

L 25340-65

ACCESSION NR: AR4046134

analysis of the photomultiplier output signal amplitude when the photocathode is illuminated by scintillation bursts from various crystal scintillators irradiated by a standard gamma source. Experimental results served to establish a poorly pronounced linear dependence of signal amplitude on temperature when a KI (Tl) crystal was used as a counter with the photomultipliers FEU-13 and FEU-11B. This counter is recommended as insensitive to variations of environmental temperature within the range from -50 to +50C (within 10% accuracy).

SUB CODE: OP,EM

ENCL: 00

Card 2/2

ENACHESCU, Georgeta; SOLDEA, I.; MARINESCU, Rodica

Biochemical modifications in onion bulbs during the winter.  
Studii cerc biochimie 5 no.1:47-64 '62.

1. Institutul de cercetari herti-viticele, Bucuresti.

SOLDEA, V., biolog

Floating reed islets in the Danube Delta and rendering their  
reed reserves valuable. Cel hirtie 10 no.3:69-74 Mr'61

1. Statiunea Experimentală Stufariile Delta Dunării, Măliuț.

SOLDEK, Jerzy, mgr inż.

A simple power regulator for low-head hydroelectric-power plants.  
Energetyka Pol 14 no.10:301-304 0 '60. (EEAI 10:3)

1. Politechnika Gdanska, Katedra Elektrotechniki.  
(Hydroelectric-power stations)

S/271/63/000/002/009/030  
A060/A126

AUTHOR: Soidek, Jerzy

TITLE: Electric time-delay relay

PERIODICAL: Referativnyy zhurnal, Avtomatika, Telemekhanika i Vychislitel'naya Tekhnika, no. 2, 1963, 30, abstract 2A194 P (Pol. pat. cl. 21c, 44, no. 44844, July 20, 1961)

TEXT: A circuit of a time-delay relay is proposed, consisting of a half-wave rectifier which, through a resistor, charges a capacitor parallel to which is connected a circuit consisting of a neon tube and an electromagnetic relay. The tube is shunted by a resistor whose circuit is closed through the relay contacts. The second pair of the relay contacts serves for closing the external circuit. The time-delay is controlled and determined by the time constant of the RC circuit. The charge on the capacitor of that circuit manages to flow down to zero through the circuit of a complementary loop which ensures stability of operation. There is one figure.

A. V.

[Abstracter's note: Complete translation]

Card 1/1

CZYZOWICZ, Jozef; MILKIEWICZ, Franciszek; SOLDEK, Jerzy

Automatic control of the rod ejector on a mechanized cooler  
steered by an analog device. Problemy proj hut maszyn 12  
no. 2:60-63 F '64.

1. Biprohut, Gliwice (for Czyzowicz).
2. Politechnika,  
Gdansk (for Milkiewicz and Soldek).

SOLBU, Ica, GORA, Vladi, Jr, Ing.

Let us increase the economic efficiency of maintenance works  
on local roads. Ray transport ll no.19-461-468 O '64.

5.10 1100

K

CZECHOSLOVAKIA/Optics

Abs Jour: Referat Zhur-Fizika, 1957, No 4, 10354

Author : Sole Ivan

Inst : Not Given

Title : Graphic Calculation of Birefringence Filter.

Orig Pub: Ceskosl casop. fys., 1955, 5, No 1, 114-116

Abstract: Description of a method of plotting nomograms for the calculation of a birefringence filter and a procedure for using this nomogram. It is indicated that a nomogram of dimension one square meter insures an accuracy to 1 A.

Card : 1/1



CZECHOSLOVAKIA/Solid State Physics - Crystallization

E

Abs Jour : Ref Jour - Fizika, No 12, 1959, 27423

Author : Sole, Ivan

Inst : Research Institute for Minerals, Turnov, Czechoslovakia

Title : Periodic Twin Growths of Crystals and Their Application

Orig Pub : Jemna. mech. a opt., 1959, 4, No 2, 53-58

Abstract : Attention is called to the classical phenomenon of twin growth of crystals. New optical properties of crystals due to this phenomenon are investigated, and a possibility is noted of their application for monochromatic filters. The method by which twin crystals of potassium chlorate are obtained from its solutions is described, and data are given on the

Card 1/2

CZECHOSLOVAKIA/S5

Ab's Jour

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No 27423

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- 54 -

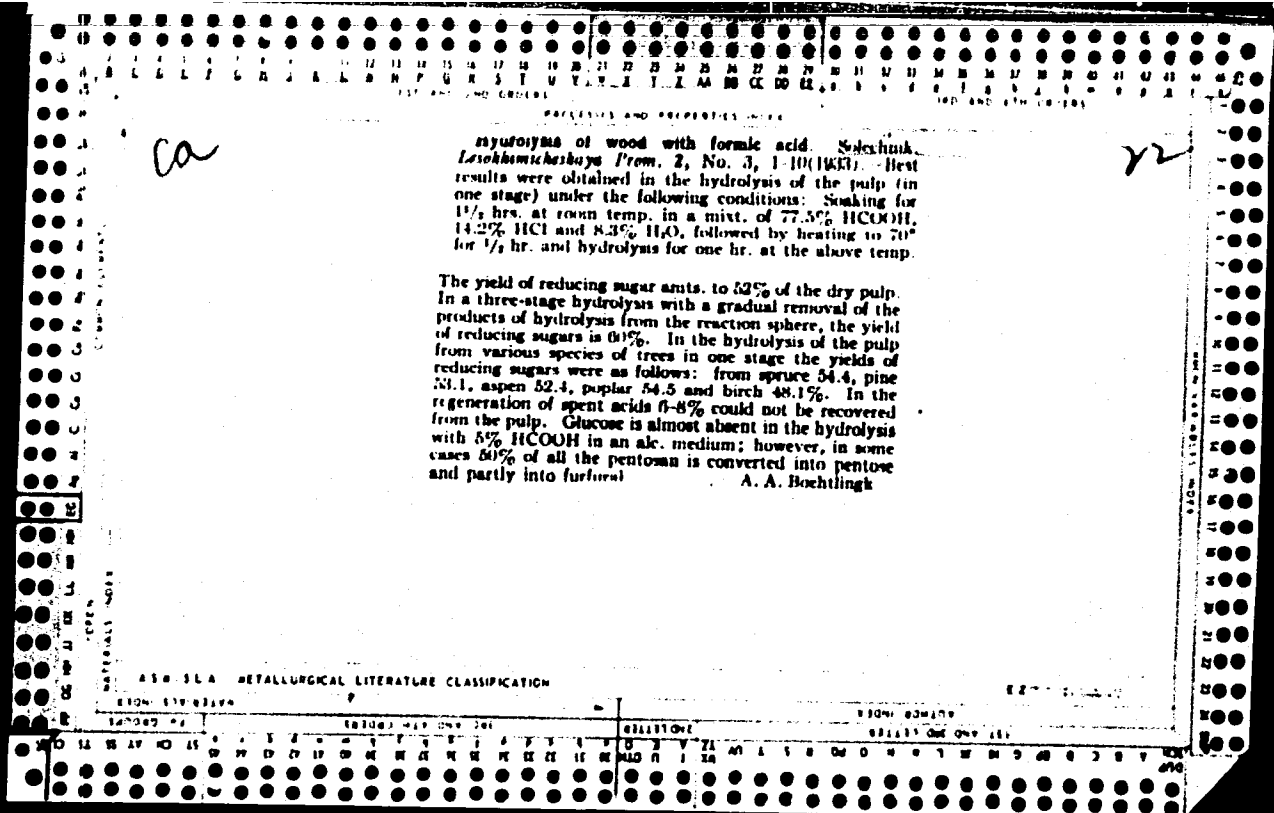
Sole, J.

"Gyroscope for orientation purposes in mine surveying." p.97

TECHNICKA PRACA. (Rada vedeckych technických spoločností pri Slovenskej akadémii vied)  
Bratislava, Czechoslovakia, Vol. 7, no. 3, 1955.

Monthly List of East European Accessions (EEAI) IC, Vol. 8, No. 9, Sept. 1959

Uncl.



