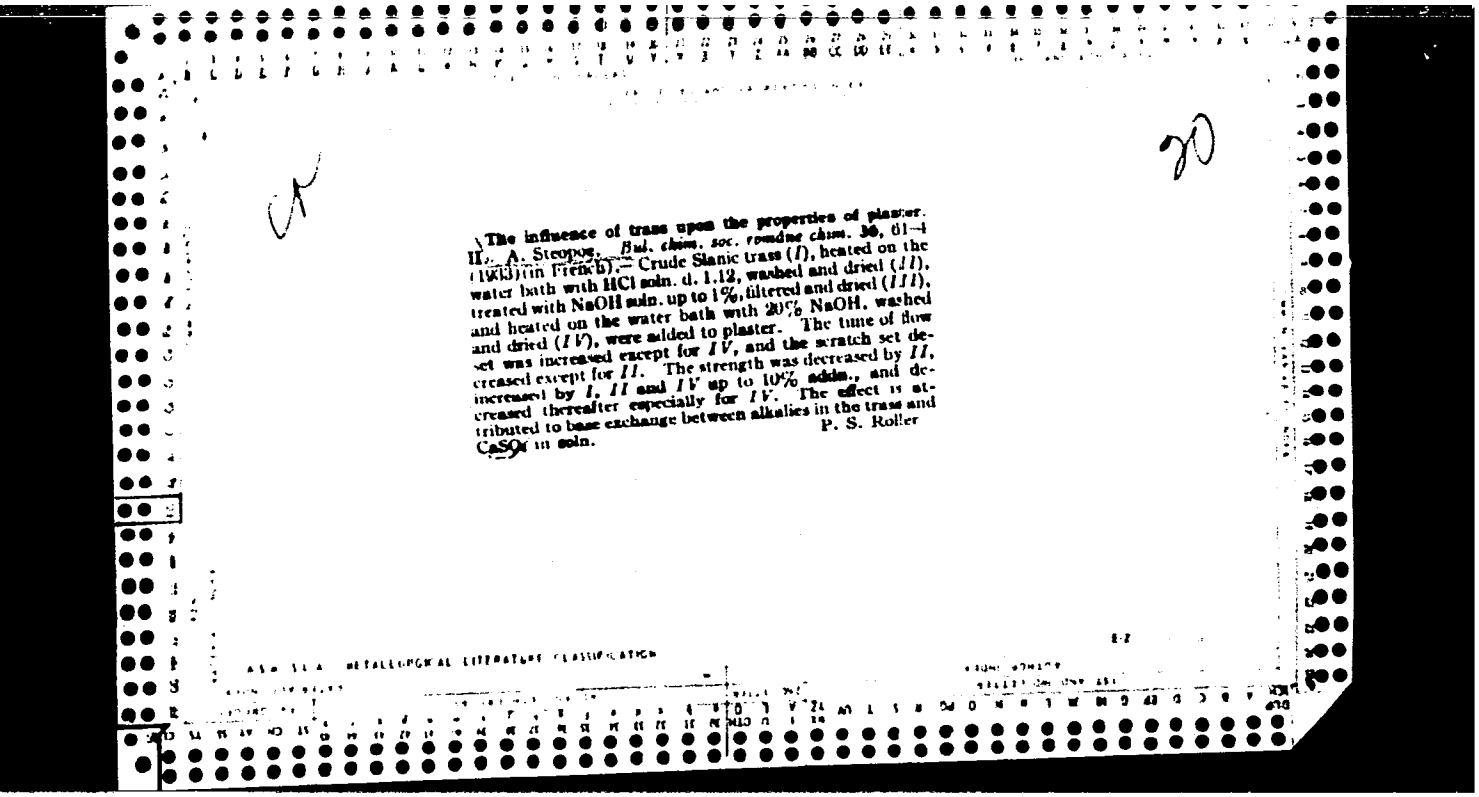


B-I-1

Reactions between trans and electrolytic zeolites and the application to water softening. A. Ernoros and G. Tuns (Bul. Chim. Soc. Romine, 1933, 36, 45—57).—Investigation of the thermal dehydration and the actions of cold HCl and of NaCl and $Ca(OH)_2$ solutions shows that both Ghaic and Daj trances behave zeolitically and are suitable as H_2O softeners. T. W. P.



