

RUTKOVSKIY, O.O.

An aerial excursion. Geogr. v shkole 19 no.3:52-54 My-Je '56.  
(School excursions)(Alma Ata--Description) (HLRA 9:9)

USSR/Forestry. Forestry and Forest Cultivation.

J-3

Abs Jour: Referat Zh-Biol., No 6, 1957, 22566

mining under trees of the Tula reservations should be abandoned, especially since the coal reserves do not exceed 6% of the total coal reserves in the Tula oblast.

Card : 2/2

-11-

RUJKOVSKIJ, V. I.

V. Rutkovskij, V. I. šloží rozvinout výzkumy v leteckého vojněho hospodářství a lesově  
meteorologička. (The following text is extremely faint and illegible)

PETROV, V.V. (Moskova); RUTKOVSKIY, V.Yu. (Moskva).

Theory of simple delay-relay servomechanisms. Izv.AN SSSR.Otd.  
tekh.nauk no.4:16-32 Ap '56. (MLRA 9:8)  
(Servomechanisms)

RUTKOVSKIY, V. Yu., kandidat tekhnicheskikh nauk

In the Institute of Automatics and Telemechanics and technical  
conference of young specialists. Vest. AN SSSR 25 no. 9:95-96  
S '55. (MLRA 8:12)

(Automatic control)

RUTKOWSKA, B.

POLAND/Soil Cultivation. Mineral Fertilizers.

J-3

Abs Jour: Ref. Zhur-Biologiya, No 1, 1958, 1243.

Author : Grzymala, J., Rutkowska, B., Skolimowski, L.

Inst :

Title : The Value of Vivianite for Fertilizer.

Orig Pub: Nowe roln., 1956, 5, No 7, 536-543.

Abstract: In most cases analysis of the vivianites taken from lowland peat bog indicates a high phosphorous content 19.8-22.2%  $P_2O_5$ ; but there are some less valuable deposits containing 1.6-7.4%  $P_2O_5$ . Vegetation experiments on peat bog soils with rye grass and timothy sown for two years indicate that the total yields over the two years were as high when vivianite was used as when superphosphate, Thomas slag, and phosphorite were used, although the plants utilized considerably less phosphorous from the vivianite. Oats utilized almost the same quantities of phosphorous

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Abs Jour: Ref. Zhur-Biologiya, No 1, 1950, 1243.

from vivianite when planted in podzolic soil with pH 5.3 as when planted on weakly podzolic and humus-rich sandy loam with pH 7.3 --

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001446210008-5

phorite were 13.6% and 2.0%. In field experiments on lowland sedge peat containing 0.38%  $P_2O_5$  dry matter a comparison was made between vivianite in doses of 45 and 90 kg./hectare and superphosphate in a dose of 45 kg./hectare  $P_2O_5$  on a base of 100 kg.  $K_2O$ . Over four years of experiments superphosphate increased the hay yield by an average of 31.7 centners/hectare while vivianite in a single dose increased it by 20.0 centners/hectare, and in a double dose by 28.3 centners/hectare, the basic harvest being 52.0 centners/hectare. In another experiment on peat moss with an average content of 0.37%  $P_2O_5$ , when fertilizers, chosen for [iz rascheta] their citrate-soluble phosphoric acid content, were applied, the harvests achieved using vivianite were actually

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RUTKOWSKA, Helena; KMITA, Stanislaw

Complete closure of the main bronchus following thoracic injury.  
Otolar. polska 8 no.3:229-233 1954.

1. Z Kliniki Ftyzjatrycznej Akademii Medycznej w Lodzi. Dyrektor:  
prof. dr J.Stopczyk.

(BRONCHI, diseases,  
obstruct. in thoracic inj.)

(WOUNDS AND INJURIES,  
thorax, causing complete obstruct. of main bronchus)

(THORAX, wounds and injuries,  
causing complete obstruct. of main bronchus)

CA

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Pressing and sintering of metallic and nonmetallic powders. W. Rutkowski and H. Rutkowska (Inst. Metalurgii, Gliwice, Poland). *Prace Badawcze Gliwickego Inst. Met.* 1 (Gliwice, 1949), 111-25. — The pressing and sintering of metal powders of Fe, Cu, Fe-Cu, Cu-Mn, Fe-Mn (1:1), and Fe-Cu-Mn (1:1:1) were investigated. The metal powders were mixed with other metallic or nonmetallic powders (bakelite was used as an org. binder, and steatite as an inorg. binder) and pressed under variable pressures. The density curve plotted vs. compacting pressure can be expressed by the equation:  $\log s = a \log P + \log b$ , where  $s$  denotes the density of the compact in g./cc.,  $P$  = compacting pressure in tons per sq. cm., and  $a$  and  $b$  are consts. to be detd. for every powder mixt. The sintering of compacts results in shrinkage or swelling, closely connected with the change in density of the sintered product. 11 references. Edward A. Ackermann



PROCESSES AND PROPERTIES INDEX		540 AND 674 SERIES	
5			17
<p>Powder Metallurgy, Hard Sinters without Tungsten Carbide. H. Rutkowska. (Hutnik, 1950, vol. 17, No. 7-8, pp. 263-264). [In Polish]. A short survey of hard sinters (not containing tungsten carbide) suitable as materials for cutting tools, and trends in their development are given. —V. G.</p>			
ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION		6-87-22-12-22	
123000 27532140		123000 27532140	
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ROT KOWSKA; H.

Met 9

Soft Magnetic Cores from Al-Si-Fe Powders (Alsilens)  
 H. Rutkowska and B. Winach (*Prace Inst. Metal. Hutn.*,  
 1957, 6, (3), 149-156).—[In Polish]. The prepn. and prop-  
 erties of soft magnetic cores from Fe, Si, and Al powders  
 are described. The effect of the chem. compn. and of the  
 melting, coating, grinding, and annealing conditions on the  
 permeability and the eddy-current and hysteresis losses was  
 studied on cores contg. 6-9% Al and 7-10% Si. In alloys of  
 low (5%) Al content, the permeability decreased rapidly  
 and the losses increased with the increase of Si content.  
 In alloys contg. 8-7.5% Al the increase in Si content had  
 a smaller effect on the permeability and eddy-current losses.  
 Strict control of the chem. compn. was essential in obtaining  
 cores of desired properties. The cores were obtained from  
 powders of ~120  $\mu$  particle dia. reduced for 4 hr. in H at  
 950° C. by mixing them with insulating materials (CrO<sub>2</sub>,  
 talcum, water-glass), compressing and annealing for 40 min.  
 in H atmosphere at 750° C.—S. K. L.

Met 9

RUTKOWSKA, H.

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P.O.L. 53

Alsifers for powdered magnetic materials (magneto-electric cores). H. Rutkowski and H. Wyszynski (Inst. Metali, Niezależnych, Poland). *Proc Inst. Minieraloga Hutnic. 6*, 143-50 (1954) (English summary).--Cores used in telecommunication are made by grinding Alsifer to 60-120  $\mu$  in a ball mill for 10 hrs., heating the powder for 4 hrs. in H<sub>2</sub> to 950°, mixing it with an insulating material, so that each particle is isolated from another one, pressing it under 14 tons/sq. cm. to form cores, and heating it again (preferably in H<sub>2</sub>) to 750° for 40 min. The Alsifers were prepared by melting ferroalloy, Al, and if necessary Armeo Fe. It was found that when Si content in the Alsifer, contg. 5% Al increases, magnetic permeability (I) decreases; eddy-current losses (II) increase, and hysteresis losses (III) remain comparatively high. When Si content in the Alsifer, contg. 7-7.5% Al increases, I does not materially change, II decrease, and III remain small. Best results were obtained with Alsifer contg. 5% Al and 9% Si; II were then 0.09 and III  $2 \times 10^{-4}$ . As insulating materials waterglass, Bakelite (dissolved in acetone, benzene, or alc.), combination of both, or a mixt. of waterglass, CrO<sub>3</sub>, and talcum (Russian method) were used.

