

BARANOV, I.Ya.; RODZYANKO, N.G.

Association of datolite mineralization with small intrusions.
Izv. vys. ucheb. zav.; geol. i razv. 6 no.9:145-148 S '63.
(MIRA 17:10)

1. Rostovskiy gosudarstvenny universitet.

BOGDANOV, N.G.

The interrelation of datolite and lead-zinc mineralization.
Razved. i okh. nedr. 30 no.3:8-10 Mr '64. (MINA 18:1)

1. Rostovskiy-na-Donu gosudarstvennyy universitet.

RODZYANKO, N.G.; TRUFANOV, V.N.

Determining the temperature regime and succession of mineral formation using the decrepitation method. Zap.Vses.min.ob-va
93 no.6:708-713 '64. (MIRA 18:4)

1. Gosudarstvennyy universitet, Rostov-na-Donu.

TRUFANOV, V.N.; ROSTOVSKIY, N.G.

Automatic decrepitometer for determining the decrepitation temperatures of inclusions. Biul.nauch.-tekhn.inform VIMS no.1:81-84 '63.
(MIRA 18:2)

1. Rostovskiy-na-Donu gosudarstvennyy universitet.

KOLYANKO, V. Yu
ZIDANOV, I. V., LIFSHITS, B. S. & ZOBKOV, V. M.

"Automatic Telephone Stations," published by the State Communications and Radio Literature, Moscow, 1945, 200 pp. and 4 diagrams.

RODZYANKO, V. Ye., Candidate in Technical Sciences, LEIS Lecturer. and ZHDANOV, I. M.,
Doctor of Technical Sciences, Depart Chairman.

"Book Review: Principles of the Engineering Economics of Laying Out City
Telephone Networks." Markhay, Ye. V., 1953, Moscow, Svyazizdat.
Vestnik Svyazi, No. 12, 1954, Pages 32-33

Translation M-3,053,366 14 Feb 1957.

LEIS - Leningrad Electrotechnical Inst. of Communications

BLYUMENFEL'D, V.N.; LYUFUR, S.L.; LIVSHITS, B.S.; PARILOV, V.P.;
PSAREV, S.A.; RODZYANKO, V.Ye.; GOLUBETSOV, I.Ye., otv. red.;
KIRILLOV, L.M., red.; SLUTSKII, A.A., tekhn. red.

[Methodology for designing the equipment of crossbar automatic telephone exchanges] Metodika rascheta oborudovaniia ATS koordinatnykh sistem; informatsionnyi sbornik. Moskva, Gos. izd-vo lit-ry po voprosam sviazi i radio, 1961. 130 p. (MIRA 15:4)
(Telephone, Automatic—Equipment and supplies)

ROEFFLER, S.

Chloj, J., Roeffler, S. Improvement of Montan Wax. Uszlachetnianie wosku montanowego". Przemysl Chemiczny. No. 10, 1953, pp. 498-503, 6 figs. 3 tabs.

Survey of the trends of research in synthetic waxes in connection with the demands of Polish industry and the results of transforming Polish montan wax into hard waxes. The stages of treatment are: (1) second extraction of wax with organic solvents in order to reduce the content of resins to approx. 15%; 2) refinement through oxidation; (3) further esterification of acid waxes obtained during refinement. There is also a description of the properties and possibilities of industrial application of the waxes examined.

ST. ROEFFLER
ST. ROEFFLER

Mare

✓ 1720° Improvement of Montana Wax. J. Obieg i S.
Roeffler (Polish.) Przemysl Chemiczny, v. 32, no. 10, Oct.
1953, p. 498-503.

Discusses second extraction of wax with organic solvents to
reduce the content of resins to 15%, refinement, oxidation, and
further esterification of acid waxes obtained during refinement.
Tables, graphs, micrographs.

*1720
P. 2-1-52*

R. E. T. S.
CZAYKOWSKI, J.; REKWART, S.; ROEFLER, W.; TROJANOWSKI, A.;
ZAWISLAK, J.

Clinical results of the use of dextran produced in Poland
(poliglukan). Polskie arch. med. wewn. 26 no.12:1939-
1942 1956.

1. Z Kliniki Chirurgicznej Instytutu Hematologii Dyrektor:
doc. dr. med. A. Trojanowski. Warszawa, ul. Chocimska 5.
Instytut Hematologii.

(DEXTRAN, ther. use
comparison of Polish prep. with foreign products (Pol))

REKART, WŁODZIMIERZ

REKWART, Stefan.; ROEFLER, Włodzimierz.

Clinical observations on the prophylaxis and treatment of post-operative shock by transfusions of different quantities of blood and blood substitutes. Polski tygod. lek. 12 no. 14:506-510 1 Apr '57.

1. Z Kliniki Chirurgicznej Instytutu Hematologii: dyrektor: doc. dr med. Andrzej Trojanowski. Warszawa, ul Chocimska 5, Instytut Hematologii.

(SHOCK, prev. & control

blood transfusion & plasma substitutes in prev. & ther.
of postop. shock (Pol))

(POSTOPERATIVE CARE

same

(BLOOD TRANSFUSION, in various dis.
postop. shock (Pol))

(PLASMA SUBSTITUTES, ther. use
prev. & ther. of postop. shock (Pol))

REKWART, Stefan; ROEFLER, Włodzimierz

Prevention of shock in surgical interventions. Polski przegl.
chir. 28 no.8:851-852 Aug 56.

1. Z Klinicznego Oddziału Chirurgicznego Instytutu Hematologii
w Warszawie. Dyrektor: doc. dr. Trojanowski. Warszawa, ul.
Chocimska 5 (Instytut Hematologii).
(SHOCK, prevention and control,
in surg. (Pol))

FELT, V.; REICHL, D.; GRAFNETTER, D.; ROHILING, S.; VOHNOUT, S.; LOJMA, Z.

Studies on the effect of certain hormones on experimental atherosclerosis. II. Effect of growth hormone, hydrocortisone and hyaluronidase on certain properties of atheromatous vascular wall in rabbits. Cas. lek. cesk. 98 no.10:294-299 6 Mar 59.

1. Ustav pro choroby obehu krevniho, reditel Prof. MUDr. Kl. Weber, Vyzk. ustav endokrinologicky, reditel doc. MUDr. K. Silink, Embryologicky ustav KY, prednosta prof. MUDr. Z. Frankenberger. V. F., Praha-Krc, Budejovicka 800.

