

SHESTERIKOVA, T. P.

USSR/Medicine - Physiology

Card : 1/1

Authors : Shesterikova, T. P., and Petrovich, Yu. A.

Title : Change in the kidney functions during disturbance of the natural light process

Periodical : Dokl. AN SSSR, 96, Ed. 4, 873 - 876, June 1954

Abstract : Experimental data show, that a continuous disturbance of the natural light process affects the functional state of the kidneys and that the larger hemispheres of the brain are affected. Twelve references. Table, graphs.

Institution : The Scientific-Research Psychoneurological Institute, Odessa, Ukr-SSR

Presented by : Academician A. I. Abrikosov, April 2, 1954

VISHNEVSKAYA, N.B.; GERASIMOV, N.I.; MALIKOVA, A.F.; PETROVICH, Yu.A.;
SHESTERIKOVA, T.P.

Influence of insulin on glycemic curves in neuroses. Trudy Gos.
nauch-issl. psikhonevr. inst. no.20:237-241 '59. (MIRA 14:1)

1. Nauchno-issledovatel'skiy psikhonevrologicheskiy institut,
Odessa.

(INSULIN)

(NEUROSES)

SHESTERIKOVA, T.P.; PUCHKOVSKAYA, Ye.L.

Peculiarities of protein and lipid metabolism in patients with
vascular diseases of the brain. Vrach. delo no.9:37-41 S '60.
(MIRA 13:9)

1. Odesskiy nauchno-issledovatel'skiy psikhonevrologicheskiy
institut.

(HYPERTENSION)

(PROTEIN METABOLISM)

(LIPID METABOLISM)

SHESTERINA, M.V.

A rare case of a foreign body in the bronchus. Sov.med. 20 no.9:
87-88 S '56. (MLRA 9:11)

1. Iz laringologicheskogo otdeleniya (zav. - prof. A.N.Voznesenskiy)
Moskovskogo oblastnogo nauchno-issledovatel'skogo tuberkuleznogo
instituta (dir. S.A.Chesnokov)
(BRONCHI, foreign bodies
compl., prev.)

SHESTERINA, M.V.

Some functional indicators in tracheobronchoscopy of tuberculous patients.
Vest.oto.-rin. 20 no.4:105 J1-Ag'58 (MIRA 11:7)

1. Iz bronkhologicheskogo otdeleniya (rukovoditel' - prof. A.N. Voznesenskiy) Nauchno-issledovatel'skogo instituta tuberkuleza Ministerstva zdravookhraneniya RSFSR.
(BRONCHOSCOPY)
(BLOOD PRESSURE)

SHESTERINA, M.V., nauchnyy sotrudnik

Treatment of antibiotics, administration [with summary in French]
Probl.tub. 36 no.2:55-61 '58 (MIRA 11:5)

1. Iz bronkho-laringologicheskogo otdeleniya (zav.-prof. A.N. Voznesenskiy) Gosudarstvennogo nauchno-issledovatel'skogo instituta tuberkuleza Ministerstva zdravookhraneniya RSFSR (dir. - kand.med. nauk V.F. Chernyshev)

(TUBERCULOSIS, PULMONARY, ther.

antibiotics, intratracheo-bronchial infusion (Rus))

(ANTIBIOTICS, admin.

intra-bronchial intratracheo-intra-bronchial in pulm.
& bronchial tuberc. (Rus))

SHESTERINA, M. V., Cand of Med Sci — (diss) "Tuberculosis of the Trachea and Bronchial
(Clinic, Diagnosis, and Treatment)
Tubes," Moscow, 1959, 16 pp, (Moscow Medical-Stomatological Institute)

(KL, 2-60, 118)

LACHINYAN, S.R., kand.med.nauk; SHESTERINA, M.V., kand.med.nauk

Review of Russian periodical literature on tuberculosis published during 1958 and 1959. Probl.tub. 38 no.8:100-107 '60. (MIRA 14:1)

1. Iz Moskovskogo nauchno-issledovatel'skogo instituta tuberkuleza Ministerstva zdavookhraneniya RSFSR (dir. - V.F. Chernyshev, zam. dir. po nauchnoy chasti - prof. D.D. Aseyev).