Frank J. Hendel

M 254

Rutkowska, H.

N

P. O. I.

Soft Magnetic Cores from Fe-Si-Al Powders, Also Called  
Alloys. H. Rutkowska and B. Winach. (*Prace Instytutu*  
*Metalurgicznego*, 1964; 6, (3), 149-150). [In Polish].  
The influence of chemical composition, particle size, annealing  
conditions and the technology of production on the magnetic  
properties of cores made of Fe-Si-Al powders was investigated.  
It was found for alloys containing 5-9% Al and 7-10% Si,  
that: (a) For low aluminium (5% Al) alloys the magnetic  
permeability rapidly decreases and the losses increase with  
an increase of silicon content; (b) in alloys with 6-7.5% Al  
the permeability and losses due to eddy current only change  
a little with increasing silicon and the changes in hysteresis  
loss are irregular.—v. a.

H. RUTKOWSKA

Metallurgical Abstracts  
July 1954  
Power Metallurgy

4  
③  
→ Powdered Magnetic Materials. W. Rutkowski and H. Rutkowska (*Prace Inst. Metal. Huta.*, 1954, 6, (1), 20-28). [In Polish]. Prod'n. methods and appn. of soft and permanent magnetic materials made by sintering or pressing powders are reviewed.—S. K. L.

RUTKOWSKI, A

4032 085222  
Jonicki J., Rutkowski A., Larys B. The Lipolytic Decomposition of the Fat Tissues of Pigs.

„Rozkład lipolityczny tkanek tłuszczowych trzody chlewnej”. Przemysł Spożywczy, No. 4, 1955, pp. 151—155, 5 tabs.

An investigation into the hydrolysis of fat in the fat tissues of pigs. Samples taken from various parts of the carcass were analysed. It was confirmed that the least rapid hydrolysis of fat takes place in the fatty tissue of the kidney knob, the most rapid in the tissues enveloping the pancreas. The general conclusion reached was that the speed of the hydrolytic process is proportional to the content of protein and water in the tissues. When tissues are kept at low temperatures, especially below 10°C, the process of hydrolysis is slowed down. No distinct activity of lipoxydase was observed. The oxidation of fat in the tissues tested proved to be of no essential importance.

MD (2)

WITKOWSKI, A.

"Influence of Raw Material, Temperature, and Crumbling on the  
Quality and Productiveness of Fat", P. 313, (GOSPODARKA MIEŚNIA,  
Vol. 6, No. 10, Oct. 1954, Warszawa, Poland)

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

RUTKOWSKI, A.

Evaluation of Gospodarka Miesna. p. 20

GOSPODARKA MIESNA, Vol. 7, No. 10 Oct. 1955

(Polskie Wydawnictwa Gospodarcze) Warszawa

SOURCE: EAST EUROPEAN ACCESSIONS LIST Vol. 5, No. 1

Jan. 1956



Rutkowski, A.

Need

✓ The hydrolytic decomposition of fat tissues of pig. Janicki, A.; Rutkowski, and B. Larys. *Przegląd Spedyjacyjny*, 9, 161- (1965) (English summary). The rate of hydrolysis of fat varies in different tissues, being fastest in tissues enveloping the pancreas and slowest around the kidney and under the skin. Generally, the rate of hydrolytic decomposition is proportional to the protein and water content of the tissue. Temps below 10° decrease considerably the rate of hydrolysis. Neither appreciable oxidation of fat nor the presence of lipoxidases was observed. W. Szybański

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RUTKOWSKI, A.

P O L .

3352

605.2/3:691.14

Rutkowski A. Some Attempts to Produce Compound Fats, and an Estimation of Their Technological Value.

„Próby otrzymania i oceny wartości technologicznej tłuszczów mieszanych roślinno-zwierzęcych”. Przemysł Rolny i Spożywczy. No. 3, 1954, pp. 87-89, 1 fig., 4 tabs.

The author investigated the physico-chemical properties of compound fats produced from beef tallow, refined rape oil and lard in varying proportions. The technological value to the baking industry of this compound was also investigated. The results confirmed that a blend of refined rape oil and beef tallow produces food compound fats. When the content of beef tallow amounts to 60% a fat is obtained very similar to lard. The melting temperature of the various components should determine the amount of each to be blended in the requisite compound fats.

GALECKI, Wladyslaw; KAWECKA, Maria; RUTKOWSKI, Boleslaw

Significance of cytological examination in surgery of bronchial cancer. Polski tygod. lek. 11 no.40:1697-1698 1 Oct 56.

1. (Z Oddzialu Chirurgicznego; kierownik dr. med. K. Lotkowski i Pracowni Cytologii; kierownik: dr. med. M. Kawecka Instytutu Onkologii, Oddzial w Gliwicach; dyrektor: dr. med. J. Swiecki)

Adres: Gliwice, Instytut Onkologii.

(BRONCHI, neoplasms,  
diag., cytol. technic (Pol))

RUTKOWSKI, E

488

4050 691.002.3 : 638.215(438-35)

Kuliński A., Rutkowski E. Raw-Material Problems of the Ceramic Building-Material Industry in the District of Warszawa.

„Zagadnienia surowcowe przemyslu ceramiki budowlanej w woj. warszawskim”, Materiały Budowlane, No. 3, 1955, pp. 62-67, 4 figs., 1 tab.

Location of plants having regard to raw-material deposits and area to be supplied with products, with a view to avoiding unnecessary transport. The necessity to consider the problems of the ceramic and the silicate industries jointly. The necessity to develop a long term plan of operation for the plants, taking into account: 1) the choice of a proper site with rich deposits, sufficient for a long period of operation, and opportunities for erecting a plant in the vicinity of the mine; 2) efficient organization of a well planned exploitation of the mine; 3) methods of converting the site, after exhaustion of the deposit, to other purposes.

HT ①

AM

RUTKOWSKI, Edward, inz.

The OR590 Sulzer engine. Biul techn. Cegielski 5:72-91 Special issue '61.

TAD48 ship engines. Ibid.:120-121

An installation for joining and controlling crankshafts. Ibid.:147

RUTKOWSKI, Edward, in2.; 1966; Andrzej, in2.

The second stage of testing the experimental 3E55 ship engine.  
Biul techn Cegielski 45-49 Special Issue '61.

KRYSZEWSKI, Josef, inz.; PRZESZ, Andrzej, inz.; RUTKOWSKI, Edward, inz.

Design and construction of the first engine of the 6RSAD76 H.  
Cegielski-Sulzer type. Biul techn Cegielski 5:122-133 Special  
issue '61.

RUTKOWSKI, H.

POL.