(ARTERIOSCLEROSIS, experimental,
eff. of hyaluronidase, hydrocortisone & sematotropin
on vasc. wall (Cz))

(HYDROCORTISONE, effects,
on exper. arteriosclerosis, on vasc. wall (Cz))

(HYALURONIDASE, effects,
effects)

(SOMATOTROPIN, effects,
same)

"APPROVED FOR RELEASE: Tuesday, August 01, 2000

CIA-RDP86-00513R001445

SOCHA, M., mgr; ROEHRYCH, K., inz.

Problem of more extensive utilization of machines. Przegl mech 22
no.1:29 10 Ja '63.

APPROVED FOR RELEASE: Tuesday, August 01, 2000

CIA-RDP86-00513R0014450

ROEHRYCH, K., inz.; SOCHA, M., mgr

4th National Conference on Repairs of the German Democratic Republic. Mechanik 36 no.1:3 of cover '63.

ROEHRYCH, K. inz.; SOCHA, M., mgr

6th Conference on Repairs in the German Democratic Republic.
Przegl mech 21 no.17:546 10 S '62.

ROEHRYCH, Karol, inz.

Proper utilization of machines. Mechanik 37 no. 5:289-290
My'64.

ZB-NMSC-RCBN-39

R6083-F451

development of a mine net for use against pursuing enemy aircraft---Minen-lets
Als Abwehrwaffe Gegen Jagdflieger---by Roehm No Place Dec 1939 Germ Secr 1P

Rough outline for development of an anti-aircraft wire net to be launched by
Aircraft attacked from the rear. Net to be 50 by 50 meters made of steel wire---
1MM dia---. Attached to net are 8 mines of 300 to 400 GR each. Net to be
projected into path of enemy plane by compressed air at a rate of 20 to 50 M per
sec. Total weight of net 8 KG. Mines are detonated by impact of enemy aircraft
on net.

SOURCE: AIR, A&C, DESK CATALOG OF GERMAN AND JAPANESE AIR-TECHNICAL DOCUMENTS,
March 1948, P. 683-84, Unclassified.

Translation No. F-13-1977-RE
ICF-VHDK-ROG-3-10-38

R2649-F418

ROELIG, H.

Dynamic calculations of the vibration damping and endurance of vulcanizates---
Dynamische bewertung der daempfung und dauerfestigkeit von vulkanisaten---By H. Roelig
leverkusen I G farbenindustrie A G Oct 1938 Germ unclass 33P incl photos, tables
diags graphs.

Test apparatus described for dynamic testing of rubber tires to determine physical data
for calculations on vibrations of vulcanized rubber. Dynamic comparison tests between
natural and synthetic rubber. Modulus of elasticity and dynamic adhesion to metal.
Apparatus consisted of eccentric weight which was turned by motor-driven elastic shaft.
Amplitude of vibrations measured by path mirror and force exerted determined by force
mirror. Light thrown on both mirrors deflects light on screen and brings out dynamic
hysteresis loop of the rubber.

SOURCE: AIR, AMC, DUSK CATALOG OF GERMAN AND JAPANESE AIR-TECHNICAL DOCUMENTS.
MARCH 1948 (P. 839) Unclassified.

ROELOFS, R.

ROELOFS, R. New Arrangement for the Observation of the Sun. Przeglad
geodezyjny, 1949, no. 5, p. 136-143.

ROMOV, E. S.

29008

Khujukotryye L'ayenego Volokma. Nauch. - Isslyed. Trudy (Tsyentr. Nauch.-Isslyed.
In-T Khujukotryye Volokma), T. III, 1949, C. 72-103. - Bibliogr: 25 Naev

No: 150011 No. 2

ROEPER, E.

ROEPER, E. Development of the gas industry in the German Democratic Republic.
p. 229

Vol. 1, no. 12, Dec. 1956

ENERGETICA
TECHNOLOGY
ROMANIA

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

POLAND/Chemical Technology - Cellulose and Its Derivatives.
Paper.

H-33

Abs Jour : Ref Zhur - Khimiya, No 24, 1958, 83793

Author : Roeske, A.

Inst Title : The Production of Cellulose From Beech in German Democratic Republic.

Orig Pub : Przegl. papiern., 1958, 14, No 2, 42-45.

Abstract : Cellulose (C) from beech is produced in GDR by the sulfite method at a plant in Pirna which has old equipment and at a Agfa-Wolffen plant where the production is based on the nitric acid method. At present the plant produces C for synthetic fibers. The equipment is modern and is provided with control-measuring devices, the bleaching is a two-step process, the water consumption is from 90 to 120 m³ per ton of C. The systems at the two plants and the indices of the C produced are cited. Sulfite liquors are

Card 1/2

Roszke, Wojciech, doc. dr.

Pharmacy in the 20-year period of the Polish People's Regime.
Farszna Pol 20 no. 13/14:471-483 Jl '64.

"APPROVED FOR RELEASE: Tuesday, August 01, 2000

CIA-RDP86-00513R001445

ROESKE, Wojciech

Pharmacy in the history of the Jagiellonian University. Acta
Pol. pharm. 21 no.1:1-3 '64.

APPROVED FOR RELEASE: Tuesday, August 01, 2000

CIA-RDP86-00513R0014450

RÓESKE, Wojciech, dr farm.

Social and economic role of pharmacy. Farmacja Pol 19 no.8:
157-159 25 Ap '63.

ROESKE, Wojciech

Florian Sawiczewski (1797 - 1876). Pol. tyg. lek. 18 no.45:
1698 4 №63.

Pharmaceutical sciences. Ibid: 1701-1702

*

ROESKE, Wojciech

Theriaca and its preparation in Poland in the XVII century.
Acta pol. pharm. 20 no.3:277-282 '63.

(PHARMACY) (HISTORY OF MEDICINE, XVII CENT)

ROESKE, Wojciech, dr.farm.

Looking back one half of the centruy; women as pharmacists.
Farmacja Pol 18 no.4:88-90 F '62.

POLAND

ROESKE, Wojciech, Dr. pharm. [Affiliation not given]

"The Social and Economic Role of Pharmacy."

Warsaw, Farmacja Polska, Vol 19, No 8, 25 Apr 63, pp 157-159.

Abstract: The author finds the present status of the qualified pharmacist in Poland inconsistent with the modern social and economic requirements of pharmacy. The pharmacist finds himself socially far behind the doctor and has been limited professionally and economically to the drug store, with the result that it has become an unattractive profession for men and is mostly occupied by women to supplement family income. He advocates expanded training for pharmacists, revision of the areas and competences in the drug store operation, such as administrative and technical tasks, requiring a pharmacist's qualifications, and directing men to the creative and attractive channels of pharmaceutical engineering and industrial production. Polish pharmacy has a tradition for progress (led toxicology studies in Europe), which should be expanded to modern times. No references.