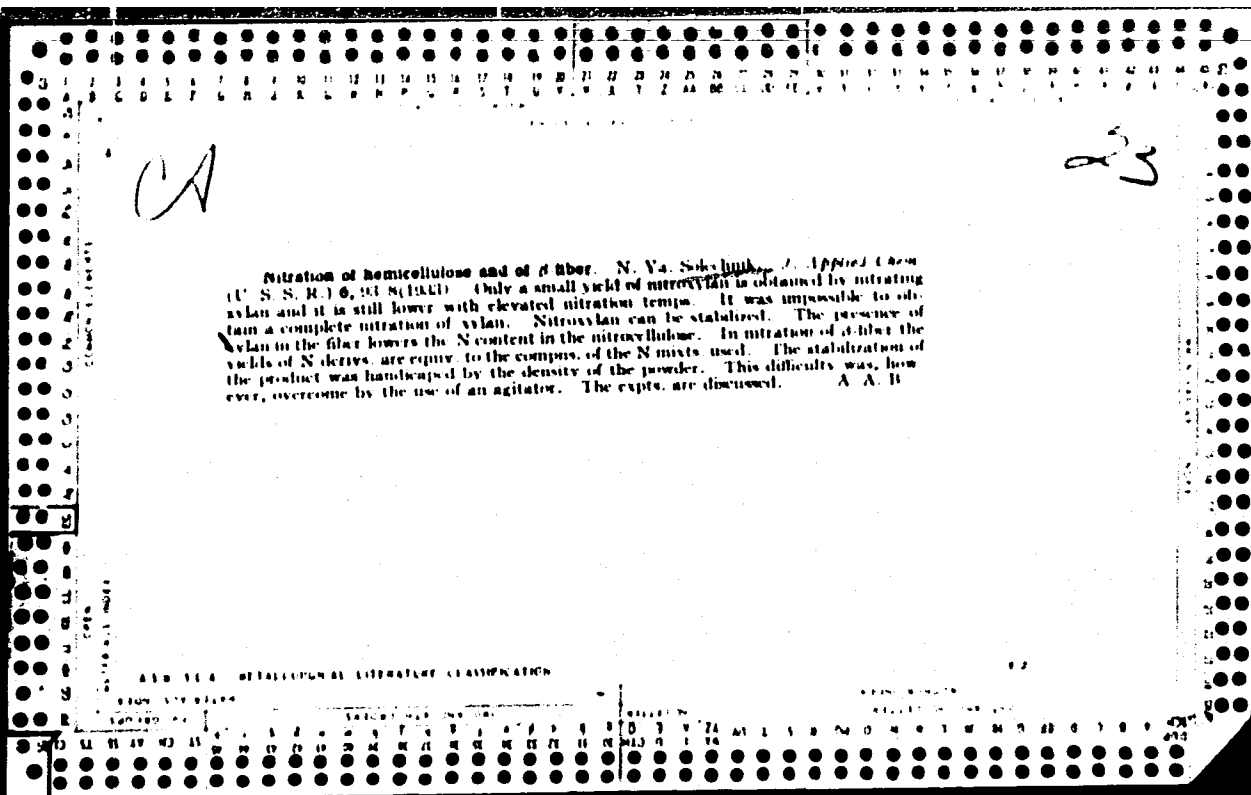
LIST AND NO. ORDERS      PROCESSES AND PROPERTIES INDEX

A

21

**Preparing acetylcellulose for varnish used as insulators in the electrical industries.**  
*N. Va. Soteknik. J. Applied Chem. (U. S. S. R.) 6, 91-92(1933).—The conditions for the prepn. of insulating varnishes from cellulose acetylated in the presence of H<sub>2</sub>SO<sub>4</sub> are: Acetylation for 5-6 hrs. at 30°, sapon. for 15-20 hrs. at 34° after a treatment of the material for 1 1/2 hrs. at 18° with a mist. of AcOH and H<sub>2</sub>SO<sub>4</sub>. An attempt to increase the stability of the acetate by boiling with alkalis and acids was discarded because of a superficial sapon. of the acetate and of a porous. of the material in acetone. Finally, an acetate was obtained with the use of a ZnCl<sub>2</sub> catalyst, from a superficially-nitrated substance, whereby it was possible to effect acetylation before a strong hydrolysis of the cellulose. The acetate so obtained was stable and the reaction proceeded at a higher velocity than with the H<sub>2</sub>SO<sub>4</sub> catalyst. If the temp. is lowered from 80° to 50° (20° acetates of a much higher viscosity are obtained. They can be used in the prepn. of silk. The exptl. procedure is described. Forty-six references. A. A. Bochtlingk*

A 50-51 A METALLURGICAL LITERATURE CLASSIFICATION



CA

23

Superficial esterification of paper. N. Ya. Solochnik and N. N. Motovilova. *Doklady Akad. Nauk SSSR*, 1953, 30-43 (1953).—Paper was esterified with steryl chloride by the method of Pringsheim, Lovand and Warrl (C. A. 26, 6123), with such changes in the conditions of the reaction, time and temp. as to insure only a partial and superficial esterification. The lab. expts. were made in a glass app. with the exclusion of air and humidity. The paper was dried at 105°, and xylene was dried with metallic Na and redist. The paper (4 g.) wetted with 40 g. quinoline and then heated in an oil bath with 40 g. steryl chloride in 150 cc. xylene was washed with boiling alc and dried at 100°. The paper treated with quinoline and the soln. of steryl chloride in xylene were preheated to the desired temp. of the esterification before use in the process. The increase in wt. of the esterified paper was 44% (esterification of 0.25 of 1 OH group) on heating 3 min. at 180° and 73% in 10 min. at 145° (0.5 of 1 OH). The products showed inferior mech. properties. Esterification to 20% decreased the hygroscopicity 50%. Esterification to 73% changed the hygroscopicity from 11.3% to 2.5% (the detns. were made at 15° in an atm. of 80% relative humidity). The elec. resistance of 73% esterified paper was  $8.66 \times 10^{10}$  as compared with  $2.04 \times 10^{10}$  for the same paper (after an exposure of 44 hrs. in an atm. of 100% humidity). Chas. Blanc

ASAC 518 METALLOGICAL LITERATURE ABSTRACTS

ca

23

A study of the properties of acetylated stearate and phosphate. N. Ya. Soluchnik and N. D. Novosil'tseva. *Plasticheskie Massy* 1964, No. 3, 9-12.—Acetylcellulose contg. 85% Ac groups (I) with excess  $H_3PO_4$  gives an ester (II) with 2.5 of its OH groups replaced by Ac and 0.2 by phosphate. With stearic anhydride I gives an ester (III) with 2.5 OH groups replaced by Ac and 0.5 by steryl. I and II are almost equally hygroscopic and mechanically strong, while III is less hygroscopic, but also is weaker. All the compds. transmit visible light. In the infra-red II is more transparent than I or III. In the ultra-violet I transmits to 2400 A., II to 2550 A. and III to 3500 A.  
H. M. Leicester

ASO-3LA METALLURGICAL LITERATURE CLASSIFICATION

2-277-100-1000

FORM 80-100

FORM 80-100



U

23

Lignocellulose stearate, N. Vn. Schobert, *Leb. Chem. Ber. 1906*, 39, No. 1, 12 (1906). In an investigation of the esters (acetates and stearates) of the individual wood components, as well as of the esters of the Cross and Bevan cellulose and of the whole lignocellulose, it was found that the esterification of the latter proceeds in a different way and yields other reaction products than the esterification of the individual wood components of the lignocellulose. This requires an investigation of not only the components of the lignocellulose esters, but namely of the whole lignocellulose. The Cross and Bevan cellulose is incompletely acetylated when acted upon with the usual acetylating mixture, because of its contents in pentosans. The subsequent saponification of the primary acetates obtained from the Cross and Bevan cellulose does not yield completely acetone-sol. secondary acetates, which probably will interfere with the prepn. of acetone-sol. acetates from the lignocellulose without degumming the latter. This is explained by the probability of the presence of a highly polymerized chem. combination between the cellulose and the pentosans of the lignocellulose. In the action of the isolated lignocellulose components with the acid chloride of stearic acid (in the presence of tertiary amines), esters are obtained which are in part (cellulose tristearate, lignon stearate) or completely (xylan stearate) sol. in