9560 Study of the Production of (Secondary) Cobalt and Tungsten Carbide Powders. H. Rutkowski, B. Kozminski, and L. Gliniska. *Henry Brucher Translation No. 3487*, 13 p. (From *Prace Glownego Instytutu Metalurgii*, v. 4, no. 4, 1952, p. 153-160.) Henry Brucher, Altadena, Calif.  
Cemented carbides were prepared from Co powder obtained electrolytically, by reduction of Co formate, and from tungsten carbide recovered from scrap. Data on density and hardness. Tables, graphs, micrographs. 6 ref.

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RUSZKOWSKI, I.

Surgical treatment of tibia deformities caused by osteomyelitis in children. Acta chir.iugosl. 2 no.2-3 196-202 1955.

1. Ortopedska klinika Medicinskog fakulteta u Zagrebu (Predstojnik prof. dr F. Grospic)

(OSTEOMYELITIS,

tibia, causing deform. in child, surg., bone transpl. (Ser))

(TIBIA, dis.

osteomyelitis causing deform. in child., bone transpl. (Ser))

(TRANSPLANTATION,

bone grafts for tibia deform. caused by osteomyelitis in child (Ser))

(BONE TISSUE,transpl.

in tibia deform . caused by osteomyelitis in child (Ser))

RUTKOWSKI, JAN

✓ Determination of the end of cooking in *suflita* pulping for rayon manufacture. Jerzy Protekta, Jan Rutkowski, and Irena Sender-Laniska. *Prace Inst. Chemicz. Papier.* 4, No. 2, 21-33(1955).—Com-scale pulping expts. were

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carried out to evaluate various methods indicating the end of cooking cycle for a pulp of desired properties. The most suitable method was a periodic examn. of the color of liquor samples toward the end of cooking by using a Pulfrich photometer. The values obtained by this method correlated with viscosity of the pulp in the range of  $\pm 5$  centipoises. Other methods, i.e. liquor  $n$ , liquor viscosity coeff., pulp viscosity index, or pH control of the liquor were judged less reliable.

T. R. Zegree

*[Handwritten signature]*

PUTKOWSKI, J.;

"Elektrotechnika samochodowa i ciagnikowa" (Motorcar and tractor electro-technics), by J. Putkowski. Reported in New Books (Nowe Książki), No. 12, June 15, 1956.

RUTKOWSKI, J.

"Heat Treatment of Spheroidal Iron in Order to Improve its Mechanical Properties."

Biuletyn. p.10

(PRZEGLAD ODLEWNICTWA Vol. 3, no. 5, May 1953 Krakow, Poland)

SO: Monthly List of East European Accessions, LC, Vol. 3, no. 5, May 1954/Uncl.

RUTKOWSKI, J.

Nauka o opatrunkach (Knowledge about dressings), by J. Rutkowski.  
Reported in New Books, (Nowe Ksiazki), No. 6, March 15, 1956.

RUTKOWSKI, Jerzy; KOSZANSKI, E.

Complete excision of cold abscess. Polski przegl. chir. 28 no.6:  
601-603 June 56.

1. Z II Kliniki Chirurgicznej A.M. w Lodzi Kierownik: prof. dr.  
J. Rutkowski, Warszawa 22, ul. Glogera 3 m. 6.  
(TUBERCULOSIS, OSTEOARTICULAR, surgery,  
excis. of scapular cold abscess, radical (Pol))

RUTKOWSKI, Jerzy

Colitis ulcerosa. Polski tygod. lek. 11 no.42:1795-1799  
15 Oct 56.

1. Z 2 Zakladu Chirurgii Instytutu Doskonalenia i Specjalizacji  
Kadr Lekarskich w Warszawie; kierownik: prof. dr. nauk med.  
Jerzy Rutkowski, Warszawa, ul. Glogera 3.  
(COLITIS, ULCERATIVE, surgery,  
(Pol))

RUTKOWSKI, Jerzy (Lodz)

Surgical interventions on the blood vessels in the treatment of  
circulatory insufficiency. Kardiol. polska 1 no.3-4:107-110 1955.

(CARDIOVASCULAR DISEASES, surgery,  
(Pol))



RUTKOWSKI, Jerzy (Lodz)

First cases in Poland of cardiac catheterization and of Bialock operation in tetralogy of Fallot. Kardiol. polska 1 no.3-4:40-41 1955.

(CATHETERIZATION, CARDIAC, history,  
in Poland (Pol))

(TETRALOGY OF FALLOT, surgery,  
Bialock operation, first cases in Poland (Pol))

RUTKOWSKI, Jerzy; ADAMSKI, Stanislaw

Pericardial cysts. Kardiol. polska 1 no.3-4:90-96 1955.

1. Z II Klin. Chirurg. AM w Lodzi. Kier. prof. dr. med.  
J. Rutkowski.  
(PERICARDIUM, cysts,  
(Pol))

RUTKOWSKI, J.

"Praktyczne wiadomości z zakresu elektrotechniki samochodowej" (Practical knowledge in the domain of motor car electrotechnics), by J. Rutkowski. Reported in New Books (Nowe Książki), No. 15, August 1, 1955

RUTKOWSKI, J.

POLAND

"Heat Treatment of Spheroidal Cast Iron," by J. RUTKOWSKI and H.SIDOR: Prace Instytutow  
Ministerstwa Hutnictwa, Gliwice, No. 2, 1956.

~~XX~~

RUTKOWSKI, Jerzy; ALICHNIEWICZ, Andrzej; KOSZANSKI, E.

Various complications following cholecystectomy. Polski tygod.  
lek. 11 no.46:1961-1965 12 Nov 56.

1. (Z II Kliniki Chirurgicznej A.M. w Lodzi; prof. dr.  
J. Rutkowski) adres: Lodz., ul. Sterlinga Nr 1/3 Panstw.  
Szpital Kliniczny Nr 3 II Klin. Chirurgiczna.  
(CHOLECYSTECTOMY, complications,  
(Pol))

29278

P/032/61/008/003/001/004  
D269/D301

11.7200  
AUTHOR:

Rutkowski, Jerzy (Warsaw)

TITLE:

New criterion for classifying combustion in piston engines

PERIODICAL: Archiwum budowy maszyn, v. 8, no. 3, 1961, 243 - 261

TEXT: In this article, the author conducts the theoretical analysis of combustion by deriving the formula for the rate of pressure propagation  $dp/dt$  in the combustion chamber of piston engines from the laws of thermodynamics and dynamics of gases. The author established experimentally that the detonation in piston engines occurs, when the critical value of  $dp/dt$  is exceeded and regards, therefore this value as the limit for normal combustion. The general formula

$$\frac{dE}{dt} = \mu - v \operatorname{div} \vec{j} - p \frac{dv}{dt} \quad (4)$$

for the heat energy balance provides the basis for classifying combustion. This formula was derived from the heat continuity

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$$dq = \rho dt - v \operatorname{div} \mathbf{j} dt \quad (2)$$

and the first law of thermodynamics -

$$dq = dE + p dv, \quad (3)$$

where  $dq$  - change of heat content of elemental mass in time  $dt$ ,  $u$  - velocity of heat generation by conversion of chemical energy (in units of energy per unit mass per time),  $v$  - specific volume per unit of mass,  $\mathbf{j}$  - vectorial intensity of heat transfer per unit of area in unit time. For static combustion

$$A_1 T^2 \exp(-A_2/T) + v \lambda \nabla^2 T = 0 \quad (4)$$

applies where  $\lambda$  - coefficient of conduction,  $A_1 A_2$  - constants. It appears that static combustion takes place only when the difference between the maximum central temperature and that of the vessel's walls does not exceed a certain value typical to the vessel's shape and mixture properties. When this critical value is exceeded a thermal explosion takes place. Various stages of combustion are