1/1

ROESKE, Wojciech, dr.farm.

A balance of the past 50 years in the light of the resolutions
of the First Pharmaceutical Congress. Farmacja Pol 18
no.15/16:361-366 Ag '62.

*

WOJEWISKI, Alfons; ROESSLER, Ryszard

Planocellular cancer of the kidney. Urol. polska 10:108-110 1956.

1. Z Oddzialu Urologicznego P. A. M. w Szczecinie. Kierownik:
dr A. Wojewski.
(KIDNEYS, neoplasms
planocellular (Pol))

ROER, G. N.

ROER, G. N. Hydraulic excavator operators. Moskva, Mashstroizdat,
1949. 86 p. (50-26829)

TN278.R6

CP

Wet-bottom producer as a cupola furnace. Karl Morch and H. La Planche. *Neue Gießerei* 33/35, N3-7(1948); *Chem. Zentralbl. (Russian Zone Ed.)* 1949, I, 728.—The wet-bottom producer was shown to be useful for the prefusion of the iron for the open-hearth furnace. The iron was transferred at a high temp. and had a low P content. A gas of high quality was simultaneously produced.

M. G. Moore

ROESKE, Wojciech, dr farm.

Problems of the Polish Museum of Pharmacy. Farm.polska 11 no.6:
140-141 June '55.

(PHARMACY,
in Poland, museum of pharmacy)
(MUSEUMS, MEDICAL,
in Poland, museum of pharmacy)

8A
22
10

The "capillary hydrodynamics" (fluid mixing editor) of H. Jelonek-Marwedel, W. Jetmar and F. C. Rosing (Mol. Phys., 1961, 12, 2-11);—Jelonek-Marwedel (ibid. 1961, 11, 46) described the formation of emulsion, persisting for several sec., when certain pairs of miscible liquids are allowed to mix. The empirical equation $\gamma = (\rho_1 - \rho_2)(\sigma_1 - \sigma_2) < 0$, where σ_1, σ_2 are surface tensions, has been confirmed for a no. of pairs of pure liquids and mixtures, provided a third phase, either air or water, is present above. But for liquids floating on water in the absence of air, γ must be > 0 . The phenomena concern coagulation when surface tension causes the donor liquid to spread over the other, and gravity then causes the film to break up in the form of droplets. Diffusion ultimately brings about complete mixing after a time dependent on the γ . A. B. DENNISON.

CA

Electron phenomena

The theory of the Raman effect. Frank C. Roessler
(Tech. Hochschule, Graz, Austria). *Acta Phys. Austriaca*
5, 477-96 (1952).—Certain aspects of the theory of light
scattering in condensed media are considered. Specifically
these are: coupling of periodic and aperiodic motions in the
scattering medium and light scattering and impact.

R. P. Stamm

Full abstracts

*Team name /
Engineering III 11/11/52*

4689. EXPERIENCE WITH POZZUOLANA CEMENT. Rossler, H. (Mitt. Ver. Grosskesselbetriebs., 1952, (20), 210-212). Addition of 30% fine fly ash strengthens these cements, precludes the need for additional water and renders shrinkage normal. Compositions and characteristics are tabulated. (L)

WOJEWSKI, Alfons; KRASOWSKI, Stanislaw; ROGIER, Eyszard

Experimental production of renal tumors. Pol. przegl. chir.
36 no.4a Suppl.: 583-589 Ap '64.

1. Z Kliniki Urologicznej Pomorskiej Akademii Medycznej w
Szczecinie (Kierownik: doc. dr A. Wojewski).

WOJEWSKI, Alfons; LASKA, Alina; ROESSLER, Ryszard

Apropos of the production of tumors of the urinary bladder in experimental animals. Roczn. Pom. akad. med. Swierczewski 10: 549-556 '64.

1. Z Kliniki Urologicznej Pomorskiej Akademii Medycznej (Kierownik: doc. dr med. Alfons Wojewski).

HOESSLER, Ryszard

Radiation injuries of the ureters. Polski przegl. radiol. 26 no.2:
165-170 '62.

1. Z Oddzialu Urologicznego Pomorskiej AM w Szczecinie Kierownik:
z-ca prof. dr med. A. Wojewski.
(RADIOTHERAPY compl) (URETERS radiation eff)

ROESSLER, Ryszard

Disorders in the urinary system after radiation therapy. Gin.
polska 32 no.5:613-619 '61.

1. Z Oddzialu Urologicznego Pomorskiej AM w Szczecinie Kierownik:
zast. prof. dr med. A.Wojewski.
(RADIATION INJURY) (UTERUE NEOPLASMS radiotherapy)
(UROGENITAL SYSTEM radiation eff)

ROESSLER, Ryszard, PARAFINIUK, Wladyslaw

Angioma of the urethra. Pol. przegl. chir. 35 no.11: Suplement 1251-1254 N°63

l. Z Kliniki Urologicznej PAM w Szczecinie (kierownik: doc. dr. A. Wojewski) i z Zakladu Anatomii Patologicznej PAM w Szczecinie (kierownik: prof.dr. K.Stojalowski).

*

ROESSLER, Ryszard

Initial signs of tuberculosis of the genito-urinary organs. Gruzlica
29 no.12:1031-1035 D '61.

1. Z Oddzialu Urologicznego PAM w Szczecinie Kierownik: prof. dr med.
A. Wojewski z Panstwowego Sanatorium Przeciwgruzliczego w Zdunowie
Dyrektor: dr med. Z. Neciuk-Szczerbinski z Centralnej Wojewodzkiej
Poradni Przeciwgruzliczej w Szczecinie Dyrektor: dr med. M. Mokrzycki.

(TUBERCULOSIS UROGENITAL diag)

MAKOWSKI, J.; ROESSLER, R.

Comparative electrophoretic studies on proteins in arterial and
capillary blood. Acta physiol.polon.11 no.5/6:823-824 '60.

