"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R001446810010-6

SAKHNO, A.

Calculation of cost in sausage production. Mias.ind.SSSR 27 no.3: 33-35 '56. (MIRA 9:9)

1.Rostovskiy-na-Donu myasokombinat.
(Sausages) (Meat industry--Accounting)

APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R001446810010-6"

"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R001446810010-6

S/073/62/028/002/001/006
B101/B110

AUTHORS: Zharovskiy, F. G., Sakhno, A. G.

TITLE: Distribution of molybdenum and tungsten in the system hydrobromic acid - organic solvent

PERIODICAL: Ukrainskiy khimicheskiy zhurnal, v. 28, no. 2, 1962, 145-150

TEXT: A study was made of the distribution of Mo and W (as sodium molybdate and sodium tungstate, respectively) between an aqueous solution of HBr and oxygen-containing solvents: isoamyl acetate, isobutanol, butanol, isoamyl alcohol, diethyl ether, n-amyl alcohol, isobutyl acetate, and propyl acetate. After mixing the HBr solution containing a known quantity of W or Mo with the organic solvent, the content of W or Mo in the aqueous phase was determined colorimetrically, and the quantity of W or Mo gone over into the organic phase was calculated from the difference. The result was: (1) 10 ml of 1.0, 2.0, 3.0, 4.0, 5.0, and 6.0 N HBr hold 0.88, 0.57, 0.44, 0.33, 0.29, and 0.26 mg of W, respectively, in solution. At higher tungsten concentrations tungstic acid is precipitated. (2) 95-70% of W is extracted from 0.1-0.5 N HBr. Accordingly, the degree of extraction decreases with

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increasing acidity. (3) With increasing acidity, the degree of extraction of Mo increases, 86-97% of Mo is extracted from 5-6 N HBr. (4) This dependence of the degree of extraction on the acidity is not influenced by the kind of organic solvent. (5) As regards their capability of extracting W from 1 N HBr, organic solvents can be arranged as follows: isoamyl acetate < isobutanol < butanol < isoamyl alcohol < diethyl ether < n-amyl alcohol < isobutyl acetate < propyl acetate. For Mo with equal acidity the following sequence is obtained: diethyl ether < isobutyl acetate < propyl acetate < isoamyl acetate < isoamyl alcohol < n-amyl alcohol < isobutanol < butanol. With W the extractive capacity of esters increases with their dielectric constant, while the extractive capacity of alcohols decreases with increasing dielectric constant. No such rule was found with Mo. (7) The solvents used do not allow a quantitative separation of Mo from W, but permit enrichment in these metals. (8) The complex of Mo (or W) extracted with isoamyl acetate has a molar ratio of M:Br = 1:2 (M = Mo or W). The existence of the complex acids $H_2[WO_3Br_2]$ and $H_2[MoO_3Br_2]$ is assumed. There are 9 tables. The two most important English-language references are: G. Morrison, Anal. Chem., 11, 1388 (1950); Y. G. Nelidow, R. H. Diamond, The Journal of Physical Chemistry, 59, 711 (1955).

APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R001446810010-6"

"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R001446810010-6

Distribution of molybdenum ... S/073/62/028/002/001/006
B101/B110

ASSOCIATION: Kiyevskiy gosudarstvennyy universitet im. T. G. Shevchenko (Kiyev State University imeni T. G. Shevchenko)

SUBMITTED: September 30, 1960

Card 3/3

APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R001446810010-6"

"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R001446810010-6

OSINTSEVA, K.V., inzh.; SAKHNO, A.P., inzh.

Shearing strength of soft overburden rocks in the central section of the Rozdol sulfur pit. Nauch.zap.Ukrniiproekta no.5:37-47 '61. (MIRA 15:7)

(Rozdol region--Strip mining) (Shear (Mechanics))

APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R001446810010-6"

"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R001446810010-6

SAKHNO, N. M., SIMONOVITCH, E. N.

"Materials on the epicemiology of infectious hemorrhagic nephroso-nephritis in the steppe focus." p. 121

Desyatoye soveshchaniye po parazitologicheskim problemam i prirodnoochagovym boleznyam. 22-29 Oktyabrya 1959 g. (Tenth Conference on Parasitological Problems and Diseases with Natural Foci 22-29 October 1959), Moscow-Leningrad, 1959, Academy of Medical Science USSR and Academy of USSR, No. 1 25 pp.

APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R001446810010-6"

"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R001446810010-6

DURASOV, A.S., kand.tekhn.nauk; KRYLOV, N.A., kand.tekhn.nauk; BYSTRYAKOV, V.Ya., inzh.; YEGOROV, N.I., inzh.; SAKHNO, G.I., inzh.

Mobile electronic acoustical and radiometric laboratory. Biul.tekh.inform. po stroi. 5 no.11:14-16 N '59. (MIRA 13:4)

(Building materials--Testing) (Radiometer) (Electronic instruments)

APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R001446810010-6"

"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R001446810010-6

SAKHNO, I. I.

"Marmota Bobak Mull's Food Habits," Priroda, No. 2, 1949.

APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R001446810010-6"

"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R001446810010-6

SAKHNO, I. I.

"Results of the Acclimatization of Racoon-like Dogs in the Donbas," Priroda, No. 4, 1948.

APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R001446810010-6"

"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R001446810010-6

SAKHNO, I.I.

Materials on the study of feed composition of some murine rodents [with summary in English]. Zool. zhur. 36 no.7:1084-1092 Jl '57. (MLRA 10:9)

1. Voroshilovgradskiy pedagogicheskiy institut.
(Uspenka District--Mice)
(Animals, Food habits of)
(Rodent control)

APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R001446810010-6"

"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R001446810010-6

SAKHNO, I.I.

Effect of agricultural practices on the sex ratio and fecundity in some murine rodents occurring in fields of Lugansk Province. Zool.zhur. 38 no.12:1856-1868 D '59. (MIRA 13:5)

1. Lugansk Pedagogical Institute.
(Lugansk Province--Rodentia)

APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R001446810010-6"

"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R001446810010-6

SAKHNO, I.I.

Effect of stage harvesting headed grain crops on murine rodents. Zool. zhur. 42 no.6:954-956 '63. (MIRA 16:7)

1. Pedagogical Institute of Lugansk.
(Mice) (Harvesting)

APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R001446810010-6"

"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R001446810010-6

PA - 3629

AUTHOR: SAKHNO, I.S.

TITLE: The Flying not Backed-off One-Tooth Worm Cutter. (Odnozubaya nezatylovannaya chervyachnaya freza-letuchka, Russian)

PERIODICAL: Stanki i Instrument, 1957, Vol 28, Nr 6, pp 37 - 37 (U.S.S.R.)

ABSTRACT: Worm gears are usually milled by means of worm cutters or flying steel blades. As it is uneconomical to manufacture a worm cutter for one or several worm gears, flying steel blades are often used, which, however, are liable to wear more quickly, are not as durable, lose their profile, and are more complicated to adjust. At the machine factory of Rostov a flying not backed-off worm cutter is being used, which can be made on a screw cutting lathe. It is characterized by the fact that it need not be backed off and can be repeatedly re-ground without losing its tooth profile. This milling cutter is produced in several parts as is shown by illustrations 1 and 2, which are accompanied by a detailed description. This method of milling can be employed also in the case of cylindrical, bevelled, and other types of toothing etc.

ASSOCIATION: Not given

PRESENTED BY:

SUBMITTED:

AVAILABLE: Library of Congress

Card 1/1

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"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R001446810010-6

SHEVCHUK, I.A.; TSELINSKIY, Yu.K.; SAKHNO, L.I.

Extraction of microimpurities of metals by amines. Report No.1: Calculation of the concentration of halide ions required for the extraction of metals using instability constants. Extraction of zinc. Trudy IREA no.25:408-414 '63. (MIRA 18:6)

APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R001446810010-6"

"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R001446810010-6

SAKHNO, M.F.

Streptomycin in listerellosis of swine. Veterinariia 37 no.12: 58 D '60. (MIRA 15:4)

1. Glavnyy veterinarnyy vrach svinosovkhoza "Kommunar", Stavropol'-skogo kraya.
(Streptomycin) (Listerellosis) (Swine--Diseases and pests)

APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R001446810010-6"

"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R001446810010-6

SAKHNO, N. G.