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described in detail and the phenomena occurring at the flame front lead to the criterion for the two kinds of combustion processes. From the heat energy balance

$$c_v \frac{dT}{dt} = -v \operatorname{div} \vec{j} - pv \operatorname{div} \vec{u} \quad (13)$$

deduced by treating the unburnt mixture undergoing combustion as a perfect gas (diffusion of burnt gases being neglected) two modes of combustion are defined: Normal slow combustion occurring when the second term of the right side of Eq. (13) (i.e. mechanical energy change) is negligible compared with the first one and detonation combustion takes place when the heat energy change - (i.e. first term of the right side of Eq. (13)) is negligible compared with the second term). Mathematical transformation of Eq. (13) leads to

$$\frac{\partial T}{\partial t} = \frac{\lambda v}{c_v} \nabla^2 T \quad (17)$$

which is valid up to the point of maximum concavity of the temperature curve in the graph given in the article. From this point on--  
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wards - the "technically visible" combustion starts which is accompanied by pressure variations defined by

$$\frac{dp}{p} \leq \frac{\kappa}{\kappa - 1} \frac{dT}{T} \quad (21)$$

where  $\kappa$  is the isentropic index. Physical interpretation of this expression is described for normal combustion. The mechanism of detonation is explained in detail by using analysis similar to that used for the proof of Duhamel's integral, and the final formula for the substantial rate of change of pressure increase for an element of the unburnt mixture, moving with velocity  $u$  is obtained in

$$\frac{dp}{dt} = \frac{(a - u) \left(\frac{dp}{dt}\right)_{pn}}{(a - w_{pn}) - \tau \frac{da}{dt}} \quad (36)$$

where  $\left(\frac{dp}{dt}\right)_{pn}$  is the rate of change of pressure wave of velocity  $a$  which started at time  $t - \tau$ , due to the pressure build-up  $(dp/dt)_{pn}$  in

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the combustion zone which moves with velocity  $W_{pn}$ . Eq. (36) which is not exactly accurate ( $a$  and  $da/dt$  are taken as mean values) provides the basis for the author's detailed analysis of the detonation phenomenon and its prediction. The critical value of  $dp/dt$ , beyond which detonation occurs depends on the properties of mixture air-fuel ratio and the chemical changes which the mixture is undergoing inside the cylinder during compression stroke and up to just before the ignition point (formation of peroxides). The author describes briefly the experimental engine used for taking the indicator diagrams in his research. Various fuels were used in an engine of variable compression ratio, ignition advance and airfuel ratio. An electronic voltmeter was used for measuring the peak values of the indicator diagrams which were averaged automatically for a large number of cycles. Photographs of the detonation pulses were taken and the gradient of shock waves was studied. The results of the author's experiments and practical conclusions drawn, are said to appear in a separate publication. There are 10 figures and 12 references: 10 Soviet-bloc and 2 non-Soviet-bloc.

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New criterion for classifying ...

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ASSOCIATION: Katedra silników pojazdów mechanicznych politechniki  
Warszawskiej (Warsaw Polytechnic Institute, Department  
of Mechanical Vehicle Engines)

SUBMITTED: January, 1961

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RUTKOWSKI, J.; POKRZYWNICKI, S.; HANKIEWICZ, J.

Controlled hypotension. Polski tygod. lek. 7 no. 43:1358-1362  
27 Oct 1952. (CML 24:1)

1. Of the Second Surgical Clinic (Head--Prof. Jerzy Rutkowski,  
M.D.) of Łódz Medical Academy.

RUTKOWSKI, J.

"Improving the quality of rayon pulp.II." p.367. (PRZEGLAD PAPIERNICZY  
Vol. 10, No. 12, Dec. 1954. Lodz, Poland)

SO: Monthly List of East European Accessions. (EEAL). LC. Vol. 4, No. 4.  
April 1955. Uncl.

RUTKOWSKI, J.

Blood transfusion in surgery. Szpital, polsk. 3 no.2-3:255-270 1950.  
(GLML 20:6)

1. Of the Second Surgical Clinic of the Medical Academy in Lodz.  
Author is Prof. M.D.

RUTKOWSKI, J.

Improving the method of digesting by the application of Soviet achievements.  
p. 263. (PRZEGLAD PAPIERNICZY, Vol. 10, No. 9, Sept. 1954, Lodz, Poland)

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 3, No. 12, Dec.  
1954, Uncl.

RUTKOWSKI, J.; ADAMSKI, St.; STADNICKI, J.; WOZNIEWSKI, A.

Besnier-Boeck-Schaumann disease. Polski tygod.lek. 10 no.10:305-309 7 Mar 55.

1. Z II Kliniki Chirurgicznej A.M. w Lodzi; kier. prof. dr J. Rutkowski i z Kliniki Chirurgii Szczekowej A.M. w Lodzi, kier. doc. dr F. Bogdanowicz Warszawa, Glogera 3.  
(SARCOIDOSIS, pathology)



RUTKOWSKI, J.; STEPKIEWICZ, S.

Denatured animal blood plasma as substitute in blood transfusion.  
Med.dosw.mikrob. 2 no.2:165-167 1950. (CML 20:6)

1. Summary of report given at 10th Congress of the Polish Micro-  
biological and Epidemiological Society held in Gdansk, Sept. 1949.  
(Lodz.)

RUTKOWSKI, J.

RUTKOWSKI, J.

Surgical treatment in pulmonary tuberculosis. Polski tygod. lek.  
5:11, 13 Mar. 50. p. 401-9

1. Of the Second Surgical Clinic at Lodz University (Director of  
the Clinic--Prof. J. Rutkowski, M. D.).

CINL 19, 5, Nov., 1950

RUTKOWSKI, J.

Heat treatment of spheroidal steel castings. p. 52

KINOTECHNIK Vol. 5, No. 2, 1955 (published 1956)

Poland

So. EAST EUROPEAN ACCESSIONS LIST, Library of Congress, Vol. 5, No. 10,  
Oct. 1956.

RUTKOWSKI, J.

Influence of the piecework system on efficiency of railroad networks. p. 209.

Vol. 7, no. 6, June 1955

PRZEGLAD KOLEJOWY, Warszawa

SOURCE: East European Accessions List (EEAL), IC, Vol. 5, no. 2, Feb. 1956

RUTKOWSKI, JAN S Z

11929\* (Polish.) Heat Treatment of Spheroidal Cast Iron.  
Obróbka cieplna żelwa sferoidalnego. Janusz Rutkowski  
and Halina Sidor. Prace Instytutu Odlewnictwa, v. 3, no. 27-33,  
1954, p. 52-65.

Determination of mechanical properties and structure of three  
kinds of cast iron subjected to austempering, heat refinement,  
and normalizing with tempering.

RG  
orig

RUTKOWSKI, J.

RUTKOWSKI, J. Amateur television receiver with electromagnetic deflection. p. 14.

Vol. 6, No. 10, Oct. 1956

RADIOMATOR  
TECHNOLOGY

Warszawa, Poland

So: East European Accession, Vol. 6, No. 2, Feb. 1957

RUTKOWSKI, Jerzy

Complications occurring during and after goiter surgery.  
Pol. przegl. chir. 37 no.11:1178-1182 N ' 65.