$C_{18}H_{35}O_2$  and  $EtOH + C_{18}H_{35}O_2$ . The esterification of the whole lignocellulose, under identical conditions, yields a product 40% of which is sol. (if preliminarily degummed) in  $C_{18}H_{35}O_2$ . The stearate yield (calcd. on the wt. of the lignocellulose from larch sawings) amounts to 600% and contains 72.25% of combined stearic acid. Such a large amt. of combined  $C_{18}H_{35}O_2$  imparts a marked hydrophobic character to the esterified lignocellulose. The stearate so obtained has a hygroscopicity of 0.17%, water absorption ability of 3.37%, and m. p. 240°. The xylan stearate was prepd. from stearyl chloride (11 parts by wt.) and dry xylan (1 part) in the presence of quinoline, by heating the mixt. for 15 min. to 115°. The product,  $C_{18}H_{35}O_2$ , (OH)(OC $C_{18}H_{35}O_2$ ), contg. 80.22% stearic acid, is a brownish powder in 18°, sol. in  $C_{18}H_{35}O_2$ . The lignocellulose stearate was prepd. from larch wood sawdust, stearyl chloride, aniline and xylene, by heating the mixt. to 133-140°. Small chips of pine wood yielded 100-200% of the stearate in the presence of the above ingredients and at a temp. of 115-130°. A. A. Buchling

ASB 514 METALLURGICAL LITERATURE CLASSIFICATION

1ST AND 2ND CROSS

PROCESSES AND PROPERTIES INDEX

180 AND 4TH CROSS

25

CO

Dyeing cellulose-ester films and varnishes. N. Ya. Sidorchuk and N. D. Novitskiyeva. *J. Applied Chem.* (U. S. S. R.) 7, 187-92(1934).—The soly. of a great variety of dyes in combination with light and heavy solvents used in the prepn. of acetyl-, ethyl- and benzyl-cellulose films, such as the soly. of basic, acidic and indanthrene dyes and their ability to dye these cellulose derivs. were investigated. The stability to light of the dyes after their incorporation in cellulose films was examd. A. A. Rehtlinok

Common Elements

Common Variants

ASB-3LA METALLURGICAL LITERATURE CLASSIFICATION

1ST AND 2ND CROSS

1ST AND 2ND CROSS

PROCESSES AND PROPERTIES UNIT

10

*co*

Xylan esters. N. Ya. Solovnikov. *J. Applied Chem.* (U. S. R. R.) 7, 1029-35 (in German 1025-6) (1934).  
 Xylan diacetate was prepd. by using 5 g. of a xylan which was preliminarily dehydrated with acetone (the xylan was prepd. by the Salkowski method (*Z. physiol. Chem.* 34, 162(1902); 35, 240(1902)), 100 g. Ac<sub>2</sub>O and 1 g. (0.5%) H<sub>2</sub>SO<sub>4</sub>. The temp. was kept at 15-18° during mixing and at 28-30° during acetylation which was carried out for 3 hrs. The acetate was pptd. from the soln. with dil. AcOH, reprecipitated from pyridine with water and dried over P<sub>2</sub>O<sub>5</sub>. The xylan diacetate so obtained corresponds to C<sub>12</sub>H<sub>16</sub>O<sub>8</sub>(OAc)<sub>2</sub>; it is sol. in glacial AcOH, pyridine and a mixt. of CHCl<sub>3</sub> and 10% EtOH. It forms transparent films of a slightly yellowish color. A xylan stearate, sol. in C<sub>6</sub>H<sub>6</sub>, C<sub>6</sub>H<sub>5</sub>Me, or CHCl<sub>3</sub>, was obtained by treating xylan with the chloro anhydride of stearic acid in the presence of quinoline during 15 min. at 145°. It contained 80% of combined stearic acid (C = 72.15% had a mol. wt. of 802 and m. 48°. Its formula corresponds to [C<sub>12</sub>H<sub>16</sub>O<sub>8</sub>(OH)(OCOC<sub>17</sub>H<sub>35</sub>)]. The xylan oleate was prepd. by the action of the dry chloro anhydride of the oleic acid on the dry xylan in the presence of pyridine at 135° during 2 hrs. The resulting xylan monooleate is insol. in org. solvents and is carbonized without melting when heated to 250°. In the action on xylan of PhCH<sub>2</sub>I in the presence of 25% NaOH a xylan benzyl ether of the formula C<sub>12</sub>H<sub>16</sub>O<sub>8</sub>(OH)(OCH<sub>2</sub>Ph)<sub>2</sub> was obtained, which was sol. in an EtOH-C<sub>6</sub>H<sub>6</sub> mixt., m. 178.9°, and was characterized by film-forming abilities. It is stated that the acetylation of the above compds. with fatty acids and the formation of ethers shows a higher reaction ability of pentosans than of cellulose. The expts. are described. Sixteen references.

A. A. Bohtlingk

ASAC-51A METALLURGICAL LITERATURE CLASSIFICATION

E2

MATERIALS NOTES

COMMON ELEMENTS

*ca* *23*

*PROCESSES AND PROPERTIES INDEX*

Physical properties of parchment. N. Ya. Sokolnik. *Bumashkaya Prom.* 13, No. 8, 24-9 (1934). Com. parchments show different degrees of transparency to light, depending on the method of production. The fuchsin-permeability and blistering tests are unreliable. The degree of parchmentization of paper is best estd. by the detn. of the degree of transparency per unit of thickness with a Se photoelement. Parchment is opaque in the entire ultra-violet and in the infra-red spectra. After 2.5 months of exposure to the elements, com. parchments showed a decrease of tensile strength of 15% in dry state and 30% in wet state, while the transparency increased from 53.5 to 55.5%, which is ascribed to the natural bleaching process. A much higher transparency results by a preliminary mercerization with 18% NaOH and subsequent treatment with 80% H<sub>2</sub>SO<sub>4</sub>. Considerable improvement of the phys. properties of parchment without affecting its transparency is effected by treating it either

with 1% stearic acid in C<sub>12</sub>H, and then with a mixt. of 75 benzylcellulose, 10 rosin and 15% triethyl phosphate in C<sub>12</sub>H, or with linseed oil and drying at 90-100° for 3-4 hrs. Good results with exptl. growing of radishes and lettuce in a parchment-lined conservatory suggest the possibility of substituting parchment for glass in the com. hot-house cultivation of vegetables. Chas. Blanc

*ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION*

The properties of films of cellulose acetate and its esters. I. The properties of cellulose acetate films. U. A. J. edson, N. Ya. Sabinuk and A. M. Kuznetsov. *Nordensk. Papperstidn. 1953*, 3, 10-12 (1953). Films of cellulose acetate (Nominal Tuzhdel' Prom. S. S. S. R. Leningrad, Plastmassy 1, 10-12 (1953)). Films of cellulose acetate (0.04-0.07 mm. thick) have a tearing strength of 7 kg per sq. mm. and a 10% elasticity. Two days' soaking in H<sub>2</sub>O lowers the strength slightly and raises the elasticity 20%, while 12% H<sub>2</sub>O is absorbed. After 2 months' soaking, however, the film becomes brittle. When plasticizers are added, the hygroscopicity is greatly lowered, and the strength and the elasticity after increasing the no. of acetyl groups on the cellulose. A sharp fall in hygroscopicity is noted when the content of acetyl group is increased from 57 to 58%. The more polar a plasticizer, the more easily it takes up H<sub>2</sub>O, and the less it protects the film from moisture. Nonpolar materials do not plasticize well. Hence these plasticizers which are neither too polar nor too nonpolar give the best results. Such are Ph<sub>2</sub>PO<sub>4</sub>, (Me<sub>2</sub>C<sub>2</sub>H<sub>4</sub>)<sub>2</sub>CO, and di-Et phosphate. When 5-20% of a plasticizer is added to a film, the hygroscopicity drops sharply, and further increase of the amt. of plasticizer does not greatly change this property. The amt. of H<sub>2</sub>O absorbed by a film is the resultant of the hygroscopicity and the amt. of material extd. by H<sub>2</sub>O. The application of modern theories to the above facts is discussed. II. The technological properties of films made from cellulose. *Ibid.* 52-110. The hygroscopicity and H<sub>2</sub>O absorption of films are characteristic of their components, and are almost proportional to the polarity of these. Thus, H<sub>2</sub>O absorption decreases steadily from Cellulose (pure cellulose) through cellulose acetate and nitrates, ethyl- and benzyl-cellulose to polystyrene, which is nonpolar and nonhygroscopic. Hydrophobic plasticizers reduce the hygroscopicity of films, especially of those from cellulose nitrates and benzylcellulose. The latter gives the best of the films studied. The amt. of ethylcellulose, and is 0.5-1% for cellulose acetate and cellulose nitrates. The film strength is a max. for ester nitrates. The film strength is a max. for ester nitrates and a min. for nonpolar polystyrene. Wetting has little effect on the strength of films from Cellulose and polystyrene. It raises the strength slightly for films from hydrophobic compounds, like cellulose nitrates and lowers it slightly for those from hydrophobic ones like cellulose acetate.