AUTHOR: Goncharevich, I. F. SOV/24-58-11-42/42

TITLE: Scientific Coordination Conference of Vibration Actuated Machinery for the Mining Industry (Nauchno-koordinatsionnoye soveshchaniye po vibratsionnym mashinam dlya gornoy promyshlennosti)

PERIODICAL: Izvestiya Akademii Nauk SSSR, Otdeleniye Tekhnicheskikh Nauk, 1958, Nr 11, p.152 (USSR)

ABSTRACT: The Mining Institute, Ac.Sc. USSR held a coordination conference on problems of design and testing of vibration type machinery for the mining industry on July 9 to July 10, 1958 (the first conference on vibration conveyors took place on April 8-10, 1957). Representatives of about thirty research establishments, design organisations, works and undertakings and teaching establishments participated. The conference dealt with sub-dividing the subjects of investigation between the individual organisations working in the field of vibration transportation, the more important scientific problems to be solved were outlined and the fundamental technical measures on developing vibration type conveyors were reported on. In his opening address, Corresponding

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SOV/24-58-11-42/42

Scientific Coordination Conference of Vibration Actuated Machinery for the Mining Industry

Member of the Ac.Sc. A. O. Spivakovskiy reviewed available data in this field and dealt briefly with the basic type, the 2-trough system with an eccentric drive and also with the required types of vibrators for operating such conveyor systems. Ten papers were read. I. F. Goncharevich, Institute of Mining, Ac.Sc. USSR, dealt with the classification and the structural schemes of vibration transportation machinery.
N. G. Sakhno dealt with experiments on utilisation of electronic analogues for calculating vibration type conveyors.
V. I. Bartoshevich (Novocherkassk Polytechnical Institute) reported on experience gained in designing and operation of electro-vibration conveyors; Ye. U. Zharikov (same Institute) reported on calculating the mechanical part of electro-vibration machinery and N. P. Zhuchkov (same Institute) reported on theoretical determination of optimum parameters of operation of vibration type conveyors.
V. S. Bondarev reported on experience in designing

Card2/4

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SOV/24-58-11-42/42

Scientific Coordination Conference of Vibration Actuated Machinery for the Mining Industry

2-trough vibration conveyors in the VNIITsvetmet Institute; V. S. Tikhonov reported on results obtained with experimental 2-tube vibration conveyors at the imeni Parkhomenko Works.
V. K. D'yachkov (VNIIPTMash) reported on the technique of testing vibration type conveyors.
V. D. Soroko (Gipronikel') reported on work of the Institute in the field of building vibration loading machinery.
The following technical and organisational measures were recommended:
1. Mastering of the manufacture of thin wall tubes, troughs of special profiles, vibration resistant rubber and rubber-metallic components, rolling bearings which can withstand vibration loading.
2. Development and organisation of the manufacture of normal series of motor-vibrators, electromagnetic and pneumatic vibrators.
3. Building of a central test stand for investigating and setting of vibration conveyors.

Card3/4

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SOV/24-58-11-42/42

Scientific Coordination Conference of Vibration Actuated Machinery for the Mining Industry

4. Organisation of the publication of literature relating to the theory, calculation and design of vibration machinery.

(Note: This is a complete translation)

Card 4/4

USCOMM-DC-60396

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"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R001446810010-6

SPIVAKOVSKIY, Aleksandr Onisimovich; GONCHAREVICH, Igor' Fomich. Prinimali uchastiye: Bronin, A.G., inzh.; KOVAL', V.T., inzh.; SAKHNO, N.G., inzh.. KHODAKOV, I.K., red.izd-va; SHKLYAR, S.Ya., tekhn.red.

[Vibratory mine haulage machinery; foreign practices] Gornotransportnye vibratsionnye mashiny; zarubezhnyi opyt. Moskva, Ugletekhizdat, 1959. 219 p. (MIRA 12:10)
(Mine haulage)

APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R001446810010-6"

"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R001446810010-6

SAKHNO, N.G.

GONCHAREVICH, Igor' Fomich, kand.tekhn.nauk; STREL'NIKOV, Leonid Pavlovich, kand.tekhn.nauk. Prinimal uchastiye SAKHNO, N.G., gornyy inzh.. TERPIGOREV, A.M., akademik, retsenzent; KHAZHINSKIY, Yu.N., kand.tekhn.nauk, retsenzent; SPIVAKOVSKIY, A.O., red.; YEVNEVICH, A.V., dotsent, kand.tekhn.nauk, red.; SMOLDYREV, A.Ye., red.; ISLENT'YEVA, P.G., tekhn.red.

[Electric vibrating conveying machinery] Elektrovibratsionnaia transportnaia tekhnika. Pod red. A.O.Spivakovskogo i A.V. Evnevicha. Moskva, Gos.nauchno-tekhn.izd-vo lit-ry po gornomu delu, 1959. 261 p. (MIRA 13:2)

1. Chlen-korrespondent AN SSSR (for Spivakovskiy).
(Conveying machinery) (Vibrators)

APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R001446810010-6"

"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R001446810010-6

SAKHNO, N.G., inzh; SPIVAKOVSKIY, A.O., prof.

Electronic modeling of vibrating conveyers. Nauch. dokl. vys. shkoly; gor. delo no.1:167-172 '59. (MIRA 12:5)

1.Chlen-korrespondent AN SSSR (for Spivakovskiy). Predstavlena kafedroy rudnichnogo transporta Moskovskogo gornogo instituta im. I.V. Stalina.

(Conveying machinery--Models)
(Electromechanical analogies)

APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R001446810010-6"

"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R001446810010-6

GONCHAREVICH, I.F., kand.tekhn.nauk; SAKHNO, N.G., inzh.; TRANIN, F.Ye., inzh.

Effect of elastic elements of suspension with a nonlinear characteristic on the operation of a vibrating conveyer. Nauch. soob. Inst. gor. dela 4:97-108 '60. (MIRA 15:1)

(Conveying machinery)

APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R001446810010-6"

"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R001446810010-6

GONCHAREVICH, I.F., kand. tekhn. nauk; SAKHNO, N.G., kand. tekhn. nauk

Some regularities in transporting by vibrating conveyors with nonsymmetrical characteristics of the elastic couplings. Nauch. soob. IGD 18:144-150 '63. (MIRA 16:11)

APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R001446810010-6"

"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R001446810010-6

L 20417-66 EWT(1)/EWA(h)

ACC NR: AP6009851 SOURCE CODE: UR/0413/66/000/004/0046/0046

AUTHOR: Melekhin, V. B.; Sakhno, N. G.

ORG: none

21
B

TITLE: Variable measuring capacitor, 25 Class 21, No. 178906

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 4, 1966, 46

TOPIC TAGS: capacitor, variable capacitor, measuring capacitor

ABSTRACT: A variable measuring capacitor with two axially mounted electrodes (see figure) is introduced. To ensure the measuring accuracy when the capacitor is used to determine both the dielectric permeability and loss tangent of liquid dielectrics, the inner electrode is demountable and consists of a hollow removable upper section and a solid lower section. The upper section of the outer electrode has an inner diameter larger than that of its lower section. Orig. art. has: 1 figure.

[JR]

Card 1/2 UDC: 621.319.43

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"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R001446810010-6

L 20417-66

ACC NR: AP6009851

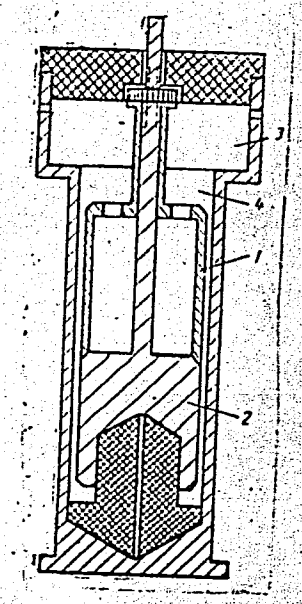

Fig. 1. Variable measuring capacitor

1 - Upper section; 2 - lower section; 3 - upper section of the outer electrode; 4 - lower section of the outer electrode.

SUB CODE: 09/ SUBM DATE: 02Apr65/ ATD PRESS: 4222

Card 2/2 ULR

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"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R001446810010-6

SAKHNO, V.

If visits to construction projects become more frequent. Fin. SSSR 37 no.1:81-83 Ja '63. (MIRA 16:2)

1. Upravlyayushchiy Checheno-Ingushskoy kontoroy Stroybanka.
(Chechen-Ingush A.S.S.R.--Construction industry--Finance)
(Chechen-Ingush A.S.S.R.--Banks and banking)

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"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R001446810010-6

1. BARDUNOV, L., SAKHNO, V. G.

2. USSR (600)

4. Malaza Valley - Caves

7. In a karst cave. Vokrug sveta, No. 2, 1953.

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

APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R001446810010-6"

"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R001446810010-6

Sakhno V.G.

USTINOVSKIY, Yu.B.; SAKHNO, V.G.

Brief geological outline of natural occurrences of sorbents in the southern part of the Soviet Far East. Trudy DVFAN SSSR. Ser. khim. no.3:10-40 '58. (MIRA 11:5)

(Soviet Far East--Sorbents)

APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R001446810010-6"

"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R001446810010-6

BYKOV, V.T.; SAKHNO, V.G.; USTINOVSKIY, Yu.B.

Outline of beds of natural sorbents in Amur Province.
Trudy DFAN SSSR. Ser. khim. no.4:5-12 '60. (MIRA 14:10)
(Amur Province—Sorbents)

APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R001446810010-6"

"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R001446810010-6

SAKHNO, V.G.

Origin of ignimbrites and tuff lavas of Cretaceous volcanogenic strata in the southern part of the Far East. Trudy Lab. vulk. no.20:143-150 '61. (MIRA 14:11)

1. Geologicheskiy institut Dal'nevostochnogo filiala Sibirskogo otdeleniya AN SSSR.
(Far East--Volcanic ash, tuff, etc.)

APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R001446810010-6"

"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R001446810010-6

SAKHNO, V.G.; USTINOVSKIY, Yu.B.

