LIVANOV, A.P.; PIKUSHOV, A.N.

Exhaust braking of a motor vehicle with a four-cycle diesel engine. Avt. prom. 30 no.6:7-10 Je '64. (MIRA 17:12)

1. TSentral'nyy nauchno-issledovatel'skiy institut mekhanizatsii i energetiki lesnoy promyshlennosti, Kavkazskiy filial.

YAKUBOVICH, I.A.; PASKHIN, N.[illegible].; VILYANSKIY, M.P.; BABIN, S.Ye., SLAVUTSKAYA, N.I.; Prinimali uchastiye: PAHADNYA, P.I.; RUPNEVSKAYA, M.I.; PURISMAN, V.I.; LEONOVA, I.F.; PAGHKOV, A.S.; BACHURINA, K.M.; FEDRIN, M.I.; YUKSINA, L.A.; PONOMAREV, Yu.F.; DYMOVICH, Ye.I.; PIKUSOVA, R.A.

Production and use of synthetic water-soluble polyacrylamide adhesives. Ferm. i spirt.prom. 30 no.8:32-34 '64. (MIRA 18:1)

1. Moskovskiy [illegible]-rodochnyy zavod.

ZMEYEV, Aleksey Andreyevich; KOVALEV, Nikolay Grigor'yevich; PIKUZ, A.N., red.; POPOV, A.N., red.izd-va; TSAGURIYA, G.M., tekhn.red.

[Railroad rolling stock; the production and foreign trade of capitalist countries] Zheleznodorozhnyi podvizhnoi sostav; proizvodstvo i vneshniaia torgovlia kapitalisticheskikh stran. Moskva, Vneshtorgizdat, 1962. 214 p. (MIRA 16:1)

(Railroads—Rolling stock) (Commerce)

PIKUZA, I.F., kand. tekhn. nauk.

Separation of grain by means of belt-type grain cleaning machines.
Sel'khozmashina no.12:15-19 D '57. (MIRA 11:2)
(Grain--Cleaning)

PIKUZA, I. F.

Doc Tech Sci - (diss) "Study of the working processes of grain throwers." Leningrad-Pushkin, 1961. 40 pp; with illustrations; (Ministry of Agriculture RSFSR, Leningrad Agricultural Inst); 150 copies; free; bibliography at end of text (10 entries); (KL, 7-61 sup, 230)

PIKUZA, [illegible]

"Rejuvenation and [illegible]itiza[illegible]ion o[illegible] [illegible]eed [illegible] 'Gordeiform [illegible]'." [illegible] Sci, Omsk Agricultural Inst, Omsk, 19[illegible]3. ([illegible], No 8, [illegible])

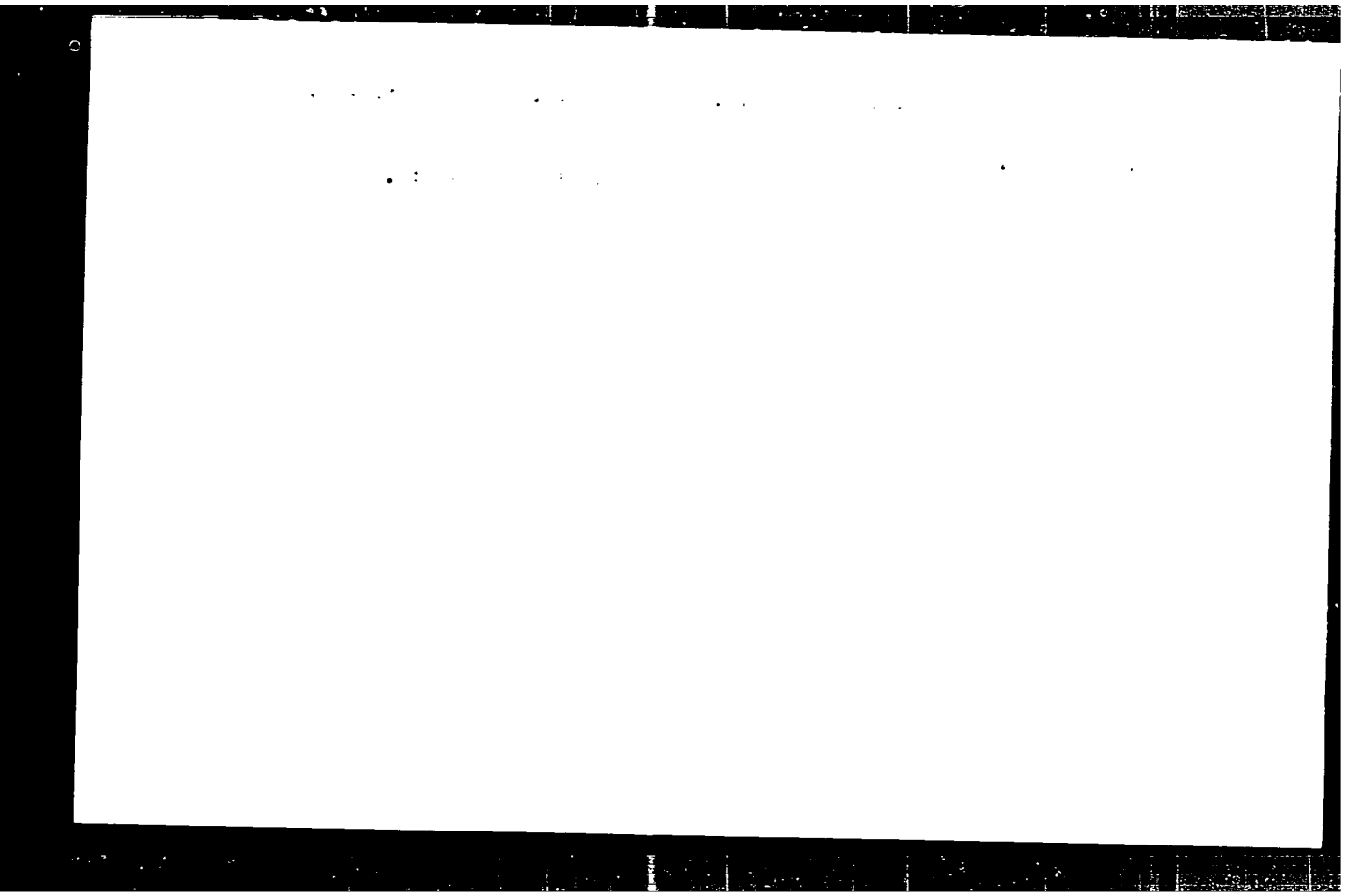
Survey of [illegible] [illegible]ertations Defended [illegible] [illegible] Educational Institutions ([illegible]

SO: Sum. No. [illegible], 24 Jun [illegible]5

PIKUZA, V.I. (Kazan')

Effect of the nonuniformities of producing layers on the curves of pressure build-up and hydraulic sounding. Izv. AN SSSR.Otd.tekh.nauk.Mekh.i mashinostr. no.1:146-149 Ja-F '63. (MIRA 16:2)

(Oil reservoir engineering)

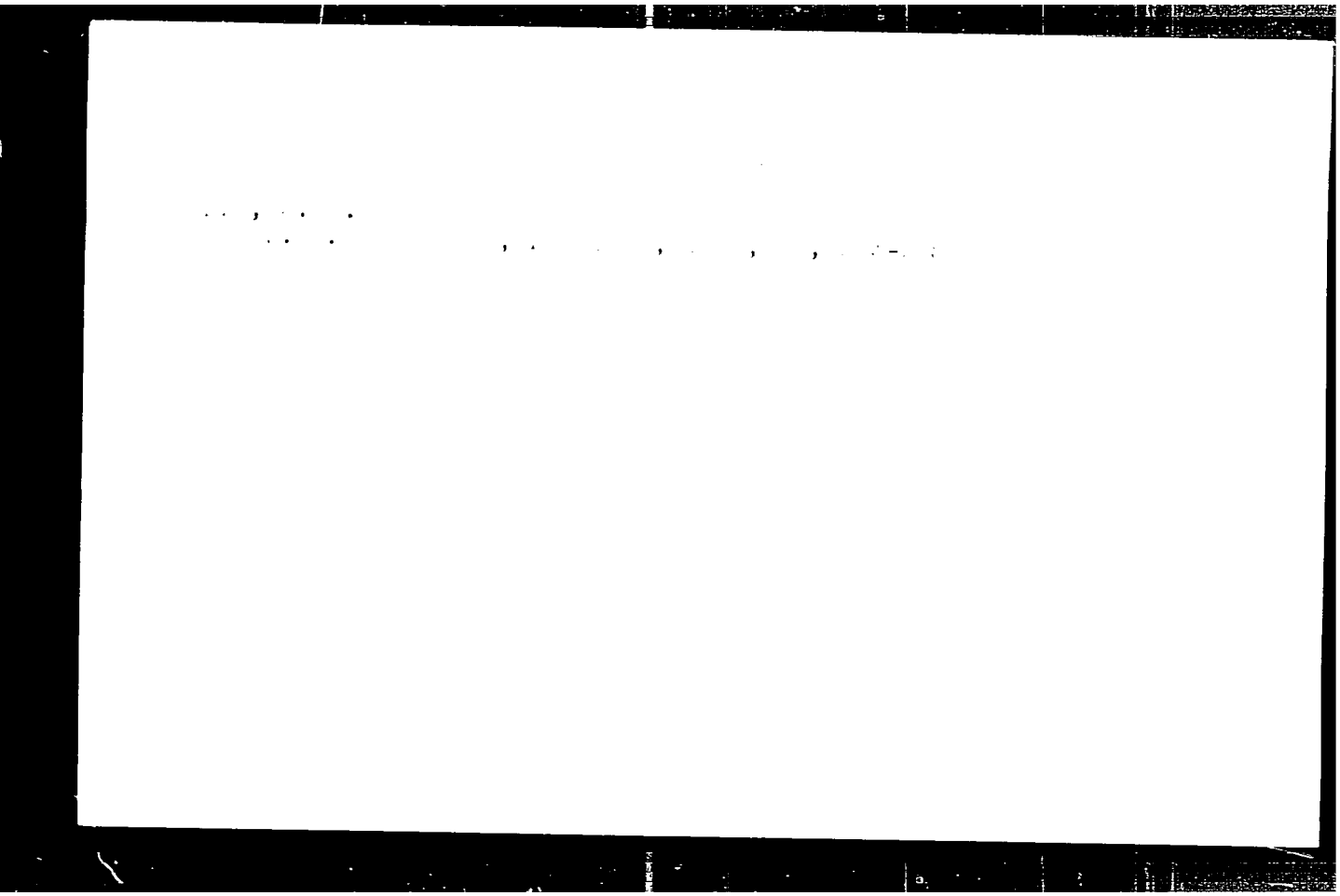


GAL'PERIN, M. D.; PIL', B. N.; KARVASARSKIY, B. D.

Radiation therapy of opticochiasmatic arachnitis. Med. rad. no.4: 18-24 '62. (MIRA 15:6)

1. Iz rentgenologicheskogo otdeleniya (zav. - prof. M. D. Gal'perin) Nauchno-issledovatel'skogo psikhonerologicheskogo instituta imeni V. M. Bekhtereva.

(MENINGITIS) (RADIOTHERAPY)



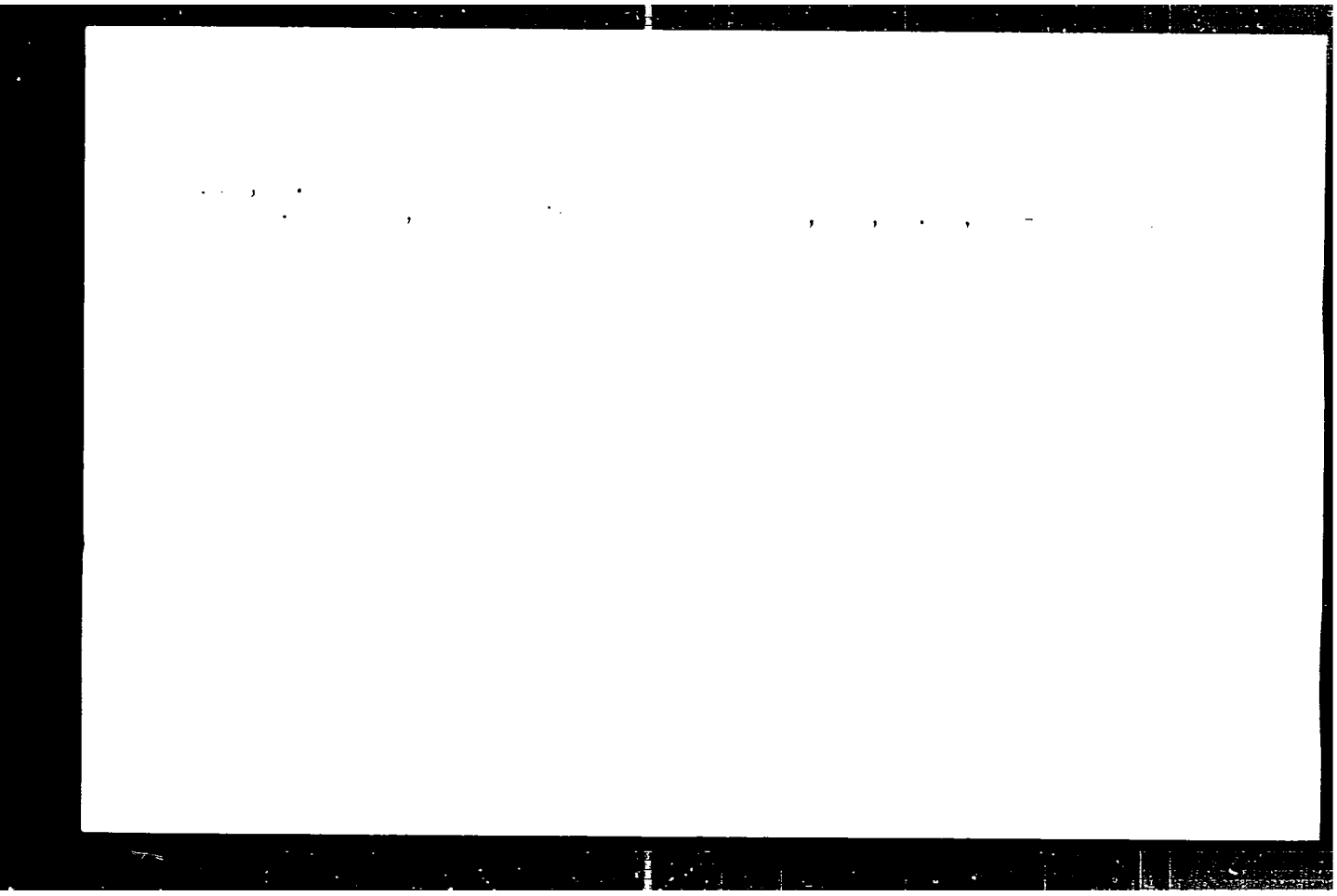
1ST AND 2ND ORDERS

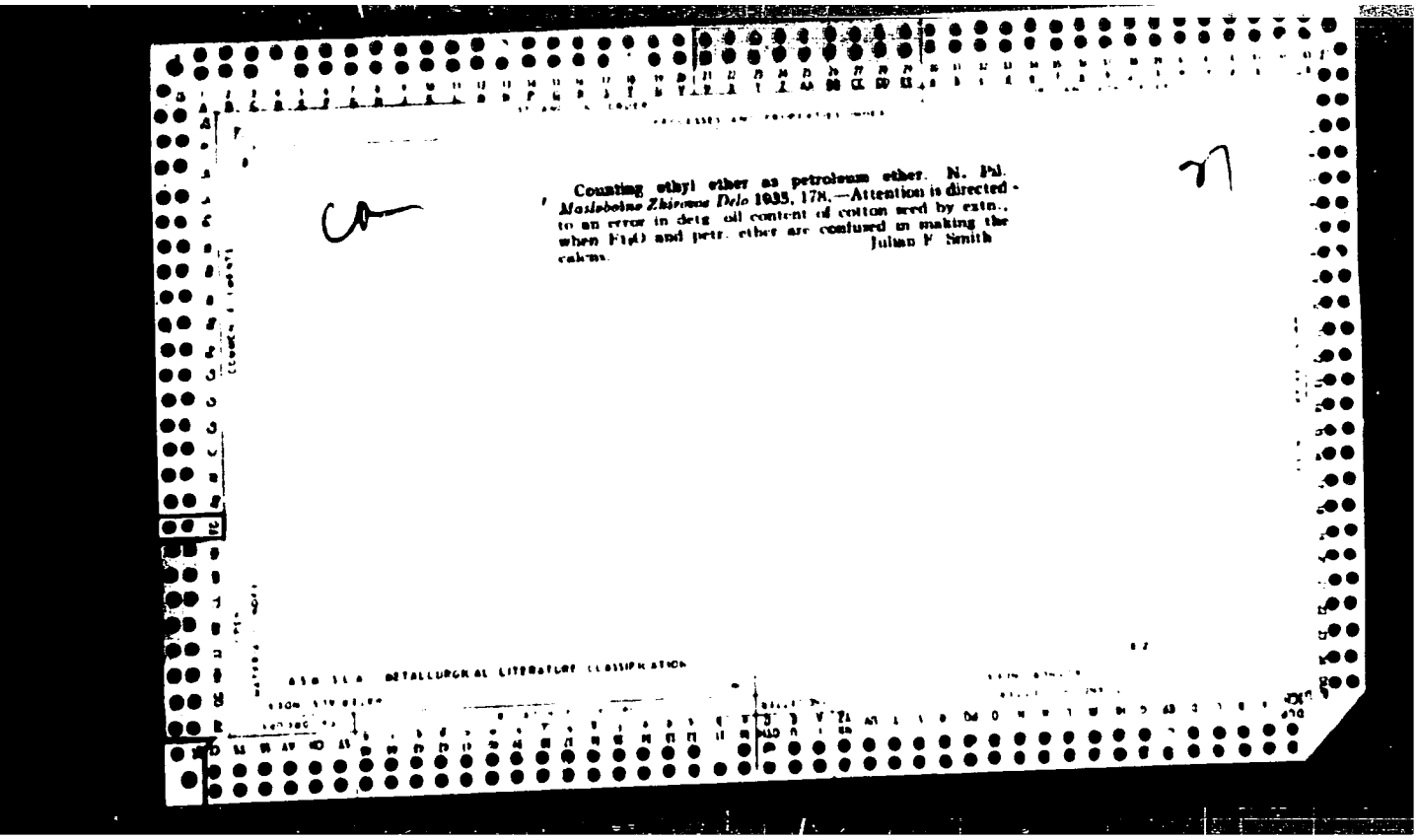
PROCESSES AND PROPERTIES INDEX

A New Observation With Respect to Luminescence of Zinc Sulfide. (In Russian.) N. Pil and C. Ottman. *Doklady Akademii Nauk SSSR* (Reports of the Academy of Sciences of the USSR), new ser., v. 66, June 1, 1949, p. 613-616.