The adsorption by trass of organic dyes and the application of trass as bleaching agent. A. Stroque and C. Filimon. *Bul. chim. soc. române chim.* 56, 79-90 (1933) (in German).—Trass prepd. from Slanic tuff is rich in sol. SiO_2 and colloidal matter. Triaryl and azo dyes are most easily adsorbed, others not at all. The adsorption is influenced by heat treatment of the trass up to 500° and pretreatment with acid or alkali. Bleaching of oils, fats and sugar solns. was effected, usually best with the trass activated with H_2SO_4 soln. P. S. Roller

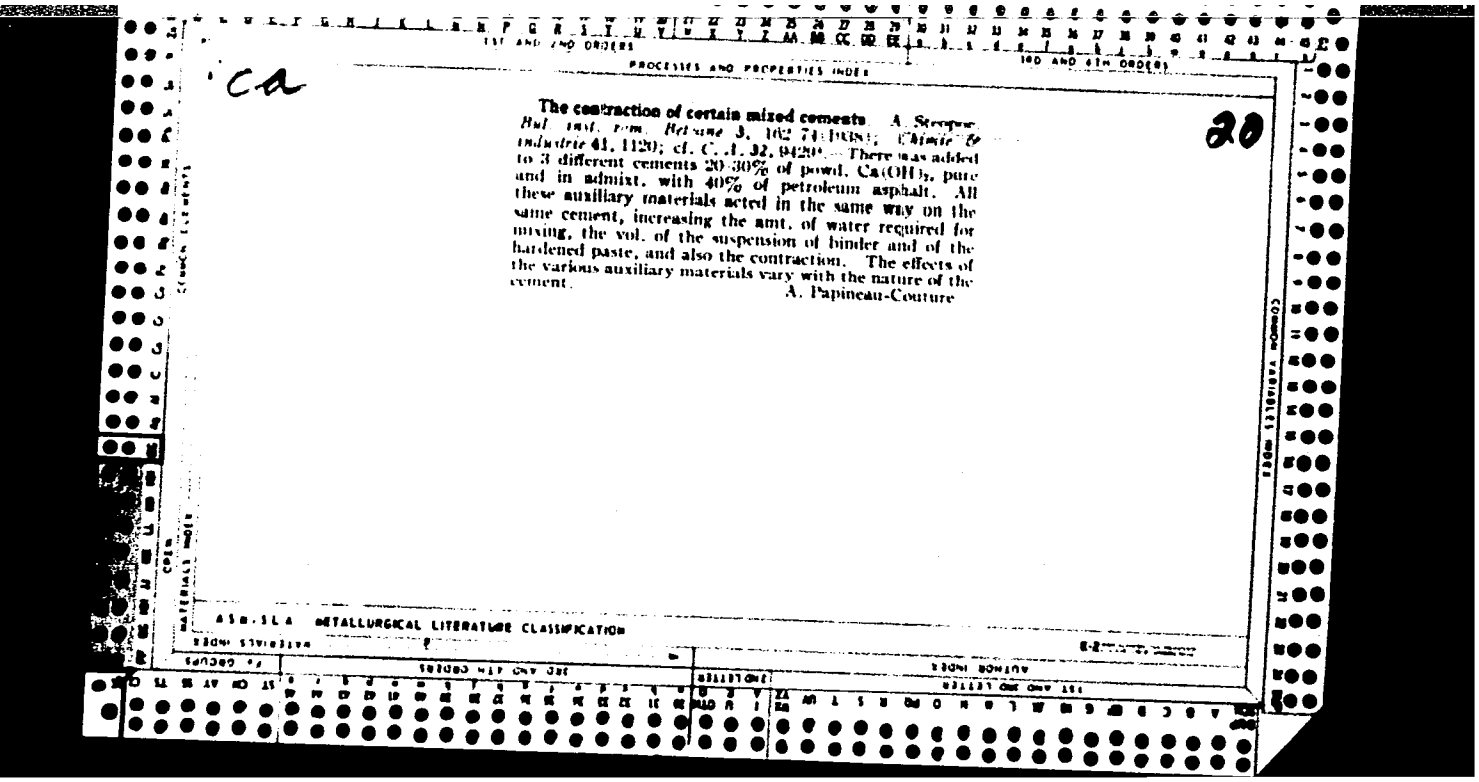


The influence of trass upon the properties of plaster. II. A. Steopoe. *Bul. chim. soc. romîne chim.* **36**, 61–4 (1943) (in French).— Crude Slanic trass (*I*), heated on the water bath with HCl soln. d. 1.12, washed and dried (*II*), treated with NaOH soln. up to 1%, filtered and dried (*III*), and heated on the water bath with 20% NaOH, washed and dried (*IV*), were added to plaster. The time of flow set was increased except for *IV*, and the scratch set decreased except for *II*. The strength was decreased by *II*, increased by *I*, *II* and *IV* up to 10% addn., and decreased thereafter especially for *IV*. The effect is attributed to base exchange between alkalies in the trass and $CaSO_4$ in soln.

P. S. Roller