1. Z Zakladu Patologii Og. i Dosw. Pomorskiej A.M. w Szczecinie
Kierownik: doc.dr. J.Makowski.
(BLOOD PROTEINS)

ZWB-E Stelle-2496 T 3

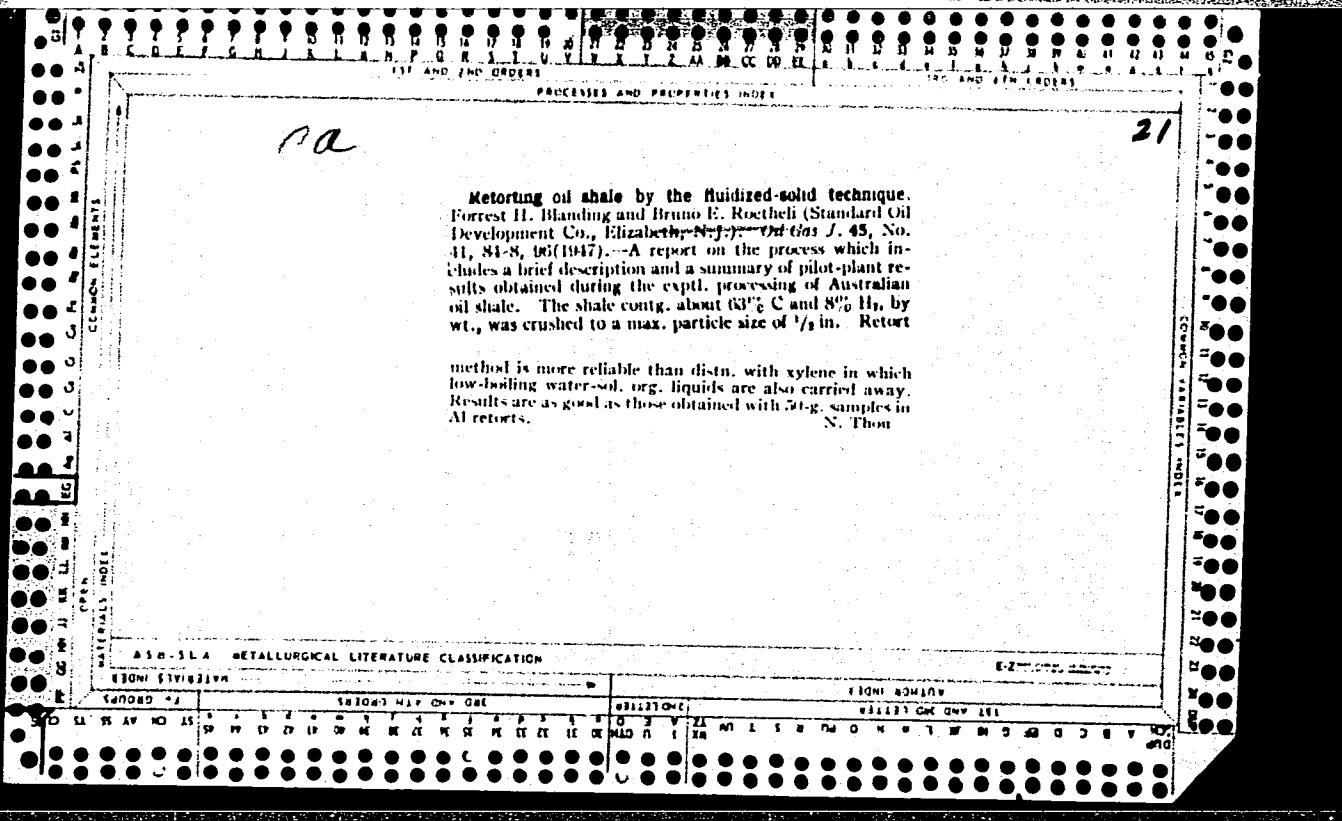
ROESNER

R8061-W1205

Temperatures in Subtropical Regions---Lufttemperaturen in Subtropischen Gebieten II---
By Roesner Rechlin E Stelle Apr 1942 Germ Unclass 5P Incl Tables Graphs

Tables and diagrams show results of atmospheric temperature measurements in continental
(rest of page cut)

SOURCE: AIR, AMC DESK CATALOG OF GERMAN AND JAPANESE AIR-TECHNICAL DOCUMENTS
March 1948, P. 749, Unclassified.



Diseases of Plants

POLAND / Plant Diseases. Diseases of Cultivated Plants

N-3

Abs Jour : Ref Zhur - Biol., No 6, March 1957, No 22980

Author : Roetskaya

Title : The Appearance of Grey Rot (*Botrytis cinerea* (Pers.) in Poland on Hemp (*Hibiscus cannabinus*)).

Orig Pub : Roczn. nauk rolinicznych., 1955, A72, No 1, 145-146

Abstract : The first time that the disease was noticed in Poland on hemp was in 1953 on the plantation of the Institute of Feeds and Plant Acclimatization in Pulavi. The disease appeared after early frosts in the first half of September on leaves, stems and plant generating organs; developing rapidly, it almost totally destroyed the plantation. The severity of the disease was the result of unfavorable conditions -- a heavy argillaceous soil, the planting density, northwestern slope, extreme infection by *B. cinerea* of the whole territory, and abundant precipitation that year. A number of prophylactic measures and utilization of agricultural methods are recommended in order to increase disease resistance of hemp.

Card : 1/1

1) NYELINOV, M. A.

28469

Vypriavlyeniye v nyelinyeynykh simmetrichnykh
elyektricheskikh k magnitnykh tsyepvakh. Doklady
akad. nauk SSSR, Novaya seryiya, t. lxviii, No. 3,
1949, s. 497-500

SO: LETOPIS' NO. 40

ROFE, A.E., dotsent; NAPADOV, M.A., kand.med.nauk

"Al'gelast-1" elastic alginate impress material. Vrach.delo no.8:
867-869 Ag '59. (MIRA 12:12)

1. Khar'kovskiy zavod zubovrachebnykh materialov.
(ALGAE) (DENTAL PROSTHESIS)

Б. И. П. /
BRODSKIY, I.Ye., inzhener; ROFE, A.E., kandidat meditsinskikh nauk.

"AKR-P" plastic material and possibilities of its practical use in dental orthopedics. Stomatologiya no.5:53-54 S-0 '55. (MLRA 9:2)

1. Iz Khar'kovskogo zavoda zubovrachebnykh materialov (dir. Ye.G. Aronov)

(GUMS AND RESINS, SYNTHETIC) (DENTAL PROSTHESIS)

Rofe, A.E.

✓ Plastic compositions for dental work. I. P. Brodak, A. E. Rofe, and D. Sh. Golberg. U.S.S.R. 102,820, Sept. 25, 1956. Comps., particularly suitable for making single

Maths

artificial teeth consist of copolymers of styrene, Me methacrylate, and di-Bu phthalate, plus poly(methyl methacrylate) and di-Bu phthalate. A recommended compn. is prep'd. from 86 parts copolymer and 16 parts poly(methyl methacrylate) by wt. The copolymer is made up of styrene 20, Me methacrylate 73, and Bu phthalate 6%, while the poly(methyl methacrylate) is made up of Me methacrylate 95 and di-Bu phthalate 5%. To this compn. is added 10 parts di-Bu phthalate.