Accumulation, composition, and weathering products of tuffs in the Tyrma Depression (Khabarovsk Territory). Geol.i geofiz. 4:82-94 '62. (MIRA 15:8)

1. Dal'nevostochnyy filial Sibirskogo otdeleniya AN SSSR, Vladivostok.
(Tyrma Depression--Volcanic ash, tuff, etc.)

APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R001446810010-6"

"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R001446810010-6

SAKHNO, V.G.; DENISOV, Ye.P.

Origin of the inclusions of ultrabasite rocks in basalts in the southern part of the Far East. Izv. AN SSSR.Ser.geol. 28 no.8:43-55 Ag '63. (MIRA 17:2)

1. Dal'nevostochnyy geologicheskiy institut Sibirskogo otdeleniya AN SSSR, Vladivostok.

APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R001446810010-6"

"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R001446810010-6

[illegible], V.[illegible]; [illegible], A.T.

Volcano of Lake [illegible]. Okhr. prir. na Dal'. Vost. [illegible]
159-[illegible] '63. [illegible] 18:[illegible]

1. Dal'nevostochnyy geologicheskiy institut Dal'nevostochnogo filiala Sibirskogo otdeleniya AN SSSR.

APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R001446810010-6"

"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R001446810010-6

SAKHNO, V.Ye.; ARTYUKH, S.Ye.

Device for the suction of oil vapors. Sbor.rats.predl.vnedr.v proizv. no.1:8 '61. (MIRA 14:7)

1. Trest "Leninruda", rudoupravleniye "Bol'shevik".
(Lubrication and lubricants--Safety measures)

APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R001446810010-6"

"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R001446810010-6

SAKHNO, Ye.P.

Oily spurge. Biul.Glav.bot.sada no.19:130 '54. (MLRA 8:2)

1. Botanicheskiy sad Chernovitskogo gosudarstvennogo universiteta.
(Spurge)

APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R001446810010-6"

"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R001446810010-6

SAKHNO, Ye.P.

Industrial excursions in the eighth class. Geog. v shkole 19 no.4: 53-56 Jl-Ag '56. (MLRA 9:10)

1.Ust'-Labinskaya shkola Krasnodarskogo kraya.
(School excursions)

APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R001446810010-6"

"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R001446810010-6

SAKHNOV, YU.

DYATCHIN, N.; SAKHNOV, Yu.

Loading device for handling long-sized freight. Avt.transp. 32 no.10:32-33 O '54. (MLRA 7:12)
(Loading and unloading)

APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R001446810010-6"

"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R001446810010-6

L 1335-66 EWP(z)/EWT(m)/EWP(b)/T/EWA(d)/EWP(w)/EWP(t) MJW/JD

ACCESSION NR: AP5022403 UR/0369/65/000/004/0465/0467

42
40
B

AUTHOR: Vyval', I. P.; Romaniv, O. N.; Sakhno, Yu. A.

TITLE: Effect of heat and vibration treatment on shear strength and endurance of bits made of R18 steel

SOURCE: Fiziko-khimicheskaya mekhanika materialov, no. 4, 1965, 465-467

TOPIC TAGS: mechanical heat treatment, shear strength, endurance test, steel/ R18 steel

ABSTRACT: R18 steel containing 0.9% C, 18.2% W, 4.1% Cr, 1.1% V, and 0.2% Mo was used in the study. The bits diameter was 9 mm and the drill rod's diameter was 15 mm. The treatment procedure involved heating to 1260°C, cooling in air to 450--600°C, cyclic torsional deformation, and quenching in oil. The treatment equipment was described in the literature (I. V. Vyval' and O. N. Romaniv, *Vliyaniye rabochikh sred na svoystva materialov*, 1964, vyp. 3 [Effect of Operating Media on Properties of Materials, 1964, No. 3]). The shear strength was examined on a vertical drill at a constant feed rate of 0.11 mm/revolution using type-45 steel. The cutting rate varied from 8.2 to 16.1 m/min. Maxima of bit endurance occured at

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L 1335-66

ACCESSION NR: AP5022403

2

n = 500 and α = 2° and n = 300 and α = 4°. Highest steel bit endurance resulted when the treatment was carried out at 450°C. The treatment has no effect on the red hardness of R18 steel. The effect of tempering temperature on bit hardness is shown in fig. 1 of the Enclosure. The microhardness Hμ distribution on bit's profile after the shear strength test is shown in fig. 2 of the Enclosure. Orig. art. has: 2 figures, 1 table.

ASSOCIATION: Fiziko-mekhanicheskiy institut AN UkrSSR, Lvov (Physico-mechanical Institute, AN UkrSSR)

SUBMITTED: 06Mar65 ENCL: 02 SUB CODE: MM, IE

NO REF SOV: 002 OTHER: 000

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L 1335-66

ACCESSION NR: AP5022403

ENCLOSURE: 01

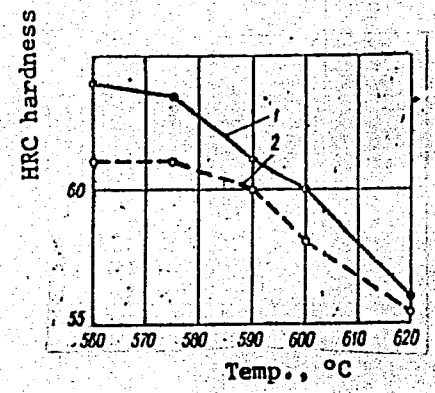

Fig. 1. 1--After treatment (n = 500 and α = 2°); and 2--After convential gradual hardening.

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ACCESSION NR: AP5022403

ENCLOSURE: 02

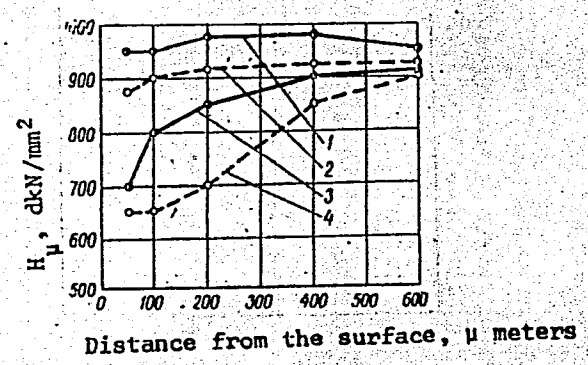

Fig. 2. 1--conventional thermal working at cutting rate V=8.2 m/min; 2--heat-vibration working at V=8.2 m/min; 3--conventional thermal working at cutting rate V=12.0 m/min; 4--heat-vibration working at V=12.0 m/min

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"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R001446810010-6

ZAYCHENKO, I.Z.; SAKHNO, Yu.A.

Using hydraulic dividing valves in synchronizing the operating elements of machine tools. Stan. i instr. 36 no.11:16-19 N '65. (MIRA 18:11)

APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R001446810010-6"

"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R001446810010-6

SERGEYEV, L.I.; DAUKAYEVA, R.S.; SAKHNOV, N.S.

Effect of mineral fertilizers and topdressing on the physiology and productivity of black currant. Izv. SO AN SSSR no.8. Ser. biol.-med.nauk no.2:94-98 '65. (MIRA 18:9)

1. Bashkirskiy gosudarstvennyy universitet, Ufa.

APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R001446810010-6"

"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R001446810010-6

SAKHNOVA, Kh.Ye.; KOROBKOVA, G., red.; NEMYTOV, V., tekhn.red.

[The present and the past of the "Tekmash" Plant"] Nastoiashchee i proshloe zavoda "Tekmash." Orel, Orlovskoe knizhnoe izd-vo, 1959. 136 p. (MIRA 13:2)
(Orel Province--Machinery industry)

APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R001446810010-6"

"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R001446810010-6

SAKHNOVICH, I. A.:

Sakhnovich, I. A.:

"On the adaptation of non-self-joined operators to diagonal form." Min Higher Education Ukrainian SSR. Khar'kov Order of Labor Red Banner State U imeni imeni A. M. Gor'kiy. Odessa, 1956. (Dissertation for the Degree of Candidate in Physicomathematical Science.)

Knizhnaya letopis'
No 34, 1956. Moscow.

APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R001446810010-6"

"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R001446810010-6

SAKHNOVICH, L.A.

Limit values of multiplication integrals. Usp.mat.nauk 12 no.3:205-210 My-Je '57. (MIRA 10:10)
(Integrals)

APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R001446810010-6"

"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R001446810010-6

PA - 2893

AUTHOR: SAKHNOVICH, L.A.