(BIBLIOGRAPHY--TUBERCULOSIS)

SHESTERINA, M.V., mladshiy nauchnyy sotrudnik

Tracheobronchoscopic examination of patients with pulmonary tuberculosis. Kaz. med. zhur. no.5:17-20 S-0 '61. (MIRA 15:3)

1. Bronkhoringologicheskoye otdeleniye (zav. - prof. A.N. Voznesenskiy) Moskovskogo nauchno-issledovatel'skogo instituta tuberkuleza Ministerstva zdravookhraneniya RSFSR.

(TUBERCULOSIS)

(BRONCHOSCOPY)

(TRACHEA—EXPLORATION)

SHESTERINA, M. V., kand. med. nauk

Tuberculosis of the trachea and bronchi in children. Probl. tub.
no.2:38-42 '62. (MIRA 15:2)

1. Iz bronkholorotdeleniya (zav. - prof. A. N. Voznesenskiy)
Moskovskogo nauchno-issledovatel'skogo instituta tuberkuleza
Ministerstva zdravookhraneniya RSFSR (dir. - kandidat meditsinskikh
nauk V. F. Chernyshev, zam. dir. po nauchnoy chasti - prof. D. D.
Aseyev)

(BRONCHI---TUBERCULOSIS)
(TRACHEA---TUBERCULOSIS)

SHESTERINA, M.V., kand. med. nauk; NEMSADZE, M.N.

Comparative evaluation of the examination of lavage waters of the bronchi and the stomach for Mycobacterium tuberculosis. Probl. tuberk. 41 no.4:31-35 '63 (MIRA 17:2)

1. Iz bronkhologicheskogo otdeleniya (rukovoditel' prof. A.N.Voznesenskiy) i iz kliniko-diagnosticheskoy laboratorii (rukovoditel' - kand. med. nauk T.N.Yashchenko) Moskovskogo nauchno-issledovatel'skogo instituta tuberkuleza (dir. - kand. med. nauk T.P.Mochalova, zamestitel' direktora po nauchnoy chasti - prof. D.D. Aseyev) Ministerstva zdravookhraneniya RSFSR.

SHESTERINA, M.V., kand.med.nauk

Clinical aspects of pulmonary tuberculosis in patients with tuberculosis of the bronchi. Probl. tub. 41 no.11:42-46 '63. (MIRA 17:9)

1. Iz bronkhologicheskogo otdeleniya (zav. - prof. A.N. Voznesenskiy) Moskovskogo nauchno-issledovatel'skogo instituta tuberkuleza (dir. - kand. med.nauk T.P.Mochalova, zam. dir. po nauchnoy chasti - prof. D.D.Aseyev) Ministerstva zdravookhraneniya RSFSR.

ACC NR: AP6017639 *JD/HW (N)* SOURCE CODE: UR/0133/66/000/001/0050/0055⁵²

AUTHOR: Dobronravov, D. N.; Lyambakh, R. V.; Stupnikov, E. G.; Shishkinskiy, V. I.;
Murdin, V. M.; Muzalevskiy, O. G.; Yevdokimov, A. S.; Yegorov, Ye. P.; Leont'yev,
S. A.; Shesterkin, A. G.; Khusid, S. Ye.