Describes intensive blue luminescence of ZnS prepared at 1250°C. and activated by addition of small amounts of copper. This luminescence differs sharply from the blue luminescence of non-activated ZnS and even more from the ordinary green luminescence of ZnS-Cu. Method of production and properties of this new form of ZnS are described.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



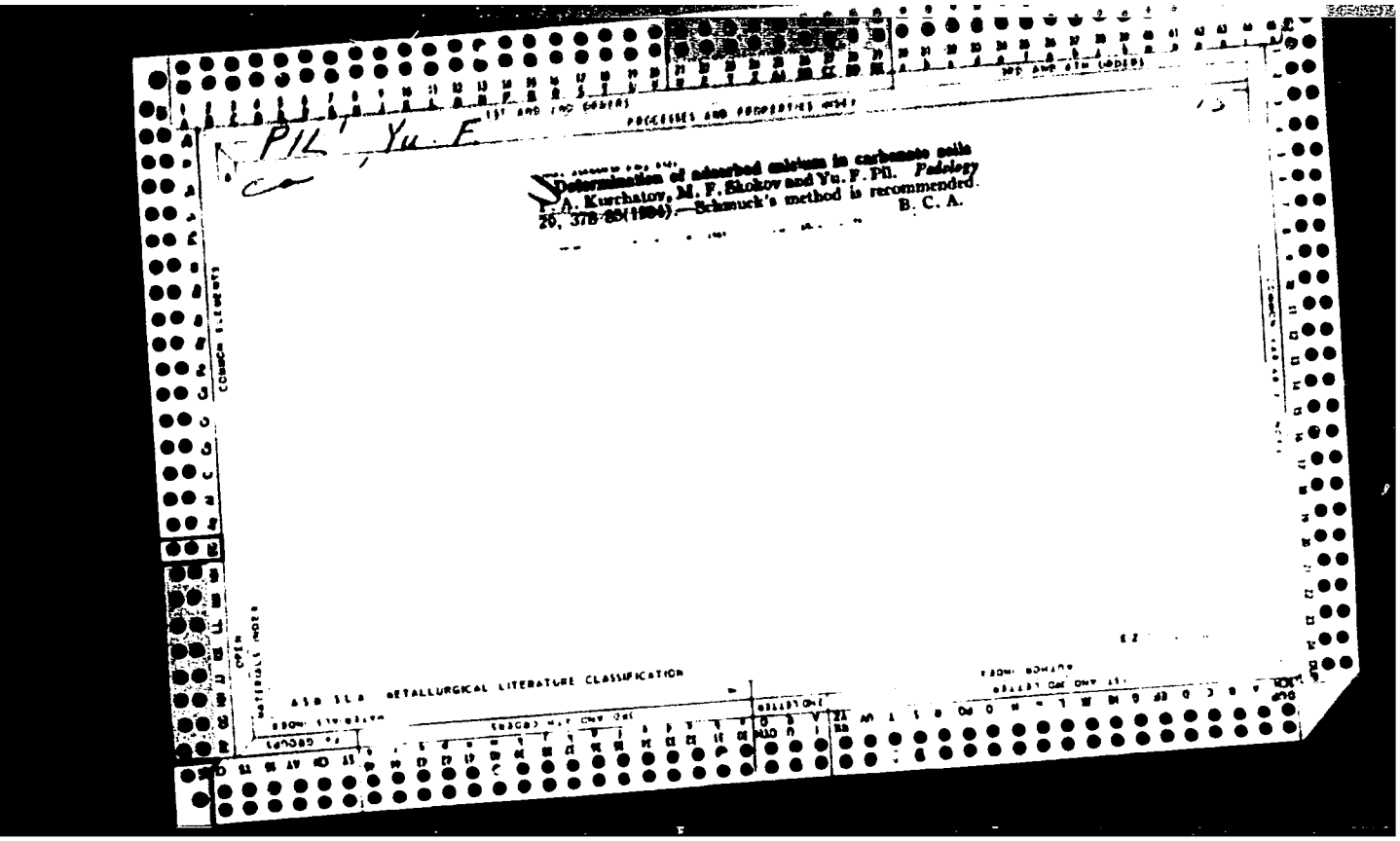


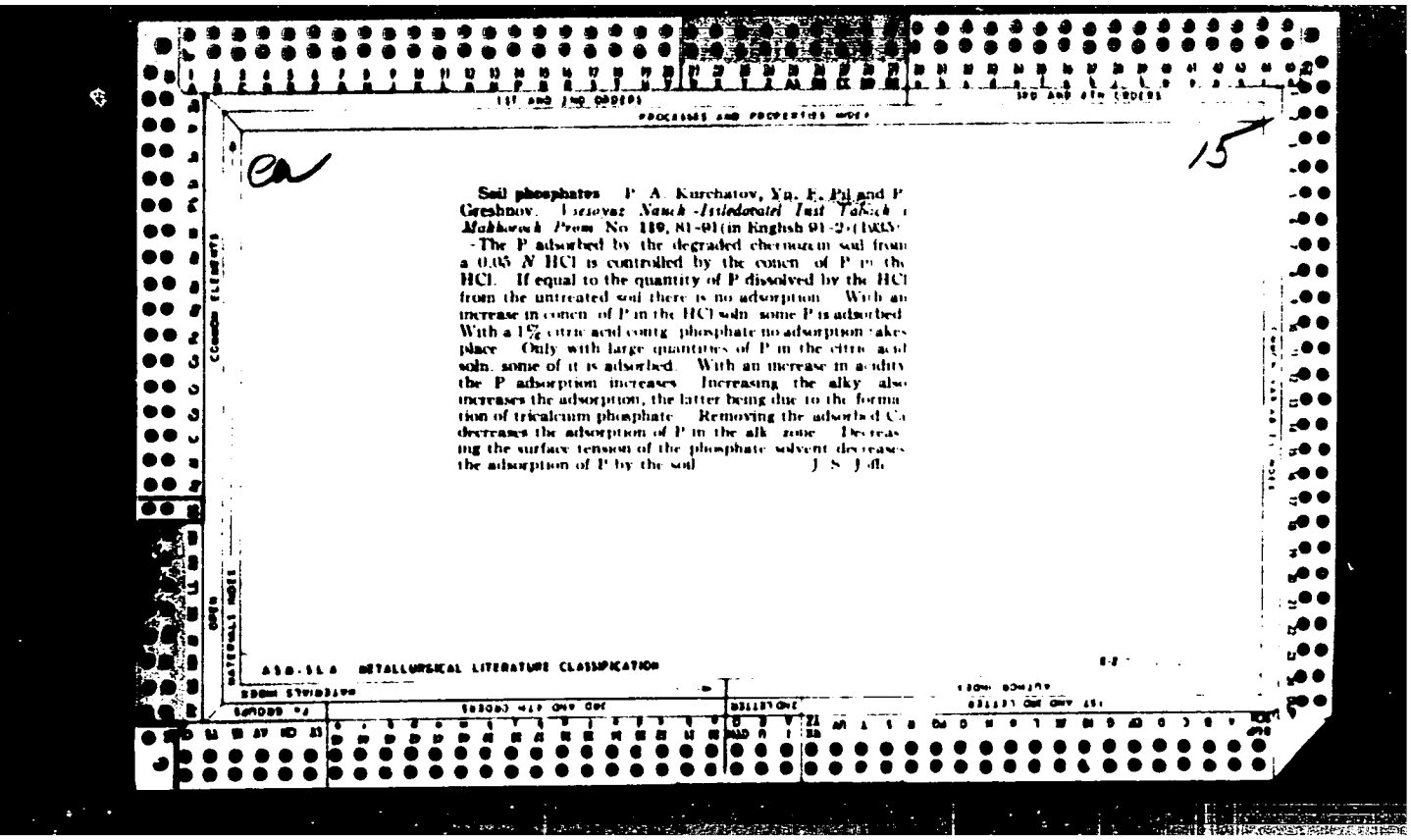
Counting ethyl ether as petroleum ether. N. Phl. *Maslobeino Zhirovoe Delo* 1935, 178.—Attention is directed to an error in detg oil content of cotton seed by extn. when Et$_2$O and petr. ether are confused in making the calcns. Julian F Smith

GAL'PERIN, M.D.; ZAYCHIKOVA, N.A. [deceased]; PIL', B.N.

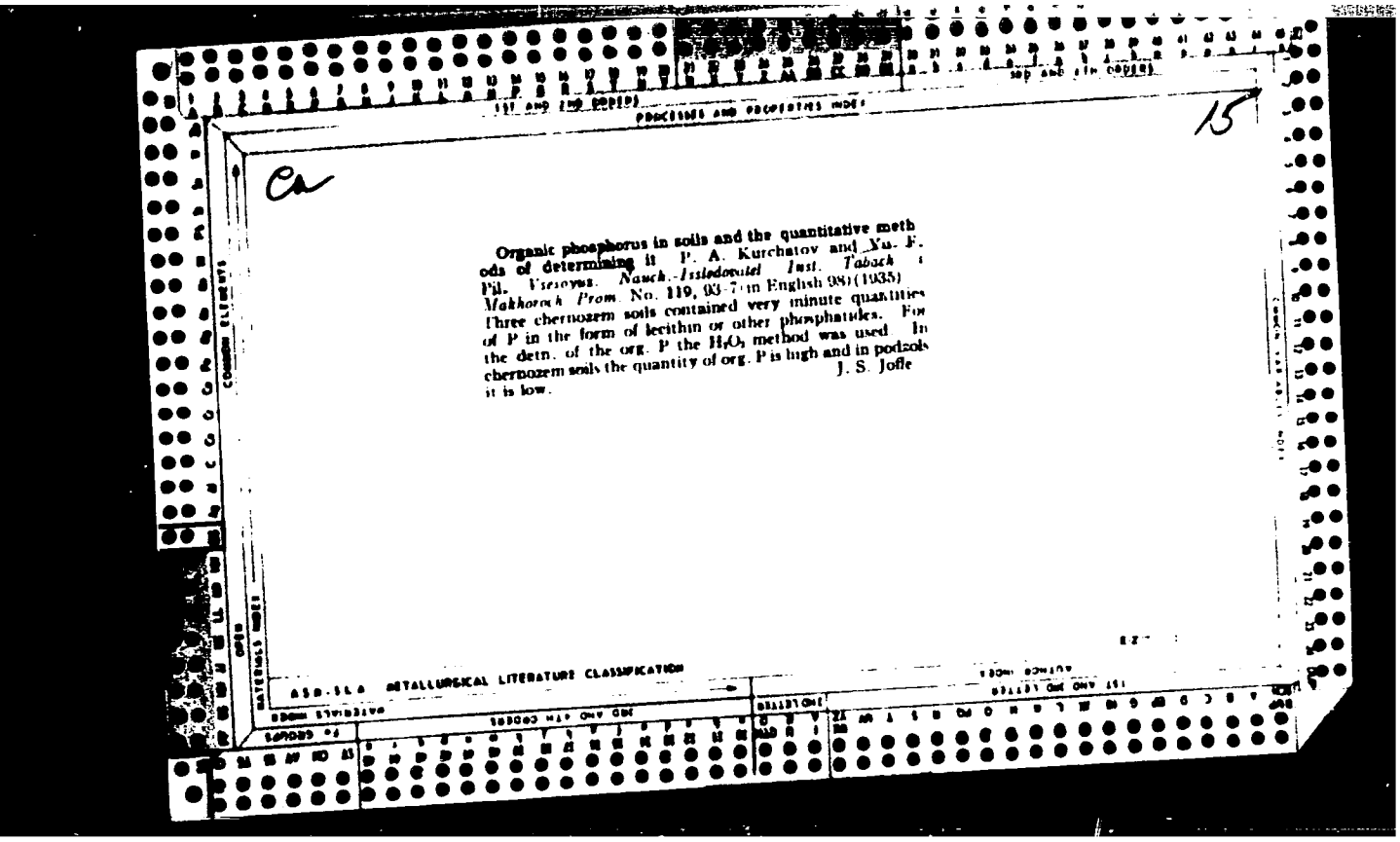
Significance of contrast methods of investigation in the diagnosis of nervous and mental diseases. Trudy Gos. nauch.-issl. psikhonevr. inst. no.20:41-53 '59. (MIRA 14:1)

1. Gosudarstvennyy nauchno-issledovatel'skiy psikhonevrologicheskiy institut imeni V.M. Bekhtereva, Leningrad.
(NERVOUS SYSTEM—DISEASES) (BRAIN—RADIOGRAPHY)





Soil phosphates P. A. Kurchatov, Yu. E. Pil and P. Greshnov. *Trudovye Nauch.-Issledovatel. Inst. Tabach. i Mahhorsh. Prom.* No. 119, 81–91 (in English 91–2) (1935).—The P adsorbed by the degraded chernozem soil from a 0.05 *N* HCl is controlled by the concn. of P in the HCl. If equal to the quantity of P dissolved by the HCl from the untreated soil there is no adsorption. With an increase in concn. of P in the HCl soln. some P is adsorbed. With a 1% citric acid contg. phosphate no adsorption takes place. Only with large quantities of P in the citric acid soln. some of it is adsorbed. With an increase in acidity the P adsorption increases. Increasing the alky. also increases the adsorption, the latter being due to the formation of tricalcium phosphate. Removing the adsorbed Ca decreases the adsorption of P in the alk. zone. Decreasing the surface tension of the phosphate solvent decreases the adsorption of P by the soil. J. S. Joffe.



Ca

15

Organic phosphorus in soils and the quantitative meth
ods of determining it P. A. Kurchatov and Xu. F.
Pil. *Vsesoyus. Nauch.-Issledovatel Inst. Tabach i
Makhorochn Prom.* No. 119, 93-7 (in English 98) (1935)
Three chernozem soils contained very minute quantities
of P in the form of lecithin or other phosphatides. For
the detn. of the org. P the H_2O_2 method was used. In
chernozem soils the quantity of org. P is high and in podzols
it is low.
J. S. Joffe

1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

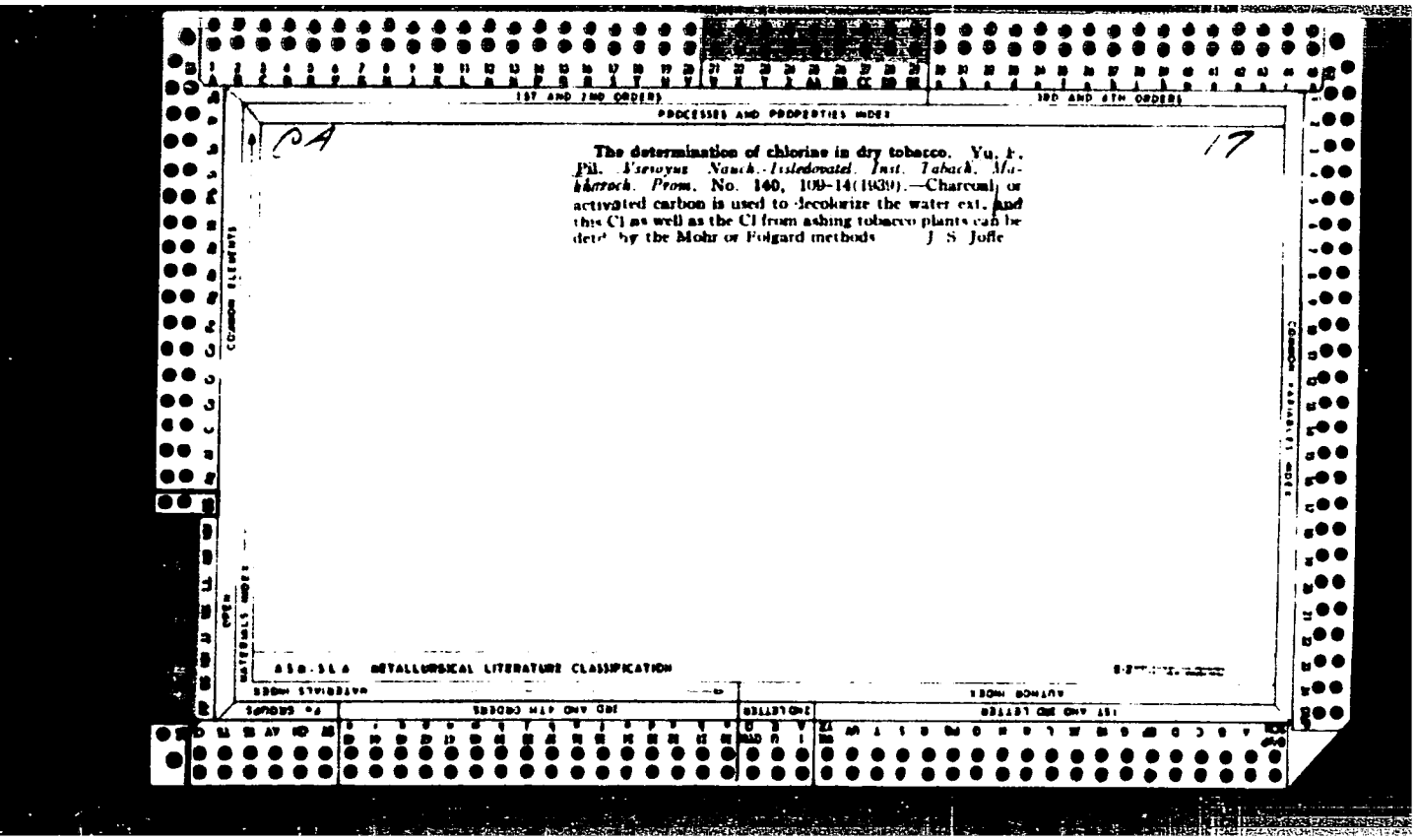
3RD AND 4TH ORDERS

15

Ca

New methods of determining the exchange capacity in soil containing carbonates. Yu. F. Pil, T. N. Agoshkova and R. M. Galkovich. *Vsesoyuz. Nauch.-Issledovatel. Inst. Tabach. i Makhorochn. Prom.* No. 119, 99-108 (in English 107) (1935).—The use of HCl and NH_4Cl as preliminary treatment of soils for the detn. of exchange capacity of such soils is described. J. S. Joffe