H. M. Leventer

PROCESSES AND METHODS

Oxidation of wood with nitric acid. N. Ya. Solovnik. *Doklady Akad. Nauk SSSR*, 1965, No. 4, 20-7(1965).—Preliminary expts. in cooking aspen chips with 7% HNO<sub>3</sub> at 90° for 1.5 hrs. resulted in a 54% yield of pulp; this treated with 0.06-0.26% NaOH at 35-40° for 2 hrs. and bleached with 3% of active Cl<sub>2</sub> at 35-40° for 2 hrs. gave a pure white product with a viscosity of 125-40 millipoises and 0.07-0.13% ash content (unbleached pulp). The spent liquor contained 10-13% of pentoses (calcd. as pentosans), 6-8% of volatile acids (calcd. as AcOH) and 3-4% C<sub>6</sub>H<sub>6</sub>. Cooking with 3% HNO<sub>3</sub> at 90° for 8 hrs. resulted in a consumption of 45% HNO<sub>3</sub> (on the wt. of aspen chips) with 3.5% of uncooked wood and 45.5% yield of pulp with Cu no. 2.5, 0.066% ash content and Sierber no. 57, which after washing the pulp with dil. NaOH was reduced to 12-20. The spent liquor, contg. 9% of pentoses, 5.4% of volatile acids and 3% C<sub>6</sub>H<sub>6</sub>, reworked with a large excess of HCl or 4% H<sub>2</sub>SO<sub>4</sub>, gave a yield of 4.5% of furfural (on the wt. of the chips used). The rate of the formation of pentose in the liquor proceeds with birch and spruce at a slower rate than in the similar decomps. of aspen.

Ches. Abstr.

ASD-51A METALLURGICAL LITERATURE CLASSIFICATION

FROM SOURCE

CLASSIFICATION

CLASSIFICATION

1ST AND 2ND EDITIONS  
PROCESSES AND PROPERTIES INDEX

22

**Oxidation of lignin.** II. N. Ya. Sotchnik. *Leshhin. Prom.* 5, No. 11, 20-2(1936); cf. *Ibid.* No. 10(1936).— The oxidation of wood pulp and tech. lignin to (CO<sub>2</sub>H), by fusing with NaOH was investigated. A powd. sample was fused with 40% NaOH soln. at 170-200° for 6 hrs. in an elec. air oven. The optimal temp. for tech. lignin was 190-200° (the yield of (CO<sub>2</sub>H), was 28.28%) and for pine sawdust 230-40° (the yield was 60.48-66.75%). However, increasing the duration of fusing of tech. lignin with NaOH to 12 hrs. increased the yield to 52.9%. The yield of (CO<sub>2</sub>H), increased with an increase of the concn. of NaOH soln.; thus use of 80% NaOH pine sawdust yielded 78.82% of (CO<sub>2</sub>H). Therefore, the yield of (CO<sub>2</sub>H), by the oxidation of lignin (the described method was used) was higher than that obtained by the oxidation with HNO<sub>3</sub>. Twenty-two references.

A. A. Podgorny

ASSOCIATED METALLURGICAL LITERATURE CLASSIFICATION

FROM SOURCE

1ST AND 2ND EDITIONS

PRINCIPLES AND PROPERTIES INDEX

Production of asphalts from gas-generator tar for road construction. N. Ya. Solechnik, *Lesokhim. Prom.* 1939, No. 2, 29; *Khim. Ref. Zhur.* 1939, No. 7, 99 - To decrease water-solub. and to increase softening temp., tar was condensed in the presence of strong mineral acids, or of chlorinated lime, and was blown with air while being heated, both with and without catalysts. The products had a considerable solub. in hot water and their mixes were more water-absorbent than the mixes obtained from petroleum bitumens with the same materials. Different water-absorption properties were obtained for bitumens produced by different methods from the gas-generating tar. Three tech. schemes for the production of bitumens from gas-generator tar and the characteristics of the materials so obtained are given. It is recommended to use these asphalts for the construction of roads as well as for inside asphalt concrete work. W. R. Hein

ASB-51A 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	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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DA LEAFLET, N. 12.

Solechnik, N. Ya. - "Professor Nikolay Nikolayevich Nepenin," (On his 65th birthday and 40th anniversary of the scientific-pedagogical and technical-production work in the field of the cellulose-paper industry), Trudy Lesotekhn. akad. im. Kirova, No 65, 1949, p. 237-38, with portrait

SO: U-5240, 17, Dec. 53, (Letopis 'Zhurnal 'nykh Statey, No. 25, 1949).

SOLECHNIK, N.Ya., professor; NOVOSIL'SKAYA, A.I.

Corrugated cardboard-base manufacture. Bum.prom. 27 no.12:14-16  
D '52. (MLRA 7:10)

1. Lesotekhnicheskaya akademiya im. S.M.Kirova.  
(Paperboard)

SOLECHNIK, N. Ya.; NATKINA, L.N.

The influence of wet pressing on the properties of impregnation papers.  
Bumash. Prom. 28, No.4, 11-15 '53. (MLRA 6:3)  
(CA 47 no.14:7213 '53)

SOLECHNIK, N. YA.

B. T. R.  
V. 3 No. .  
Mar. 1954  
Wood and Forest  
Products

4290\* Production of Brown Wood Pulp From Shavings.  
(Russian.) N. Ya. Solechnik, A. I. Novosel'skaia, and A. P.  
Ivanova. *Bumizhitaia Promyshlennost*, v. 28, no. 11, Nov. 1953,  
p. 25-28.  
Brown wood pulp was obtained from fir and aspen shavings,  
which compare favorably in break and stretch strength with  
the usual fir pulp masses. Tables, micrographs.

SOLECHNIK, N. YA.

SOLECHNIK, N.Ya.; NATKINA, L.N.; NOVOSKL'SKAYA, A.I.

Thermal treatment of hard wood-fiber boards. Bum.prom. 29 no.7:  
15-16 JI '54. (MLRA 7:8)

1. Ordena Lenina Lesotekhnicheskaya akademiya im. S.M.Kirova.  
(Paperboard)

Solechnik, N. Ya.

Thermal stability of cellulose and paper. N. Ya. Solechnik and N. E. Trukhtenkova. *Zhur. Priklad. Khim.*, 27, 416-24 (1956).—The most stable forms of cotton cellulose contain the greatest amts. of cellulose with a degree of polymerization (D.P.) of 1200 or higher and lack fractions of a D.P. of under 10. The least thermostable forms are those which lack fractions above 1200 and contain appreciable amts. of less than decameric units (sulfite pulp and related forms). Other varieties of cellulose have intermediate stability to heat. The most thermostable papers are those which yield aq. exts. with pH 6.5-7.5; pH under 6.5 are progressively less thermostable, the lower the pH of their exts., while those yielding exts. with pH above 7.5 are thermostable but show increasing yellowing on heating. Only the free H ions are important in this case, since the ions which are in an absorbed state do not affect thermostability as neither do Ca or Al ions. A simple characterization of thermal stability in paper is the ease of fracture on folding; the thermostable varieties are much more resistant to crease cleavage.  
G. M. Kosolapoff

SOLECHNIK, N. Ya

Walls

Thermal stability of cellulose and paper. N. Ya. Sole-  
chnik and N. B. Trukhtenkova. *J. Appl. Chem. U.S.S.R.*  
29, 453-60(1956)(Engl. translation).—See *C.A.* 50, 9737d.  
B. M. R.

2

Solechnik, N. Ya.

✓ Reactivity of wood cellulose. N. Ya. Solechnik and A. A. Bukk (V. M. Molotov Technol. Inst., Leningrad). *Zhur. Priklad. Khim.* 29, 768-74(1956).—Examn. of cellulose specimens from cotton and sulfite and sulfate pulps showed that the chem. reactivity is affected mostly by the distribution of mol. wt. of the cellulose material. The higher the content of fractions with a degree of polymerization above 1200 and the lower that below 200 the less reactive is the material; the degree of interchain cross-linking is less important. A regulation of reactivity in formation of xanthate is possible by activation of cellulose at 50° with dil. mineral acids (HCl) for about 6 hrs. The measure of cross-linking is obtained by the isotherms of water adsorption. G. M. Kosolapoff

*Chem 2*



SOLECHNIK, N. Ya.