ORG: Central Automation Laboratory (Tsentral'naya laboratoriya avtomatiki);
TsNIICHM; Magnitogorsk Metallurgical Combine (Magnitogorskiy metallurgicheskiy
kombinat)

TITLE: Experimental operation of an automatic system for controlling strip thickness
on the 2500 continuous sheet mill *14 15*

SOURCE: Stal', no. 1, 1966, 50-55

TOPIC TAGS: hot rolling, automatic control equipment, *steel*

ABSTRACT: An automatic control system was developed for regulating the thickness of
steel strip, consisting of regulators of the gaps between the work rolls, and of a
system stabilizing the tension of the strip between the stands. The automatic con-
trol system yielded satisfactory performance data on the 2500 continuous hot-rolling
mill, and for the majority of the strip profiles studied, decreased the longitudinal
variation in thickness and maintained a more accurate nominal strip thickness than
had been possible before. In the presence of the automatic control system, the
strips are rolled with deviations of no more than ± 0.05 mm (with the exception of

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UDC: 621.771.23:65.011.56

I. 00113-00

ACC NR: AP6017639

short rear portions of the strip, where the positive deviation reaches 0.1-0.15 mm). Without the automatic control system, the length of the strip ends thickened by 0.3-0.2 mm reaches 50-100 m. The decrease in the length of thickened portions of the strip and a more accurate control of nominal strip thickness result in a 1.5% average increase in strip length. Orig. art. has: 6 figures and 2 tables.

SUB CODE: 11,13/ SUBM DATE: none/ ORIG REF: 002/ OTH REF: 001

Card: 2/2 *ell*

SHESTERKIN, V.D.

Pavements of river gravel-sand sedimentations processed with bitumen.
Avt.dor. 28 no.6:28 Je '65. (MIRA 18:8)

VOLKOV, G.K., assistént; SHESTERKINA, N.V.; OGLOBLIN, N.Ye.; KASYUK, I.I.,
veterinarnyy vrach

Air **ionization** increases the sexual activity of bulls. Veterinariia
40 no.9:47-48 S '63. (MIRA 17:1)

1. Moskovskaya veterinarnaya akademiya (for Volkov). 2. Zaveduyushchaya
Stupinskoy stantsiyey iskusstvennogo osemneniya sel'skokhozyaystvennykh
zhivotnykh, Moskovskoy oblasti. (for Shesterkina). 3. Starshiy **zoetekh-**
nik-laborant Stupinskoy stantsii iskusstvennogo osemneniya sel'sko-
khozyaystvennykh zhivotnykh, Moskovskoy oblasti (for Ogloblin).

SKRYARENKO, I.P., inzh.; KRIGMAN, F.Ye.; SHESTERENKOV, V.I.; KOLESNIK, A.F.

Radioluminescent light sources with tritium filling. Svetotekhnika
9 no.8:23-26 Ag '63. (MIRA 16:8)

1. Makeyevskiy institut po bezopasnosti rabot v gornoy promyshlennosti.
(Electric lighting) (Luminescence)

SHESTERNEV, G. (Krasnovodsk)

Making the "Crocodile" clamps. Radio no.10:43 0 '57. (MIRA 10:10)
(Radio--Equipment and supplies)

SHESTAKOV, N.F.; SHESTERNIN, M.F.

Detachable ball-shaped hammer for excavators used in crushing hard
rocks. Rats. i izobr. predl. v stroi. no.79:19-20 '54. (MIRA 8:4)
(Excavating machinery)