TITLE: The Reduction of VOLTERRA Operators to the most Simple Form, and the Inverse Problems.
(O Privedenii vol'terrovskikh operatorov k prosteyshemu vidu i obratnykh zadachakh, Russian)

PERIODICAL: Izvestiia Akad. Nauk SSSR, Ser. Mat., 1957, Vol 21, Nr 2, pp 235 - 262 (U.S.S.R.)
Received: 5 / 1957 Reviewed: 6 / 1957

ABSTRACT: M.S.LIFSHITS (Matem. sborn., 36 (76):1 (1954), 145 - 199) showed that every operator of the class i , the spectrum of which is concentrated at a single point $\Omega = 0$, can be reduced to the "triangular shape" $Af = i\int_0^x f(t)\beta(t)Idt\beta(x)$ $(0 \leq x \leq 1)$ by means of a unitary transformation. Here $f(x) \in L_r^2 [0,1]$ applies. The matrix $\beta(t)$ is non-negative and $Sp\beta^2(x) = 1$ applies. I is a diagonal matrix in the diagonal of which only + 1 or - 1 occur. The present papaer investigates the further simplification of the operator given above by means of linear (not necessarily unitary) transformations. In the case of some additional restrictions of the matrix $\beta^2(x)I$ it is stated that the operator A is linearly equivalent to the operator $I^{(m)}$. $I^{(m)}$ is defined here as follows:

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PA - 2893

The Reduction of VOLTERRA Operators to the most Simple Form, and the Inverse Problems.

$$I^{(m)}\varphi = \left[i\int_0^x \varphi_1(t)dt, \ldots, i\int_0^x \varphi_m(t)dt, 0, 0, \ldots \right], \quad x \in [0,b].$$

The operator $I^{(m)}$ represents the direct sum of the most simple integration operators. In particular, a result for the integral VOLTERRA operators is given.

As an application of the results obtained the present work proves some uniqueness theorems for the inverse problems which are connected with the following systems of differential equations:

The following systems may easily be reduced to the form just given:

$$\begin{cases} \dfrac{d\xi_1}{dt} = \lambda\left[b(t)\xi_1 + c(t)\xi_2\right] \\ \dfrac{d\xi_2}{dt} = -\lambda\left[a(t)\xi_1 + b(t)\xi_2\right] \end{cases} \qquad \begin{cases} \dfrac{d\varphi}{dx} = -\lambda\Psi + a(x)\varphi + b(x)\varphi \\ \dfrac{d\Psi}{dx} = -\lambda\varphi + b(x)\varphi - a(x)\Psi \end{cases}$$

The following operators are investigated in detail:

$$Af = i\int_0^x f(t)\beta(t)Idt\beta(x) \quad (0 \leq x \leq 1)$$

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PA - 2893

The Reduction of VOLTERRA Operators to the most Simple Form and the Inverse Problem.

$$Kf = i\int_0^x f(y)K(x,y)dy, \quad f(y) \in L^2[0,1]$$

$$Af = i\int_0^x f(t)\beta^2(t)Idt\beta(x), \quad Af = i\int_0^x f(t)\beta(t)Idt\beta(x), \quad (0 \leqslant x \leqslant 1)$$

ASSOCIATION: Not given
PRESENTED BY: S.L.SOBOLEV, Member of the Academy.
SUBMITTED: 2.4.1956
AVAILABLE: Library of Congress.

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"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R001446810010-6

SAKHNOVICH, L.A.

20-3-10/59

AUTHOR: Sakhnovich, L.A.

TITLE: On the Reduction of Non-Selfadjoined Operators to the Diagonal Form (O privedenii nesamosopryazhennykh operatorov k diagonal'nomy vidu)

PERIODICAL: Doklady Akademii Nauk SSSR, 1957, Vol. 115, Nr 3, pp. 462-465 (USSR)

ABSTRACT: At first reference is made to relevant preliminary works. The present paper examines the non-selfadjoined operators A of the class $i\Omega$ with a continuous spectrum. The operator A defined in the Hilbert (Gilbert) space H belongs to class $i\Omega$ when its imaginary part $(A - A^*)/2i$ is a totally continuous operator with a converging sum of the moduli of the eigennumbers. The author determines the sufficient conditions under which the operator A can be brought to the diagonal form. The thus obtained results are then used for the investigation of the behavior of $\|\psi(t)\|$ when $t \to \infty$. In this connection $\psi(t)$ signifies the solution of the Schroedinger (Shredinger) equation $i h \frac{\partial \psi(t)}{\partial t} = A \psi(t)$, $\psi(0) = \psi_0$ $(\psi_0 \in H)$. The

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On the Reduction of Non-Selfadjoined Operators to the Diagonal Form 20-3-10/59

problem of reducibility of the operator $A(A \in i\Omega)$ to the diagonal form can be solved when another here-discussed operator A_1 can be brought to this form. The following cases are more closely examined here: The rank of non-hermitianity of the operator A_2 is equal to 1. The operator A be assumed in a certain space H. The results obtained here are then used for the proof of a theorem of uniqueness for systems of differential equations. The Schroedinger (Shredinger) equation $i h \partial \psi(t)/\partial t = A\psi$, $\psi(0) = \psi_0$ $(\psi_0 \in H)$ and the equation $(\partial^2\psi/\partial t^2) + A\psi = 0$, $\psi(0) = \psi_0$, $\frac{\partial\psi}{\partial t}_{t=0} = \psi_1$ $(\psi_0, \psi_1 \in H)$ are investigated. In the latter case A is an operator of the class $i\Omega$ with a continuous spectrum. The present paper contains altogether 6 theorems. There are 6 references, 5 of which are Slavic.

ASSOCIATION: Pedagogical Institute imeni K.D.Ushinskiy in Odessa (Odesskiy pedagogicheskiy institut imeni K.D. Ushinskogo)

PRESENTED: February 28, 1957, by M.V.Keldysh, Academician

SUBMITTED: January 10, 1957

AVAILABLE: Library of Congress

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"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R001446810010-6

SAKHNOVICH, L.A.

20-4-9/60

AUTHOR: Sakhnovich, L.A.

TITLE: The Spectral Analysis of Volterra-Operators and Some Inverse Problems (Spektral'nyy analiz vol'terrovskikh operatorov i obratnyye zadachi)

PERIODICAL: Doklady Akademii Nauk SSSR, 1957, Vol. 115, Nr 4, pp. 666-669 (USSR)

ABSTRACT: According to data obtained by V.A.Marchenko (Tr.Mosk.Matem. Obshch., 1952, Vol. 1, p. 327) the operator K is equivalent to the operator of the iterated integration $J^2 f = \int_0^x f(\xi)(x-\xi)d\xi$, $f(\xi) \in L^2[0, 1]$. The present paper determines sufficient conditions under which the Volterra operator (which must not necessarily be produced by a differential equation) is linearly equivalent to the above-mentioned operator of the iterated integration. The data obtained here are then used for the proof of the uniqueness theorems for systems of differential equations. The author investigates the Volterra operator $Kf = \int_0^x f(t)\, K(x,t)dt$ $f(x) \in L^2[0,1]$ Moreover $K(x,y)$ shall satisfy the following conditions: Limited differentials exist:

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20-4-9/60

The Spectral Analysis of Volterra-Operators and Some Inverse Problems

1.) $\frac{\partial^{j+k}}{\partial x^j \partial t^k} K(x,t)$ $(j,k = 0,1,2)$; $\frac{d}{dx}\left[\frac{\partial^2}{\partial x^2} K(x,t)\Big|_{t=x}\right]$

2.) $K(x,x) \equiv 0$ $(x \geqslant t)$; 3.) $\left|\frac{\partial}{\partial x} K(x,t)\Big|_{t=x}\right| > 0$. Without limitation of the universality it may be assumed here that $\frac{\partial}{\partial x} K(x,t)\Big|_{t=x} \equiv 1$ is valid. Theorem: When the nucleus $K(x,t)$ of the operator K satisfies the above-mentioned conditions, the operator K is linearly equivalent to the operator J^2 of the iterated integration $J^2 f = \int_0^x f(t)(x-t)dt$, $f(t) \in L^2[0,1]$. This theorem also applies, when the operator K is assumed in the space $L^2_m[0,1]$ and when $K(x,t)$ is a matrix-function. Then the author investigates the system of the differential equations $dW/dx \equiv i\lambda W\beta^2(x)J$, $W(0,\lambda) \equiv I (0 \leqslant x \leqslant 1)$. In this connection $\beta^2(x)$ is a hermetically-nonnegative matrix of finite or infinite order r. J is a diagonal matrix in whose diagonal stand either +1 or -1. Finally a theorem on the unique definition of the system of the differential equations by the matrix $W(1,\lambda)$ is given. There are 3 Slavic references.

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"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R001446810010-6

SOV/42-13-4-7/11

AUTHOR: Sakhnovich, L.A.

TITLE: The Reduction to Diagonal Form of a Non-Selfadjoint Operator With a Continuous Spectrum (Privedeniye odnogo nesamosopryazhennogo operatora s nepreryvnym spektrom k diagonal'nomu vidu)

PERIODICAL: Uspekhi matematicheskikh nauk, 1958, Vol 13, Nr 4, pp 193-196 (USSR)

ABSTRACT: Let $Bf = \varphi$

$$\varphi(t) = \frac{1}{\Gamma(i+1)} \frac{d}{dt} \int_0^t f(x)(t-x)^i dx, \quad 0 \leq t \leq 1$$

be an integration operator in the $L^2[0,1]$ and let

$$Af = xf(x) + i \int_0^x f(t)dt, \quad 0 \leq x \leq 1.$$

Theorem: 1) B is bounded.
2) B has the bounded inverse operator B^{-1}

$$f(x) = B^{-1}\varphi(t) = \frac{1}{\Gamma(-i+1)} \frac{d}{dx} \int_0^x \varphi(t)(x-t)^{-i} dt \quad 0 \leq x \leq 1.$$

3) The operator B reduces the operator A to the diagonal

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form, i.e. it is

$$BAB^{-1} = Q.$$

(Q is the operator of multiplication with the independent variable in the $L^2[0,1]$).
In a certain sense, the paper is a completion of the investigations of Livshitz [Ref 1] on non-selfadjoint operators.
There are 2 references, 1 of which is Soviet, and 1 English.