W. H. *Reactivity of wood cellulose.* N. Ya. Solechnik and A. A. Bak. *J. Appl. Chem. U.S.S.R.* 29, 833-8 (1956) (English translation). See *C.A.* 50, 11880g. B. M. R. 2

SOLECHNIK, Nikolay Yakovlevich

[Manufacture of fiberboard] Proizvodstvo drevesno-voлокнистых  
плит. Moskva, Goslesbumizdat, 1959. 285 p.

(MIRA 14:3)

(Wood, Compressed)

SOLECHNIK, N.Ya., doktor tekhn.nauk; ALIKIN, V.P., inzh.

Some problems of rheology and grinding of fibrous vegetable  
materials. [Trudy] NTO bum.i der.prom. no.8:144-169 '59.  
(MIRA 16:2)

(Woodpulp)  
(Milling machinery)

SOLECHNIK, N.Ya.; ALIKIN, V.P.

Deformation and beating of woodpulp. Bum.prom. 34 no.12:7-8  
D '59. (MIRA 13:4)

1. Lesotekhnicheskaya akademiya im. Ye.M. Kirova (for Solechnik)
2. Leningradskiy tekhnologicheskii institut tsellyulozno bumazhnoy promyshlennosti (for alikin).  
(Woodpulp)

SOLECHNIK, N.Ya., prof.

Professor Nikolai Nikolaevich Nepenin; on his 75th birthday and the 50th anniversary of his technical, scientific, and pedagogical activities. Trudy LTA no.87:3-4 '59. (MIRA 13:4)  
(Nepenin, Nikolai Nikolaevich, 1883-)

SCLECHNIK, N.Ya.; NOVOSEL'SKAYA, A.I.

Searching for methods helping to increase the water resistance of  
wood. Trudy LPA no.87:65-72 '59. (MIRA 13:4)

(Wood--Preservation)

SOLECHNIK, N.Ya.; ALIKIN, V.P.

Effect of polydispersity on the elastic and viscous properties  
of cellulose and its grinding quality. Trudy LTA no.91:49-64  
'60. (MIRA 15:12)

1. Leningradskaya lesotekhnicheskaya akademiya imeni  
Kirova.  
(Cellulose) (Paper industry)

PRAVILOVA, T.A.; SOLECHNIK, N.Ya.; KHODARINOVA, G.N.

Effect of the electromagnetic field of high-frequency currents  
on paper. Trudy LTA no.91:145-153 '60. (MIRA 15:12)

1. Laboratoriya konservatsii i restavratsii dokumentov  
AN SSSR.

(Paper--Disinfection) (Electromagnetism)  
(Materials at high temperatures)



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SOV/80-55-3-2/47

AUTHOR: Solovnik, N. Ya.

TITLE: Nikolay Ignat'yevich Nikitin (On the Occasion of His  
Seventieth Birthday)

PERIODICAL: Zhurnal prikladnoy khimii, 1960, Vol 33, Nr 3,  
pp 518-522 (USSR)

ABSTRACT: This is a short biography of Nikolay Ignat'yevich Nikitin,  
an eminent Soviet scientist and a Corresponding Member  
of the Academy of Sciences of USSR. He is an author of  
110 scientific papers, a list of which is given at the  
end of the article.

Card 1/1

NIKITIN, Nikolay Ignat'yevich. Prinimali uchastiye: ABRAMOVA, Ye.A., starshiy nauchnyy sotr., kand. khim. nauk; AKIM, E.L., inzh.-tekhnolog; ANTONOVSKIY, S.D., dots., kand. tekhn. nauk; VASIL'YEVA, G.G., inzh.-tekhnolog; ZAYTSEVA, A.F., starshiy nauchnyy sotr., kand. tekhn.nauk; KLENKOVA, N.I., kand. tekhn. nauk; MALEVSKAYA, S.S., kand. khim. nauk; NIKITIN, V.N.starshiy nauchnyy sotr., kand. fiz.-mat. nauk; OBOLENSKAYA, A.V., kand. tekhn. nauk, dotsent; PETROPAVLOVSKIY, G.A., starshiy nauchnyy sotr., kand. tekhn. nauk; PONOMAREV, A.N., kand. tekhn. nauk, dots.; SOLECHNIK, N.Ya., prof., doktor tekhn. nauk; TOKAREV, B.I., inzh.; TSVETAYEVA, I.P., kand. tekhn. nauk; CHOCHIYEVA, M.M., kand. tekhn. nauk; ELIASHBERG, M.G., doktor tekhn. nauk; YUR'YEV, V.I.; KARAFETYAN, G.O., red.izd-va; ZAMARAYEVA, R.A., tekhn. red.

[Wood chemistry and cellulose] Khimiia drevesiny i tselliulozy. Moskva, Izd-vo Akad.nauk SSSR, 1962. 711 p. (MIRA 15:2)

1. Chlen-korrespondent Akademii nauk SSSR (for Nikitin). 2. Zaveduyushchiy kafedroy fizicheskoy i kolloidnoy khimii Lesotekhnicheskoy akademii (for Yur'yev).

(Cellulose)

SOLECHNIK, N.Ya.; SHISHKINA, <sup>1</sup>P.

Theoretical basis and studies of the factors of semidry  
molding. Nauch. trudy LTA no.98:11-18 '62. (MIRA 15:12)  
(Hardboard)

SOLECHNIK, N.Ya.; LASKEYEV, P.Kh.; NOVOSEL'SKAYA, A.I.; MOZHE, Z.V.

Theoretical bases of the preparation of chips for milling.  
Nauch. trudy LTA no.98:27-36 '62. (MIRA 15:12)  
(Hardboard)

SOLECHNIK, N.Ya.; LASKEYEV, P.Kh.; MOZHE, Z.V.

Cold alkaline process for birch and pine firewood chips.  
Nauch. trudy LTA no.98:53-59 '80. (MIRA 15:12)  
(Hardboard)

SOLECHNIK, N.Ya.; NATKINA, L.N.; KOROMYSLOVA, T.S.; LIKHACHEVA, L.I.

Investigating chemical processes for obtaining lignin plastics  
binders. Nauch. trudy LTA no.98:61-68 '62. (MIRA 15:12)  
→ (Hardboard)  
(Wood, Chemistry)

SOLECHNIK, Nikolay Yakovlevich; KOLOMIN, G.P., red.; FILIMONOVA,  
A.I., red. izd-va; VDOVINA, V.M., tekhn. red.

[Production of fiberboard] Proizvodstvo drevesno-voloknistykh  
plit. Izd. 2., perer. 1 dop. Moskva, Goslesbumizdat, 1963.  
337 p. (MIRA 16:7)

(Hardboard)

SOLECHNIK, N.Ya.; NATKINA, L.N.; KOROMYSLOVA, T.S.; LIKHACHEVA, L.I.

Obtaining compressed laminated wood without binders. Der. prom.  
12 no.3:9-11 Mr '63. (MIRA 16:5)

1. Lesotekhnicheskaya akademiya im. S.M.Kirova.  
(Wood, Compressed)



SOLECHNIK, N.Ya.; TSAREV, G.I.; SHISHKINA, A.P.

Characteristics of fiberboard prepared by the method of dry  
molding. Der. prom. 13 no.6:6-7 Je '64. (MIRA 17:6)

REIFER, I.; SOLECKA, M.

~~Terminal oxidases in wheat shoots~~  
Terminal oxidases in wheat shoots. Acta biochem. polon. 5 no.3:277-293  
1958.

1. Z Zakladu Biochemii Roslin Instytutu Biochemii i Biologii PAN,  
Warszawa Kierownik Zakladu: prof. dr I. Reifer.

(WHEAT,  
terminal oxidases in wheat shoots (Pol))  
(OXIDASES,  
in wheat shoots, terminal oxidases (Pol))

ZIELINSKA, Cecylia; SOLECKA, Waleria

Behavior of blood platelets in pregnancy toxemias. Ginek. pol.  
no.4:553-556 '62.

1. Z Instytutu Matki i Dziecka w Warszawie Dyrektor: prof. dr med.  
F. Groer Z Kliniki Poloznictwa i Chorob Kobietych Kierownik: prof.  
Kierownik: prof. dr. med. J. Lesinski Z Laboratorium Analitycznego  
Kierownik: dr Waleria Solecka.

(BLOOD PLATELETS) (BLOOD CELL COUNT) (PREGNANCY TOXEMIAS)

SCLECKI, A.

A telephone-answering device. p. 302.  
(TELE-RADIO. Vol. 2, no. 6, June 1957, Warszawa, Poland)

SO: Monthly List of East European Accessions (EEAL) LC. Vol. 6, No. 12, Dec. 1957.  
Uncl.