RUTKOWSKI, Jerzy; ALICHNIEWICZ, Andrzej

Two complicated cases of peptic ulcer in adolescents. Polski tygod. lek. 11 no.8:371-372 20 Feb 56.

1. Z II Kliniki Chirurg. A M w Lodzi; kier. Kliniki prof. dr. J. Rutkowski (Sterlinga 1/3, Panstw. Szpit. Klin. III Klinika Chirurg.)

(PEPTIC ULCER, complications,

pyloric stenosis in adolescents, surg. (Pol))

(ADOLESCENCE, diseases,

peptic ulcer with pyloric stenosis, surg. (Pol))

(PYLORUS, stenosis,

in peptic ulcer in adolescents. (Pol))



RUTKOWSKI, J.; RACZKA, J.

Annealing of white malleable cast iron in a controlled atmosphere of steam and air. Prace inst odlew 13 no.2:101-125 '63 [publ. '65].

1. Submitted June 14, 1962.

RUTKOWSKI, Jerzy (Lodz, ul. Piotrowska 175)

Technic of intra-arterial blood transfusion. Polski tygod. lek.  
9 no.22:701-702 31 May 54.  
(BLOOD TRANSFUSION,  
intra-arterial, technic)

Rutkowski, Jerzy

Artificial hibernation in surgery. Polski tygod. lek. 10 no. 46:  
1489-1492 14 Nov. '55.

1. Z II Kliniki Chirurgicznej A.M. w Lodzi; kierownik: prof. dr.  
J. Rutkowski. Warszawa, ul. Glogera 3.

(HIBERNATION,  
controlled, in surg.)

RUTKOWSKI, Jerzy; ALICHNIEWICZ, Andrzej

Treatment of arteritis obliterans of the extremities with novocain block of the 3rd thoracic sympathetic ganglion. Polski tygod. lek. 10 no. 25: 825-828 20 June '55.

1. Z II Kliniki Chirurgicznej A.M. w Lodzi; Kierownik: prof. dr. J. Rutkowski) Warszawa, Glogera 3.

(ARTERITIS,

peripheral, obliterans, ther. novocain block of 3rd thoracic sympathetic ganglion)

(ANESTHESIA, REGIONAL, ther. use

sympathetic block in

arteritis, peripheral, obliterans, with procaine)

(PROCAINE, ther. use.

arteritis, peripheral, obliterans, sympathetic block)

RUTKOWSKI, Jerzy; CZKWIANIANC, Mikolaj; JAKUBOWICZ, Dorota; CHYZO-MACHNIK,  
Krystyna.

Prevention of shock during surgery with local anesthesia by pen-  
diomide. Polski przegl.chir. 27 no.7:629-630 July '55.

(AUTONOMIC DRUGS, therapeutic use

pendiomide in prev. of shock in surg.with local anesth.)

(SHOCK, prevention and control

pendiomide in surg. with local anesth.)

RUTKOWSKI, Jerzy; POKRZYWNICKI, Stanislaw.

Arterial hypotension in surgery. Postepy chir.1:29-42 1954.

1. Z II Kliniki Chirurgicznej Akademii Medycznej w Lodzi.

Kierownik: prof.dr med. Jerzy Rutkowski.

(HYPOTENSION, artificial,  
controlled in surgery)

RUTKOWSKI, Jerzy

Nikolai Pirogov, 150th anniversary of his birth. Polski tygod.  
lek. 16 no.39:1506-1508 25 S '61.

(BIOGRAPHIES)

PUTKOWSKI, K.

A flux method of refining copper alloys, p. 68. (KRAKOW, Warszawa, Vol. 3, no. 2, 1953)

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 4, No. 6, Jan. 1955,  
Uncl.



RUTKOWSKI, K.

POL.

3113

689.354/.8.018.24:021

Górny Z., Rutkowski K. Foundry Tin-Bronze, Leaded Bronze, and Substitute Brasses in Machine-Building Practice.

„Odlewnicze brązy cynowe i cynowo-olowiane oraz ich stopy zasłyszane w budowie maszyn”. Przegląd Mechaniczny. No. 12, 1953, pp. 398-404, 21 figs., 2 tabs.

The authors deal with the properties of tin-bronze and leaded bronze. Chemical properties and the use in foundry practice of tin-bronze, leaded bronze and substitute bronze alloys (manganese brass, aluminum brass; aluminum bronze, silicon bronze, lead bronze, alpha-beta leaded bronze).

M 82

RUTKOWSKI

Properties and structures of copper alloys and their alloys.  
 Z. Górný and K. Rutkowski. *Práce Inst. Odlevo*  
 1955, No. 4, 17 pp.; *Přehledy Abstr. No. 3, Abstr. No.*  
 4239 (1959). — Cu-Si-Zn alloys can be substituted for Sn  
 bronzes since they have good properties and the Cu content  
 is lower than that of Si bronzes. Correlations exist between  
 the chem. compn., the structure, and the mech. and phys.  
 properties of Cu-Si-Zn alloys. The influence of the chem.  
 compn. was detd. on the casting properties of alloys (Zn in-  
 creases the castability), resistance of alloys to chem. attack,  
 and antiabrasive properties. The advantageous or deleter-  
 ious effect of Al, Pb, As, Ni, Mn, Fe, P, and Sb on the  
 alloys was detd. K. L. C.

7

1/1

*[Handwritten signature]*

RUTKOWSKI, K.

"Substitute alloys for tin bronzes used in founding," Przegląd Odlewnictwa, Krakow, Vol 4, No 7/8, July/Aug. 1954, p. 196.

SO: Eastern European Accessions List, Vol 3, No 11, Nov 1954, L.C.

RUTKOWSKI, K.

"New high-quality copper alloys," (Piuletyn), Przegląd Odlewnictwa, Krakow,  
Vol 4, No 7/8, July/Aug. 1954, p. 14.

SO: Eastern European Accessions List, Vol 3, No 11, Nov 1954, I.C.

RUTKOWSKI, K.

"Manganese Brass." p.83  
(PRZEGLAD ODLEWNICTWA Vol. 3, no. 3, March 1953 Krakow, Poland)

SO: Monthly List of East European Accessions, LC, Vol. 3, no. 5, May 1954/Uncl.

EUTKOWSKI, F.