SUBMITTED: November 18, 1955

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"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R001446810010-6

AUTHOR: Sakhnovich, L.A. 38-22-2-7/8

TITLE: Spectral Analysis of the Operators of the Form

$Kf = \int_0^x f(t)k(x-t)dt$ (Spektral'nyy analiz operatorov vida

$Kf = \int_0^x f(t)k(x-t)dt$

PERIODICAL: Izvestiya Akademii nauk SSSR, Seriya Matematicheskaya, 1958, Vol 22, Nr 2, pp 299-308 (USSR)

ABSTRACT: The operators K and K_1 operating in $L^2[0,1]$ are called linearly equivalent, if it exists a bounded operator V so that 1.) V^{-1} exists and is bounded, 2.) $VKV^{-1} = K_1$.

Theorem 1: If the kernel k(x,t) of the operator

$$Kf = i \int_0^x f(t)k(x,t)dt \quad , \quad f(t) \in L^2[0,1]$$

possesses a bounded mixed derivative $\frac{d^2}{dt\,dx} k(x,t)$ and if it

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$$Kf = \int_0^x f(t)k(x-t)dt$$

is $k(x,x) \equiv 1$, then K is linearly equivalent to the operator

$$i\,I\,f = i \int_0^x f(t)dt \quad .$$

Theorem 2: Let $k^{(n)}(t)$ $(0 \leqslant t \leqslant 1)$ be bounded, $k(0) = k'(0) = .. = k^{(n-2)}(0)=0$; $k^{(n-1)}(0) = \alpha$ $(\alpha \neq 0)$. Then it exists an operator

$$H\,f = \int_0^x f(t)h(x-t)dt \qquad f(t) \in L^2\,[0,1]$$

so that $H^n = K$, where $h(0) = \beta$ $(\beta^n = \alpha)$ and $h'(t)$ is bounded.

Theorem 3: If the kernel $k(x)$ satisfies the conditions of theorem 2, and if furthermore $k^{(n+1)}(t)$ $(0 \leqslant t \leqslant 1)$ is bounded, then the operator

$$Kf = \int_0^x f(t)k(x-t)dt, \quad 0 \leqslant x \leqslant 1$$

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"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R001446810010-6

$$Kf = \int_0^x f(t)k(x-t)dt$$

is linearly equivalent to the operator $\alpha I^n f =$

$$= \alpha \int_0^x f(t) \frac{(x-t)^{(n-1)}}{(n-1)!} dt \quad , \quad 0 \leqslant x \leqslant 1.$$

Theorem 4 : If k(x) satisfies the conditions of theorem 3 and if the operators

$$H_1 f = \int_0^x f(t)\, H_1\, (x,t)dt \ , \quad H_2 f = \int_0^x f(t)\, H_2\, (x,t)dt$$

$$\left(\int_0^1 \int_0^1 \left| H_k(x,t) \right|^2 dx\, dt < \infty \quad , \quad k = 1,2 \right)$$

are the n-th roots of the operator K, then it is

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Spectral Analysis of the Operators of the Form 38-22-2-7/8

$Kf = \int_0^x f(t)k(x-t)dt$

$H_1 = \varepsilon H_2$ $(\varepsilon^n = 1)$. There are 2 references, 1 of which is Soviet, and 1 English.

PRESENTED: by S.L. Sobolev, Academician

SUBMITTED: November 17, 1956

AVAILABLE: Library of Congress

1. **Mathematics—Theory**

Card 4/4

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"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R001446810010-6

AUTHOR: Sakhnovich, L.A. (Odessa) 39-44-4-4/5

TITLE: Reduction of Non-Selfadjoint Operators With Continuous Spectrum to Diagonal Form (Privedeniye nesamosopryazhennykh operatorov s nepreryvnym spektrom k diagonal'nomu vidu)

PERIODICAL: Matematicheskiy Sbornik, 1958, Vol 44, Nr 4, pp 509-548 (USSR)

ABSTRACT: The paper consists of three chapters, the first and second of which are devoted to the theory and the third to the examples. The results were already announced by the author without proof two years ago [Ref 8]. There are 11 references, 7 of which are Soviet, 1 German, 2 American, and 1 English.

SUBMITTED: November 17, 1956

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"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R001446810010-6

AUTHOR: Sakhnovich, L.A. (Izmail) SOV/39-46-1-3/6

TITLE: The Inverse Problem for Differential Operators of Order $n > 2$ With Analytic Coefficients (Obratnaya zadacha dlya differentsial'nykh operatorov poryadka $n > 2$ s analiticheskimi koeffitsiyentami)

PERIODICAL: Matematicheskiy sbornik, 1958, Vol 46, Nr 1, pp 61-76 (USSR)

ABSTRACT: Let $y(x,\lambda)$ be a solution of the equation

$$\frac{d^n y}{dx^n} + q(x)y - \lambda^n y = 0 \ , \ y(0,\lambda) = 1 \ , \ \frac{d^k}{dx^k} y(x,\lambda)\Big|_{x=0} = 0$$
$$(k = 1, 2, \ldots, n-1),$$

and $\omega(x,\lambda)$ the solution of

$$\frac{d^n \omega}{dx^n} - \lambda^n \omega = 0 \ , \ \omega(0,\lambda) = 1 \ , \ \frac{d^k \omega}{d x^k}\Big|_{x=0} = 0 \ (k=1,2,\ldots n-1).$$

The main contents of the paper is the simple formula :

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$$(1) \qquad y(x,\lambda) = \omega(x,\lambda) + \int_0^x \omega(t,\lambda)K(x,t)dt$$

where $K(x,t)$ is the solution of a certain Cauchy problem. It is shown that for entire functions $q(x)$ the function $K(x,t)$ is analytic. It is mentioned and is said to be shown in a later paper that it is sufficient that $q(x)$ be analytic in a circle of sufficiently large finite radius. The formula (1) is used in order to prove the following theorems : Theorem 1:

Let the Volterra-operator $g(x)=V\varphi = \int_0^x \varphi(t)V(x,t)dt$, $0 \leqslant x \leqslant 1$

be generated by the differential operator

$$\frac{d^n g}{dx^n} + q(x)g = \varphi, \quad \frac{d^k}{dx^k} g\Big|_{x=0} = 0 \quad (k = 0,1,\ldots, n-1)$$

If $q(x)$ is an entire function, then V linearly is equivalent to the operator

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$$I^n \varphi = \int_0^x \varphi(t) \frac{(x-t)^{n-1}}{(n-1)!} dt , \quad 0 \leqslant x \leqslant 1$$

Theorem 2 : Let $y_i(x,\lambda)$ be a solution of

$$\frac{d^n y_i}{dx^n} - q_i(x) y_i - \lambda^n y_i = 0 , \; y_i(0,\lambda) = 1 , \; \frac{d^k}{dx^k} y_i(x,\lambda)\Big|_{x=0} = 0$$

$$(k=1,2,\ldots, n-1)$$

and the $q_i(x)$ are assumed to be entire functions; $i = 1,2$.

Furthermore let $\int_0^1 y_1(x,\lambda) y_1(x,\mu) dx = \int_0^1 y_2(x,\lambda) y_2(x,\mu) dx$.

Then it is $q_1(x) \equiv q_2(x)$.

There are 8 references, 7 of which are Soviet, and 1 German.

APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R001446810010-6"

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The Inverse Problem for Differential Operators of Order $n > 2$ With Analytic Coefficients SOV/39-46-1-3/6

SUBMITTED: March 21, 1957

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"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R001446810010-6

16(1) SOV/140-59-1-18/25

AUTHOR: Sakhnovich, L.A.

TITLE: On the Reduction of Non-Selfadjoint Operators to the Triangular Form (O privedenii nesamosopryazhennykh operatorov k treugol'nomu vidu)

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Matematika, 1959, Nr 1, pp 180-186 (USSR)

ABSTRACT: Let A be a bounded operator in the Hilbert space H. The maximal subspace which is invariant with respect to A and A* and where $AA^* = A^*A$ is, called the additional component. Let the operator A belong to the class T if to two arbitrary invariant subspaces H_1 and H_2 ($H_1 \in H_2$, $\dim (H_2 \ominus H_1) > 1$) there always exists a third subspace H_3 invariant with respect to A so that $H_1 \in H_3 \in H_2$ and $H_1 \neq H_3 \neq H_2$. The operator $\vec{A}$ is called triangular if it can be defined by

$$\vec{A}f = \frac{d}{dx}\int_0^x f(t)K(x,t)dt, \quad 0 \leq x \leq 1,$$

where $f(t) = [f_1(t), \ldots, f_m(t)]$, $(m \leq \infty)$, $\|f\|^2 = \sum_{k=1}^{m} \int_0^1 |f_k(t)|^2 dt$

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On the Reduction of Non-Selfadjoint Operators to the Triangular Form SOV/140-59-1-18/25

and $K(x,t)$ is a matrix function of m-th order.