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

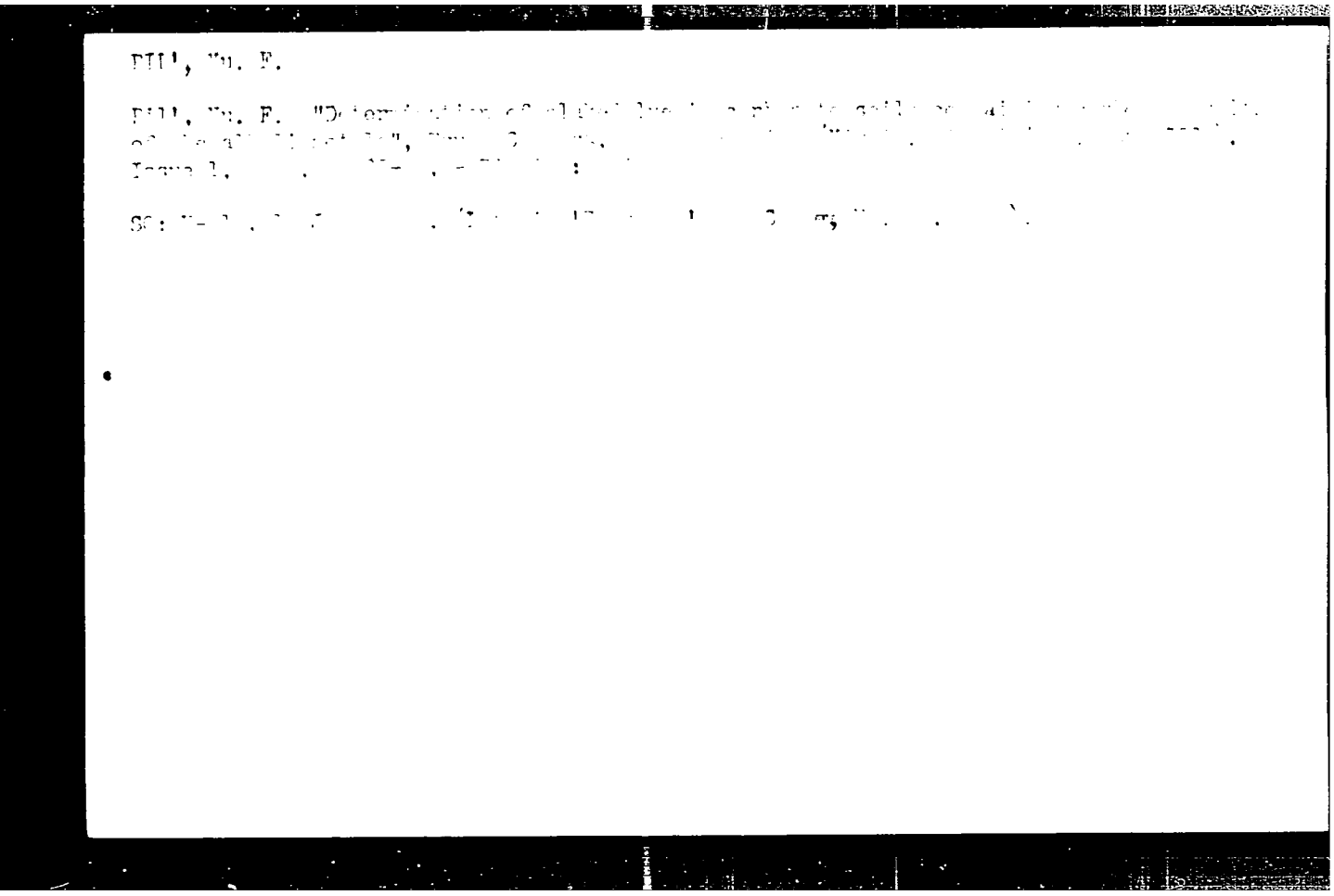


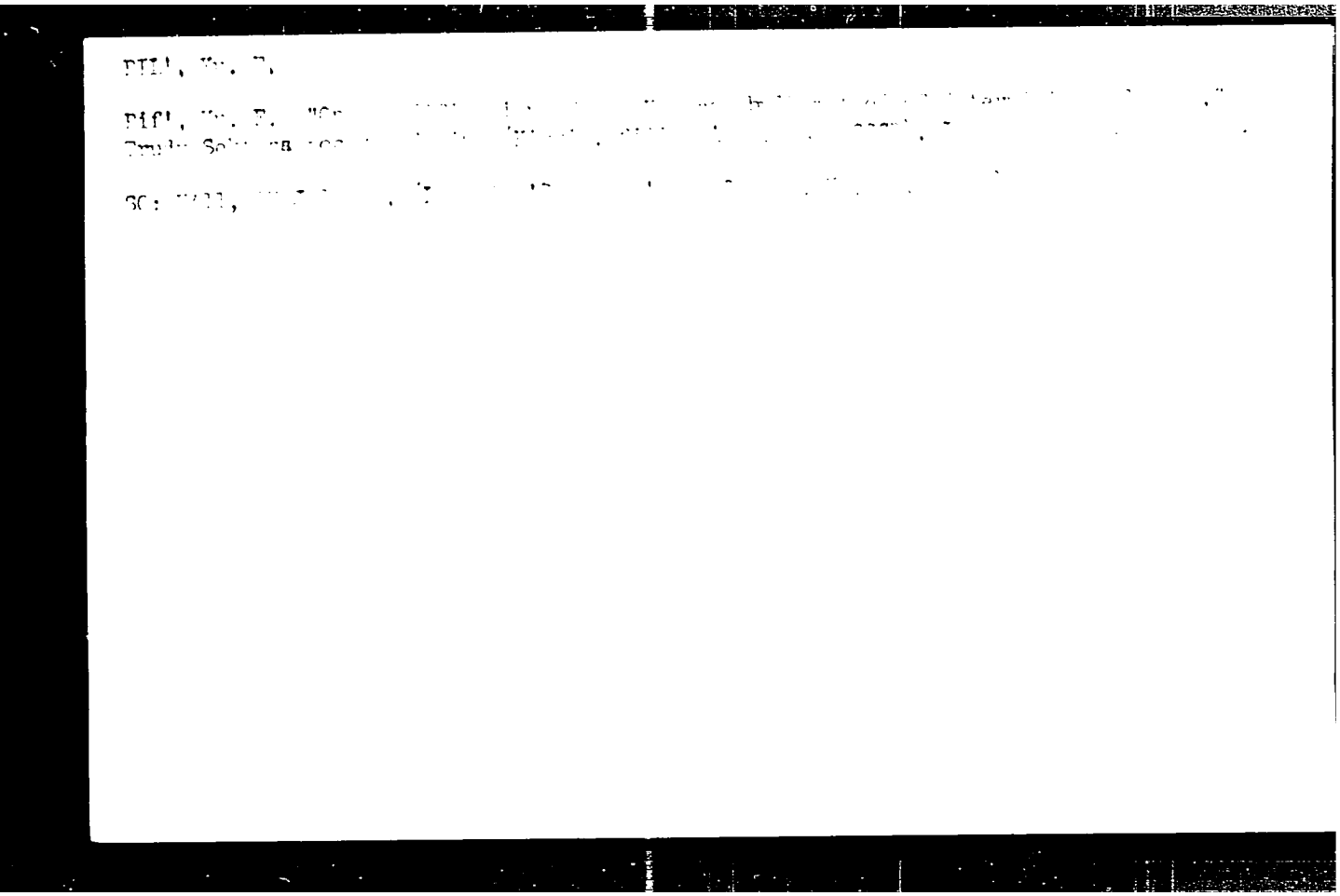
PROCESSES AND PROPERTIES INDEX

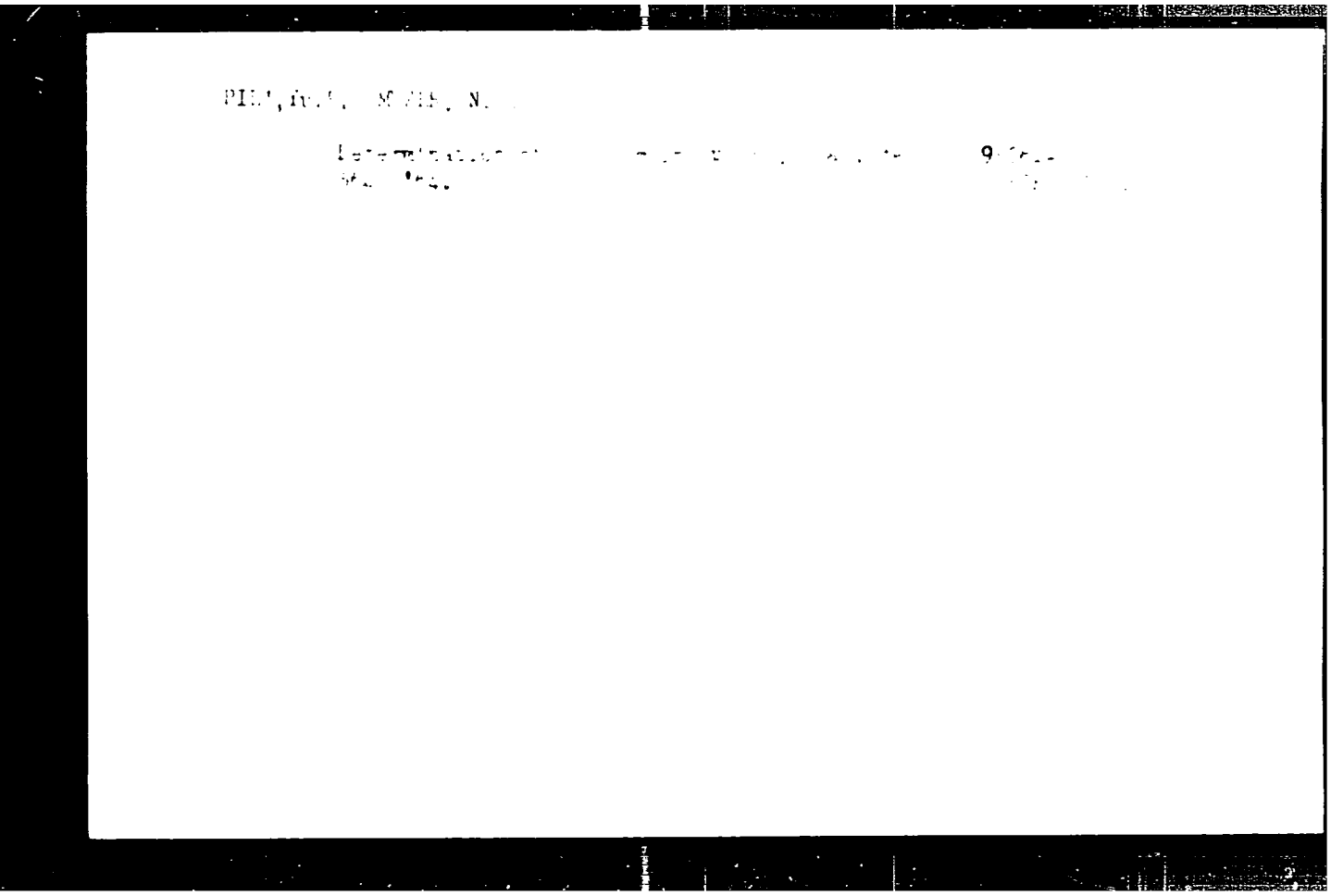
17

The determination of chlorine in dry tobacco. Yu. F. Pil. *Vsesoyuz. Nauch.-Issledovatel. Inst. Tabach. Makhorochn. Prom.* No. 140, 109–14(1939).—Charcoal or activated carbon is used to decolorize the water ext. and the Cl as well as the Cl from ashing tobacco plants can be detd. by the Mohr or Folgard methods. J. S. Joffe

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION







SYUDMAK, N.V.; PIL', Yu.F.; VARSHAVSKAYA, K.A.

Trilonometric determination of calcium and magnesium in blood serum. Vrach. delo no.11:110-113 N '61. (MIRA 14:11)

1. Rovenskoye oblliechsanupravleniye i kafedra pochvovedeniya zav. - dotsent Yu.F.Pil') Ukrainskogo instituta inzhenerov vodnogo khozyaystva.

(BLOOD--ANALYSIS AND CHEMISTRY)
(CALCIUM IN THE BODY) (MAGNESIUM IN THE BODY)

P/014/61/040/003/004/005
A221/A126

AUTHORS: Biernat, Janusz; Głowacz, Kazimierz; Łoziński, Jan; Pilch, Władysław and Stachurski, Józef

TITLE: Production of commercial concentrates of zircon, ilmenite and monazite from indigenous sea sands

PERIODICAL: Przemysł Chemiczny, no 3, 1961, 149-150

TEXT: In this article a method is described by which zircon, ilmenite and monazite concentrates can be obtained from sea sands. For several years the Instytut Metali Lekkich (Light Metals Institute) carried out investigations in that direction but without success. The authors managed to develop the method by which a product of standard purity can be obtained. The final zircon concentrate is obtained by separating same from rutile by means of flotation. Before floating the mixture of zircon and rutile grains must be specially treated with 0.4% solution of fatty acid salts at 95°C. By doing so selective adsorption takes place and fatty acid anions are adsorbed by zircon

Card 1/3

Production of commercial ...

grains. After this treatment the grains are washed first in water and afterwards with diluted sulfuric acid. Fatty acids adsorbed are now converted into fatty acids hard to solve. Fatty acids are not wetted by water, therefore zircon grains are becoming hydrophobic. From the mixture so prepared, titano-magnetite, ilmenite and garnet are removed by magnets and the remaining grains diverted into flotation chamber. Before flotation this mixture contained about 70% zircon, 14% rutile and 14% of other opaque minerals. After flotation the concentration of zircon is increased to 97% with 87% efficiency. Obtaining ilmenite concentrate. From the sea sands treated with magnetic enrichment, a mixture of ilmenite and titano-magnetite was obtained. This mixture was roasted in CO atmosphere at 700°C. The product of this treatment was subjected to another magnetic enrichment from which two products were obtained: The titano-magnetite and ilmenite with 50.25% of TiO_2. Monazite separation: In sea sand samples 0.1% of monazite was detected. In the concentrate obtained there were 90.97% of monazite, 1.5% zircon, 0.9% of garnets and 6.63% of opaque minerals. (Abstractor's note: No details of monazite extraction are given.) The authors conclude: Polish sea

Card 2/3

PILACKI, M.

"The Problem of the Cultivation of Neglected Waters." p. 23, (GOSPODARKA RYBNA, Vol. 5, ..o. 2, Feb. 1953, Warsaw, Poland).

SO: Monthly List of East European Accession, Lib of Congress, Vol 2, no 10 Oct. 1953, Uncl.

PILAVOV, P.

USSR

Moscow

On: "In[illegible]
Gynecology".

Source: P: [illegible]

Abstracted in USAF "Treasure Island" [illegible]
13A97 on file in Library of Congress, Air Information
Division.

PLAKHOV, P.