Cast Tin Bronzes and Tin Lead Bronzes and Their Substitutes as Used in Construction of  
Machines

Source - PRZEBUDOWA MECHANICZNY (Mechanical Engineering Review) Poland  
Vol. XII, No. 10 October 1953, pp. 339-370

CA

Microchemical electrophotocolorimetric determination of phosphorus in blood. L. A. Rutkovskii. *Lab. Prakt. (U. S. S. R.)* 13, No. 5, 18-21 (1944).—The proposed apparatus consists of a light in an optical system composed of 2 lenses which produce parallel beams of light and of 2 iris diaphragms which sep. parallel light beams of a definite size. The illumination is regulated by a rheostat and controlled with a voltmeter. One of the light bundles passes through a jar from optical glass, through one iris diaphragm and falls on a Se photoelement. The other light bundle passes through a similar diaphragm and falls on a compensator Se photoelement. The photoelements are connected so that the e. m. f. is directed in different directions. The difference in the e. m. f. is registered by a mirror galvanometer whose sensitivity is  $0.00 \times 10^{-9}$  amp. In order to equalize the e. m. f. of the photoelements a high ohmic resistance is placed between them. Twenty series of similar detns. with known concns. of  $KH_2PO_4$  solns. (contg. 0.01, 0.005, 0.0025, 0.00125 and 0.000625 mg. of P) were performed to establish the calibration curve. For the detn. of P in blood only 0.1–0.05 ml. of blood are required. Pour 1.6 ml. of distd. water into a centrifuge tube, add 0.1 ml. of blood, rinse the micropipet several times with the soln., add to the tube 0.3 ml. of trichloroacetic acid, mix and centrifuge for 3–5 min. Pour into an ordinary test tube 1 ml. of the centrifugate (0.05 ml. of blood), add 0.5 ml. of a molybdate soln. and 0.5 ml. of a hydroquinone soln., let stand for 5 min., add drop by drop 2 ml. of a carbonate-sulfite soln. and perform an electrophotocolorimetric detn. after 10 min. A no. of detns. of various solns. of P were made with the electrophotocolorimeter and with an Autenrieth colorimeter; the electrophotocolorimeter was more accurate. 7 references. W. R. Henn

ASS. SLA METALLURGICAL LITERATURE CLASSIFICATION

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
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1ST AND 2ND SERIES PROCESSES AND PROPERTIES INDEX

A-4

BC

Investigation of the reaction of cobalt with  
 sulfur dioxide. L. G. A. Bostwick, (Dissertation, 1960, S.  
 68-284) - since the colors produced when Br reacts with  
 irradiated and non-irradiated samples are practically indis-  
 tinguishable the reaction cannot be used for determination of  
 cobalt. W. McC.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

1ST AND 2ND SERIES

GROUPS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
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1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50

1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

11B

Suitability of Tortelli-Jaffe reaction for the determination of vitamin D. L. A. Rutkovskii. *Russkimiya* 5, 528-31(1940).--The reaction of Tortelli-Jaffe is not specific for irradiated ergosterol (vitamin D), since non-irradiated ergosterol gives with Br soln. the same coloration, tint and light extinction. H. Priestley

ASD 33 A METALLURGICAL LITERATURE CLASSIFICATION

1ST AND 2ND ORDERS

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50

RUTKOWSKI K.

✓ 5749\* (Polish.) Investigations of the Properties and Structure of Cu-Si-Zn Casting Alloys. *Badania własności i struktury odlewanych stopów Cu-Si-Zn.* In: *Gotny and K. Rutkowski, Prace Instytutu Odlewactwa, v. 4, no. 4-34, 1953, p. 241-260.*

Chemical composition and properties of these alloys which are most useful with regard to economy and application.

2

PKS MK

GORNY, Z., and RUTKOWSKI, K.:

POLAND

"Investigations of the Properties and Structure of Cu-Si-Zn- Casting Alloys," Prace Instytutu Odlewnictwa, No. 4, 1954.

RUTKOWSKI, KAZYSZTOP.

POLON

13140\* Substitutes Alloys for the Tin Bronzes Used in Casting Production. Stopy zastepcze branzow cynowych stosowanych w odlownictwie. (Polish.) Zbigniew Córny and Krzysztof Rutkowski. Przegląd Odlownictwa, v. 4, nos. 7-8, July-Aug. 1964, p. 196-208.

Necessity for economizing on Sn and Cu has led to the designing of special bronzes and brasses, with Al, Fe, Ni, and Mn contents; examples of Sn-P, Sn-Zn, and Sn-Zn-Pb bronzes; strength, hardness, and other tests. Tables, graphs, diagrams.

*RUTkowski, K.*

2/3/118

669.35.5.74

DISCO N

Bronze-Manganese Alloys with Low  
Content of Copper

Przeł.Mech.  
14(6), 173-177  
June, 1955  
Poland

K. Rutkowski, Z. Gorny

The ~~Polish~~ Foundry Research Institute has recently obtained bronze-manganese alloys with a very low content of copper ranging between 4.5 and 4.8%. It is claimed that these alloys can be used not only to replace similar alloys with a higher content of Cu but also, in many instances, can be used instead of gun metal, leaded bronze, bell metal, silicon and aluminium-bronze alloys. The technology of smelting and casting the bronze-manganese alloys with a low content of copper and the savings achieved by their introduction are described. A brief account of the research on the improving of their mechanical properties is given. Photographs of various alloys treated chemically and electro-chemically, diagrams and tables are included in the text.

*[Handwritten signature]*

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50  
 A B C D E F G H I J K L M N O P Q R S T U V W X Y Z AA AB AC AD AE AF AG AH AI AJ AK AL AM AN AO AP AQ AR AS AT AU AV AW AX AY AZ  
 PROCESSES AND PROPERTIES INDEX

CA

4

The protective action of chromate as a means of measuring the cathode polarization in the electrolysis of alkali chlorides without a diaphragm. I. S. Katsen, M. I. Rukhovich and P. I. Rudakov. *J. Phys. Chem. U.S.S.R.* 5, 832-47 (1934).—Measurements were made on 25% KCl solns. with or without hypochlorite or 1.3%  $K_2Cr_2O_7$ . Pt and Cu cathodes being used at c. d. from 0.0225 to 0.25 amp./sq. cm. Without the use of  $K_2Cr_2O_7$  the potential-time curve becomes more and more positive, but in its presence it remains const. at a more negative value.  $K_2Cr_2O_7$  greatly accelerates depolarization. By allowing the H produced to diffuse through a Pd tube it was found that the presence of  $K_2Cr_2O_7$  does not decrease but even increases the percentage of H diffused from about 80 to 98% of the total. This would indicate that  $K_2Cr_2O_7$  does not speed up the formation of H<sub>2</sub> ions. — F. H. R.

ASD-514 METALLURGICAL LITERATURE CLASSIFICATION

10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50  
 A B C D E F G H I J K L M N O P Q R S T U V W X Y Z AA AB AC AD AE AF AG AH AI AJ AK AL AM AN AO AP AQ AR AS AT AU AV AW AX AY AZ

RUTKOWSKI, Marian; TOMASIK, Zdzislaw

Physicochemical analysis of a heptane fraction of synthine. *Chemia*  
Stosow 4 no.3/4:519-527 '60. (EEAI 10:9)

1. Katedra Technologii Nafty i Paliw Plynnych Politechniki Wroclawskiej.

(Carbon monoxide) (Hydrogenation) (Heptane)  
(Heptene) (Dimethylpentene) (Methylhexene)  
(Methylhexane)

RUTKOWSKI, Marian

A laboratory apparatus for accurate dosing of small amounts of liquids under pressure. Chemia stosow 4 no.3/4:529-532 '60.  
(EEAI 10:9)

1. Pracownia Nr. 11. Zakladu Syntezy Organicznej PAN.

(Liquids)



ORLOWSKI, Witold J.; RUTKOWSKI, Sławomir; NIEWIADOMSKI, Roman.

General akinesia in ophthalmological surgery; preliminary communication. Klin.oczna 25 no.4:261-266 1955.

1. Z Oddziału Ocznego - Ordynator: dr. med. W.J.Orlowski i z I Oddziału Chirurgicznego - Ordynator: dr. med. W.Zagorski. Wojskowego Szpitala Okręgowego.