REF ID: A66100

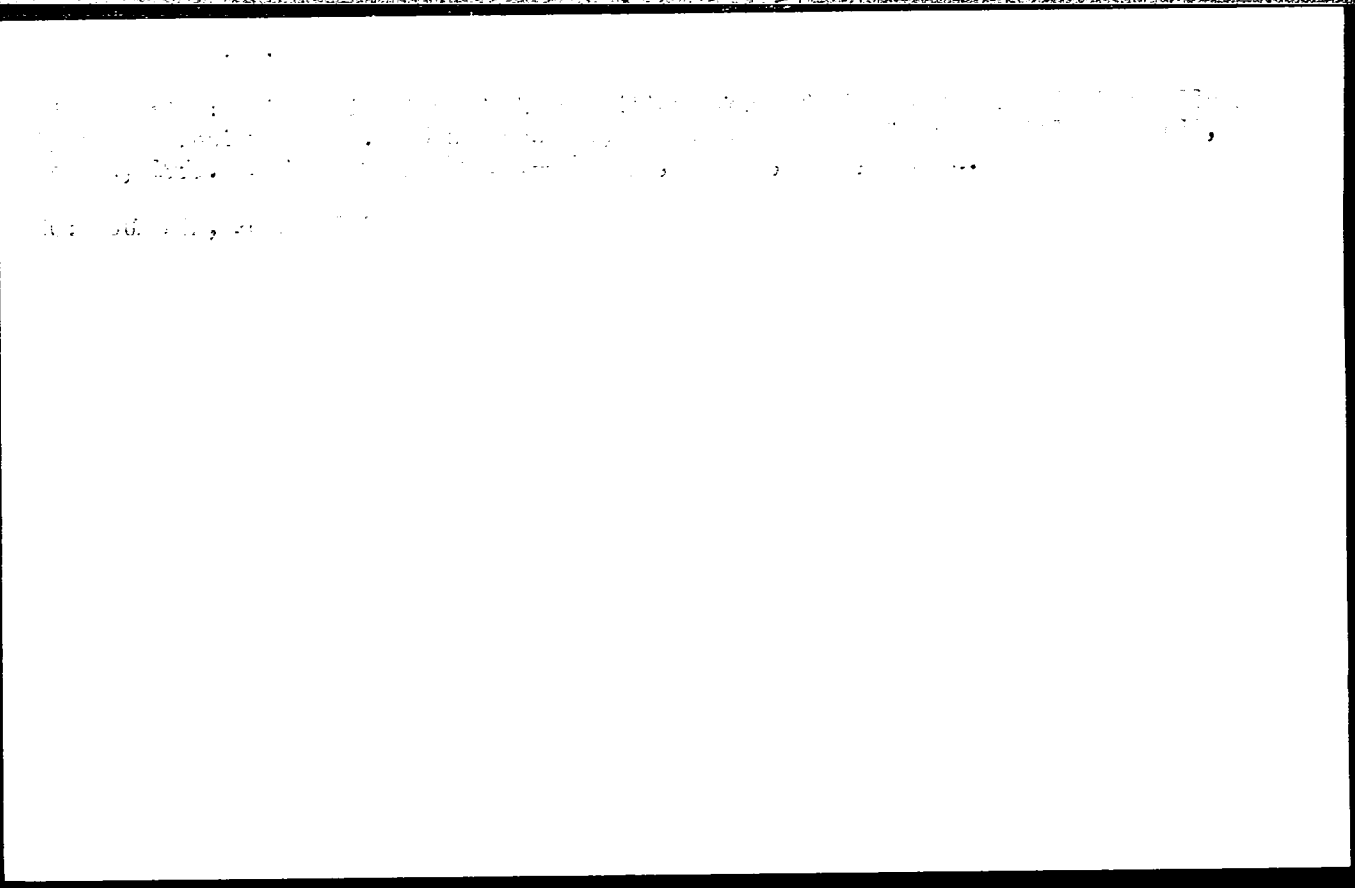
001

1. ZHDANENKO, V. I.; SHESTERNIN, P. S.

2. USSR (600)

"Processing of Shaft Furnace Slag at the Moscow Copper-Smelting and Electrolytic Plant
imeni Molotov," Tsvet. Met., 14, No. 3, Mar. 1939.

9. Report U-1506, 4 Oct. 1951.



SHESTERMIN, P. S.