Theorem: To every $A \in T$ there exists an $\vec{A}$ and a unitary transformation with the properties: a) U maps biuniquely the space $H \Theta D_A$ onto the space $\vec{H} \Theta D_{\vec{A}}$ (D_A, $D_{\vec{A}}$ are additional components of the operators A and $\vec{A}$); b) for this mapping the operator A defined on $H \Theta D_A$ goes over in the operator $\vec{A} = UAU^{-1}$ defined on $\vec{H} \Theta D_{\vec{A}}$.

For the proof the author uses some notions of M.S.Livshits [Ref 1].

There are 4 references, 2 of which are Soviet, 1 American, and 1 Swedish.

ASSOCIATION: Odesskiy institut pishchevoy i kholodil'noy promyshlennosti (Odessa Institute of Food and Refrigeration Industry)

SUBMITTED: December 6, 1957

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16(1)

AUTHOR: Sakhnovich, L.A. SOV/ 140-59-4-18/26

TITLE: The Investigation of the "Triangular Model" of Non-Self-adjoint Operators

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Matematika, 1959, Nr 4, pp 141 - 149 (USSR)

ABSTRACT: The author considers the operators

(2) $A = H + i B$,

where H is a self-adjoint operator and B a self-adjoint operator of Hilbert-Schmidt. The author shows that all the operators (2) belong to the class T (see author [Ref 1]) and that their "triangular model" has the form

$$\vec{A}\varphi = \varphi(x)H(x) + \int_0^x \varphi(t)N(x,t)dt ,$$

where $H(x) = H^*(x)$, $N(x,t)$ matrix with elements

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The Investigation of the "Triangular Model" of Non-Selfadjoint Operators SOV/140-59-4-18/26

$n_{ij}(x,t)$ and

$$\sum_{i,j=1}^{m} \int_0^1 \int_0^1 |n_{ij}(x,t)|^2 \, dx \, dt < \infty .$$

Altogether there are 3 theorems and several conclusions. V.B. Lidskiy is mentioned in the paper. There are 6 references, 3 of which are Soviet, 1 Swedish, 1 American, and 1 German.

ASSOCIATION: Odesskiy institut pishchevoy i kholodil'noy promyshlennosti (Odessa Institute of Food and Refrigeration Industry)

SUBMITTED: May 17, 1958

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16(1)

AUTHOR: Sakhnovich, L. A. SOV/41-11-3-6/16

TITLE: Limiting Values of a Multiplicative Integral

PERIODICAL: Ukrainskiy matematicheskiy zhurnal, 1959, Vol 11, Nr 3, pp 275-286 (USSR)

ABSTRACT: Let $W(\lambda) = \overrightarrow{\int_a^b} e^{i\frac{dE(t)I}{t-\lambda}} = \overrightarrow{\int_a^b} e^{i\frac{\beta^2(t)I}{t-\lambda}dt}$, where $E(t) = \int_a^t \beta^2(s)ds$; $\beta^2(s)$ is a Hermitean non-negative matrix function; I is a diagonal matrix the diagonal of which consists of +1 and -1. The symbol

$$\overrightarrow{\int_a^b} e^{i\frac{dE(t)I}{t-\lambda}} = \lim_{\max \Delta t_j \to 0} \left[e^{i\frac{\Delta E(t_0)I}{\xi_0-\lambda}} \cdots\cdots e^{i\frac{\Delta E(t_{n-1})I}{\xi_{n-1}-\lambda}} \right]$$

$(a = t_0 \leqslant \xi_0 \leqslant \ldots \leqslant t_n = b)$ denotes the so-called multiplicative integral:

Let the matrix $\beta^2(t)I$ satisfy the following conditions: 1. There exists a matrix $U(t)$ so that $\beta^2(t)I = UH(t)U^{-1}$, where $H(t)$ is a

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selfadjoint matrix; 2. $\sup\left\{\|U(t)\|,\ \|U(t)^{-1}\|,\ \mathrm{Sp}\,\beta^2(t)\right\} \leq M$; 3. There exists a K so that for arbitrary $t_1, t_2 \in [a,b]$ it holds $\|U(t_1) - U(t_2)\| \leq K|t_1 - t_2|$.

Theorem: Under the above assumptions for almost all σ there exist the limit values

$$(1)\quad \lim_{\tau\to+0} W(\sigma+i\tau) = W^+(\sigma),\quad \lim_{\tau\to+0} W(\sigma-i\tau) = W^-(\sigma),$$

namely in the sense of strong convergence it holds

$$W^+(\sigma) = \lim_{\varepsilon\to+0}\left[\int_a^{\sigma-\varepsilon} e^{i\frac{dE(t)I}{t-\sigma}}\, e^{-\pi\beta^2(\sigma)I} \int_{\sigma+\varepsilon}^{b} e^{i\frac{dE(t)I}{t-\sigma}}\right],$$

$$W^-(\sigma) = \lim_{\varepsilon\to+0}\left[\int_a^{\sigma-\varepsilon} e^{\frac{idE(t)I}{t-\sigma}}\, e^{\pi\beta^2(\sigma)I} \int_{\sigma+\varepsilon}^{b} e^{\frac{idE(t)I}{t-\sigma}}\right].$$

The author mentions V.P.Potapov.

There are 3 Soviet references.

SUBMITTED: May 25, 1957

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"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R001446810010-6

SAKHNOVICH, L. A., Doc Phys-Math Sci - (diss) "Spectral analysis of non-selfadjoining, completely continuous operators with a unique spectrum point." Khar'kov, 1960. 14 pp; (Ministry of Higher and Secondary Specialist Education Ukrainian SSR; Khar'kov Order of Labor, Red Banner State Univ im A. M. Gor'kiy); 150 copies; free; bibliography at end of text (21 entries); (KL, 19-60, 129)

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S/042/61/016/005/004/005
C111/C444

AUTHOR: Sakhnovich, L. A.

TITLE: Necessary conditions for the existence of a transformation operator for equations of fourth order

PERIODICAL: Uspekhi matematicheskikh nauk, v. 16 no. 5, 1961, 199 - 204

TEXT: The author proved in (Ref 1: Ob obratnykh zadachakh dlya wravneniy vysshikh poryadkov n > 2 s analitichkimi koeffitsiyentanni [On inversion problems for equations of higher order n > 2 with analytic coefficients], Matem, sb. 46 (88): 1(1958), 61 - 76) the existence of an operator, transforming the solution of

$$\frac{d^n y}{dx^n} + q_{n-2}(x)\frac{d^{n-2}y}{dx^{n-2}} + \dots + q_0(x)\, y - \lambda y = 0$$

into the solution of

$$\frac{d^n \omega}{dx^n} - \lambda\omega = 0.$$

The coefficients $q_i(x)$ were supposed to be analytic.

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Now it is shown that the supposition of analicity turns out to be necessary.

Theorem: Given is the differential equation

$$\frac{d^4y}{dx^4} + \frac{d}{dx}\left[p(x)\frac{dy}{dx}\right] + q(x)y - \lambda y = 0, \qquad 0 \leqslant x \leqslant 1, \tag{1}$$

It be known that its non-trivial solution has the representation

$$y(x, \lambda) = \omega(x, \lambda) + \int_0^x \omega(t, \lambda)K(x, t)dt, \tag{2}$$

where every fourth order derivative of the kernel $K(x, t)$ is continuous and $\omega(t, \lambda)$ is the solution of

$$\frac{d^4\omega}{dx^4} - \lambda\omega = 0, \quad \omega^{(k)}(0, \lambda) = \alpha_k \qquad (k = 0, 1, 2, 3). \tag{3}$$

If $p(x)$ on $0 \leqslant x \leqslant 1$ is infinitely often differentiable, the the same

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Necessary conditions for the existence... holds for q(x).

The author mentions V. I. Matsayev.

There are 2 figures, 2 Soviet-bloc and 1 non-Soviet-bloc reference.

SUBMITTED: February 2, 1960

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S/039/61/055/003/004/004
D299/D304

AUTHOR: Sakhnovich, L.A. (Odessa)

TITLE: Method of the transformation operator applied to the equations of higher order

PERIODICAL: Matematicheskiy sbornik, v. 55, no. 3, 1961, 347-360

TEXT: The possible use of the method for equations higher than second-order is ascertained; a method of solution is proposed for the reciprocal problem. A substantial difference is noted between the use of the method for second order and for higher-order equations respectively. A local solution to reciprocal problem is given. Differential operators of type

$$lg = (-1)^n \frac{d^{2n}g}{dx^{2n}} + (-1)^{n-1} \frac{d^{n-1}}{dx^{n-1}} \left[p_1(x)\frac{d^{n-1}g}{dx^{n-1}}\right] + \dots + p_n(x)g, \quad (1)$$

$$0 \leqslant x < \infty$$

are considered; the functions p(x) are real, differentiable func-

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D299/D304

Method of the transformation ...

tions. The operator l is given on a set of functions which satisfy the linearly independent boundary conditions

$$U_j g = \sum_{k=1}^{2n} \alpha_{j,k} g^{[k-1]}(0) = 0 \quad (j = 1,2,\ldots,n) \qquad (2)$$

where g denotes quasiderivatives, $\alpha_{j,k}$ are real numbers. If the function $\varphi(x, \lambda)$ satisfies certain conditions, then it is called the generalized eigenfunction of the boundary value problem (1)(2). Two boundary-value problems are called equivalent, if an operator of type

$$(I + K)f = f(x) + \int_0^x f(t)K(x, t)dt \qquad (4)$$

exists, transforming the generalized eigenfunctions of one boundary value problem into generalized eigenfunctions of the other boundary value problem. To the n linearly independent eigenfunctions