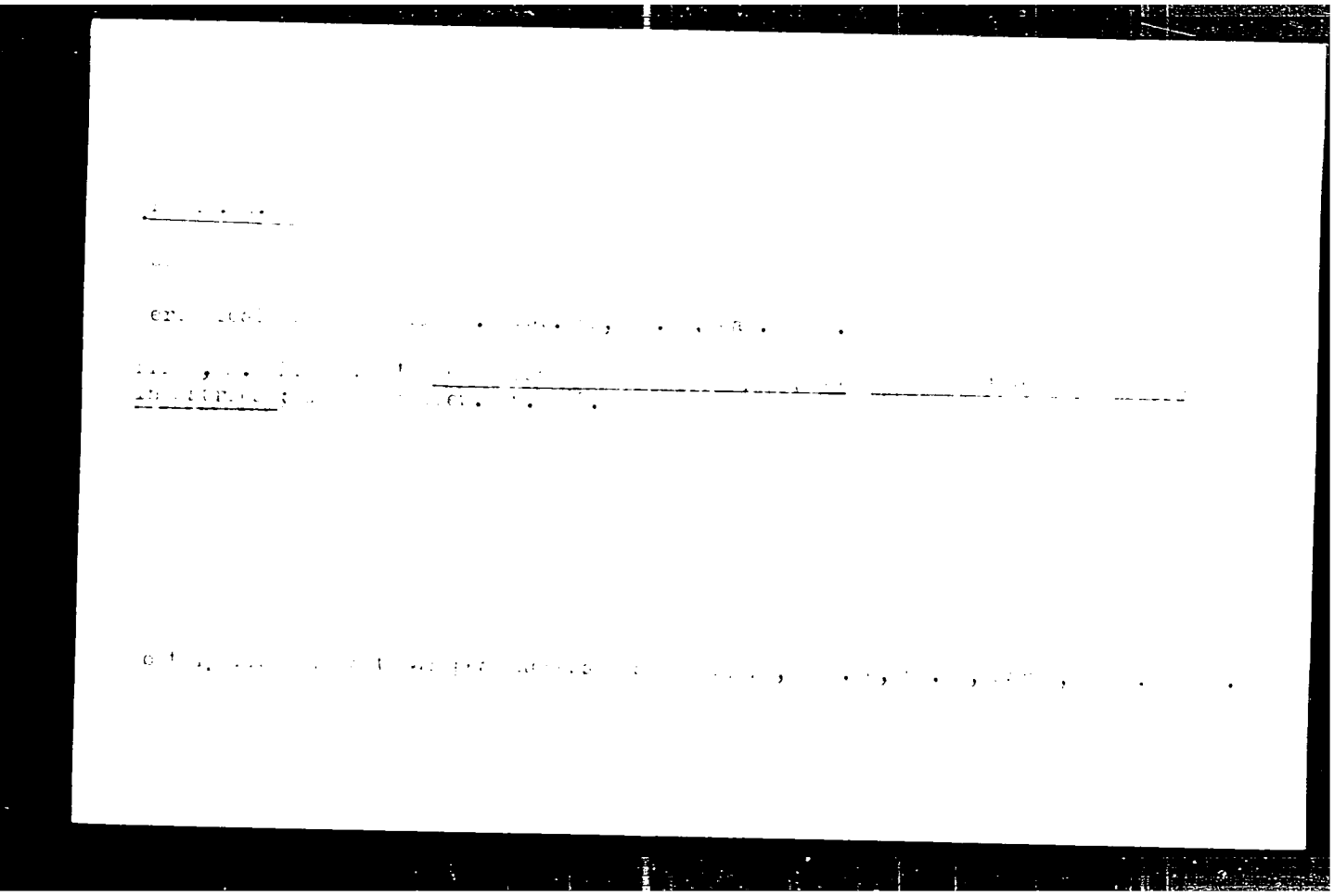
On: "Institute of Obstetrics and Gynecology".

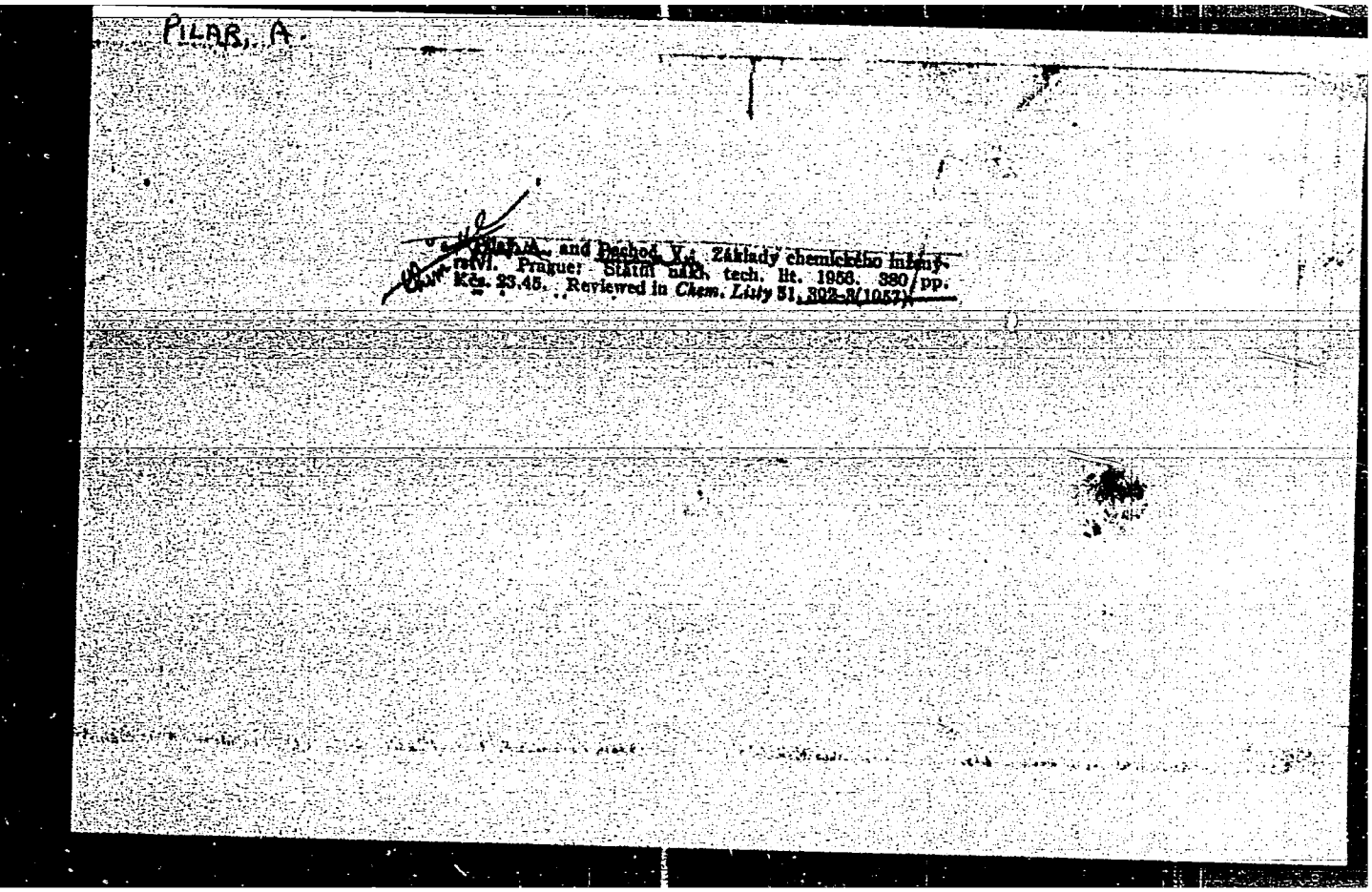
Soviet Source: P: Kabinitsa, July [illegible], [illegible] Abstracts in [illegible] "[illegible]" Report No. [illegible], on file in Library of Congress, Air Information Division.

FILA[illegible], A.

Solution to the [illegible] of the [illegible] of nomograms. p. [illegible].
[illegible], Vol. [illegible], No. [illegible], [illegible].

SO: [Mo]nthly List of East European Accessions, [illegible], Vol. [illegible], No. [illegible], [illegible], [U]ncl.





PILAR, A.

Pilař A. and Pachod V., Základy chemického inženýrství. Prague: Státní nakl. tech. lit. 1958. 380 pp. Kčs. 23.45. Reviewed in *Chem. Listy* 51, 302-3(1957).

[illegible], I.

Application of the rule of linearity in chemical engineering functions : r [illegible] azeotropic system.

p. 75 (Chemicky Prumysl. [illegible], Feb. 19[illegible], [illegible])

Month List Index [illegible] East European Accessions [illegible]. Vol. 7, no. 2, February 1958

HLAR, A.

Measurement and regulation techniques as a subject for our faculties of chemical technology.

P. 596. (CHEMICKY PRUMYSL) (Praha, Czechoslavakia) Vol. 7, no. 11, Nov. 19

SO: Monthly Index of East European Accession (EEAI) LC, Vol. 7, No. 5, May 19

PILAR, Antonin

CZECHOSLOVAKIA / Physical Chemistry. Thermodynamics. Thermochemistry. Equilibria. Physical-Chemical Analysis. Phase Transitions. B-5

Abs Jour : Ref Zhur - Khim., No 10, 1958, 31668

Author : Antonin Pilar

Inst : -

Title : Application of Linear Functions Pub. to Computation of Azeotropic Systems.

Orig Pub : Chem. prumysl. 1957, 7, No 2, 75-77.

Abstract : Considerations concerning the methods of graphical determination of vapor pressure and latent heat of evaporation of binary and ternary azeotropic systems are expressed.

Card 1/1

16

Z/009/60/000/01/032/038
E142/E235

AUTHOR: None Given

TITLE: New Books

PERIODICAL: Chemický průmysl, 1960, Nr 1, pp 38-40

ABSTRACT: The following books are reviewed:
"Examples of Chemical and Engineering Calculations I/1" by A. Pilař, M. Ryba, Z Volák, V. Pechoč and I. Koropecký; published by SNTL, Prague 1959; reviewed by J. Nývlt, VÚAnCh.
"Technical Uses of Silicones" by V. Bažant, V. Chvalovský and J. Rathouský; published by SNTL, Prague, 1959; reviewed by J. Dvořák, Research Institute for Macromolecular Chemistry.
"Chemical Analyses in the Polygraphic Industry" by J. Borecký; published by SNTL, Prague, 1959; reviewed by S. Lankaš.
"Survey of Organic Chemistry" ("Précis de Chimie Organique") by V. Grignard; published by Masson a spol., Paris, 1958; reviewed by V. Vesely

Card 1/2

PILAR, A.

Pilar, A. Solution to the computation of the operating efficiency of mixers by means of nomograms. p. 148. CHEMICKY PRUMYSL. Praha. Vol. 5, no. 4, Apr, 1955.

SO: Monthly List of the East European Accession, (EEAL), LC. Vol. 4, no. 10, Oct. 1955. Uncl.

PILAR, Antonin

"Industrial refrigeration equipment" by E. Dvorak, C. Cervenka. Reviewed by Antonin Pilar. Chem prum 13 no.5:264 My '63.

1. Vysoka skola chemicko-technologicka, Pardubice.

PILAR, Antonin

"Physical principles of chemical ergineering" by P. Grassmann. Reviewed by Antonin Pilar. Chem prum 12 no.8:456 Ag '62.

1. Vysoka skola chemicko-technologicka, Pardubice.

PILAR, ANTONIN

Zakladni operace a provozni zarizeni v chemicke vyrobe. [Vyd. 1.] Praha, Statni pedagogicke nakl., 19(53). (Ucebni texty vysokych skol) Vol. 3. [Basic operations and operational equipment in chemical production Bibl., diagrs.]

SO: Monthly List of East European Accessions, Library of Congress, Vol. 3, No. 2, February, 1954, Uncl.

PILAR, B.

Use of polyethylene blocks for nuclear reactor shielding.
Jaderna energie 6 no.5:176 My '60.

GANZ, V.; HAMMER, J.; PILAR, J.; PISA, Z.; ZEMPLENYI, T.

Working test with ECG recording during physical effort.
Vnitr. lek., Brno 1 no.6:423-426 June 55.

1. Ustav pro choroby obehu krevniho, Praha, Krc, reditel prof. Dr. Kl. Weber, Ustav pro choroby obehu krevniho, Praha-Krc.

(PHYSIOLOGY
working test, ECG eff. of phys. effort.)
(ELECTROCARDIOGRAPHY
in working test, eff. of phys. effort.)
(EXERCISES, effects
phys. effort on ECG in working test.)

PILAR, J.

Heparin and the clearing reaction in atherosclerosis. T. Zemplényi, V. Felt, J. Fodor, D. Reichl, and J. Pilař (Ústav pro choroby oběhu krevního, Prague). *Časopis Lékařů Českých* 94, 262-6(1965).—Intravenous administration of heparin (I) produced a significantly smaller clearing of alimentary lipemia in 55 atherosclerotic patients as compared with 42 normal subjects. The *in vitro* addn. of normolipemic (12-hr. starvation) serum from atherosclerotic patients to a mixt. of hyperlipemic serum from normals with I serum from normals inhibits the clearing reaction, as compared to control mixts. of normolipemic, hyperlipemic, and I serum, all from normal individuals. Only a min. amt. of I serum necessary for producing a clearing effect was used in order to increase the selectivity of the test. An artificial oil emulsion can be substituted for normal hyperlipemic serum in these expts., thus obviating the need for lipemic blood. It has been prepd. by emulsifying 1 ml. olive oil with 15 mg. crude lecithin in a 1:1 mixt. of phosphate buffer pH 6.9 with 5% NaOAc. This emulsion is dild. with saline, stabilized by the addn. of 0.8 g. human-serum albumin, and emulsified once more. Heparinized serums were removed 15 min. after the intravenous administration of I to both normal and atherosclerotic subjects; normal serums had a significantly greater clearing effect on the emulsion than atherosclerotic serums. The differences between the normal and atherosclerotic subjects were found even in groups homogenous by the criteria of age and sex. In all these expts. it is important to correct for the spontaneous clearing of the substrate (owing to other causes than heparinized serum) during the incubation. Milk is not a valid substrate. I. M. Hais

MD

(4)

L 21109-66 EWT(l)/ETC(f)/EPF(n)-2/EWG(m) IJP(c) AT
ACC NR: AP5015926 SOURCE CODE: CZ/0055/65/015/006/0399/0406

AUTHOR: Pilar, J.; Sicha, M.

ORG: Faculty of Mathematics and Physics, Charles University, Prague 59

TITLE: Verification of the microwave method of measuring small changes in concentration of electrons in striated plasma

SOURCE: Chekhoslovatskiy fizicheskiy zhurnal, v. 15, no. 6, 1965, 399-406

TOPIC TAGS: plasma resonance, electron distribution, microwave plasma, frequency band, plasma wave, traveling wave interaction, critical wavelength

ABSTRACT: A more detailed experimental verification of shorter wavelengths in a frequency band of 3 kMc was carried out. The method of measuring small changes in electron concentration in plasma by the high-frequency resonance method with an apparatus working in a frequency band of 3 kMc was verified. The authors stated that the initial relations of the given method are valid with sufficient accuracy even in this frequency band. The authors thank V. Vesely, Department of Electronics and Vacuum Physics of the Mathematical Physical Faculty of Charles University, for his valuable advice and aid in carrying out experiments. Orig. art. has: 3 figures, 6 formulas, and 2 tables. [Based on authors' abstract.] [NT]

SUB CODE: 20/ SUBM DATE: 11Nov64/ ORIG REF: 001/ OTH REF: 005/

Card 1/1 dda

PILAR, Josef

Experiences in periodic revision of product quality. Podn org 18 no.11: 489-492 N '64.

1. Tesla National Enterprise, Pardubice.

HLAS, L.

The block signal system.

P. 230 Zeleznicni Technika) Vol. 5, No. 9, Sept. 1957, Czechoslovakia

SO: MONTHLY INDEX OF EAST EUROPEAN ACCESSIONS (EEAI) LC. - Vol. 7, No.1,JAN. 1958

PILAR, K.

Conditions for a good signal system. p. 236.
ZELEZNICE, Prague, Vol. 4, no. 9, Sept. 1954.

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 5, No. 6, June 1956, Uncl.

PILAR, K.

"Railroad Transportation of Tomorrow." p. 215
"Further Experiences of our "Zavodchiks", Track Maintenance Men." p. 217 (Zeleznice, Vol. 3, no. 9, 1953, Praha)

SO: Monthly List of East European Accessions, Vol. 3, No. 3 /Library of Congress, March 1954 ~~1953~~, Uncl.

IBLER, Zbynek, inz.; PILAR, Radovan, inz.

Power consumption standards in steam power stations. Energetika Cs 12 no.12:622-627 D '62.

PILAR, Vl. (Ing.)

Vl. Pilar, "Zur Rauchgasrueckfuehrung im Generatorbetrieb," Energietechnik (Berlin), 7/10, October 1957, pp. 464-71.

The author is affiliated with the Gas Institute at Bechovice.

PTIAR, V.

[illegible]or[illegible] in the training center [illegible] of [illegible] health.

[illegible] 87 (Ministry of Health, [illegible] for Organization [illegible] Service) Vol. [illegible], No. 2, [illegible] 19[illegible].

[illegible]: Monthly Index of East European Accessions (EEAI) Vol. [illegible], No. [illegible] November [illegible]

PILAR, Vaclav, MUDr.

Activity of a training station of public health schools.
Cesk. zdravot. 5 no.2:87-90 Feb 57.

1. Prednosta interniho oddeleni OUNZ Vrchlabi.
(PUBLIC HEALTH, educ.
train. station for students (Cz))

Bl-2 Sal.d v Vrossa...

Brit.abs.