SOLECKI, M.

"Lighting in the pulp and paper industry" (P. 230). PRZEGLAD PAPIERNICZY (Centralny Zarząd Przemysłu Papierniczego i Stowarzyszenie Inżynierów i Techników Przemysłu Papierniczego) Lodz, Vol. 9, No. 8, Aug. 1953.

SO: East European Accessions List, Vol 3, No. 8, Aug. 1954.

SOLECZY, M.

✓  
1248. Changes in muds during drying and grinding as determined by thermal analysis. J. J. Glogocowski and M. Soloeki. *Bull. Polish Inst. Petrol.*, 1956, 6, 2-4 (suppl. *Najta* (Krakow), 1956, 12).—Whilst work was being done on formulation and preparation of Polish muds, investigations were started on the extent of thermal changes in the loams considered which may occur during processing. These show that not only is there a loss of water (at 90° C and 140° C) but the minerals change to others of the same stoichiometric mol composition, but of different crystallographic nature, mainly montmorillonite.  
M. S.

5

The copper rotating-disk electrode in the spectrographic analysis of lubricating oils, crude oils, and natural brines. Zofia Bierhat and Mieczyslaw Sołdecki (Inst. Naftowy, Krakow, Poland). *Biał. Pr. Naftowe*, 8, 7-8 (1958).  
Pub. in *Nafta* (Poland) 14, No. 7 (1958).—A device composed of a spark generator and a Cu rotating-disk electrode (30 mm. in diam. and 2 mm. thick) was used for detg. trace amts. of metal in lubricating oils, crude oils, and natural brines. It was found very useful in detg. Pb in lubricating oils. Heavy petroleum products, such as paraffin wax or asphalt, can be examd. directly, whereas light products must be freed from volatile constituents. Z. Kurtyka

*Solecki, Mieczyslaw*

POLMED/Analytical Chemistry. Analysis of Inorganic Substances.

E

Abs Jour: Ref Zhur-Khin., No 9, 1959, 31053.

Author : Biernat, Zofia, Solecki, Mieczyslaw.

Inst : Petroleum Institute.

Title : Spectral Method of Determining Sequential Quantities of Elements in Rock Matrices.

Orig Pub: Hafta (Polska) 1958, No 8, 214-215.

Abstract: This article describes the results of the studies carried out at the Petroleum Institute (Poland) on the correlation of geological cross sections by the method of qualitative, semi-quantitative and quantitative spectral analysis. In the analyses of various rock matrices (shale, marl, limestone, sandstone) the spectrums were photographed on an

Card : 1/3

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POREDO/Analytical Chemistry. Analysis of Inorganic  
Substances.

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ibs Jour: Ref Zhur-Kain, No 9, 1959, 31053.

at 0.1% - 0.0015%.  $Ca_3O_4$  which is introduced into  
the standards and into the samples an 0.1% concen-  
tration serves as inner standard. In order to  
construct a characteristic curve gradual clearing  
agent was utilized. -- Vol. Spital'noy.

Card : 3/3

106

SOLECKI, Mieczyslaw, inż.

Vanadium in crude oil at Węglówka. Nafta Pol 17 no.7:187-189  
'61.

1. Instytut Naftowy, Krakow.

SOLECKI, R.

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634.014.1 : 624 072.223

Solecki R. Free Vibrations on a Single-Span Beam Supported in a Most General Manner.

„Drgania swobodne belki jednoczłonowej podpartej w sposób najogólniejszy”. Inżynieria i Budownictwo. No. 5, 1958, pp. 155—180, 19 figs., 1 tab.

Consideration of a single beam of a constant inertia moment and with continuous, uniform distribution of mass, fixed at both ends and elastically supported. An appropriate differential equation of the vibrations and amplitudes is evolved and then, after appropriate transformation, an equation for the frequency also. The latter equation is made up on the assumption that the beam axis is non-torsile and that torsional inertia and shearing are disregarded. By means of a suitable selection of parameters (characteristics of the elastic supports), an equation for frequency may be obtained, applicable to any possible supporting method. In the table presented, all possible methods of supporting a single-span beam are given, together with the corresponding equations of frequency.

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3

PHASE I BOOK EXAMINATION POL/4460

Pis'ma avdeleniya nauki. Instytut podstavnykh problemov te khimii  
Zagubnitsa Oleg' Nuzhitskiy, 1 (Problems of Nonlinear Vibrations, Vol. 2)  
Warsaw, Pils'nowo wsi-wo naukow, 1960. 138 p. 650 copies printed.

Ed.: Stefan Ziemia; Deputy Ed.: Janislaw Sawronski.  
PURPOSE: This book is intended for scientists and engineers interested in  
theoretical and experimental research on vibrations.

COVERAGE: The collection contains 10 articles on the theory and measurement of  
nonlinear vibrations of structural systems. The basic problem is the nonlinear  
character of the dependence of the acting forces on the strains or the velocity  
of motion of particular elements of the investigated structural system. This  
nonlinearity is to be taken into consideration in calculating electrical and  
mechanical systems. The mathematical procedures of the investigation of motion  
in the calculation of the nonlinearity of systems with a finite number of degrees  
of freedom are based on the theory of dynamic systems generalized according to  
the work of Birkhoff and other classic authors. The combination of the purely  
technical problems of vibration theory with the theory of dynamic systems has  
contributed to the rapid development of nonlinear vibration theory during the  
last decade. The main research activities in this field have been based on the  
development of adequate mathematical models and the search for analytical  
and Kraichnevskiy in this field. The book contains several articles by  
Warsaw and Krakow, which deal with very promising results. For several years  
Problems of the 2ND USSR PAS (Zhurnal Zadaniy Ispytaniy i Resheniy)  
of Basic Technical Problems of the Polish Academy of Sciences) has contained  
studies on two sets of problems: 1) the qualitative analysis and synthesis of the  
motion of mechanical systems of several degrees of freedom; and 2) the quantitative  
analysis of the motion of such systems by asymptotic methods. The papers of this  
collection are concerned chiefly with the first set. References and summaries in  
Russian and English are given at the end of each article.

- 65 Osiński, Z. (Warsaw). Generalization of the Asymptotical Method of Bogolyubov in the Theory of Nonlinear Vibrations of Nonautonomous Systems With Heavy Damping
- 75 Osiński, Z. Problems of the Influence of the Simultaneous Action of Exciting Periodical Forces of Different Frequency on a Certain Nonlinear Vibrating System
- 87 Bogusz, W. (Kraków). Vibration of Variable Length Rotating Rods
- 89 Kępczyński, J. (Warsaw). Wave Solution of the Dynamic Problems of an Elasticity Rod
- 117 Solcicki, R. (Warsaw). Vibration of a Plate Having the Shape of a Circular Sector
- 131 See Bibliographical Items of the Zaklad Badania Ergas (Department for Vibrations Study) for 1973-1979
- 131
- 131

UTWALE: Library of Congress

SOLCICKI, R.

KURZAWA, Zbigniew; SOLECKI, Roman

Determination of traces of silver as a catalyst in the reaction of  
 $Mn^{2+}$  to  $Mn^{7+}$  oxidation. Chem anal 5 no.6:893-896 '60.  
(EAI 10:9)

1. Department of General Chemistry, Politechnika, Poznan.

(Silver) (Catalysts) (Manganese)

SOLECKI, R.

The general solution of a triangular plate  $30^{\circ}$ - $60^{\circ}$ - $90^{\circ}$  by means of eigentransform. Bul Ac Pol tech 8 no.7:325-332 '60. (EEAI 10:3)

1. Department of Vibrations, Institute of Basic Technical Problems,  
Polish Academy of Sciences. Presented by W.Wierzbicki  
(Plates) (Fourier series) (Eigenfunctions)

SOLECKI, R.

General solution for a thin orthotropic rectangular plate. Bul Ac  
Pol Tech 8 no.8:399-409 '60. (EEAI 10:6)

1. Department of Vibrations, Institute of Basic Technical Problems,  
Polish Academy of Sciences. Presented by W.Nowacki.  
(Vibration) (Elasticity) (Plates)

SOLECKI, Roman (Warsaw)

General solution of the problem of a rectangular orthotropic plate. Archiw mech 12 no.5/6:729-748 '60.

1. Department of Vibrations, Institute of Basic Technical Problems, Polish Academy of Sciences, Warsaw.



SOLECKI, Roman; ZIEMBA, Stefan

Vibration of electromechanical elements. Przegl elektroniki  
2 no.5/6:370 '61.