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$$\varphi_k(x, \lambda), \quad \varphi_k^{(r)}(x, \lambda)\Big|_{x=0} = \gamma_{rk}, \quad \gamma_{rk} = \bar{\gamma}_{rk}, \quad 1 \leqslant k \leqslant n, \quad 0 \leqslant r \leqslant \leqslant 2n-1,$$

there corresponds a real spectral matrix-function, called the spectral matrix-function of the boundary-value problem (1) (2). Assume a non-decreasing n-th order real matrix-function $\sigma(\lambda)$ $(-\infty < \lambda < \infty)$ as given. It is required to determine whether a boundary value problem (1) (2) exists, whose spectral matrix is $\sigma(\lambda)$ and, if this is the case, to give a method for constructing this boundary-value problem, proceeding from the matrix $\sigma(\lambda)$. The problem thus formulated is solved by assuming that the given $\sigma(\lambda)$ differs little from some matrix-function $\sigma_0(\lambda)$ of a pre-determined boundary value problem of type (1) (2). A method is given for passing from the boundary value problem corresponding to $\sigma_0(\lambda)$, to that corresponding to $\sigma(\lambda)$. Hence the solution of the reciprocal problem (construction of differential operator and boundary conditions from a known spectral matrix-function) involves two steps: 1) Choice of appropriate spectral matrix $\sigma_0(\lambda)$, corresponding to the given operator l_0 and the given bounda-

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ry conditions V_j. 2) Construction of the operator l and of the boundary conditions U_j, corresponding to the spectral matrix o (λ). For second-order equations, the first step presents no difficulties, whereas for higher-order equations, the choice of $\sigma_0(\lambda)$ is much more complicated. In fact, such a choice is no longer possible for fourth-order equations already. The second step is practically similar for both second- and higher-order equations. Further, certain necessary conditions are obtained which should be satisfied by the spectral matrix-function of the boundary value problem under consideration. These conditions are stated in the form of 2 theorems. Finally, examples are given of non-equivalent boundary value problems. Thereby, it is proved that for fourth-order equations no finite set of boundary value problems exists, to which all other boundary-value problems could be reduced by means of the transformation operator. There are 5 Soviet-bloc references.

SUBMITTED: February 2, 1960

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B112/B108

AUTHOR: Sakhnovich, L. A. (Odessa)

TITLE: Inverse problem for fourth-order equations

PERIODICAL: Matematicheskiy sbornik, v. 56 (98), no. 2, 1962, 137-146

TEXT: It is demonstrated that boundary value problems of the form

$$d^4g/dx^4 - d(2p(x)dg/dx)/dx + (p^2(x) - p''(x))g - \lambda g = 0,$$

$$\beta_{11}g(0) + \beta_{12}g'(0) + g''(0) = 0, \quad \beta_{21}g(0) + \beta_{22}g'(0) + g'''(0) = 0$$

constitute a class of equivalence. Two boundary value problems are said to be equivalent if there is an operator of the form $f(x) + \int_0^x f(t)K(x,t)dt$, which transforms the generalized eigenfunctions of one problem into the eigenfunctions of the other problem. There are 3 Soviet references.

SUBMITTED: March 11, 1960

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S/020/62/142/003/008/027
C111/C333

AUTHOR: Sakhnovich, L.A.

TITLE: Discrete spectrum of Schrödinger's radial equation

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 142, no. 3, 1962, 550-553

TEXT: The author considers the Schrödinger equation

$$-\frac{\partial^2 u}{\partial x^2} + \left[\frac{\mu(\mu-1)}{x^2} - 2q(x)\right] u - \lambda u = 0 \qquad (1)$$

$$u(0) = 0, \quad 0 \leq x < \infty, \quad \mu > 1,$$

where $q(x)$ is continuous for $x > 0$ and moreover

$$q(x) = \begin{cases} \frac{\beta}{x} + O(1), & 0 \leq x \leq x_0 \\ \frac{A_1}{x} + \frac{A_2}{x^2} + O\left(\frac{1}{x^3}\right), & x \geq x_0 \end{cases} \qquad (2)$$

with $A_1 > 0$. The author investigates the behavior of the smallest eigen-

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number $\varphi(\mu)$ of (1) and of the corresponding eigenfunction $u(x, \mu)$ which he denotes as the minimum function of (1) and as the minimizing eigenfunction respectively.

Theorem 1 : The minimum function has the form

$$\varphi(\mu) = -\frac{A_1^2}{\mu^2} - \frac{4A_2A_1^2}{\mu^4} + O\left(\frac{1}{\mu^6}\right), \quad \mu > 1 .$$

Theorem 2 : The minimizing eigenfunction $u(x, \mu)$ is

$$u(x, \mu) = x^{\mu}\left[1 + O\left(\frac{1}{\mu}\right)\right], \quad 0 \leq x \leq x_0$$

$$u(x, \mu) = x^{\mu} e^{-\frac{A_1}{\mu}x}\left[1 + O\left(\frac{1}{\mu^k}\right)\right],$$

where $0 < k < 1$, $x_0 \leq x \leq \mu^{\frac{3-k}{2}}$, and it is

$$u(x, \mu) = x^{\mu} e^{-\frac{A}{\mu}x}\left[1 + O\left(\frac{1}{\mu^{\frac{1-3k}{2}}}\right)\right],$$

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where $0 < k < \frac{1}{3}$, $\frac{3-k}{2}$ x $\frac{2}{A_1}$ $1 + \frac{1}{\ldots}$ $(1 > 0)$.

In the theorems 3 and 4 the author gives for the normed minimizing eigenfunction $\bar{u}(x, \ldots)$, $\bar{u} = 1$ the estimations :

$$\left\| \bar{u}(x, \mu) - c(\mu_1) e^{-\frac{A_1}{\mu_1} x} \right\|^2 \leqslant O\left(\frac{1}{\mu^3}\right),$$

where

$$\mu_1 = \frac{1 + \sqrt{(2\mu - 1)^2 - 8A_2}}{2}, \quad c(\mu_1) = \left[\int_0^\infty x^{2\mu_1} e^{-\frac{2A_1}{\mu_1} x} dx\right]^{-\frac{1}{2}}.$$

and

$$\left\| u(x, \mu) - c(\mu) x^{\mu} e^{-\frac{A_1}{\mu} x} \right\|^2 \leqslant O\left(\frac{1}{\mu}\right),$$

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where

$$c(\mu) = \left[\int_0^\infty x^{2\mu} e^{-\frac{2A_1}{\mu}x}\, dx\right]^{-\frac{1}{2}}.$$

Theorem 5 : If $\varphi_1(\mu)$ and $\varphi_2(\mu)$ are minimum functions of two boundary value problems, where it holds

$$q_1(x) - q_2(x) = \frac{A_m}{x^m} + O\left(\frac{1}{x^{m+1}}\right), \quad x \geqslant x_0, \quad m > 1,$$

then

$$\varphi_1(\mu) = \varphi_2(\mu) - \frac{2A_m A_1^m}{\mu^{2m}} + O\left(\frac{1}{\mu^{2m+\frac{1}{2}}}\right).$$

Theorem 6 : If the potential $q(x)$ has the form

$$q(x) = \frac{A_1}{x} + \frac{A_2}{x^2} + \frac{A_3}{x^3} + O\left(\frac{1}{x^4}\right), \quad x \geqslant x_0,$$

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then it holds

$$\varphi(\mu) = -\frac{A_1^2}{\mu^2} - \frac{4A_2 A_1^2}{\mu^4} - \frac{4A_2^2 A_1^2 + 2A_3 A_1^3}{\mu^6} + O\left(\frac{1}{\mu^{\frac{13}{2}}}\right).$$

Theorem 7 : Let

$$\varphi_1(\mu) = \varphi_2(\mu) + O\left(\frac{1}{\mu^m}\right),$$

where m = 1,2,... . If the corresponding potentials $q_1(x)$, $q_2(x)$ are analytic functions which are regular at infinity, then it holds

$$\varphi_1(\mu) = \varphi_2(\mu), \quad q_1(x) = q_2(x).$$

There are 2 Soviet-bloc references and 1 non-Soviet-bloc reference.

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Discrete spectrum of Schrödinger's ... S/020/62/142/003/008/027
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The reference to English-language publication reads as follows : L.Schiff, Kvantovaya mekhanika (Quantum mechanics), IL, 1959.

ASSOCIATION: Odesskiy institut pishchevoy i kholodil'noy promyshlennosti (Odessa Institute of Food and Cold-Storage Building Industry)

PRESENTED: August 28, 1961, by A.N. Kolmogorov, Academician

SUBMITTED: July 1, 1961

Card 6/6

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"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R001446810010-6

SAKHNOVICH, L. A. (Odessa)

On the discrete spectrum of a radial Schrodinger equation.
Mat. sbor. 58 no.4:377-396 D '62. (MIRA 16:1)

(Differential equations)

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"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R001446810010-6

SAKHNOVICH, L.A.