Determination of the mix proportions in mortar and concrete. A. Steopoe. *Zement* 23, 758-62(1934).—The methods proposed by **Kriege** (*C. A.* **18**, 2231) and in later investigations are discussed. The detn. of the cement content of known mortars showed that treatment of the powd. material with dil. HCl only is not sufficient to dissolve all the silica from the cement, but that an alk. wash is required also. It is suggested that cold *N* HCl and cold 5% Na_2CO_3 contg. 5% NaCl solns. be used to avoid possible soln. of the natural SiO_2 and silicates. The addn. of 5% NaCl to the reagents and the use of 0.8% HCl wash soln. prevent the discoloration of the filtrates. It is possible to detect the presence of hydraulic admixts. by detg. the silica sol. in the HCl and in the Na_2CO_3 solns. separately, since the sol'y. of such admixts. is high in the alk. soln.

H. F. Kriege



Ca

PROCESSES AND PROPERTIES INDEX

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The contraction of certain mixed cements. A. Steopoe. *Bul. inst. rom. Recherche* 3, 162-74 (1938); *Chimie & industrie* 41, 1120; cf. C. A. 32, 9420.—There was added to 3 different cements 20-30% of powd. $Ca(OH)_2$, pure and in admixt. with 40% of petroleum asphalt. All these auxiliary materials acted in the same way on the same cement, increasing the amt. of water required for mixing, the vol. of the suspension of binder and of the hardened paste, and also the contraction. The effects of the various auxiliary materials vary with the nature of the cement.
A. Papineau-Couture