M. Hocch

BUGROV, V.A.; ROFE, A.I.

Potentials of the petroleum refineries of the Lvov Economic Region for improving the use of productive capacities. Neft. i gaz. prom. no.2:59-61 Ap-Je '64. (MIRA 17:9)

GERNER, M.M.; ARONOV, Ye.G.; ROFE, A.Ye.; KALONTAROV, D.Ye.,
red.; KOKIN, N.M., tekhn. red.

[Study of materials for stomatology] Materialovedenie po
stomatologii. Moskva, Medgiz, 1962. 255 p. (MIRA 16:5)
(STOMATOLOGY--EQUIPMENT AND SUPPLIES)

ROFE, Yu.S., inzh.

The UBSh2 machine for boring holes. Stroi. truboprov. 8 no.1:
30-31 Ja '63. (MIRA 16:5)

1. Spetsial'noye konstruktorskoye byuro "Gazstroymashina".
(Boring machinery)

ROEM, Yu.S., inzh.

Machine for boring holes. Stroi. truboprov. 5 no.4:25-27
Ap '60. (MIRA 13:9)
(Boring machinery)

ROFE, Yu.S., inzh.

Machine with two drills for boring holes. Stroi. truborrov. 6 no.4:
12 Ap '61. (MIRA 14:6)

(Rock drills)

SKOPTS, Z.A. (Yaroslavl'); OSTROVSKIY, A.I. (Moskva); BEISKIN, L.N. (Mos'cva);
BALK, M.B. (Smolens'k); BORSUK, M.V. (L'vov); BYKOV, A.M. (Baku);
CHANTURIYA, Z.A. (Tbilisi); NOVIKOVA, V.S. (Orekhovo-Zuyevo); DUBNOV,
Ya.S. (Moskva); STECHIN, S.B. (Moskva); KHAVIN, L.P. (Leningrad);
ERDNIYEV, P., (Stavropol'); CHIAREULI, D.L. (GruzSSR); ASEKRITOV, U.U.
(Yaroslavl'); GOLOUBEV, V.A. (Kuvshinovo); MALIKIN, V.V. (Leningrad);
DAVYDOV, U. (Gor'ki'); ROZENBERG, V.I. (Leningrad); TIKHONOV, P.G.
(Kazan'); ROMANCHUK, N.A. (Khar'kov); KINLOS, R.A. (Moskva); OGAY,
S.V. (Trunze); ROFE-BERGSTOV, F.S.; BERSHTEYN, A. (Moskva); ARLIAZAROV,
V.L. (Moskva)

Solutions to problems. Mat.pros. no.4:253-270 '59.

(MIRA 12:11)

(Mathematics--Problems, exercises, etc.)

ROFE-BEKETOV, F.S. (Khar'kov)

Expansion of infinite simultaneous differential equations in
non-self-conjugate and self-conjugate cases into eigenfunctions.
Mat.sbor. 51 no.3:293-342 J1 '60. (MIRA 13:8)
(Differential equations)
(Eigenfunctions)

ACCESSION NR: AP3009463

S/0020/63/152/006/1312/1315

AUTHOR: Rofe-Beketov, F. S.

TITLE: Concerning the spectrum of non-self-adjoint differential operators with periodic coefficients

SOURCE: AN SSSR. Doklady*, v. 152, no. 6, 1963, 1312-1315

TOPIC TAGS: analysis, non-self-adjoint differential operator, differential operator

ABSTRACT: Several results are given on the topology of the spectrum of an n-th order linear differential equation with periodic complex coefficients. The principal theorem states that the spectrum of the operator associated with the equation coincides with the set of conditional stability of the equation. Orig. art. has: 12 equations.

ASSOCIATION: Fiziko-tehnicheskiy institut nizkikh temperatur Akademii nauk UkrSSR (Low-temperature physics-engineering insti-

Card 1/2

8820U

16.1-00

16.4600

S/039/60/051/003/001/001
C111/C222

AUTHOR: Rofe-Beketov, F.S. (Khar'kov)

TITLE: Development in Terms of Eigenfunctions of the Infinite Systems
of Differential Equations in Non-Selfadjoint and Selfadjoint Cases

PERIODICAL: Matematicheskiy sbornik, 1960, Vol.51, No.3, pp.293-342.

TEXT: The following notations are used: H is a separable Hilbert space;
an operator function and a vector function, respectively, is a function
the values of which are operators and vectors, respectively; Z is a
linear topological space consisting of all even entire summable functions
 $\varphi(\lambda)$ of finite degree; T(Z) is the set of all generalized functions
in Z; (l,h) is the scalar product in H; H(0,N), $N \leq \infty$ is the (complete)
Hilbert space of the vector functions (with values of H) the amount of
which on (0,N) is integrable in the square; \overline{W}_N^2 is the subspace of
H(0, ∞) consisting of even entire vector functions the degree of which
is $\leq N$; $L_{\{g\}}^2$ is the Hilbert space of the vector functions with the scalar
product
$$(13.0) \langle l(\lambda), h(\lambda) \rangle_g = \int_{-\infty}^{\infty} ([d\varphi(\lambda)] l(\lambda), h(\lambda)) = \int_{-\infty}^{\infty} \sum_{i,k=1}^{\infty} l_k(\lambda) h_i(\lambda) d\varphi_{ik}(\lambda),$$

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where $\mathfrak{g}(\lambda) = [g_{ik}(\lambda)]$ is a selfadjoint non-decreasing operator-matrix-distribution function, i.e. $\Delta \mathfrak{g}(\lambda) = \mathfrak{g}(\lambda + \Delta\lambda) - \mathfrak{g}(\lambda)$ for $\Delta\lambda > 0$; here besides it holds

$$(12.0) \quad \mathfrak{g}(\lambda - 0) = \mathfrak{g}(\lambda).$$

In chapter I the author considers the boundary value problem

$$(A) \quad \mathfrak{l}[y] \equiv -y'' + q(x)y = \lambda^2 y \quad (0 \leq x < \infty)$$

$$(B) \quad y'(0) - Ay(0) = 0,$$

where $q(x)$ is a continuous operator function with generally non-self-adjoint values, A is a bounded operator. The solutions $y(x)$ of (A)-(B) may be operator or vector functions. Beside of (A)-(B) the author considers the transposed problem

$$(A') \quad \tilde{\mathfrak{l}}[y] \equiv -y'' + yq(y) = \lambda^2 y \quad (0 \leq x < \infty)$$

$$(B') \quad y'(0) - y(0)A = 0.$$

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Let $\omega(x, \lambda)$ and $\tilde{\omega}(x, \lambda)$, respectively, be the operator solution of the system (A)-(B) with the initial conditions

$$(3.1.1) \quad \omega(0, \lambda) = I, \quad \omega'(0, \lambda) = A$$

and the system (A')-(B') with the initial conditions

$$(5.1.1) \quad \tilde{\omega}(0, \lambda) = I, \quad \tilde{\omega}'(0, \lambda) = A,$$

respectively.