(MUSCLE RELAXANTS, therapeutic use,  
in eye surg., prod. of general akinesia)

(EYE, surgery,  
musc. relaxants in, prod. of general akinesia)

RUTKOWSKI, Slawomir

Problems of keratoplasty. I. Mechanism of corneal trepanation  
and some new ophthalmic trephines. Klin. oczna 27 no.1:1-8 1957.

1. Z Zakladu Fizjologii Czlowieka A.M. w Warszawie Kierownik:  
prof. dr. F. Czubalski. Warszawa, ul. Mokotowska 61 m. 1.  
(CORNEAL TRANSPLANTATION, appar. & instruments  
trephines, design & use (Pol))

RUTKOWSKI, Sławomir

Problems of keratoplasty. II. Analysis of Filatov's operation.  
Klin. oczna 27 no.2:109-116 1957.

1. Z Zakładu Fizjologii Człowieka A.M. w Warszawie Kierownik:  
prof. dr. med. F. Czubalski. Warszawa, ul. Mokotowska 61 m. 1.  
(CORNEAL TRANSPLANTATION, exper.  
analysis of Filatov's operation in rabbits (Pol))

RUTKOWSKI, Sławonir

Functional potentials of the retina and method of registration during application of a reinforcer of constant current associated with a register of a simple ECG apparatus. Acta physiol. polon. 5 no. 4, 1954-1956, 1954.

1. Z Zakładu Fizjologii Człowieka Akademii Medycznej w Warszawie.  
Kierownik: prof. dr Fr. Czubalski.

(RETINA, physiology,  
electrophysiol., registration technic)

RUTKOWSKI, Sławomir

Coagulation of aqueous humor and phenomenon of stream of thick fluid following opening of the ocular chamber in rabbit. Acta physiol. polon. 5 no.4:536-538 1954.

1. Z Zakładu Fizjologii Człowieka Akademii Medycznej w Warszawie.  
Kierownik: prof. dr Fr. Czubalski.

(AQUEOUS HUMOR,  
coagulation & thickening after eye inj. in rabbit)

27

Oil from *Paphia lathyris* L. as a raw material for the preparation of olein. B. V. Rutkowski and H. F. Dudy. *Stosywny J. Applied Chem* 10: 5, 6, 7, 12, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100. The seeds of *P. lathyris* contain fat 44.7-49.2, protein (N 6.25) 11.1-17.2, N-free extractable substances 12.7-15.7, fiber 17.7-18.9, and ash 3.1-3.2%. The oil has d<sub>4</sub> 0.9210-0.9245, n<sub>D</sub> 1.4712-1.4720,

acid no. 0.71-3.92, sapon. no. 197.2-197.5. Ac no. 2.28-6.92, I no. 81.07-84.05 and thiocyanogen no. 68.08-69.07. The oil can be used in the textile industry after treatment with alc. It can also be used for the prepn. of textile soaps. A. A. Bochtank

METALLURGICAL LITERATURE CLASSIFICATION

RUTKOWSKI, T.

RUTKOWSKI, T. Rationalized and standardized operating forms as an efficiency factor of chemical reactions in the building industry. p. 99. Vol. 5, No. 7, Sept. 1956. UŁOWNICTWO PRZEMYSŁOWE. Warszawa, Poland.

SOURCE: East European Accessions List (EEAL) Vol. 6, No. 4--April 1957

POLAND / Organic Chemistry. Synthetic Organic  
Chemistry.

G-2

Abs Jour: Ref Zhur-Khimiya, 1958, No 17, 57369.

Author : Prebendowski S., ~~Rutkowski B.~~

Inst : Not given.

Title : New Product of the Reduction of Croconic Acid.

Orig Pub: Roczn. Chem., 1957, 31, No 1, 81-91.

Abstract: In boiling of the K-salt of croconic acid (I acid) with 4 mols of 44% HI (60 hours), a new product of the reduction (I) has been obtained. It probably is a trihydrate (3,4-dioxy-2,5-diketocyclopentane) (II). Its yield is 50%. It loses water at 110°/2mm. II is soluble in hot water, insoluble in

Card 1/2

5

A new product of croconic acid reduction. Stanislaw  
Prebendowski and Zygmunt Rutkowski (Glasgow Acad.  
Medycyna, Zabrze, Poland). *Kochinski Chem.* 31, 81-91  
(1907) (German summary).—A new product (I) of reduction  
of croconic acid (II) was obtained besides the known "hy-  
dride" [Nietzki, *Ber.* 23, 3136 (1890)] by boiling II K salt  
with 8 moles 44% III. I is a colorless, cryst. compd. with 4  
acidic enol groups, probably bicyclic, formula  $C_{12}H_8O_6$   
(OH)<sub>4</sub>.3H<sub>2</sub>O. The yellow and red-brown salts may have  
the fulvene structure. Ba salts of I are insol. in H<sub>2</sub>O, sol.  
in aq. HCl; I Me ether (III),  $C_{12}H_8O_6(OMe)_4$ , m. 125°; I  
Ac deriv.,  $C_{12}H_8O_6(OAc)_4$ , m. 146°; p-nitrophenylhydrazone  
of III, m. 192° (decompn.).  
A. Kreczowski

PM  
MS



RUTKOVSKIY, V. I.

21847 RUTKOVSKIY, V. I. Klimaticheskaya i gidrologicheskaya rol' gosa. Trudy Vtorogo Vsesoyuz. geogr. s"yezda, T.P.M., 1948, s. 387-405. - Bibliogr: 19 nazv.

SO: Letopis' Zhurnal'nykh Statey, No. 29, Moskva, 1949

RUTKOVSKIY, V.I.

Intra-continental moisture cycle. Vop.geog. 28:156-167 '52.  
(MLRA 7:5)  
(Moisture)

RUTKOVSKIY, V. I.

Forest Influences

Broader development of research in forest hydrology and meteorology, Les. khoz. 6, No. 2, 1953.

9. Monthly List of Russian Accessions, Library of Congress, May 1953. Unclassified.

CA

9

Pressing and sintering of metallic and nonmetallic powders. W. Rutkowski and H. Rutkowska (Inst. Metalurgii, Gliwice, Poland). *Prace Badawcze Głównego Inst. Met. i Odlew.* 1949, 111-25. The pressing and sintering of metal powders of Fe, Cu, Fe-Cu, Cu-Mn, Fe-Mn (1:1), and Fe-Cu-Mn (1:1:1) were investigated. The metal powders were mixed with other metallic or nonmetallic powders (bakelite was used as an org. binder, and steatite as an inorg. binder) and pressed under variable pressures. The density curve plotted vs. compacting pressure can be expressed by the equation:  $\log s = a \log P + \log b$ , where  $s$  denotes the density of the compact in g./cc.,  $P$  = compacting pressure in tons per sq. cm., and  $a$  and  $b$  are consts. to be detd. for every powder mixt. The sintering of compacts results in shrinkage or swelling, closely connected with the change in density of the sintered product. 11 references. Edward A. Ackermann

RUTKOWSKI, W.