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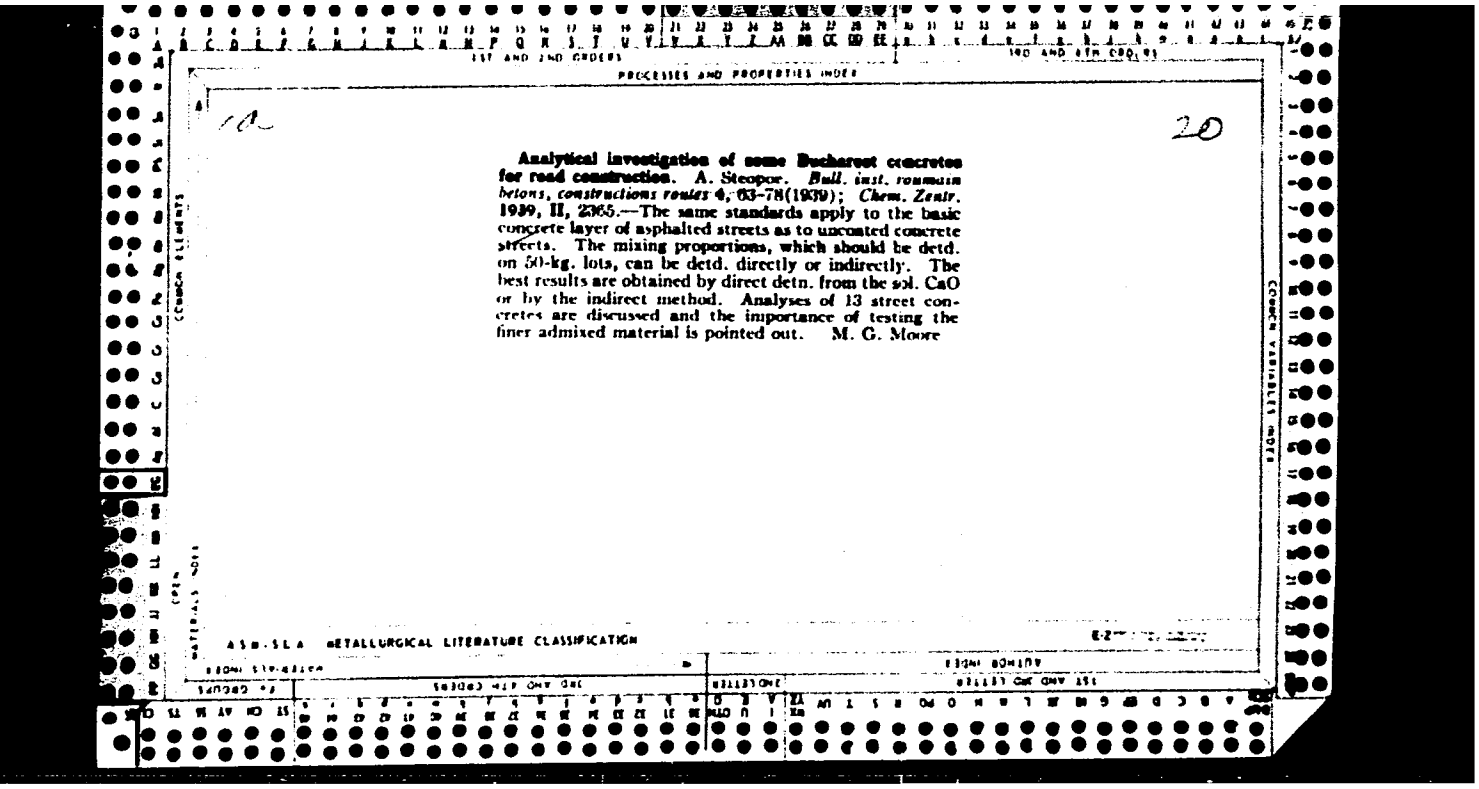

PROCESSES AND PROPERTIES INDEX

10

20

Analytical investigation of some Bucharest concretes for road construction. A. Steopoe. *Bull. inst. roumain betons, constructions routes* 4, 63–78(1939); *Chem. Zentr.* 1939, II, 2365.—The same standards apply to the basic concrete layer of asphalted streets as to uncoated concrete streets. The mixing proportions, which should be detd. on 50-kg. lots, can be detd. directly or indirectly. The best results are obtained by direct detn. from the sol. CaO or by the indirect method. Analyses of 13 street concretes are discussed and the importance of testing the finer admixed material is pointed out. M. G. Moore