At first it is proved that there exist kernels $K(x, t)$, $\tilde{K}(x, t)$ being operator functions of x, t and vanishing for $t > x$ so that there hold the representations

$$(1.2.1) \quad \omega(x, \lambda) = I \cos \lambda x + \int_0^x K(x, t) \cos \lambda t dt,$$

$$(2.2.1) \quad \tilde{\omega}(x, \lambda) = I \cos \lambda x + \int_0^x \cos \lambda t \cdot K(x, t) dt,$$

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where I is the unit operator in H. For the kernels the author gives an integral equation the solution of which is obtained by iteration as follows:

$$(5.2.1) \quad K(x,t) = \sum_{n=0}^{\infty} K_n(x,t), \quad K_{n+1}(x,t) = \frac{1}{2} \iint_{R(x,t)} q(s) K_n(s, \xi) ds d\xi, \\ K_0(x,t) = I + \frac{1}{2} \int_{\frac{t-x}{2}}^{\frac{t+x}{2}} q(s) ds,$$

where $R(x,t)$ is a rectangle of the (s, ξ) -plane the sides of which are parallel to the straight lines $\xi = \pm s$ and which has the diagonally opposite corners $(0,0)$ and (x,t) .

Then it is shown that reversely it holds

$$(1.3.1) \quad I \cos \lambda x = \omega(x, \lambda) - \int_0^x H(x,t) \omega(t, \lambda) dt,$$

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Development in Terms of Eigenfunctions of the Infinite Systems of Differential Equations in Non-Selfadjoint and Selfadjoint Cases

$$(2.3.1) \quad I \cos \lambda x = \tilde{\omega}(x, \lambda) - \int_0^x \tilde{\omega}(t, \lambda) \tilde{H}(x, t) dt,$$

where the kernels satisfy the equations

$$(5.3.1) \quad H(x, t) = K(x, t) - \int_t^x H(x, s) K(s, t) ds,$$

$$(6.3.1) \quad \tilde{H}(x, t) = \tilde{K}(x, t) - \int_t^x \tilde{K}(s, t) \tilde{H}(x, s) ds.$$

The connection between ω - and $\tilde{\omega}$ -transformations, respectively, and the cosine-transformations of finite operator functions is investigated. Here the cosine and the $\tilde{\omega}$ -transformations, respectively, of a finite operator function $f(x)$ are defined by

$$(1.4.1) \quad c_f(\lambda) = \int_0^\infty f(x) \cos \lambda x dx$$

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Development in Terms of Eigenfunctions of the Infinite Systems of Differential Equations in Non-Selfadjoint and Selfadjoint Cases

and

$$(3.4.1) \quad E_f(\lambda) = \int_0^\infty f(x) \omega(x, \lambda) dx,$$

respectively. It is shown: Every ω -transformation of a finite $f(x)$ is simultaneously a cosine-transformation of a certain other uniquely determined operator function $f_1(x)$, and reversely.

In chapter II the author considers the spectral matrix and the reversion problem in the non-selfadjoint case.

Theorem 1: Every operator - boundary value problem (A)-(B) in the separable Hilbert space generates a spectral matrix $R = [R_{ik}]$ with elements $R_{ik} \in T(z)$ so that it holds

$$(41.1.2) \quad [E_f(\lambda) \tilde{RE}_g(\lambda)] = \int_0^\infty f(x) g(x) dx$$

where $f(x)$ and $g(x)$ are piecewise continuous finite operator functions, $E_f(\lambda)$ and $\tilde{E}_g(\lambda)$ are their ω and $\tilde{\omega}$ -transformations, respectively, and according to the definition it holds

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$$(42.1.2) \quad [F(\lambda)RG(\lambda)] = \left[\sum_{j,l=1}^{\infty} (F_{ij}(\lambda)G_{lk}(\lambda), R_{jl}) \right]_{i,k=1}^{\infty}$$

Theorem 2: In order that the matrix R with the elements $R_{ik} \in T(Z)$ is the spectral matrix of a boundary value problem (A)-(B), where the operator function $q(x)$ has $n \geq 0$ continuous derivatives, it is necessary and sufficient that

1° The operator function

$$(1.3.2) \quad \phi_0(x) = \left[\frac{1-\cos \lambda x}{\lambda^2}, R \right] - I \cdot |x|$$

for $x \neq 0$ has $n+3$ continuous derivatives, where

$$(2.3.2) \quad \phi_0'(0) = 0.$$

2° For $\varepsilon(N) > 0$ and an arbitrary vector function $\vec{G}(\lambda)$ of \vec{w}_N^2 it holds:
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$$(3.3.2) \sup_{\|\vec{x}(\lambda)\|=1} |[\vec{G}(\lambda)R\vec{x}(\lambda)]| \geq \varepsilon(N) \|\vec{G}(\lambda)\|, \quad \vec{G}(\lambda), \vec{x}(\lambda) \in \mathbb{W}_N^2,$$

$$(4.3.2) \sup_{\|\vec{x}(\lambda)\|=1} |[\vec{x}(\lambda)R\vec{G}(\lambda)]| \geq \varepsilon(N) \|\vec{G}(\lambda)\|, \quad \vec{G}(\lambda), \vec{x}(\lambda) \in \mathbb{W}_N^2.$$

Here $q(x)$ and (A) are determined uniquely by R . In chapter III the author considers the problem (A)-(B) for the self-adjoint case $A^* = A$, $q^*(x) = q(x)$, $0 \leq x < \infty$. It is shown (theorem 4) that then the spectral matrix R of the problem is an operator measure, i.e. that it holds

$$(1.6.3) [F(\lambda)RG(\lambda)] = \int_0^\infty F(\sqrt{\lambda}) [d\gamma(\lambda)] G(\sqrt{\lambda}),$$

where $\gamma(\lambda)$ is a non-decreasing operator function, $F(\lambda)$, $G(\lambda)$ is an even entire operator function of finite degree, $(|F(\lambda)| \cdot |G(\lambda)|) \in L^1(0, \infty)$. Here it holds the Parseval equation