0005

Investigation of conditions of refining of secondary aluminum alloys with the aid of magnesium. P. S. Shestermin and S. M. Voronov. *Sbornik Nauch. Trudov Mosk. Inst. Tsvetnykh Metal. i Zolota* 1954, No. 24, 228-40; *Referat. Zhur. Akad. Nauk SSSR*, 1956, No. 1115. — In the system Al-Fe-Mg pptn. proceeds intensively during the first 5-6 hrs., then diminishes. In the middle zone in the first 2-3 hrs. some enrichment of Fe alloy occurs on account of flocculation of intermetallic compds. as they settle from the upper zone. The time required for the flocculation of intermetallic particles indicates the necessity of settling of alloys before filtration. The ternary eutectic Al-Al₃Mg-FeAl₃ contains 0.075% of Fe. Soly. of Fe increases with temp. Addn. of Mg refines Al alloys also from Si, forming Mg₂Si, which floats to the surface. When Fe and Si are both present in Al-Mg fusion, pptn. of Fe and floating of Si is mutually hindered, so that the distribution of Fe and Si in zones depends on their relative concn. in the initial alloy. With increase in temp., soly. of Si in the alloy markedly increases. Mn promotes removal of Fe ((Fe,Mn)Al₃ is formed); the optimal ratio of Fe:Mn is 1:1. In the presence of Si and Mn in the system Al-Fe-Mg new intermetallic compds. are not formed. Filtration of such a system effects adequate sepn. of Fe, less complete sepn. of Mn, and least sepn. of Si. Cu in the alloy increases soly. of Fe, and also the soly. of Si at higher temp. It is possible to use filtration for detn. of chem. compn. of liquid phases. V. N. Bednarski

Metal

PSB

YEGOROV, S.M.; KLUSHIN, D.N.; FISHER, A.Va.; ~~CHISTERNIN~~ P.S

Vacuum dezincing of brass. TSvet.met. 28 no.6:32-36 N-D '55.
(MIRA 10:11)
(Brass) (Zinc) (Metallurgical furnaces)

FISHER, A.Ya., kandidat tekhnicheskikh nauk; SHESTERNIN, P.S., kandidat tekhnicheskikh nauk.

Continuous-action unit for the vacuum dezincing of lead. TSvet.met.
29 no.3:15-20 Mr '56. (MLRA 9:7)
(Lead--Metallurgy)

SHESTERNIN, P.S., kandidat tekhnicheskikh nauk.

Treatment of oxidized lead tailings and battery scrap in shaft
electric furnaces. TSvet. met. 29 no.8:59-68 Ag '56. (MLRA 9:10)

(Lead--Electrometallurgy) (Electric furnaces)

SOV/136-59-2-21/24

AUTHOR: Istrin, M.

TITLE: Conference on Secondary Non-Ferrous Metals (Soveshchaniye po vtorichnym tsvetnym metallam)

PERIODICAL: Tsvetnyye Metally, 1959, Nr 2, pp 85-87 (USSR)

ABSTRACT: The third conference of the non-ferrous metals economy section of the Permanent Committee on Economic and Scientific and Technical Co-operation in the field of Non-ferrous Metallurgy of the participating nations of the Soviet Ekonomicheskoy Vzaimopomoshchi (Council for Mutual Economic Aid) was held in Moscow on 9th-20th December 1958. The conference heard and discussed the following reports from representations of the various nations: "Organisation of the Preparation and First Treatment of Non-Ferrous Metal Scrap and Waste" (S.M.Eydis reported for the USSR); "Production of Secondary Aluminium-Base Alloys" (Engineer A.A.Gaylit for the USSR); "Production of Secondary Copper-Base Alloys" (V.M.Bazilevskiy, Candidate of Technical Sciences for the USSR); P.S.Shesternin, Candidate of Technical Sciences on "Results of Trials of an Electric Shaft Furnace for

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Conference on Secondary Non-Ferrous Metals

Reclaiming Melting of Lead Scrap and Waste". The consumption of secondary non-ferrous metals in some of the centres represented is half the total consumption. The author tabulates for the various nations 1958 productions as percentages of those for 1953 and planned 1965 productions as percentages of those for 1958 for copper, lead and zinc. He notes that production possibilities are not everywhere being fully utilised. The conference made recommendations for improving the situation and urged especially better scrap collection, storage and preparation. The importance of dust catching to avoid zinc losses was stressed. The formation of a working group to study melting practice for secondary aluminium alloys was urged; for melting copper-base scrap the conference recommended the induction furnace. The next conference of the section was planned for February 1959 in Prague;

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Conference on Secondary Non-Ferrous Metals

an exhibition on non-ferrous metals economy was
recommended for that town for June 1959. There is
1 table.