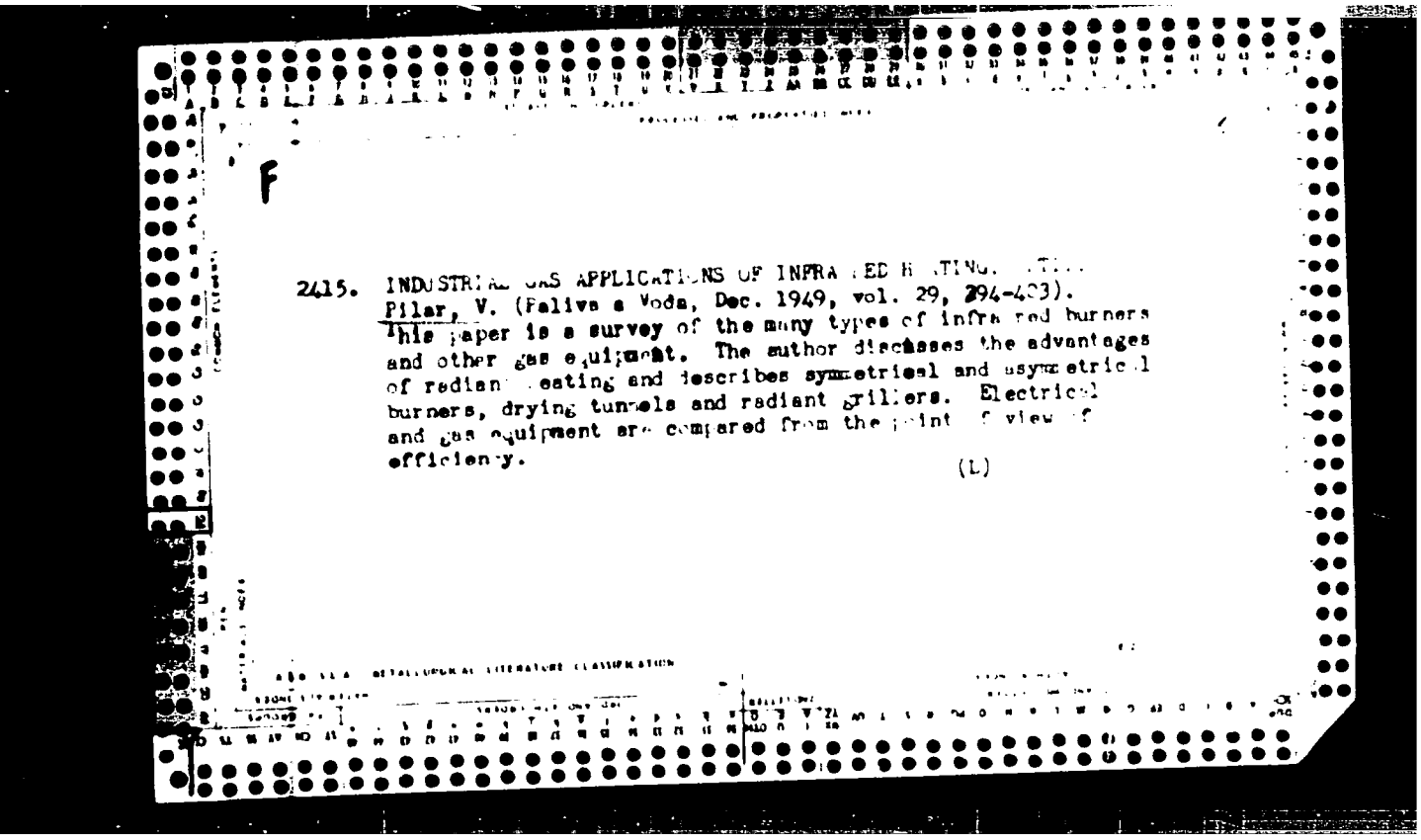
Radiant heat in fuel-gas practice. H. V. Pilar (Chemie a Voda, 1949, 29, 394—403; cf. B., 1949, I, 852).—The design and performance of various gas burners used in Western Europe and the U.S.A. are reviewed, and their applications to industry are discussed.

R. Truscoe

Brit. Abs

Radiant heat in fuel-gas practice. II. V. Pilar (*Paliva a Voda*, 1949, **29**, 394—403; cf. B., 1949, I, 802).—The design and performance of various gas burners used in Western Europe and the U.S.A. are reviewed, and their applications to industry are discussed.

R. Truscoe.



F

2415. INDUSTRIAL GAS APPLICATIONS OF INFRARED HEATING. [illegible]
Pilar, V. (Paliva a Voda, Dec. 1949, vol. 29, 394-403).
This paper is a survey of the many types of infra red burners and other gas equipment. The author discusses the advantages of radiant heating and describes symmetrical and asymmetrical burners, drying tunnels and radiant grillers. Electrical and gas equipment are compared from the point of view of efficiency.

(L)

PILAR-SVOBODA, B., dr.

Surgical treatment of jaw fractures. Chir. maxillofac. (Zagreb) 4 no.2:80-86 '64

PROCESSES AND PROPERTIES INDEX

THE NECE[illegible]ITY FOR RAT[illegible]ONALI[illegible]TION AND MECHANI[illegible]T[illegible] IN [illegible]ILING. J. Pilerozyk. (Przeglad Technicrny, 1950, July-Au[illegible], pp. 301-388). In Polish. Some auxiliary installations for hand and [illegible] some automatic welders are described. V.G.

ASB SLA METALLURGICAL LITERATURE CLASSIFICATION

Pilarczyk J.

Pilarczyk J., B. Sc. Tech. "Welding in the Six-Year Plan." (Spawalnictwo w ramach Planu 6-letniego). Przeglad Spawalnictwa, No. 3-4, 1950, pp. 81-.

The general outline of the development of welding provided for in the Polish Six-Year Plan.

SO: Polish Technical Abstracts - No. 2, 1951

PILARCZYK, J.

Weldability of Steel K.52. J. Pilarczyk. (Hutnik, 1950, vol. 17, Sept. - Oct. pp. 321-329). (In Polish). The types of steel used for welded constructions, the difficulties incountered in welding them, and efforts to determine their weldability are outlined.

Immediate source clipping

PILARCZYK, J.

669.14-162 : 621.791.052

3433

Pilarczyk J., Staub F., Sniegon K. The Welding of Heat-Resisting Steels. "Spawalnie stali żarowytrzymałych". Przegląd Spawalnictwa. No. 2, 1954, pp. 28—31, 13 figs., 5 tabs.

POL

The authors review the results of gas and arc welding on heat-resisting steels by means of ES24-16 electrodes of post and present manufacture, and ES18-8-8 electrodes. The experiments revealed that 1) the arc method, since it provides a weld of superior mechanical strength, is more suitable for welding KNS-12 heat-resisting steel; 2) joints made with the use of ES18-8-8 electrodes are only slightly less sound than joints made by using the more expensive type of ES24-16 electrodes; 3) the resistance to high temperatures of welds made by either of these two methods is not inferior to that of the KNS-12 steel itself; 4)) the strength of the welds is lower than that of the parent material, a fact which should, by introducing correction factors given in an accompanying table, be allowed for in the constructions.

PIL[illegible]YK, J.

"Trends in the Production of Auxiliary Materials for Welding", p. 1[illegible],
(PRZEGLAD SPAWALNICTWA, Vol. 6, No. 8, Aug. 1954, Warszawa, Poland)

SO: Monthly List of East European Accessions, (EEL), LC, Vol. 4, No. 5,
May 1955, Uncl.

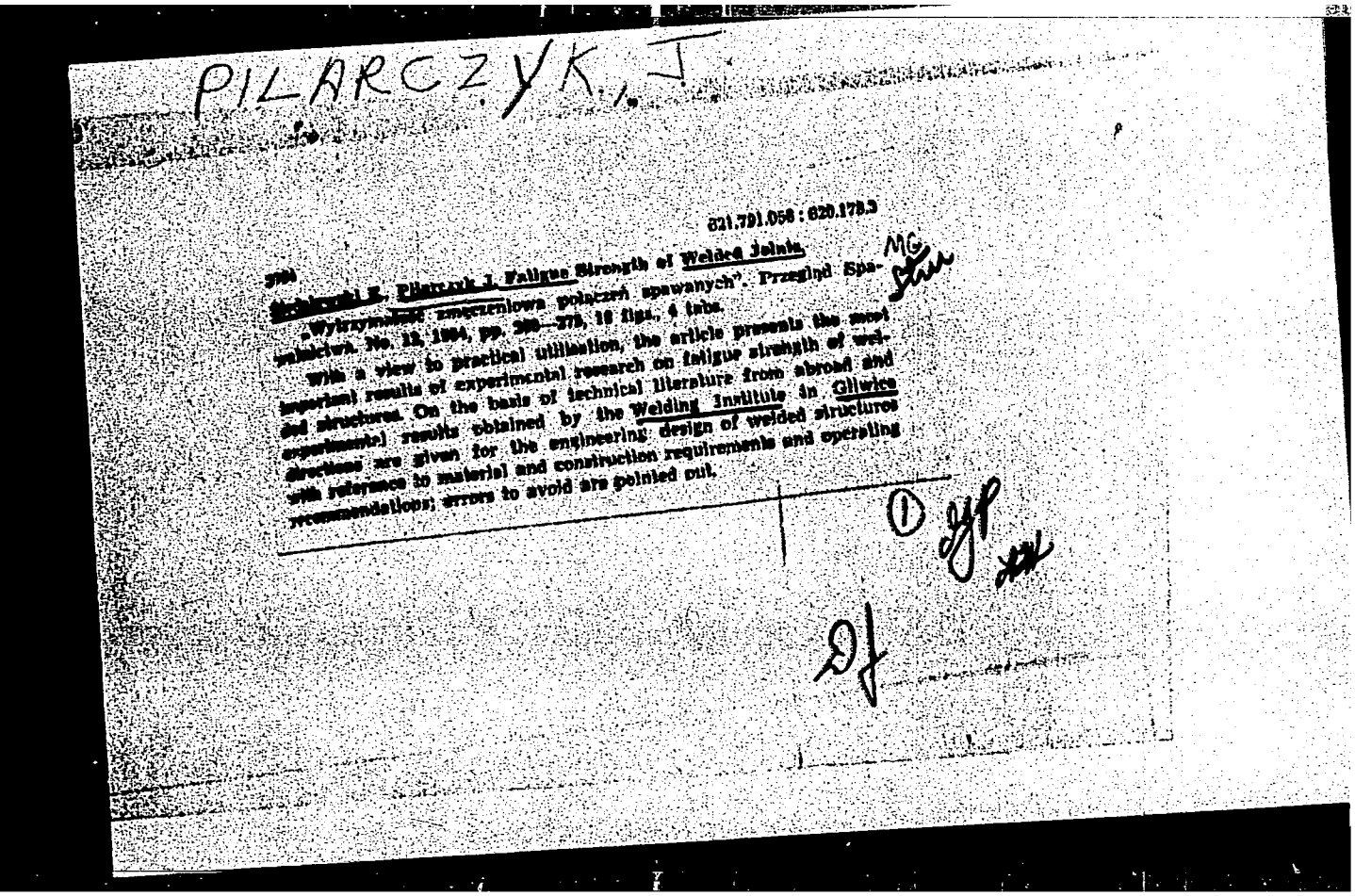
PILARCZYK, J.

9785 621.791.75.056

Pilarczyk J., Sianos J. Effect of Mn Content in Wire and MnO in Flux on the Mn Content in Welds Made by the Shielded Arc Process. MG

„Wpływ zawartości Mn w drucie i MnO w topniku na zawartość Mn w spoinie przy metodzie spawania łukiem krytym". Przegląd Spawalnictwa. No. 11, 1954, pp. 237—248, 27 figs., 7 tabs.

Trials were made to determine the degree of migration of manganese from wire and flux into the welds made by the shielded arc process. For this purpose a number of welding wires and fluxes were prepared having a varying content of Mn and MnO. It was established that for welding low-carbon steel by the shielded arc process welding wires of average content of about 1.5 per cent of manganese and fluxes of about 20 per cent of MnO are the most suitable. Excessive quantity of MnO in fluxes is harmful by reason of the migration of a considerable part of the manganese into slag and penetration of the phosphorus into welds.



PILARCZYK, J.

621.791.058 : 620.178.3

Pilarczyk J. Fatigue Strength of Welded Joints

"Wytrzymałość zmęczeniowa połączeń spawanych". Przegląd Spawalnictwa. No. 12, 1984, pp. 369—378, 18 figs., 4 tabs.

With a view to practical utilization, the article presents the most important results of experimental research on fatigue strength of welded structures. On the basis of technical literature from abroad and experimental results obtained by the Welding Institute in Gliwice directions are given for the engineering design of welded structures with reference to material and construction requirements and operating recommendations; errors to avoid are pointed out.

PILARCZYK, J.

Trends in the development of welding in Poland. Tr. from the Polish. p. 119.

ZVARACSKY SBORNIK Vol. 4, no. 1, 1955

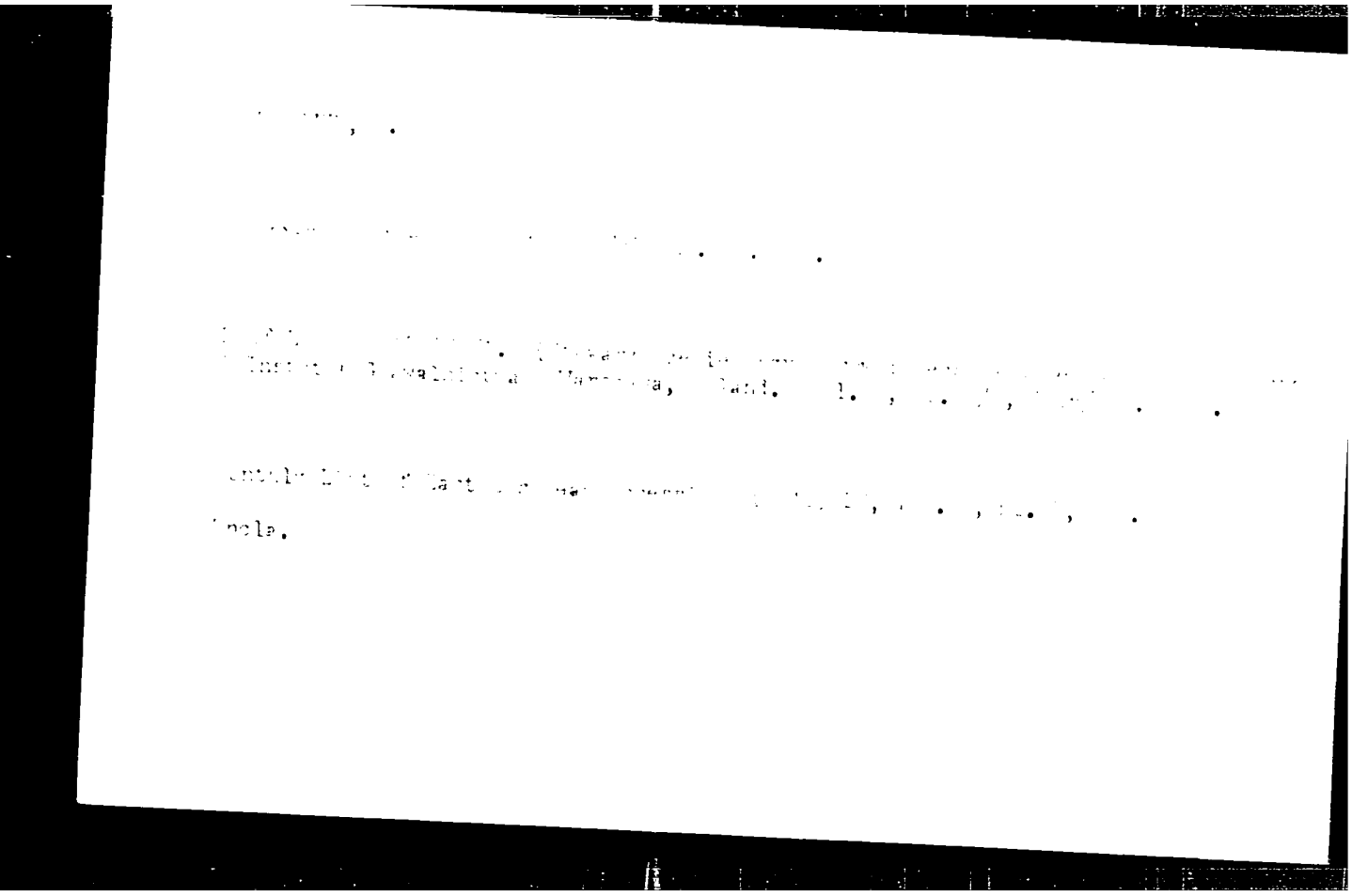
Czechoslovakia

Source: EAST EUROPEAN LISTS Vol. 5, no. 7 July 1956

PILARCZYK, J.

"Trends in Welding in Poland", p. 2, (PRZEGLĄD SPAWALNICTWA, Vol. 7, No. 1, Jan. 1955, Warszawa, Poland)

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. -, No. 5, May 1955, Uncl.



PILARCZYK, J.

Welding in the Soviet Union. p. 246.

Vol. 7, no. 11, Nov. 1955

PRZEGLAD SPAWALNICTWA. Warszawa

SOURCE: East European Accessions List (EEAL), LC, Vol. 5, no. 3, March 1956

18(5),25(1)

AUTHOR: Pilarczyk, Józef, Engineer

SOV/125-59-10-7/16

TITLE: The Present State and the Outlook for the Welding Industry in Poland

PERIODICAL: Avtomaticheskaya svarka, 1959, Nr 10, pp 61-66 (USSR)

ABSTRACT: The article is a short account of the present state of the welding industry in Poland; after a rapid survey of developments up to now, for which the Institut svarki (Institute of Welding) has been chiefly responsible, the author proceeds to deal with the present position in the equipment field. Electric arc-welding was not introduced until 1949, and now there are 2 types of DC welding machines (250 and 500 amps), 2 types of welding transformers (300 and 500 amps), and a 1,000 amps welding transformer for welding tractors. Work on the modernization of the equipment is being carried out at the Institute of Welding with a view to creating light-weight, high-efficiency, remote-control welding machinery. The position is not so satisfactory concerning the manufacture of welding tractors for arc-welding with the fluxes UT-1250 and FDSh-500, and much equipment and

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The Present State and the Outlook for the Welding Industry in Poland

assistance have been imported from the GDR and the USSR, particularly from the Institut elektrosvarki imeni Ye.O. Patona (Institute of Electric Welding imeni Ye.O. Paton). In the field of contact electric welding only 2 models of spot-welding machines have so far been built (20 kilovolt/amps); gas-welding was widely used in Poland before the war and manufacture of this equipment is now limited to one plant, while the problem of the production of automatic oxygen cutters is still being worked on. Oxygen, acetylene, welding wire and fluxes are largely of domestic origin and production is being stepped up: from 10 million m^3 in 1945 to 40 million m^3 in 1958 (oxygen), and from 2,000 tons in 1945 to 5,000 tons in 1958 (acetylene). There is a shortage of electrodes in the electric arc-welding industry, which will continue for another 3 years or so, there being at present no electrode factory in Poland, and the manufacture of fluxes is limited to certain types suited to the welding of low-carbon steel. Welding processes invol-

The Present State and the Outlook for the Welding Industry in Poland

ving the use of protective gases - argon and CO_2 - are still in their teething stages, particularly since the present domestic supplies of the gases are not pure enough for this purpose. Considerable progress has, however, been made in the training of welding experts and the raising of technical qualifications: this reponsibility lay first in the hands of the Institute of Welding in Katowice, later with the Tsentr professional'nogo obucheniya (Center of Professional Training), and finally with the Ministry of Education. In the last 2 years a check of welders' qualifications has been carried out, as a result of which the standard has risen; in addition, about 250 engineers specializing in welding have graduated from polytechnic schools. A brief review is then given of various institutions connected with welding in Poland: the Institute of Welding, the first and for many years the only one in the country, founded in March 1945, and the sub-divisions of it in the

 experimental center at the Gdansk shipyards, the

SOV/125-59-[illegible]-7/16

The Present State and the Outlook for the Welding Industry in Poland

Otdeleniye tekhnologii svarki v Zheleznodorozhnom institute (Department of Welding Technology at the Railroad Institute), and the Svarochnaya laboratoriya v Institute stroitel'noy tekhniki (Welding Laboratory at the Institute of Construction Technology . The first-named, based on Gliwice and a member of the International Institute of Welding, concerns itself with the main, general problems of this sphere of industry, while the sub-divisions are engaged on more specialized, technical matters; there are also 5 departments of welding in 5 polytechnic institutes. In the near future the following main tasks are to be solved: the raising of the output of gas and fluxes, the modernization of welding equipment and the carrying-out of further, extensive research work.