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$$(2.6.3) \quad \int_{-\infty}^{\infty} E_f(\sqrt{\lambda}) [d g(\lambda)] E_g^*(\sqrt{\lambda}) = \int_0^{\infty} f(x) g^*(x) dx,$$

where $f(x)$, $g(x)$ are finite piecewise continuous operator functions.
For arbitrary vector functions of $H(0, \infty)$ it holds

$$(3.6.3) \quad \int_{-\infty}^{\infty} ([d g(\lambda)] \tilde{E}_f(\sqrt{\lambda})) = \int_0^{\infty} (\vec{f}(x), \vec{g}(x)) dx, \quad X$$

where

$$(4.6.3) \quad \tilde{E}_f(\sqrt{\lambda}) = \text{l.i.m.} \int_{N \rightarrow \infty}^N \omega(x, \sqrt{\lambda}) \vec{f}(x) dx,$$

$$(5.6.3) \quad \vec{f}(x) = \text{l.i.m.} \int_{N \rightarrow \infty}^N \omega(x, \sqrt{\lambda}) [d g(\lambda)] \tilde{E}_f(\sqrt{\lambda});$$

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Development in Terms of Eigenfunctions of the Infinite Systems of
Differential Equations in Non-Selfadjoint and Selfadjoint Cases

the first integral converges to the norm of L^2 , the second integral
converges to the norm of $H(0, \infty)$.

The author mentions V.A.Marchenko, I.M.Gel'fand, B.M.Levitan, M.G.Kreyn,
A.G.Kostyuchenko and Yu.M.Berezanskiy. There are 22 references:
18 Soviet, 2 German, 1 American and 1 Swedish.

SUBMITTED: August 6, 1958

Card 10/10

ROFL-BUR'YTOV, F.S.

Expansion in eigenfunctions of systems with summable potentials.
Dokl. AN SSSR 156 no. 5:1029-1032 Je '64. (MIRA 17:6)

1. Fiziko-tehnicheskiy institut nizkikh temperatur AN UkrSSR.
Predstavлено академиком I.G.Petrovskim.

ROFE-BEKETOV, F.S.

Spectrum of non-self-adjoint differential operators with
periodic coefficients. Dokl. AN SSSR 152 no.6:1312-1315 O '63.
(MIRA 16:11)

1. Fiziko-tehnicheskiy institut nizkikh temperatur AN
UkrSSR. Predstavлено akademikom S.N. Bernshteynom.

ACCESSION NR: AP4038516

S/0020/64/156/003/0515/0518

AUTHOR: Rofe-Beketov, F. S.

TITLE: A criterion for the finiteness of the number of eigen values in the gaps of the continuous spectrum of a perturbed periodic potential

SOURCE: AN SSSR. Doklady*, v. 156, no. 3, 1964, 515-518

TOPIC TAGS: ordinary differential equation, Sturm Liouville system, self adjoint problem, boundary value problem, spectral theory

ABSTRACT: It is known that for a real, periodic potential $q(x)$, the problem

$$y'' + \{\lambda - q(x)\} y = 0, \quad -\infty < x < \infty, \quad (1)$$

has a purely continuous spectrum, bounded below and consisting of a set of intervals stretching to $\pm \infty$, and separated by gaps (the length of each gap approaches 0 as $\lambda \rightarrow \pm \infty$). If the real, non-periodic perturbation $p(x)$ is small enough in some sense as $x \rightarrow \pm \infty$ (for example under condition (3) below), then the problem

$$y'' + \{\lambda - q(x) - p(x)\} y = 0, \quad -\infty < x < \infty, \quad (2)$$

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ACCESSION NR: AP4038516

has the same continuous spectrum as problem (1), but in addition each gap may contain a finite or an infinite number of discrete eigen-values. Answering a question put by M. Sh. Birman and I. M. Glazman, the author proves that if $p(x)$ satisfies the condition

$$\int_{-\infty}^{\infty} (1 + |x|) |p(x)| dx < \infty \quad (3)$$

then each gap has at most a finite number of eigen-values, and each gap sufficiently far from the origin contains not more than two eigen-values. The main part of the proof uses I. M. Glazman's "splitting method", i.e. one considers equation (2) on the intervals $(-\infty, -M^1)$, $(-M^1, M)$, (M, ∞) and the boundary conditions $y(-M^1) = y(M) = 0$, with a judicious choice of M, M^1 for each gap. "The author expresses his deep gratitude to N. I. Akhiezer and I. M. Glazman for their interest in this work." Orig. art. has: 8 equations.

ASSOCIATION: Fiziko-tehnicheskiy institut nizkikh temperatur Akademii nauk USSR
(Low-Temperature Physics-Engineering Institute, Academy of Sciences, USSR)

SUBMITTED: 13Jan64

ENCL: 00

Card 2/3

MARCHENKO, V.A.; ROFE-BEKETOV, F.S.

Expansion of nonself-conjugated singular differential operators
into eigen functions. Dokl. AN SSSR 120 no. 5:963-966 Je '58.
(MIRA 11:8)

1. Khar'kovskiy gosudarstvennyy universitet im. A.M.Gor'kogo.
Predstavлено академиком S.N.Bernshteynom.
(Operators(Mathematics))
(Eigenfunctions)

ZALGALLER, S.I. (Leningrad); SKOPETS, Z.A. (Yaroslavl'); ROFE-BEKETOV, F.S. (Khar'kov); LANDIS, Ye.M. (Moskva); LEVIN, V.I. (Moskva); STECHKIN, S.B. (Moskva); LYAPUNOV, A.A. (Moskva); ARNOL'D, V.I. (Moskva); LOPSHITS, A.M. (Moskva)

Problems of higher mathematics. Mat.pros. no.3:270-274 '58.
(MIRA 11:9)

(Mathematics--Problems, exercises, etc.)