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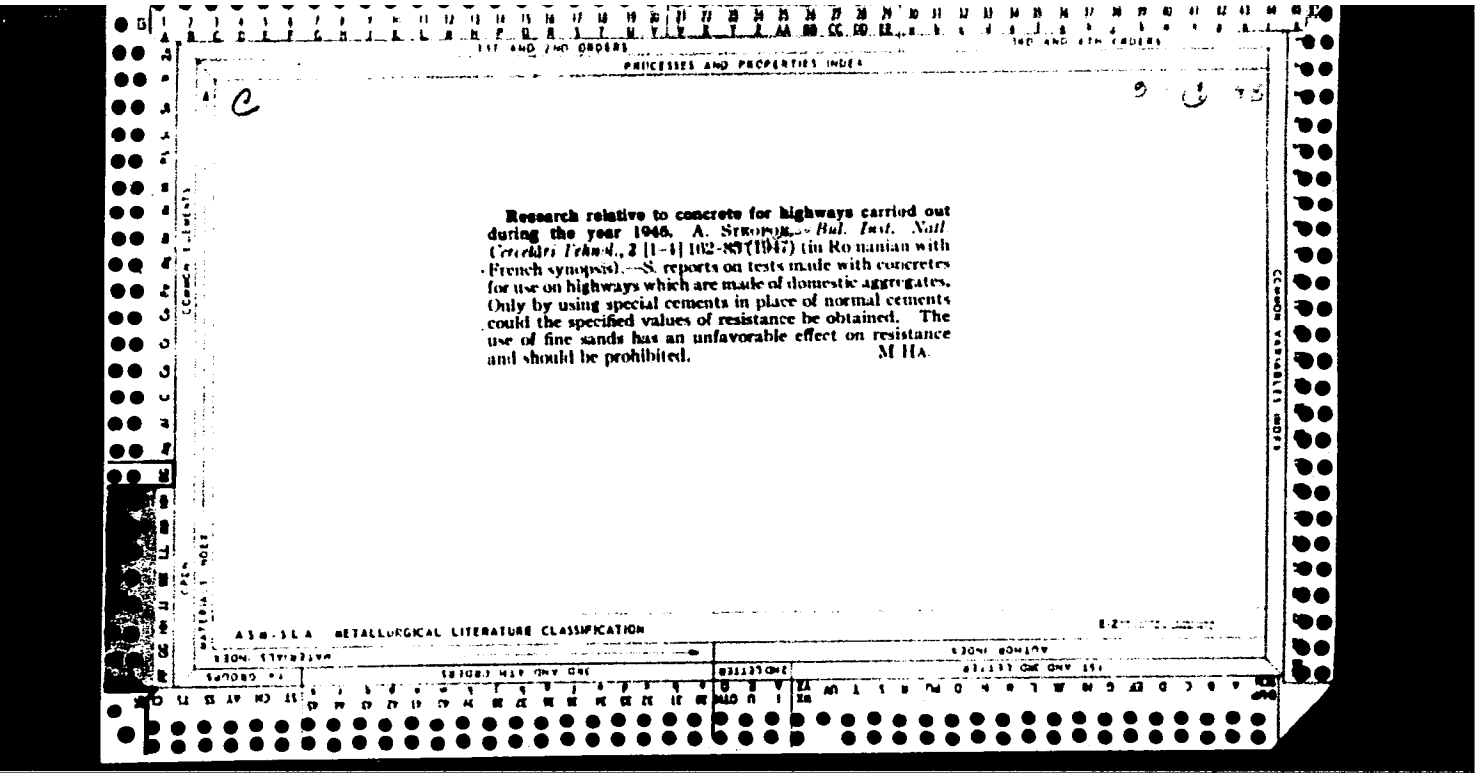

Research relative to concrete for highways carried out during the year 1946. A. Stroiman.—*Bul. Inst. Natl Cercetări Tehn.-Ec.*, 2 [1–4] 102–85 (1947) (in Romanian with French synopsis).—S. reports on tests made with concretes for use on highways which are made of domestic aggregates. Only by using special cements in place of normal cements could the specified values of resistance be obtained. The use of fine sands has an unfavorable effect on resistance and should be prohibited. M Ha.

Setting of cements in the presence of great quantities of water. A. Steopoe. *Bull. études et recherches tech.* (Bucharest) 1, 183-8(1949).—An app. is described for measuring the setting time of cements which eliminates the discrepancies found between setting times measured in the lab. and observed in practice. A porous cup is filled to a height of 40 mm. with cement paste of normal consistence. The cup is immersed in a crystn. dish filled with H_2O or a salt soln. Salts which may form ppts. in the pores of the cup, such as sulfates, must be avoided. The penetration of a needle of 1 sq. mm. cross section under 300-g. load is measured in the usual way.

G. Cohn