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SHESTERIN, P.S.

"The Use of Vacuum in the Metallurgy of Secondary Non-Ferrous Metals."

report presented at the Scientific Technical Conference of Workers in
Secondary Non-ferrous Metallurgy, Khar'kov, 25-27 January 1961.

TSYGANOV, Aleksandr Spiridonovich; SHESTERNIN, P.S., kand. tekhn. nauk, retsenzent; FEL'DMAN, I.Ye., inzh., retsenzent; MISHARINA, K.D., red.izd-va; MIKHAYLOVA, V.V., tekhn. red.

[Production of secondary nonferrous metals and alloys; manual for training and raising the qualification of workers] Proizvodstvo i obrabotki tsvetnykh metallov i splavov; posobie dlia podgotovki i povysheniia kvalifikatsii rabochikh. Moskva, Gos.nauchno-tekhn.izd-vo lit-ry po chernoi i tsvetnoi metallurgii, 1961. 301 p. (MIRA 15:1)
(Nonferrous metals--Metallurgy)

GORODETSKAYA, Ye.G; [Horodets'ka, E.H.], prof.; SHESTERNINA, G.A.
[Shesternina, H.A.]; YARMOLENKO, A.A.

Exercise therapy in the compound treatment of rheumatism in
children. Ped., akush. i gin. 22 no.6:10-12 '60. (MIRA 14:10)

1. Kafedra pediatrii No.2 (zaveduyushchiy - prof. Ye.G.Gorodetskaya
[Horodets'ka, E.H.]) Kiyevskogo ordena Trudovogo Krasnogo Znameni
meditsinskogo instituta im. akad.Bogomol'tsa (direktor - dotsent
M.N.Umovist).

(EXERCISE THERAPY)

(RHEUMATIC FEVER)

SADOV, F.I., doktor tekhn.nauk, prof.; KALININA, K.G., dotsent, kand.tekhn.
nauk; SHESTERNINA, G.P., inzh.

Effect of surface-active substances on the dyeability of acetate
fibers with dispersions dyes. Izv.vys.ucheb.zav.; tekhn.prom.
no.1:56-65 '62. (MIRA 15:2)

1. Moskovskiy tekstil'nyy institut (for Sadov, Kalinina). 2. Novo-
Noginskaya tkatskootdelochnaya fabrika (for Shesternina).
(Dyes and dyeing-Rayon)(Surface-active agents)

SADOV, F.I., prof.; KALININA, K.G., dotsent; Primali uchastiye:
SHESTERNINA, P., studentka; KOSTANDI, L.A., student

Role of surface active agents in the dyeing of acetate rayon
fabrics with dispersed dyes. Tekst.prom. 21 no.9:51-53 S '61.
(MIRA 14:10)

1. Moskovskiy tekstil'nyy institut.
(Dyes and dyeing--Rayon)
(Surface-active agents)

KULEV, L.P.; SHESTEROVA, A.A.

Acyl derivatives of barbiturates, hexamidine, and dihenyl-
hydantoin. Zhur. ob. 31 no.4:1378-1381 Ap '61. (MIRA 14:4)

1. Tomskiy politekhnicheskii institut.
(Barbituric acid) (Hexamidine) (Hydantoin)

SHESTIALTYNOV, F.Ya.

Characteristics and distribution of malignant tumors in South
Kazakhstan Province. Trudy Inst. klin. i eksp.khir. AN
Kazakh. SSR 8:12-14 '62. (MIRA 17:7)

SHESTIALTYNOV, S.I., inzhener.

New method of stacking lumber material in a TsNIIMOD-24 dryer. Der.
i lesokhim.prom. 3 no.12:22-23 D '54. (MIRA 8:1)

1. Rechitskiy mebel'nyy kombinat.
(Lumber--Drying)

SHESTIAL'YNOV, S.I.; KORENEV, N.I.; GARELIK, Ye.M.; VYATKIN, M.D.