A semi-inverse problem. Usp. mat. nauk 18 no.3:199-206 My-Je '63. (MIRA 16:10)

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SAKHNOVICH, L.A.

Certain properties of the discrete spectrum of Schrödinger's radial equation. Dokl. AN SSSR 153 no.2:286-289 N '63. (MIRA 16:12)

1. Odesskiy tekhnologicheskiy institut pishchevoy i kholodil'noy promyshlennosti. Predstavleno akademikom P.S.Novikovym.

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"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R001446810010-6

SAKHNOVICH, L.A. (Odessa)

Spectrum analysis of Volterra operators given in the space of the vector function L_m^2 [0, 1]. Ukr. mat. zhur. 16 no.2:259-268 '64. (MIRA 17:3)

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L 41291-65 EWT(d) IJP(c)

ACCESSION NR: AP5000866 S/0038/64/028/006/1345/1362

AUTHOR: Sakhnovich, L. A.

TITLE: On the Spectrum of an Anharmonic Oscillator

SOURCE: AN SSSR. Izvestiya. Seriya matematicheskaya, v. 28, no. 6, 1964, 1345-1362

TOPIC TAGS: Oscillation theory, anharmonic oscillator, oscillator, mathematical physics, numerical method, asymptotic method

ABSTRACT: The author carries out a detailed investigation of the equation of motion of an anharmonic oscillator with a perturbation of the form

$$V(x)=V(-x)=\sum_{p=1}^{n-1}\frac{B_p}{x^{\frac{p}{n}}},\quad x>0.$$

Formulas applicable to numerical solution of the equation of motion of the oscillator are derived. Orig. art has: 54 equations.

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ACCESSION NR: AP5000866 0

ASSOCIATION: none

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NO SOV REF: 001 OTHER: 001

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SAKHNOVICH, L.A. (Odessa)

Analytic properties of the discrete spectrum of Schrödinger's equation. Mat. sbor. 64 no.2:185-204 Je '64.

(MIRA 17:9)

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"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R001446810010-6

SAKHNOVICH, L.A. (Odessa)

Spectrum of a radial Schrödinger equation near zero. Mat. sbor. 67 no.2:221-243 Je '65. (MIRA 18:8)

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SAKHNOVICH, Ts. M.

PHASE I BOOK EXPLOITATION SOV/4893

Vsesoyuznoye soveshchaniye po fizike, fiziko-khimicheskim svoystvam ferritov i fizicheskim osnovam ikh primeneniya. 3d, Minsk, 1959

Ferrity; fizicheskiye i fiziko-khimicheskiye svoystva. Doklady (Ferrites; Physical and Physicochemical Properties. Reports) Minsk, Izd-vo AN BSSR, 1960. 655 p. Errata slip inserted. 4,000 copies printed.

Sponsoring Agencies: Nauchnyy sovet po magnetizmu AN SSSR. Otdel fiziki tverdogo tela i poluprovodnikov AN BSSR.

Editorial Board: Resp. Ed.: N. N. Sirota, Academician of the Academy of Sciences BSSR; K. P. Belov, Professor; Ye. I. Kondorskiy, Professor; K. M. Polivanov; Professor; R. V. Telesnin, Professor; G. A. Smolenskiy, Professor; N. N. Shol'ts, Candidate of Physical and Mathematical Sciences; E. M. Smolyarenko; and L. A. Bashkirov; Ed. of Publishing House: S. Kholyavskiy; Tech. Ed.: I. Volokhanovich.

PURPOSE: This book is intended for physicists, physical chemists, radio electronics engineers, and technical personnel engaged in the production and use of ferromagnetic materials. It may also be used by students in advanced courses in radio electronics, physics, and physical chemistry.

COVERAGE: The book contains reports presented at the Third All-Union Conference on Ferrites held in Minsk, Belorussian SSR. The reports deal with magnetic transformations, electrical and galvanomagnetic properties of ferrites, studies of the growth of ferrite single crystals, problems in the chemical and physicochemical analysis of ferrites, studies of ferrites having rectangular hysteresis loops and multicomponent ferrite systems exhibiting spontaneous rectangularity, problems in magnetic attraction, highly coercive ferrites, magnetic spectroscopy, ferromagnetic resonance, magneto-optics, physical principles of using ferrite components in electrical circuits, anisotropy of electrical and magnetic properties, etc. The Committee on Magnetism, AS USSR (S. V. Vonsovskiy, Chairman) organized the conference. References accompany individual articles.

Ferrites (Cont.) SOV/4893

Latsh, V. V., Ts. M. Sakhnovich, and B. Kh. Somin. Decomposition of Manganese-Zinc Ferrite During Heat Treatment in an Oxidizing Atmosphere 170

Piskarev, K. A. Effect of Cooling Rate on the Magnetic Properties and Phase Composition of the System $NiO-ZnO-Fe_2O_3$ 174

Bashkirov, L. A., A. P. Falkin, and N. N. Sirota. Investigation of the Magnetic Properties of the Ternary System $NiFe_2O_4-MgFe_2O_4-ZnFe_2O_4$ 183

Kontorovich, I. I. Some Properties and Microstructure of Magnesium-Chromium Ferrites 196

Mirvasov, N. Z. Investigation of the Constant of the Magnetic Anisotropy of Polycrystalline Nickel and Magnesium Ferrites by a Method of Approaching Magnesium Saturation 199

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SAKHNOVSKIY, A. I.

SAKHNOVSKIY, A. I.: "The prothrombin tests in the diagnosis of injuries to the liver in syphilis patients." State Sci Res Dermatological-Venereological Inst, Min Health RSFSR. Leningrad, 1956.
(Dissertation for Degree of Candidate in Medical Science).

SO: Khirurgiya Letopis', No 23, 1956.

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SAKHNOVSKAYA, B.V.

USSR.

A physicochemical investigation of the system $NH_4Br \cdot Al_2Br_6 \cdot C_6H_5NO_2$ (electroconductivity, viscosity, and specific gravity). L. S. Bigich and B. V. Sakhnovskaya. *J. Gen. Chem. U.S.S.R.* 23, 189-93(1953)(Engl. translation); *Zhur. Obschei Khim.* 23, 185-90(1953); cf. *C.A.* 46, 8405i.—The electrocond., viscosity, and sp. gr. for the $NH_4Br \cdot Al_2Br_6$ complex in nitrobenzene were investigated at 20, 30, 40, and 50° for the concn. range 5.00 to 60.09% of complex. The specific electrocond. curves pass through a max. that disappears when the data are cor. for viscosity. The mol. electrocond. values increase with diln. and develop an abnormal character when cor. for viscosity. The curves were similar to those for the $NH_4Br \cdot Al_2Br_6$ complex in nitrobenzene (*C.A.* 44, 9229e). J. J. Casey

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SAKHNOVSKAYA, G. K.

USSR / Microbiology. Anaerobic Bacilli. F-6

Abs Jour: Ref Zhur-Biol., No 16, 1958, 72200.

Author : Sakhnovskaya, G. K.
Inst : Not given.
Title : Comparative Study of Immunity of Native and Purified Aluminum Hydroxide Sorbed Tetanus Anatoxins in Experiment.

Orig Pub: V sb.; Anaerobnyye infektsii, Kiyev, Gosmedizdat USSR, 1957, 38-43.

Abstract: No abstract.

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SAKHNOVSKAYA G. K.

F

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USSR / Microbiology. Microbes Pathogenic for Man and Animals. Bacteria. Anaerobic Bacilli

Abs Jour : Ref Zhur - Biologiya, No 6, 1959, No. 24084

Author : Chernaya, L. A.; Sakhnovskaya, G. K.
Inst : L'vov Scientific Research Institute of Epidemiology, Microbiology and Hygiene
Title : The Problem of Tetanus During Peace Time
Orig Pub : Sb. nauchn. rabot. L'vovsk. n.-i. in-t epidemiol., mikrobiol. i gigiyeny, 1957, vyp 2, 157-165

Abstract : On the basis of the material from four Western oblasts of the Ukrainian SSR for the last few years, it was shown that the mortality due to tetanus exceeds the mortality due to dysentery, scarlet fever, measles, and diphtheria; the lethality in tetanus is equal

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Country : USSR F
Category : Microbiology-Antibiosis and Symbiosis. Antibiotics

Abs. Jour : Ref Zhur - Biol., No.19, 1958, 86015

Author : Shablovskaya, Ye.O.; Sakhnovskaya, G.K.
Institut. : -
Title : The Problem of the Effects of Microcide on Bacillus perfringens

Orig Pub. : Mikrobiol. Zh., 1957, Vol.19, No.2, 38-42

Abstract : The antibiotic microcide acts bacteriostatically and bactericidally on Bacillus perfringens. Under strictly anaerobic conditions, microcide does not only act on B. perfringens but also on the staphylococcus of the aureus species, which is highly sensitive to it and the growth of which, under ordinary conditions, is suppressed by microcide in a concentration of 1:16,000. - L.S.Khaskin

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SAKHNOVSKAYA, G.K., Cand Biol Sci -- (diss) "Tetanus morbidity and souring capacity of soils Bac. tetani in the western regions of the UkSSR." L'vov, 1959, 16 pp (Acad Med Sci USSR) 200 copies (KL, 34-59, 113)

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