mat ①

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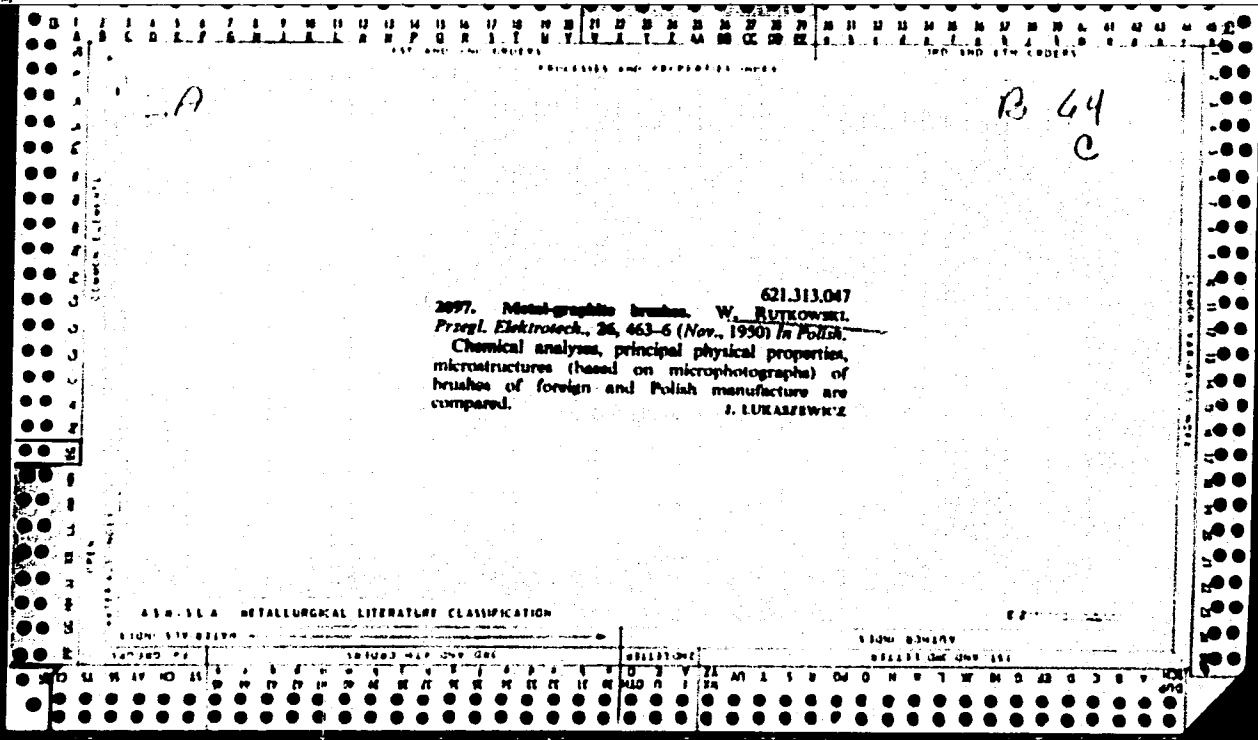
621.3.017.4

Rutkowski W. Compound Metal and Graphite Brushes.

„Szczotki metalowo-grafitowe”. Przebieg Elektrotechniczny. 16.  
9—10—11, 1950, pp. 463—466, 4 figs., 4 tabs.

The author deals with the properties of materials used in the manufacture of compound metal and graphite brushes, quoting chemical analysis and major physical properties. Microphotographs of foreign-made brushes and of brushes made by Polish factories provide a comparison of the structural details of these materials. The author also refers to fused metal and graphite brushes with small graphite content used in the production of electric contacts.

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Scientific Research Relating to Powder Metallurgy. W.  
Rutkowski. (*Hutnik* (Warsaw), 1931, 18, July-Aug.,  
293-297). [In Polish]. Some aspects of research in powder  
metallurgy are discussed.—V. G.



M

SINTERED ELECTRICAL-CONTACT MATERIALS. I.—PRELIMINARY INVESTIGATION. A. Krupkowski, W. Matkowski, and S. Stelarsz (Prace Glownego Inst. Met., 1961, 3, (2), 149-160).—(In Polish). Methods of prepn. and properties of sintered W-Cu and W-Ag elect.-contact materials have been investigated. The effects of compn., particle size, applied pressure, temp., and time of sintering on d, hardness, elect. conductivity, and arcing resistance of sintered contacts have been examined. W 60-70, Cu or Ag 30-40% contacts, prepared from high-purity powders with the use of coarse (50-300  $\mu$ ) sintered W, possess best properties. Compacting pressures above 15 tons/cm.<sup>2</sup>, sintering temp. ~1100°C. for W-Cu and 1000°C. for W-Ag, and sintering times of 3-4 hr. in dry N, are recommended.—A.G.

PROCESSES AND PROPERTIES INDEX

13635\* Production of Metal Powders by Atomization. (In Polish) W. Rutkowski. *Prace Glinowego Instytutu Metalurgii*, v. 3, no. 3, 1951, p. 250-260.

Describes historical development of metal-powder production by methods based on granulation and atomization. Describes separately installations for atomization of low-melting-point metals such as Sn, Pb, Zn, and Al, and of high-melting-point metals such as Cu, bronze, Fe, and steel. Describes the influence of various factors upon the quality of atomized powder and efficiency of the process. 11 ref.

AS 351.6 METALLURGICAL LITERATURE CLASSIFICATION

UNIVERSITY MICROFILMS

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MA

**Sintered Electrical-Contact Materials.**—II. W. Rutkowski and S. Stolarz (*Prace (Hównego Inst. Met.*, 1951, 3, (4), 297-305).—[In Polish]. Cf. *ibid.*, (3), 140; *M.I.*, 19, 541. The press. and indust. appn. of sintered composite elect. contacts, using W and Cu or W and Ag, are described in detail. 99.4% pure W was produced on an indust. scale by the oxidation of rejects from elect. bulb and contact factories to  $WO_3$  (2-6 hr. at 900°-1000° C. in air) and reduction with H (4 hr. at 1000° C.).  $8 \times 8 \times 120$  mm. rods weighing 160 g. were produced in a 4 ton/cm.<sup>2</sup> press, sintered for 15 min. at 1750° C., and then for 30 min. in an elect. furnace in a H atmosphere, where the temp. of 3000°-3100° C. was maintained for 5-10 min., so that a  $d$  of 17-18 g./c.c. was attained. The rods were powdered, mixed with various quantities of unsintered W and electrolytic Cu (10-40%) or Ag (20%), compacted at 4-10 tons/cm.<sup>2</sup> and sintered for 3 hr. at 1100° C. Various types of contacts are illustrated, and operational experiences are evaluated.—A. G.

RUTKOWSKI, W.

Polish Technical Abstracts 2338  
No. 4, 1953  
Metallurgy

621.775.75: 669.275-492.8:  
621.3.066

Rutkowski W., Stolarz S. Sintered Electric  
Contact Materials.

"Spiekane styki elektryczne." (Prace Inst.  
Metalurgii No. 1), Katowice, 1952, PWT, 15 pp.,  
17 figs., 10 tabs.

The infiltration method applied to sintered electric contact materials on the W-Cu and W-Ag basis was investigated. After pressing and sintering, a porous tungsten body was infiltrated with molten copper or silver in a protective hydrogen atmosphere. The influence of the following factors on the properties of sintered contacts was examined: composition, particle size, applied pressure, temperature of sintering of tungsten body, temperature and time of infiltration. The following properties were taken into consideration: density, hardness, electrical conductivity and arcing resistance. As compared with sintered (non-infiltrated) electrical contacts, those which are infiltrated have a considerably higher density and hardness, their arcing resistance being about five times greater.