22706

10 9100 also 1103, 1191, 1327

P/006/61/009/001/001/001  
D213/D305

AUTHOR: Solecki, Roman

TITLE: A flat isotropic cylindrical shell with arbitrary boundary conditions

PERIODICAL: Rosprawy inzynierskie, v. 9, no. 1, 1961, 63-87

TEXT: Although shells of similar shape have been considered before, notably by V. Z. Vlasov (Ref. 1: Obshchaya teoriya obolochek (General Theory of Shells), GITTL; Moskva 1949), the author gives a new method of solving equations in Ref. 1 (Op. cit) which should provide much more exact numerical solutions for cylindrical shells. The shell under consideration is shown in Fig. 1. The static equilibrium of the shell is described with

$$\left\{ \begin{aligned} \frac{\partial^2 u}{\partial x^2} + \frac{1-\nu}{2} \frac{\partial^2 u}{\partial y^2} - \frac{1+\nu}{2} \frac{\partial^2 v}{\partial x \partial y} + \frac{\nu}{R} \frac{\partial w}{\partial x} &= 0, \\ \frac{1-\nu}{2} \frac{\partial^2 u}{\partial x \partial y} - \frac{\partial^2 v}{\partial y^2} + \frac{1-\nu}{2} \frac{\partial^2 v}{\partial x^2} + \frac{1}{R} \frac{\partial w}{\partial y} &= 0, \\ \frac{\nu E \delta}{R(1-\nu^2)} \frac{\partial u}{\partial x} + \frac{E \delta}{R(1-\nu^2)} \frac{\partial v}{\partial y} + DV^2 \nabla^2 w + \frac{E \delta}{1-\nu^2} \frac{w}{R^2} + q_1 \frac{\partial^2 w}{\partial x^2} &+ \end{aligned} \right. \quad (1.1)$$

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P/006/61/009/001/001/001  
D213/D305

A flat isotropic cylindrical shell...

The remaining boundary conditions are obtained by differentiation of Eqs. (3.3), (3.4), (3.5). The general solution confirms the correctness of the solution for the particular case of W. Nowacki (Ref. 3: Op. cit) and Z. Kaczkowski, (Ref. 9: Orthotropic Rectangular Plates with Arbitrary Boundary Conditions, Arch. Mech. Stos. 2, 8 (1958)) and Ref. 11: Ortotropowe plyty prostokatne o dowolnych warunkach brzegowych. Arch. Mech. Stos. 4, 7 (1955) s. 457). The difficulty in solving the general equation depends on boundary conditions. However, it should be a useful aid in solving many practical problems. With the aid of a computer it should be extremely helpful in solving not only cylindrical shells but also shells of any shape. There are 4 figures, 1 table and 12 Soviet-bloc references.

ASSOCIATION: Zakład badania drgań IPPT PAN (Vibrations Research Institute, IPPT PAS)

SUBMITTED: March 24, 1960

Card ~~11/12~~

SOLECKI, Roman

Vibration of straight bars and plates with concentrated masses.  
Rozpr inż PAN 9 no.3:497-512 '61.

1. Zakład Badania Drgan Instytutu Podstawowych Problemow Techniki  
Polskiej Akademii Nauk.

(Vibration)

S/124/63/000/003/043/065  
D234/D308AUTHOR: Solecki, R.

TITLE: Vibrations of plates with concentrated masses

PERIODICAL: Referativnyy zhurnal, Mekhanika, no. 3, 1963, 23, abstract 3V154 (Bull. Acad. polon. sci. Sér. sci. techn. 1961, v. 9, no. 4, 209-215 (Eng.; summary in Rus.))

TEXT: The problem is solved with the aid of a Fourier transformation for the product of two functions, one of which is Dirac's delta function, the other the deflection function of the plate. The author continues the development of the method proposed by himself earlier (Bull. Acad. polon. sci. Sér. sci. techn. 1960, v. 8, no. 7, 325-332). Its idea is the application of Fourier transformations to a wide class of problems (bending, free vibrations, loss of stability of plates with arbitrary boundary conditions, with varying mass of the plate and varying rigidity of elastic base, with concentrated masses) when the solution of any analogous (fundamental) problem for a plate of the same configuration is known. With the

Card 1/2

Vibrations of plates ...

S/124/63/000/003/043/065  
D234/D308

aid of the transformation, the initial differential equation (or system of these) goes over into an algebraic one (or a system). The kernel of the integral Fourier transformation is chosen in the form of eigenfunctions of a known (e.g. homogeneous) problem. The solution is obtained in the form of double Fourier series. As an example, the author considers the steady-state vibrations of a plate of constant thickness, compressed uniformly over the boundary, with concentrated masses, placed on an inhomogeneous rigid Winkler base. In the general case, when the boundary conditions in the problem in question and in the known solution are different it is necessary to solve an infinite system of algebraic equations. This is illustrated by considering free vibrations of a rectangular orthotropic plate with rigidly clamped edges and with a concentrated mass in the center. From an approximate solution of the frequency equation the author obtains a formula for the fundamental frequency of such a plate. 10 references. [Abstracter's note: Complete translation.]

Card 2/2

SOLECKI, R.

The non-homogeneous isotropic rectangular plate with arbitrary boundary conditions. Bul Ac Pol tech 9 no.6:329-335 '61.

1. Department of Vibrations, Institute of Fundamental Technical Problems, Polish Academy of Sciences. Presented by W. Nowacki.

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517 1431 1158, class 2807

P/033/61/013/001/002/009  
D242/D301

AUTHOR: Solecki, Roman (Warsaw)

TITLE: A general solution of the problem of the orthotropic rectangular parallelepiped and an example from the theory of thick plates

PERIODICAL: Archiwum mechaniki stosowanej, v. 13, no. 1, 1961, 117-136

TEXT: The author presents detailed equations for the coefficients in the triple Fourier expansion of the general static or steady-state vibrational solution of the following equations

$$A_{11}u_{xx} + A_{66}u_{yy} + A_{55}u_{zz} + \mu\omega^2u + (A_{12} + A_{65})v_{xy} + (A_{13} + A_{55})w_{zx} = q_x, \tag{1.1.1}$$

$$(A_{12} + A_{66})u_{xy} + A_{66}v_{xx} + A_{55}v_{yy} + A_{44}v_{zz} + \mu\omega^2v + (A_{23} + A_{44})w_{yz} = q_y, \tag{1.1.2}$$

$$(A_{13} + A_{65})u_{xz} + (A_{23} + A_{44})v_{yz} + A_{55}w_{xx} + A_{44}w_{yy} + A_{33}w_{zz} + \mu\omega^2w = q_z, \tag{1.1.3}$$

for a rectangular parallelepiped with boundary conditions which are linear and at least sectionally continuous, the regions of contin-

Card 1/2



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P/033/61/013/001/008/009  
D242/D301

A general solution...

uity having edges parallel to those of the parallelepiped. The boundary conditions are taken in the form of a double Fourier series, whose coefficients may be known or unknown, and the effect of approximation in their determination, when unknown, is examined by considering two static examples. The first is a straightforward calculation for a square prism symmetrically loaded on walls, when  $z = \text{constant}$  and with no normal displacement on the lateral walls. The second involves an isotropic rectangular thick plate loaded vertically and clamped along the edge with the possibility of tangential horizontal displacement. An infinite system of algebraic equations is obtained for the unknown Fourier coefficients, and the results are found by replacing it by finite systems of different numbers of equations, the conclusion is reached that, at least, the sixth approximation should be found, i.e., 36 equations should be solved to obtain sufficient accuracy for correct comparison with the results of elementary methods. There are 4 figures and 8 Soviet-bloc references.

ASSOCIATION: Department of Vibrations, IBTP, Polish Academy of Sciences

SUBMITTED: July 13, 1960

Card 2/2

X

WOJTCZAK, Jan; SOLECKI, Roman

Research on the gelatinization process of some hydrosols used  
in photography. Prace matemat przyrod Poznan 10 no.2:27-39  
'62.

1. Physical Chemistry Department, Adam Mickiewicz  
University, Poznan.

GUO ZHONG-HENG [Kuo Chung-heng]; SOLECKI, R.

Free and forced finite-amplitude oscillations of an elastic thickwalled sphere of incompressible material. Bul Ac Pol tech 11 no.2:75-80 '63.

1. Department of Mechanics of Continuous Media, Institute of Fundamental Technical Problems, Polish Academy of Sciences, Warsaw. Presented by W.Nowacki.