AUTHOR: Marchenko, V.A., Rofe-Beketov, F.S. 20-120-5-9/67
TITLE: Expansion in Terms of Eigenfunctions of Non-Selfadjoint Singular Differential Operators (Razlozheniye po sobstvennym funktsiyam nesamosopryazhennykh singulyarnykh differentsiyal'nykh operatorov)
PERIODICAL: Doklady Akademii nauk SSSR, 1958, Vol 120, Nr 5, pp 963-966 (USSR)
ABSTRACT: The authors consider an arbitrary non-selfadjoint boundary value problem

$$(1) \quad l[y] \equiv y'' - q(x)y = -\lambda^2 y \quad (0 \leq x < \infty) \\ y'(0) - Ay(0) = 0$$

and analogous problems for finite and infinite systems of differential equations. Here $q(x)$ is an arbitrary function summable on every finite interval and A is an arbitrary complex number. The authors extend the notion of the spectral function $\mathfrak{g}(\lambda)$ proved by H.Weyl [Ref 1] for the selfadjoint case: Now $\mathfrak{g}(\lambda)$ is a generalized function in a topological space Z . At the same time the expansion formulas of Weyl [Ref 1] are generalized too. The authors give conditions that a generalized function is the spectral function of the problem (1). The generalized functions used by the authors correspond best to the scheme of Gel'fand and Shilov

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Expansion in Terms of Eigenfunctions of Non-Selfadjoint Singular 20-120-5-9, 67
Differential Operators

[Ref 2]. Altogether five theorems are announced which essentially represent an extension of results well-known in the selfadjoint case [Ref 4,5] to the non-selfadjoint case. There are 7 references, 5 of which are Soviet, 1 German and 1 Swedish.

ASSOCIATION: Khar'kovskiy gosudarstvennyy universitet imeni A.M.Gor'kogo
(Kharkov State University imeni A.M.Gor'kiy)
PRESENTED: February 3, 1958, by S.N.Bernshteyn, Academician
SUBMITTED: February 2, 1958

1. Mathematics 2. Operators (Mathematics)

Card 2/2

GRADSHTEYN, I.S. (Moscow) ROIZ-BELETOV, Z.S. (Khar'kov); MINLOS, R.A. (Moscow)
SKOPETS, Z.A. (Yaroslavl'); GEL'FOND, A.O. (Moscow); YAGLOM, A.M.
(Moscow); ROBINSON, R.M. (SShA); DUBNOV, Ya.S. (Moscow); STECHKIN,
S.B. (Moscow)

Problems of higher mathematics. Mat. pres. no.1:224-227 '57.
(MIRA 11:?)

(Mathematics--Problems, exercises, etc.)

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ROFFE, Yu.S., inzh.

Floating or track-laying shovel excavator. Stroi. i dor. mash.
7 no.12:1-3 D '62. (MIRA 16:1)
(Excavating machinery)

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(Beds and bedsteads)



ROG. F.: SERGEYEV, M.

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1. Pavlodarskiy elevator.
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(for Iszkowski). 2. Lengyel Statisztikai Fohivatal elnokhelyettese
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ROG. V.

Wrote an article on Diamond-substitute Disks for Trueing Grinding Wheels developed by All-Union Scientific-Research Institute of Abrasives and Grinding, Leningrad, Leningradskaya o., RSFSR

Soviet Source: P: Automobil', No. 5, May 1950, Moscow
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RGJ, VIK. C. AUTOMATIC

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KOG, V 13.

Chen → Synthesis and transformations of oxygen-containing organosilicon compounds. II. Reaction of diethyl- and diphenylsilanediols with vinyl ethers. M. P. Shostak, D. A. Kochkin, and V. M. Rok. *Bull. Acad. Sci. U.S.S.R., Div. Chem. Sci.* 1958, 571 (Engl. translation). — B. M. R.

M. A. YOUTZ 2

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Rog., V. M.

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Synthesis and transformations of oxygen-containing organosilicon compounds. II. Reaction of diethyl- and diphenylsilanediols with vinyl ethers. M. F. Shostakovskii, D. A. Kochkin, and V. M. Rog (N. D. Zelinskii Inst. Org. Chem., Moscow). *Zhurn. Nauk. S.S.R. Otdel. Khim. Nauk* 1955, 553-5; cf. C. A. 50: 55504. Et₂Si(OH)₂ (12 g.) and 50 g. BuOCH=CH₂ treated with 1 drop concd. HCl and heated 1.5-2 hrs. at 60° yielded 37% Ph₂Si(OCH=CH₂)₂ MeOBu₂, bp 127-9°, n_D²⁰ 1.4270, d₄²⁰ 0.9910, and a residue of polysiloxanes. The product treated with 5% H₂SO₄ 3-4 hrs. at 100° gave 65-80% AcH. Similar reaction of PhSi(OH)₂ with BuOCH=CH₂ gave MeCH(OBu)₂ and a high-boiling material from which it was impossible to isolate the expected silanocetal Ph₂Si(OCH=CH₂)₂ owing to its thermal instability. Hydrolysis with dil. acid readily gave 82-92% AcH. G. M. Kosolapoff

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SHOSTAKOVSKIY, M.F.; KOCHKIN, D.A.; ROG, V.M.

Investigation into the synthesis and conversion of organic silicon compounds which contain oxygen. Part 2. The reactions of diethyl- and diphenylsilan diols with vinyl ethers. Izv. AN SSSR. Otd.khim. nauk no.5:953-955 S-0 '55. (MLBA 9:1)

1. Institut organicheskoy khimii imeni N.D.Zelinskogo Akademii nauk SSSR. (Vinyl ethers) (Silanediol)

Roga, B.

H-22

POLAND/Chemical Technology - Chemical Products and Their
Application - Treatment of Solid Mineral Fuels.

Abs Jour : Ref Zhur - Khimiya, No 3, 1958, 9206
Author : Roga B., Ihnatowicz A.
Inst : Main Institute of Mining.
Title : Investigation of the Process of Dry Distillation of Solid
Fuels.
Orig Pub : Przegl. gorniczy, 1956, 12, No 10, Biul. Glosnego Inst.
Gornictwa, 19-28

Abstract : An investigation was made of the process of dry distilla-
tion of Polish fuels: peat, brown coal and 3 varieties of
coal, at a constant rate of heating; the variable parame-
ter was the distillation temperature; the experiments were
conducted using the Grey-King apparatus. Correlations were
determined between yields of distillation products and

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POLAND/Chemical Technology - Chemical Products and Their
Application - Treatment of Solid Mineral Fuels.

H-22

Abs Jour : Ref Zhur - Khimiya, No 3, 1983, 9206

their composition, on the one hand, and temperature of the process and degree of carbonization of the fuel, on the other. It is shown that the highest yield of tar is obtained over the temperature range of 450-600°; the amount of emitted water of decomposition and of CO₂, as well as the amount of emitted H₂, are characteristic of the degree of carbonization of the fuel.

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