ASSOCIATION: Institut svarki, g. Glivitse, PNR (Institute of Welding, town of Gliwice, Polish People's Republic)

SUBMITTED: April 27, 1959.

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PILARCZYK, J.

Training of welding engineers. p.65

PRZEGLĄD SPAWALNICTWA. (Stowarzyszenie Inżynierow i Techników Mechaników Polskich i Instytut Spawalnictw) Warszawa, Poland. Vol.11, no.3, Mar. 1959

Monthl List of East European Accessions Index, (EEAI) LC, Vol. , no.6, June 19
Uncl.

25622

P/036/61/000/008/001/002
D001/D101

1230 1573

AUTHORS: Pilarczyk, Józef, Docent, Engineer, and Brózda, Jerzy, Master of Engineering

TITLE: The influence of arc linear heat capacity on hardening of steels of various carbon content within the sphere of heat action

PERIODICAL: Przegląd spawalnictwa, no. 8, 1961, 201-204

TEXT: In this report the authors discuss the results of their investigations for ascertaining how arc linear heat capacity influences the mechanical properties of welded steel. This research was undertaken because of lack of "CTP" graphs applicable to steel made in Poland from which the structure and hardness of steels affected by heat can be estimated with sufficient accuracy. [Abstracter's note: The meaning of the "CTP" abbreviation is not revealed]. Mechanical properties of welds depend on the microstructure of metal exposed to heat during the process of welding, chemical composition of welded steel and the speed with which the metal cools down after welding.

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The influence of arc...

Cooling speed of the metal area adjacent to the weld can be expressed by the following equation:

$$w = \omega \frac{2\pi\lambda(T-T_0)^2}{q/v} \left[{}^{o}C/sec\right]$$

where T=the temperature in ^{o}C at which the cooling takes place, T_0= the temperature of the object in ^{o}C, λ = heat conductance coefficient in cal/cm x sec x ^{o}C, q= amount of heat put into the metal in cal/sec, v= welding speed in cm/sec, = the coefficient in cal/cm x sec x ^{o}C, q= amount of heat put into the metal in cal/sec, v=welding speed in cm/sec, ω = the coefficient depending on the shape and size of the welded object. The amount of heat put into the metal per unit of time was calculated by the following formula: $q = 0.24\ U \times I \times \eta$ cal/sec, where U = the arc voltage in V, I = welding current power in A and η = metal heating process efficiency coefficient. For calculation of the arc linear heat power q/v, the coefficient η = 0.75 was chosen for hand welding, and for automatic welding η = 0.90. The authors examined six sorts of steel, containing from 0.10 - 0.48% C, 0.32 - 1.08% Mn, 0.03 - 0.33% Si and 0.022 -

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The influence of arc ...

0.05% S and applied the following arc linear heat capacities: 750, 1,492, 2,113 and 3,729 cal/cm. In order to secure identical structural properties, all samples were annealed before welding. Welded samples were metallographically examined and their hardness measured by Vickers' method. Upon examination of obtained data, it was revealed that as the arc heat capacity diminishes, the hardness of steel affected by heat increases along with carbon content in it. As the hardness of the intermediate sphere should not exceed HV 300, for welding steel with higher carbon content, thicker electrodes and a current of higher intensity should be applied and at the same time welding speed reduced. Thicker steel tends to harden in the sphere of heat influence, therefore, in order to avoid this, the data obtained, should be multiplied by a suitable coefficient listed in a table. The article ends with a practical example on how to estimate the arc current intensity for fillet welding of a 20 mm thick steel sheet containing 0.4% C, with welding speed 7 m/hr (0.19 cm/sec), arc voltage U = 28 V and η = 0.75. There are 3 tables, 3 graphs, 8 photos and 6 references: 4 Soviet-bloc and 2 non-Soviet-bloc. The references to the English-language publications read as follows:

Card 3/4

25622

P/036/61/000/00?/001/002
D001/D101

The influence of arc. .

H. Sekiguchi, M. Inagaki: "Continuous Cooling Transformation Diagrams of Steels for Welding and their Application"; Guide to Weldability of Steels. American Welding Society, 1942.

ASSOCIATION: Politechnika Śląska (Silesian Polytechnical Institute), Gliwice.

Card 4/4

PILARCZYK, Jan, mgr inz.

The 18G2A steel susceptible to cold cracking during welding.
Przegl spaw 17 no.4:89-93 Ap '65

1. Welding Institute, Gliwice.

PIARCZYK, J., prof. inż.

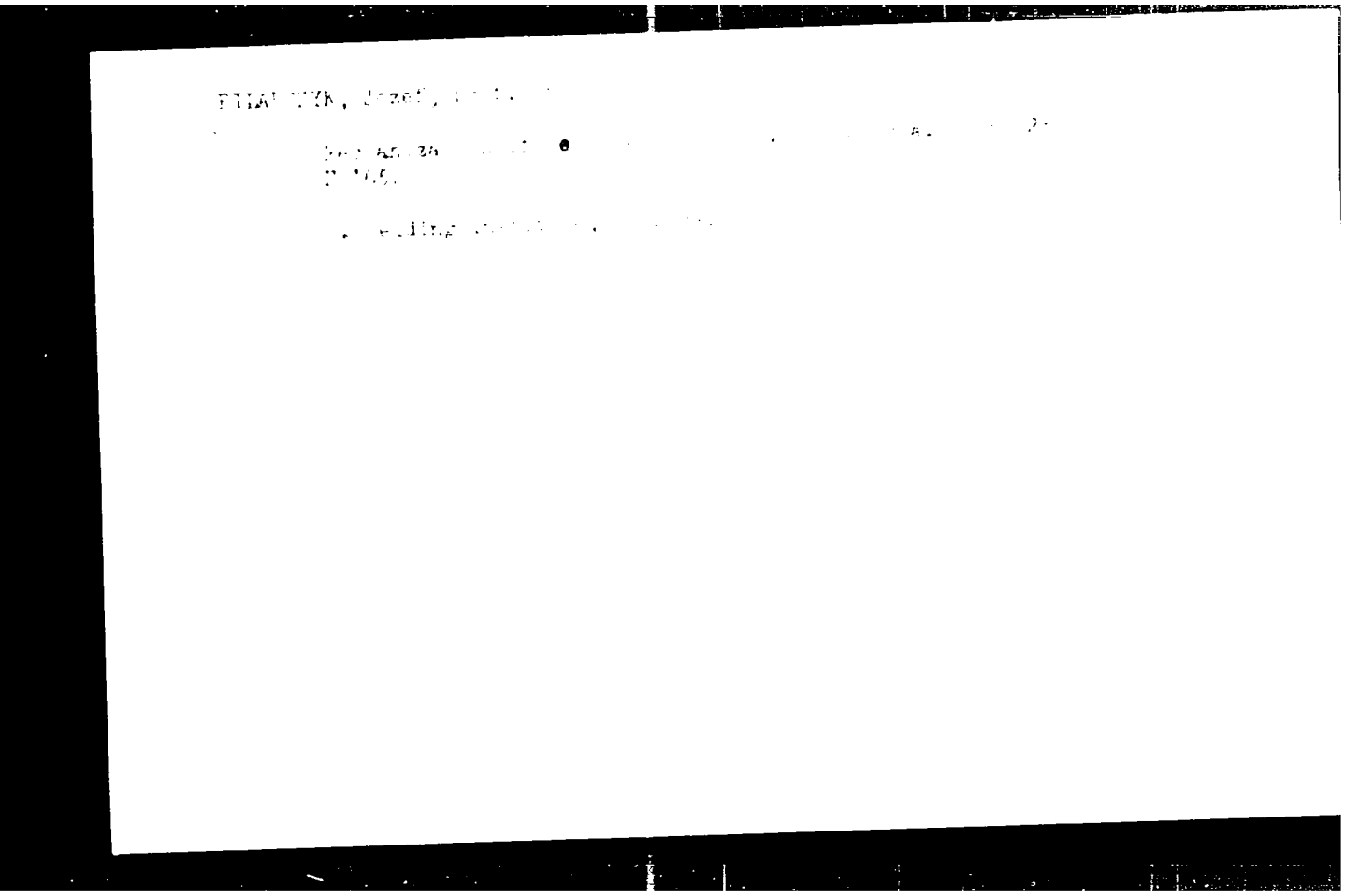
A declaration of the Welding Institute. Przegl spaw 12 no.7
159-159 Je '64.

1. Head, Welding Institute, Gliwice.

PILARCZYK, Jozef, doc., inz.; BROZDA, Jerzy, mgr., inz.

Influence of arc force upon the hardening of the heat affected zone in steel with various carbon contents. Przegl spaw 13 no.8:201-204 Ag '61.

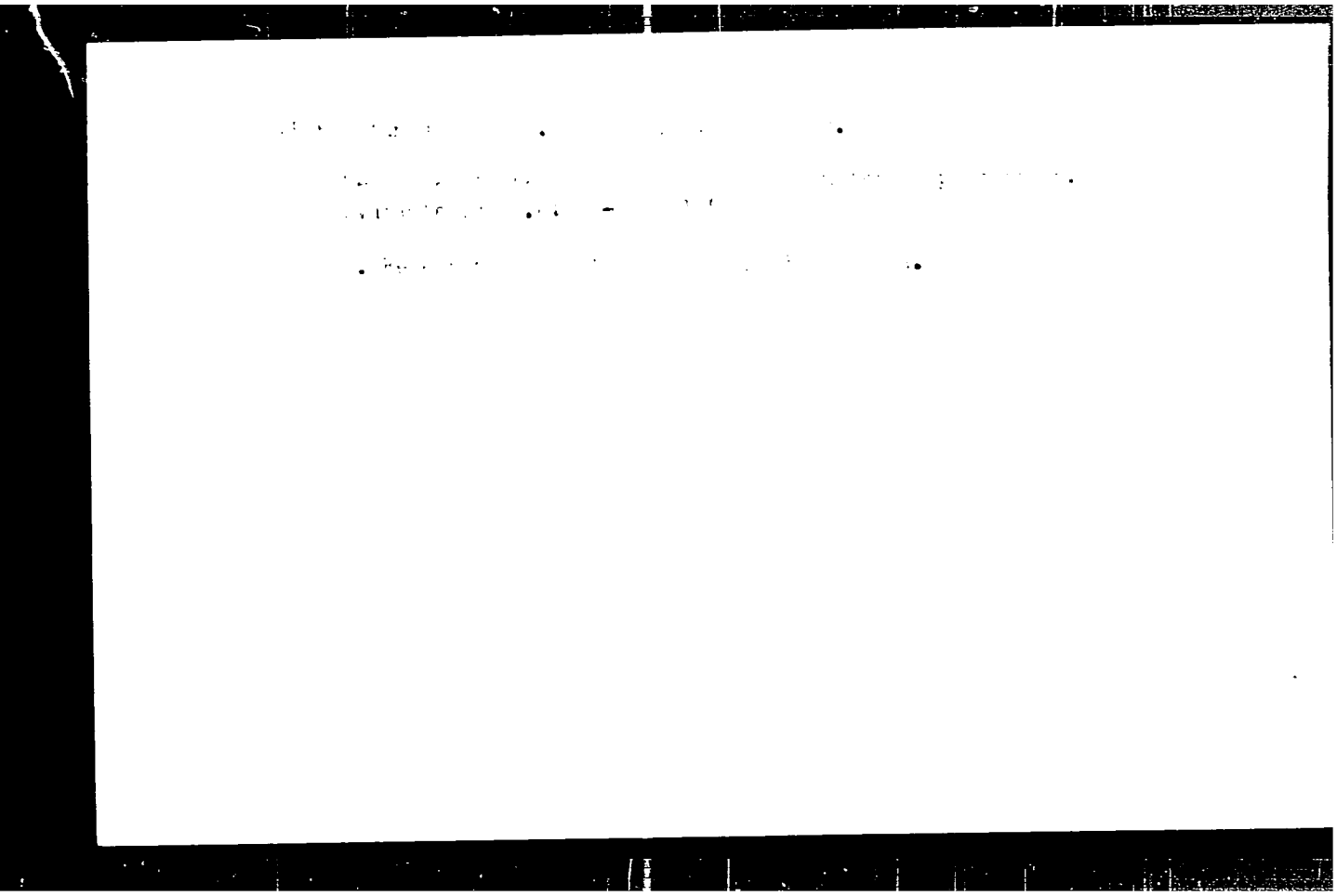
1. Politechnika Slaska, Gliwice.



KOSNAC, Ludovit, inz.; PILARIk, Stanislav, inz.

Activity of some spray metal powders with water glass in electrode jackets. Zvaranie 11 no.5:135-139 My '62.

1. Vyskumny ustav zvaracsky, Bratislava.



S/137/63/000/001/007/019
A006/A101

AUTHORS: Horváth, Štefan, Pilarik, Stanislav

TITLE: A method of producing metal powders for the manufacture of welding electrodes and filler wire

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 1, 1963, 36 - 37, abstract 1G230 P (Czechosl. patent no. 101007, of September 15, 1961)

TEXT: In the method the metal powder is passivated by a passivating agent, introduced to the gas or liquid jet that pulverizes the molten metal. Solutions of HNO_3, H_2SO_4, alkalis or their vapors, and ammonia can be used as passivating agents. At high temperatures the passivating agents react practically instantly with the surface of the molten metal drops during the pulverization process. If a gas jet acts as a pulverizer (compressed air, nitrogen, etc) then the passivating agent, in the form of vapor, fine drops or gas, must be uniformly distributed in the pulverizing gas. The pulverizing gas pressure exceeds usually 3 atm; when Fe-Si powder is passivated it is e.g. equal to 8 - 15 atm. Such a Fe-Si powder, when used for electrode coatings, assures the production of compact built-up

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S/137/63/000/001/007/019
A006/A101

A method of producing metal powders for...

metal without pores. The method is efficient and secures a high passivation degree.

Ye. Greyl'

[Abstracter's note: Complete translation]

Card 2/2

[illegible]

Induction furnaces. [illegible] technickej literatury) Vol. [illegible], no. [illegible], Mar. 1954.

[illegible]: East European Accessions List, Vol. [illegible], no. [illegible], [illegible]

MROZINSKI, Stanislaw; CIELSLINSKA, Krystyna; PILARSKA, Krystyna

Pulmonary embolism associated with changes in muscles of the left ventricle. Pol. tyg. lek. 20 no.30:1118-1120 26 Jl '65.

1. Z I Kliniki Chorob Wewnetrznych Pomorskiej AM w Szczecinie (Kierownik: doc. dr. med. Karol Gregorczyk).

PILARSKA-MYCLEISKA, H.

Temperature inversion in the region of Rabka, Obtowa, and Nowy Targ.

P. 5 (Gazeta Obserwatora) Vol. 10, No. 9, Sept. 1957, Warszawa, Poland.

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

PIL [illegible], [illegible]; [illegible] A., [illegible].

Production of spring [illegible] by the Gatowice Railroad Rolling Stock Repair [illegible]. p. 122.

[illegible] Warszawa, Poland, Vol. 10, no. 4, Apr. [illegible].

Monthly List of East European Accessions [illegible], LC, Vol. 8, no. 9, September, 1959. Uncl.

PILARSKI, Jan, inz.

Transformer ignition plug for initiating explosions in enclosures of fireproof devices. Przegl gorn. 20 no.10. Suppl.: Biul Glow inst gorn 14 no.3:34-35 '64.

P/528/61/001/000/007/007
D204/D307

AUTHORS: Sokołowski, Janusz and Pilarski, Zenon

TITLE: The selective deacetylation of N-acetyl-N-2,3,4,6-tetra-O-acetyl-D-glucopyranosyl-p-aminoazobenzene (A) by means of amines

SOURCE: Gdańsk. Wyższa Szkoła Pedagogiczna. Zeszyty naukowe. Matematyka, fizyka, chemia, v. 1, 1961. Gdańsk, 1962, 107 - 109

TEXT: The present study was carried out in view of the difficulty in deacetylating selectively O-acetyl groups in pentaacetyl-β-glucoside and similar compounds. The authors attempted to deacetylate A with stoichiometric quantities of aniline, ammonia, cyclohexylamine, dimethylamine, and piperidine, at temperatures varying from 20 to 65°C and over periods of 1 to 48 hours. The procedure consisted of preparing methanolic solutions of pentaacetyl-N-D-glucosyl-p-aminobenzene and the primary or secondary amine (in amounts exceeding by 5% those

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calculated for the deacetylation of O-acetyl groups), maintaining the mixture at the set temperature for the required length of time, and distilling off (at room temperature and 15 mm Hg) the solvent and the unreacted amine. The dry residue was then analyzed by paper chromatography, using water at 20°C as the nonstationary phase. N-acetyl-N-glucoside and a small quantity of N-D-glucosyl-4-amino-azobenzene were found. The optimum results were attained with dimethylamine (~ 98% of N-acetyl-N-glucoside) over 9 hrs at 20°C; completely negative results were obtained with aniline. In general nonaromatic amines and ammonia attack the O-acetyl groups in preference to the N-acetyl, although complete selectivity was not achieved in any instance. The rate of deacetylation increased with temperature and with the basic strength of the amine, suggesting a nucleophilic mechanism of the rupture of N-acetyl and O-acetyl bonds. Oxidation of the deacetylation products with sodium metaperiodate demonstrated the existence of a pyranosidic ring in N-acetyl-N-glucoside. There is 1 table.