SOLECKI, Roman

A certain solution for the problem of an anisotropic rectangular plate with variable rigidity; *Rozpr ins PAN* 11 no.2;203-215 '63.

1. Zakład Mechaniki Osrodkow Ciaglych, Instytut Podstawowych Problemow Techniki, Polska Akademia Nauk, Warszawa.

GUO ZHONG-HENG; SOLECKI, Roman

Free and forced finite-amplitude oscillations of an elastic  
thickwalled hollow sphere made of incompressible material.  
Archiw mech 15 no. 3:427-433 '63.

1. Department of Mechanics of Continuous Media, Institute of  
Basic Technical Problems, Polish Academy of Sciences, Warsaw.

SOLECKI, R.

Bending of a beam elastically connected with a rigid body.  
Bul Ac Pol tech 12 no. 2:142-146 '64.

1. Presented by W. Kowacki.

SOLECKI, Roman (Warsaw)

Integral equation method of computing finite deflections  
of beams. Archiw inz lad 10 no.3:267-278 '64.

KAPITANOWYK, Kazimierz; SOLECKI, Roman

A method of joining polyvinyl chloride floor slabs to a concrete base. Chemia Poznan no.2:59-63 '64.

1. Department of General Chemistry, Technical University, Poznan.



SOLECKI, Roman

Sintering of glass powders obtained from Polish glass. *Chemia  
Poznan* no.2:65-72 '64.

1. Department of General Chemistry, Technical University, Poznan.

BELEC, Czeslaw; SOLECKI, Stanislaw

Estrogenic bodies in the Krynica mud. Pol. tyg. lek. 17 no.15:567-568  
9 Ap '62.

1. Z Centralnego Sanatorium Wojskowego w Krynicy; kierownik: dr med.  
Czeslaw Belec.

(MUD THERAPY) (ESTROGENS)

SOLECKI, W.

"The dispatcher in textile industries." p. 25. (ODZBIER, Vol. 4, no. 2, Feb. 1953, Lodz, Poland)

SO: Monthly List of East European Accessions, L. C., Vol. 3, No. 5, May 1954, Uncl.

SOLEK, Leszek, mgr inz.

New measuring instruments for construction engineering.  
Inz i bud 21 no.11:394-395 N '64.

1. Technical University, Krakow.

SOLANIK, A., inzh.elektrik (Leningrad)

Thin air in the house. Zdorov's 4 no.11:32 N '58. (MIRA 11:11)  
(ODORS) (OZONE)

SOLENIKOV, N.N., kand. tekhn. nauk

Distributing earth in constructing roadbeds using large scrapers.  
Trudy RISI no. 4:144-150 '55. (MIRA 12:1)  
(Scrapers) (Road construction)

SOLENIKOV, N.N., inzhener

For economy in the construction of earth road beds. Avt.dor.18  
no.4:24-25 J1-Ag'55. (MLRA 8:11)

(Road construction)

SOLENIKOV, N., kandidat tekhnicheskikh nauk; POLYAKOV, A., inzhener.

New two-story trailer-trolley buses. Zhul.-kom.khos. 6 no.3:30 '56.  
(MIRA 9:8)

(Berlin--Trolley)



SOLOV'EV, N.N., kand. tekhn. nauk

Economical system for making roadbeds. Nauch. dokl. vuz. stroit. stroi.  
no. 4:265-268 1977. (MIRA 12:7)

1. Rekomendovaniya kafedroy tekhnologii stroitel'nogo proizvodstva  
Rostovskogo inzhenerno-stroitel'nogo instituta.  
(Road construction)

SOLENIKOV, M.N., kand. tekhn. nauk

Generalized indices of expenditures on roadbed construction.  
Avt.dor. 22 no.2:20-21 F '59. (MIRA 12:2)  
(Road construction)

SOLENIKOV, N.N., kand.tekhn.nauk

Let's use efficient methods in conducting earthwork operations.  
Avt. dor. 23 no.8:20-21 Ag '60. (MIRA 13:8)  
(Earthwork--Accounting)

SOLENKO, T. V.

PONOMAREV, V.D.; NI, L.P.; LEBEDEV, K.B.; SOLENKO, T.V.

Influence of sulfide ions on the speed of dissociation of aluminate solutions. Izv. AN Kazakh. SSR. Ser. gor. dela, met., stroi. i stroimat. (MLRA 10:5)  
no. 1: 34-40 '57.  
(Sulfides) (Aluminates) (Dissociation)

PONOMAREV, V.D., otv.red.; NI, L.P., red.; RUBAN, N.N., red.;  
SAZHIN, V.S., red.; SOLENKO, T.V., red.; ZHUKOVA, N.D., red.;  
RCROKINA, Z.P., tekh.red.

[Chemistry and technology of alumina; transactions] Khimia i  
tehnologiya glinozema; trudy. Alma-Ata, Izd-vo Akad.nauk  
Kazakhskoi SSR, 1961. 162 p. (MIRA 15:5)

1. Vsesoyuznoye soveshchaniye po khimii i tekhnologii glinozema,  
Alma-Ata, 1959. 2. Institut metallurgii i obogashcheniya AN Kazakh-  
skoy SSR(for Ni). 3. Kazakhskiy politekhnicheskii institut (for  
Ponomarev, Sazhin).

(Alumina)

NI, L.P.; PEREKHREST, G.L.; SOLENKO, T.V.

Solubility of sodium aluminosilicate in aluminate solutions. Zhur.prikl.  
khim. 37 no.1:22-29 Ja '64. (MIRA 17:2)

1. Institut metallurgii i obogashcheniya AN KazSSR.

PONOMAREV, V.D.; MONICH, V.K.; NURLYBAYEV, A.N.; NI, L.P.;  
SOLENKO, T.V.; PANCHENKO, A.G.

Nepheline rocks of the Virgin territory as a comprehensive  
raw material for the production of aluminum oxide, soda  
products and cement. Vest. AN Kazakh. SSR 18 no.4:23-31  
Ap '62. (MIRA 16:11)

SOLENKO, T.V.; NI, L.P.

Interaction of iron hydroxide with high-ratio aluminate solutions  
in presence of calcium oxide at 90°C. Trudy Inst. met. i obog.  
AN Kazakh. SSR 12:3-8 '65. (MIRA 18:10)



IL'IN, S., slesar' mekhanicheskogo tsekha, ratsionalizator; SOLENKOV, A.  
elektromonter, ratsionalizator; VARLAMOV, I., tehnik-konstruktor.  
ratsionalizator.

Proper conditions for the work of efficiency promoters have not been  
created. Stroi.mat. 3 no.2:28 F '57. (MLRA 10:3)

1. Shchurovskiy tsementnyy zavod.  
(Shchurovo--Cement industries)

SOV/117-59-7-8/28

25(7)

AUTHOR: Solenkov, Yu.N.

TITLE: Modernization of a Planing-Milling Machine

PERIODICAL: Mashinostroitel', 1959, Nr 7, pp 18-19 (USSR)

ABSTRACT: The article describes how "Kurt Hube" planing-milling machines were modernized at the Kolomenskiy teplovo-zostroitel'nyy zavod (Kolonna Diesel Locomotive Plant) by making changes in the milling head and table displacement mechanism of the machine. The old journal bearings of the milling head spindle were replaced by roller bearings with the addition of forced lubrication, etc. The table displacement mechanism was provided with a new reversible electric motor "Ts-30/8-4" with 1425 and 720 rpm speed, a new worm gear pair, etc. This modernization has doubled the machining rate and reduced the auxiliary work time. There are 2 diagrams.

Card 1/1

KRASIL'NIKOV, Gennadiy Aleksandrovich; SOLENOK, Z.A., inzh.,  
retsenzent; SOKOL'SKIY, I.F., red.; USTINOVA, V.A.,  
tekhn. red.

[Oil and water cooling of the transformers of the V.I.  
Lenin Volga Hydroelectric Power Station] Masliano-  
vodianoe okhlazhdeniye transformatorov Volzhskoi TES im.  
V.I.Lenina. Moskva, Gos.energ.izd-vo, 1960. 46 p.  
(MIRA 16:10)

(Electric transformers--Cooling)  
(Volga Hydroelectric Power Station (Lenin))

SOLENCY, K.I.

A case of brucellar etiology of meningitis. Zdrav. Kazakh.  
23 no.2:73-74'63. (MIRA 16:10)

1. Iz Kirovskoy rayonnoy bol'nitsy Yuzhno-Kazakhstanskogo  
kraya. (BRUCELLOSIS) (MENINGITIS)