ASSOCIATION: Katedra Chemii Organicznej Wyższa Szkoła

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P/528/61/001/000/007/007
The selective deacetylation ... B204/B307

Pedagogicznej, Gdańsk (Department of Organic Chemistry, Higher School of Education, Gdańsk)

SUBMITTED: June 6, 1961

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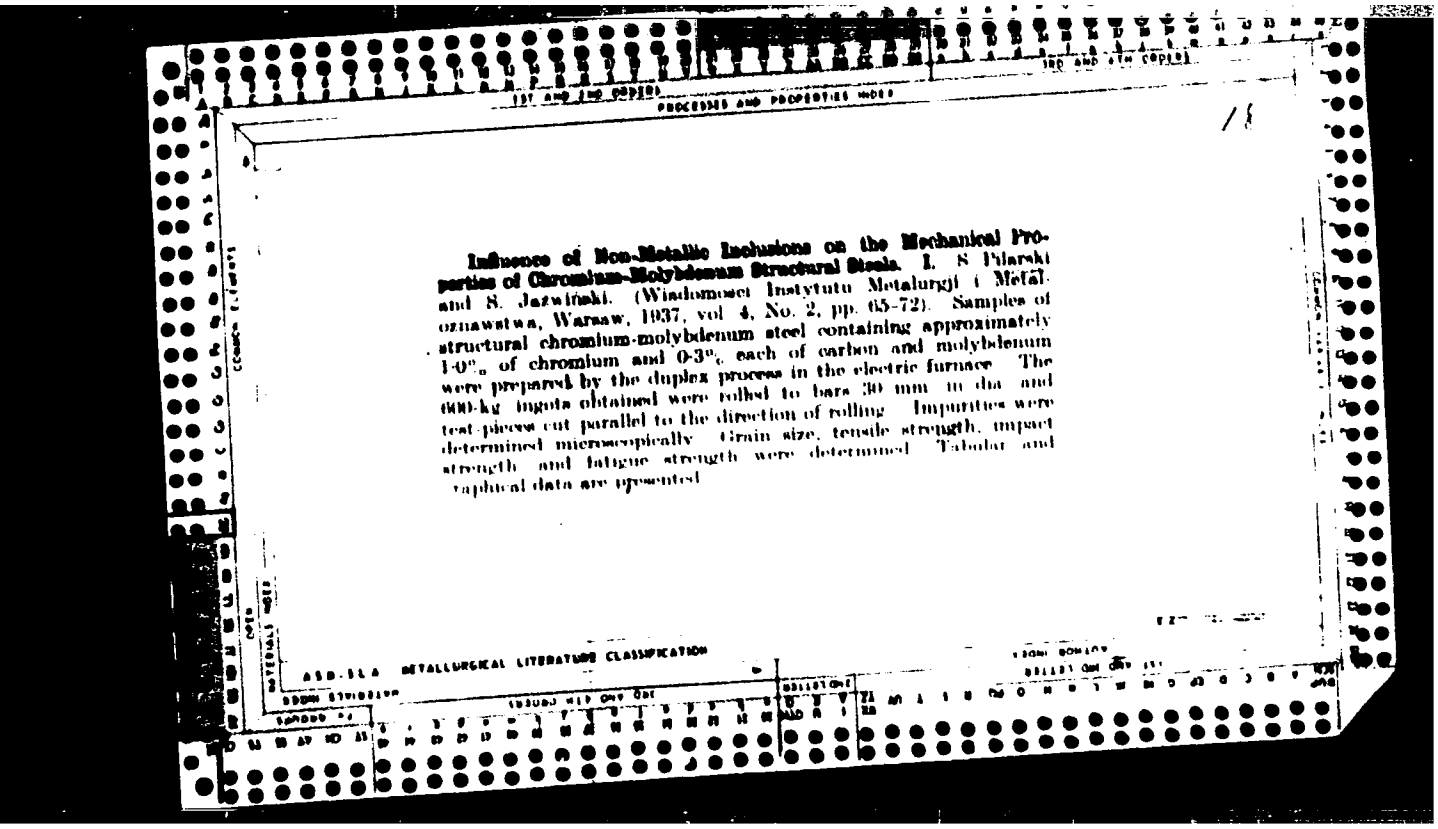
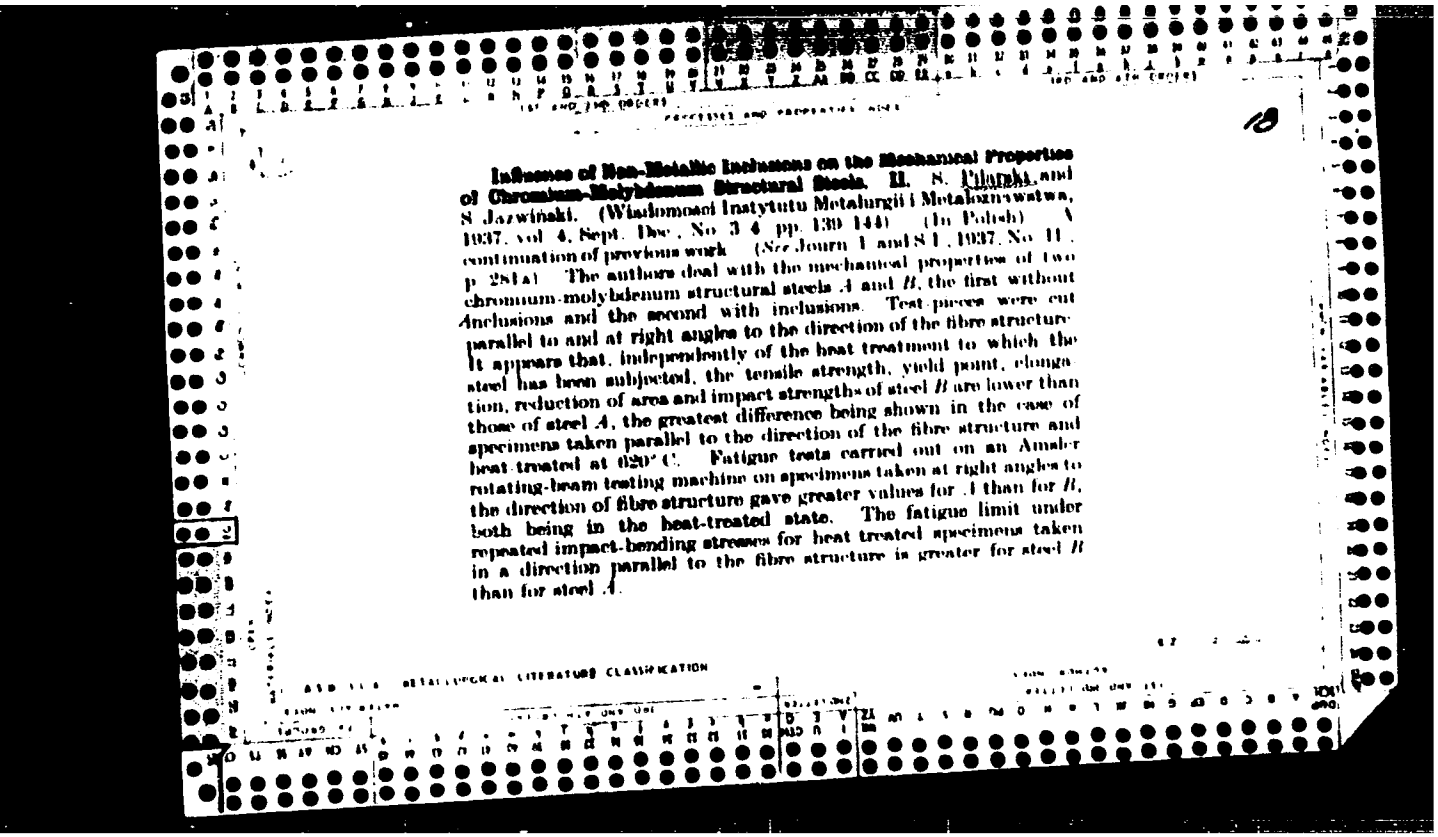
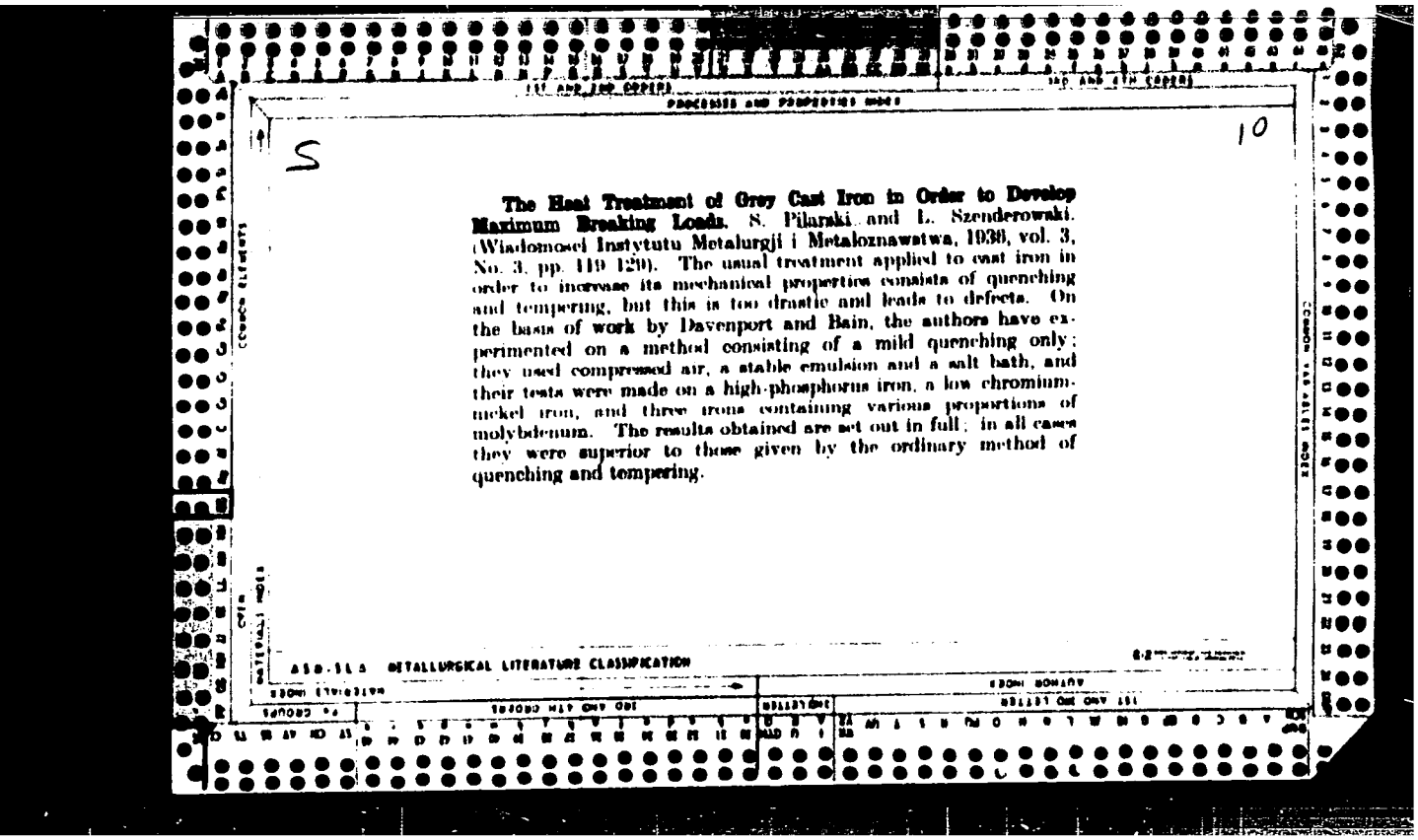


Influence of Non-Metallic Inclusions on the Mechanical Properties of Chromium-Molybdenum Structural Steels. I. S Pilarski and S. Jazwinski. (Wiadomosci Instytutu Metalurgji i Metaloznawstwa, Warsaw, 1937, vol 4, No. 2, pp. 65-72). Samples of structural chromium-molybdenum steel containing approximately 1·0% of chromium and 0·3% each of carbon and molybdenum were prepared by the duplex process in the electric furnace. The 600-kg ingots obtained were rolled to bars 30 mm in dia and test-pieces cut parallel to the direction of rolling. Impurities were determined microscopically. Grain size, tensile strength, impact strength and fatigue strength were determined. Tabular and graphical data are presented

ASD-SLA METALLURGICAL LITERATURE CLASSIFICATION



Influence of Non-Metallic Inclusions on the Mechanical Properties of Chromium-Molybdenum Structural Steels. II. S. Pilarski and S. Jazwiński. (Wiadomości Instytutu Metalurgii i Metaloznawstwa, 1937, vol. 4, Sept.-Dec., No. 3-4, pp. 139-144) (In Polish) A continuation of previous work (See Journ. I and S.I., 1937, No. 11, p. 281A). The authors deal with the mechanical properties of two chromium-molybdenum structural steels *A* and *B*, the first without inclusions and the second with inclusions. Test-pieces were cut parallel to and at right angles to the direction of the fibre structure. It appears that, independently of the heat treatment to which the steel has been subjected, the tensile strength, yield point, elongation, reduction of area and impact strengths of steel *B* are lower than those of steel *A*, the greatest difference being shown in the case of specimens taken parallel to the direction of the fibre structure and heat-treated at 920° C. Fatigue tests carried out on an Amsler rotating-beam testing machine on specimens taken at right angles to the direction of fibre structure gave greater values for *A* than for *B*, both being in the heat-treated state. The fatigue limit under repeated impact-bending stresses for heat treated specimens taken in a direction parallel to the fibre structure is greater for steel *B* than for steel *A*.



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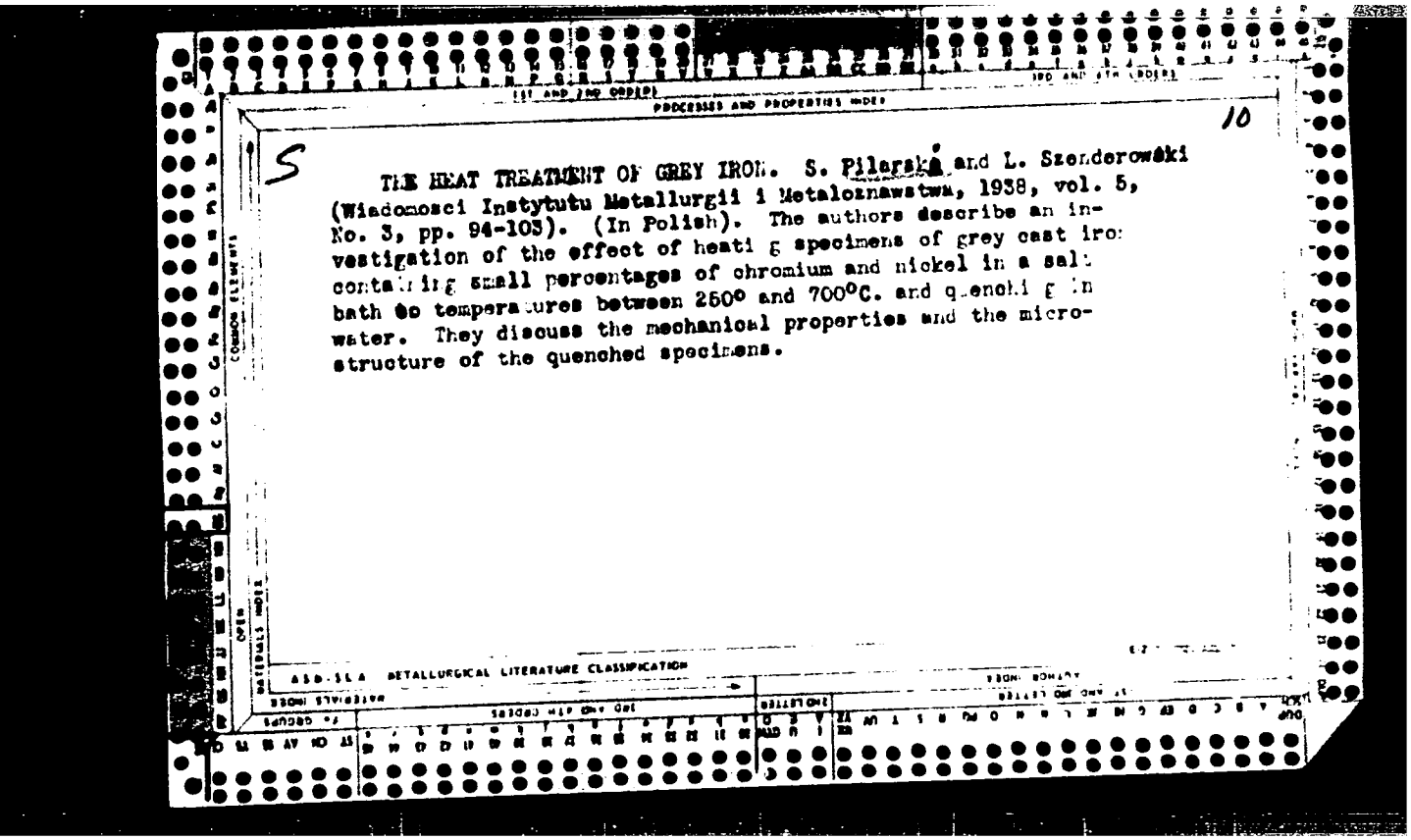
The Heat Treatment of Grey Cast Iron in Order to Develop Maximum Breaking Loads. S. Pilarski and L. Szenderowski. (Wiadomosci Instytutu Metalurgji i Metaloznawstwa, 1936, vol. 3, No. 3, pp. 119-129). The usual treatment applied to cast iron in order to increase its mechanical properties consists of quenching and tempering, but this is too drastic and leads to defects. On the basis of work by Davenport and Bain, the authors have experimented on a method consisting of a mild quenching only; they used compressed air, a stable emulsion and a salt bath, and their tests were made on a high-phosphorus iron, a low chromium-nickel iron, and three irons containing various proportions of molybdenum. The results obtained are set out in full; in all cases they were superior to those given by the ordinary method of quenching and tempering.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



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10

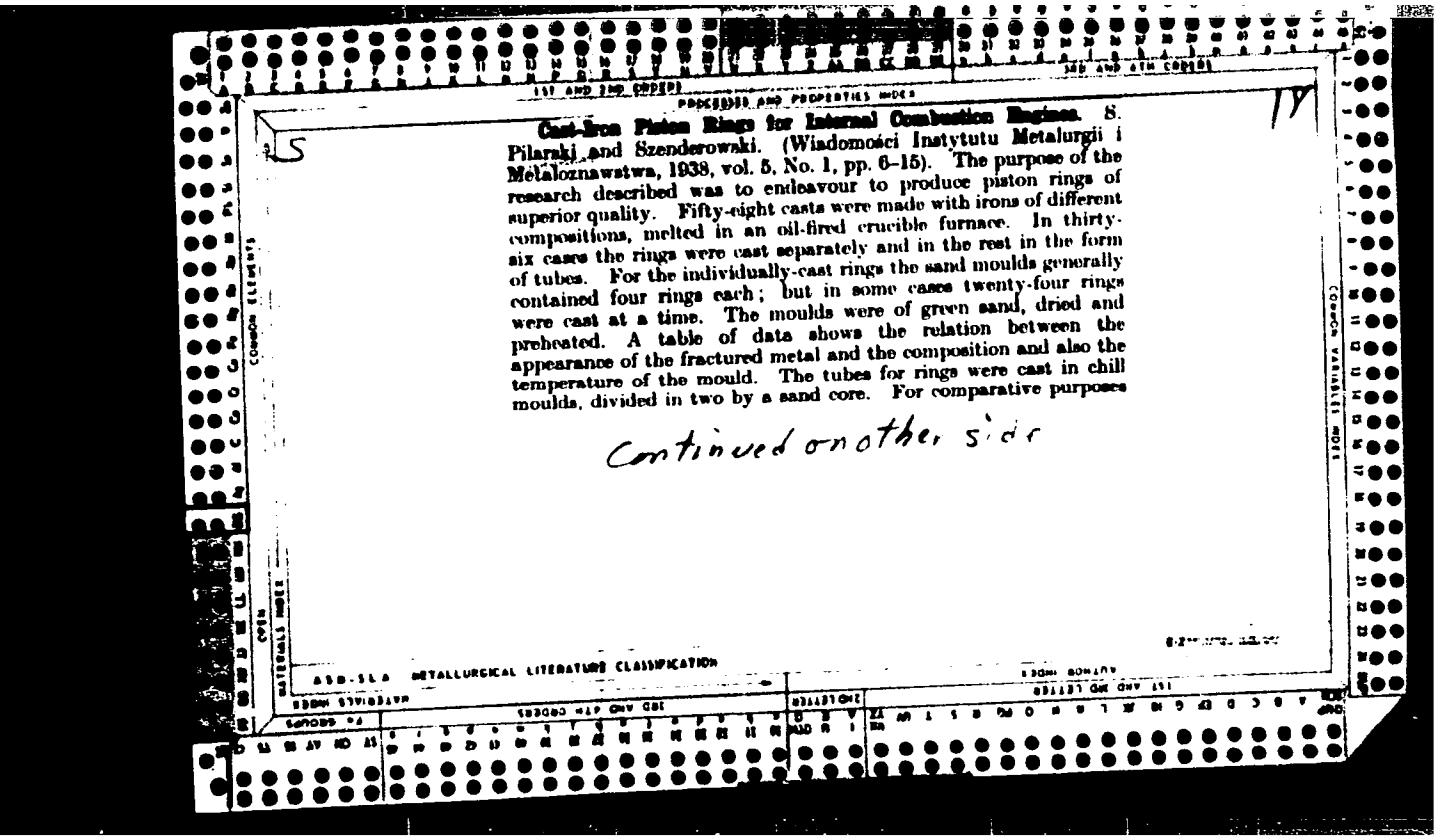
THE HEAT TREATMENT OF GREY IRON. S. Pilarska and L. Szenderowski (Wiadomosci Instytutu Metallurgii i Metaloznawstwa, 1938, vol. 5, No. 3, pp. 94-103). (In Polish). The authors describe an investigation of the effect of heating specimens of grey cast iron containing small percentages of chromium and nickel in a salt bath to temperatures between 250° and 700°C. and quenching in water. They discuss the mechanical properties and the microstructure of the quenched specimens.

Cast-iron piston rings for combustion engines. ... Pilarski and L. Szendrowski. *Wiadomości Inst. Metal. urg. Metalozn.* 5, 6-10(1958). The object was to elaborate a method of production of cast iron piston rings which would have the best possible properties. The rings were molded individually (in sand mold-plates, each composed of 4 segments) or in flasks (24 rings in 1 mold). The sand molds were used wet, dry or heated to 100°, 200° or 300°. The influence of the chem. compn. of the cast iron and also the effect of the molding temp. on the properties of the rings were examd. To increase the strength properties of the rings and give them proper shape and elasticity, a thermal treatment was used, based on isothermic decompn. of austenite in fused salts ("mild tempering"). Piston rings individually molded showed better strength properties, also their quality was higher than that of rings which were molded in flasks. In case of using the latter method, an addn. of 0.64% Cr and 0.86% Mo was necessary to obtain rings of good strength properties. Rings individually molded, with an addn. of only 0.4% Mo, showed similar properties. Thirteen references.

Edward A. Ackermann

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

Isothermal treatment of gray pig iron. S. [illegible] and [illegible] Szendrowski. [illegible] *Met.* [illegible] *Metals* [illegible] (in French) [illegible] The authors based their study upon the presumption that gray pig iron should behave during an isothermal treatment similarly to steel because its chem. compn. and structure are similar to those of a corresponding steel, the only difference being a larger content of nonmetallic inclusions (graphite, etc.). Six kinds of gray pig iron were examd.; a table gives their compn. They were subjected to isothermal treatment in a salt bath, the temp. of which was [illegible] up to [illegible]; a mixt. of 50% $NaNO_3$ and 50% KNO_3 was used; above [illegible] a mixt. of 30% KCl, [illegible]% NaCl, 20% K_2SO_4, and 20% Na_2SO_4 were employed. After the samples were removed from the bath and cooled, they were subjected to mech. tests, whereby their bending strength and Brinell hardness were detd.; metallographic investigations were also performed. Isothermal treatment of the tested pig irons gave favorable results. In all cases, with the exception of phosphorus pig iron, the strength properties increased remarkably. Isothermal treatment enables also the obtaining of optimal qualities of the concerned pig iron for a certain anticipated hardness. The temp. of the bath used for isothermal hardening has a deciding effect upon the final result and upon the properties of the improved pig iron. The best results were obtained at [illegible] or [illegible]; the results obtained by using a bath, the temp. of which was [illegible], were in all cases [illegible] favorable. It can be expected that in future isothermal treatment will have a wide application. [illegible]



Cast-Iron Piston Rings for Internal Combustion Engines. S. Pilarski and Szenderowski. (Wiadomości Instytutu Metalurgii i Metaloznawstwa, 1938, vol. 5, No. 1, pp. 6–15). The purpose of the research described was to endeavour to produce piston rings of superior quality. Fifty-eight casts were made with irons of different compositions, melted in an oil-fired crucible furnace. In thirty-six cases the rings were cast separately and in the rest in the form of tubes. For the individually-cast rings the sand moulds generally contained four rings each; but in some cases twenty-four rings were cast at a time. The moulds were of green sand, dried and preheated. A table of data shows the relation between the appearance of the fractured metal and the composition and also the temperature of the mould. The tubes for rings were cast in chill moulds, divided in two by a sand core. For comparative purposes

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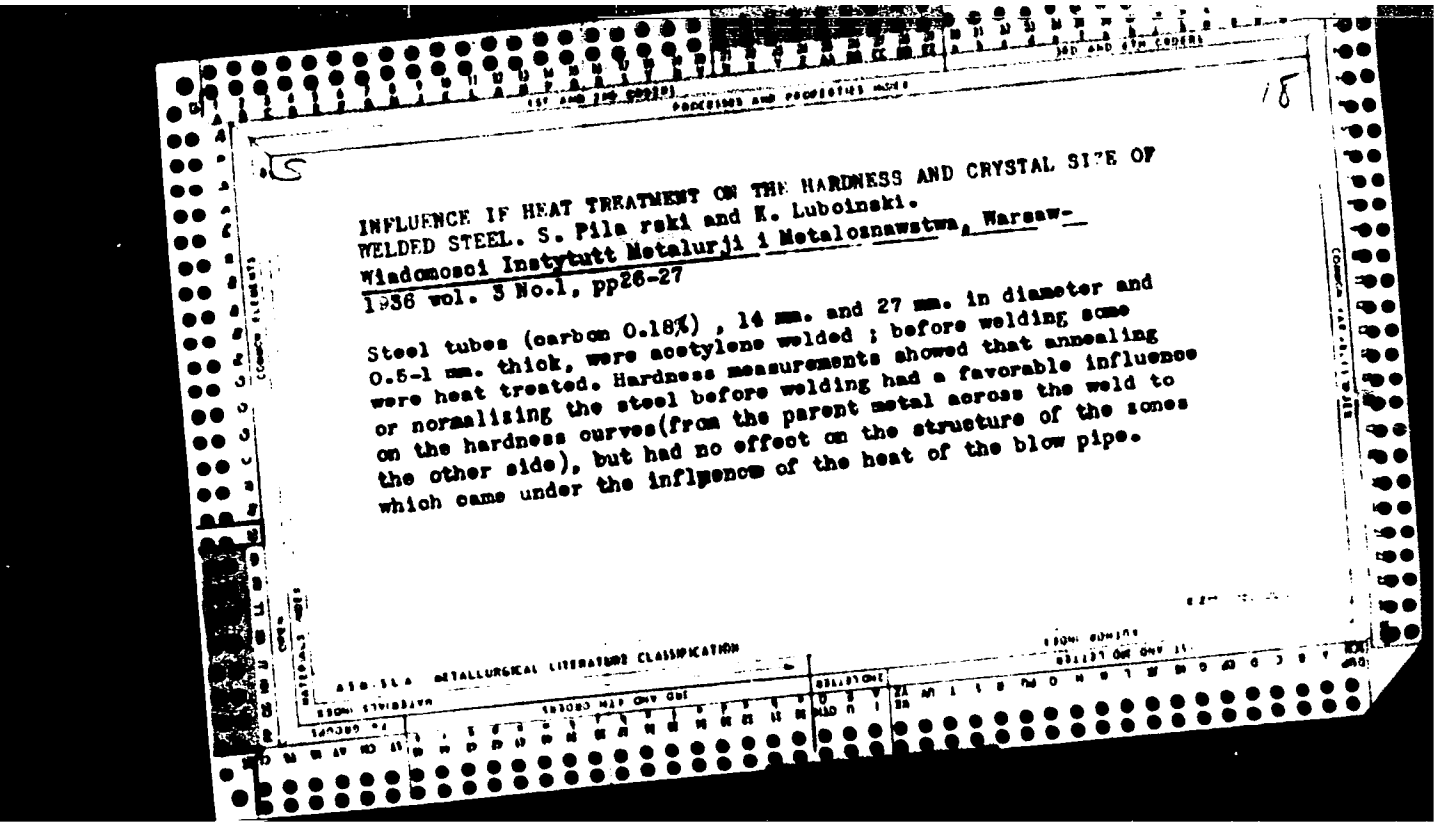
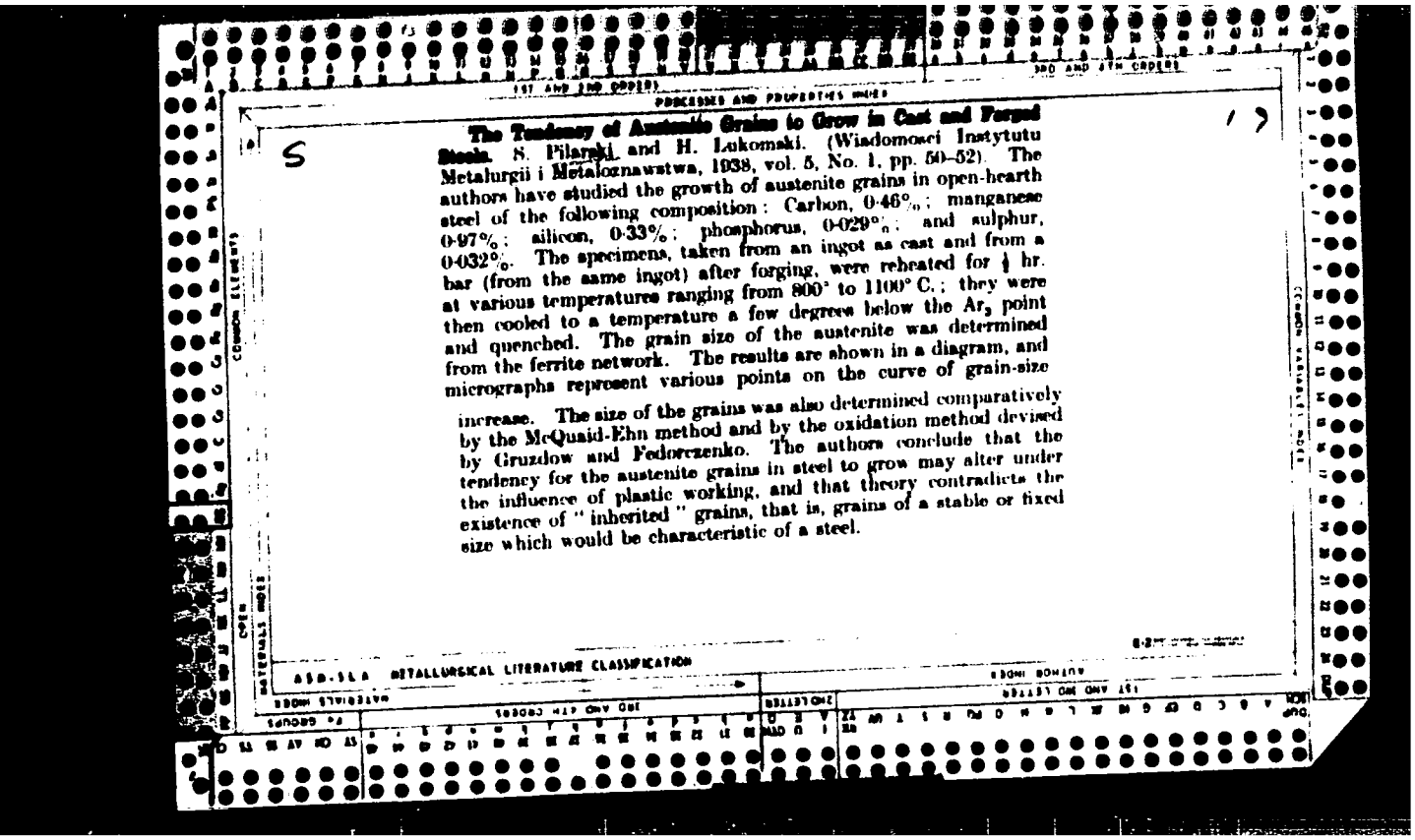


INFLUENCE IF HEAT TREATMENT ON THE HARDNESS AND CRYSTAL SIZE OF WELDED STEEL. S. Pila rski and K. Luboinski.
Wiadomosci Instytutt Metalurji i Metalosnawstwa, Warsaw-
1936 wol. 5 No.1, pp26-27

Steel tubes (carbon 0.18%) , 14 mm. and 27 mm. in diameter and 0.5-1 mm. thick, were acetylene welded ; before welding some were heat treated. Hardness measurements showed that annealing or normalising the steel before welding had a favorable influence on the hardness curves(from the parent metal across the weld to the other side), but had no effect on the structure of the zones which came under the influence of the heat of the blow pipe.



The Tendency of Austenite Grains to Grow in Cast and Forged Steels. S. Pilarski and H. Lukomski. (Wiadomosci Instytutu Metalurgii i Metaloznawstwa, 1938, vol. 5, No. 1, pp. 50–52). The authors have studied the growth of austenite grains in open-hearth steel of the following composition: Carbon, 0·46%; manganese 0·97%; silicon, 0·33%; phosphorus, 0·029%; and sulphur, 0·032%. The specimens, taken from an ingot as cast and from a bar (from the same ingot) after forging, were reheated for ½ hr. at various temperatures ranging from 800° to 1100° C.; they were then cooled to a temperature a few degrees below the Ar_1 point and quenched. The grain size of the austenite was determined from the ferrite network. The results are shown in a diagram, and micrographs represent various points on the curve of grain-size increase. The size of the grains was also determined comparatively by the McQuaid-Ehn method and by the oxidation method devised by Gruzdow and Fedorczenko. The authors conclude that the tendency for the austenite grains in steel to grow may alter under the influence of plastic working, and that theory contradicts the existence of "inherited" grains, that is, grains of a stable or fixed size which would be characteristic of a steel.