Drying lumber in the chamber-24 produced by the Central Scientific
Research Institute for Machine Woodworking. Der.prom. 5 no.6:18-19
Je '56. (MLBA 9:9)

1.Rechitskiy mebel'nyy kombinat.
(Lumber--Drying)

№ 11 1977. 11. 1977. V. 1.

treating of carbamide resin under pressure. Ser. prot. 6 no. 7:19-20
(MLRA 10:8)

1. Putovskaya na-Somu nebel'naya fabrika imeni Uritskogo.
(Gluing) (Urea)

SHESTIALTYNOV, S.I., inzh.

Experimental use of grained paper for facing furniture panels.
Der.prom. 10 no.2:20-21 F '61. (MIRA 14:3)

1. Rostovskaya-na-Donu mebel'naya fabrika im. Uritskogo.
(Furniture) (Wood finishing)

DMITRENKO, P.A.; SHESTIDESYATNAYA, N.Ye.

Effect of liming on soil fertility in Transcarpathia. Pochvovedenie
no.10:40-46 0 '62. (MIRA 15:11)

1. Ukrainskiy nauchno-issledovatel'skiy institut zemledeliya.
(Transcarpathia--Liming of soils)
(Transcarpathia--Soil fertility)

SHCHERBIN, G.F., inst.

Using electronic computers for controlling catalytic reforming
process. Mekh. i avton. uprav. 18 no.9:31-33 S '64.

(MIRA 17:11)

1. The first part of the report.

2. The second part of the report, which is a summary of the work done during the period from 1960 to 1964. (WPA 18.10)

SHESTIKHIN, O.F.

Nomograms for determining valve output coefficients.
Mash. i nefteobor. no.11:40-44 '64.

(MIRA 19:1)

1. Lengiprogaz.

DABAYAN, R.A.; SHCHERBACHENKOVA, V.V.; VERKHESOVA, L.I.; VISHNINOV, Yu.V.;
VYALOVA, N.S.; GLAZUNOV, I.S.; BRUTMAN, R.D.; FEMPEL'KAYA, N.N.;
KOTOVA, E.S.; KUBSHAKOV, N.S., prof.; LARCHEVA, I.P.; LYSKOVA, M.N.;
MALYSHEVA, M.S.; PETUSHEV, V.N.; RYMKOVA, N.N.; SOKOLOVA, I.I.;
STUPENKIN, L.A.; CHUSOVA, V.N.; SHESTIKHINA, O.N.; SHCHLYATIKOVA,
A.Ya.; SHTEKHEBERG, Yu.M.; BARANOVA, Ye.F., red.

[Acute radiation lesion in man] Ostrnaya radiatsionnaya travma
u cheloveka. Moskva, Medicina, 1965. 313 p.

(NINA 10:0)

1. Chief-correspondent IMN USSR (for Kurshakov).

SHAPIRO, P.

"Elasticity of a Crystal as Dependent on Temperature," Dok. Ak. 36, No. 2, 1942. 13r.,
Leningrad Physico-Technical Inst., Dept. Physico-Math. Sci. Acad. Sci., -1942-.

SUDAKOVICH, D. I., SHESTINKIY, N. N.

Woodworking Machinery

Electric band polishing machine for wood type 1-106. Mekh. stroi. 9 no. 4, 1952.

Monthly List of Russian Accessions, Library of Congress, July 1952. UNCLASSIFIED.

SHESTINSKIY, N. N.

SUDAKOVICH, D.I.; BERNADSKIY, G.I.; PETRUN³KIN, L.P., inzhener, laureat
St. linskoy premii, retsenzent; SHESTINSKIY, N.N., inzhener, redaktor.

[Manual on mechanized hand tools] Spravochnik po mekhanizirovannomu
ruchnomu instrumentu. Leningrad, Gos. nauchno-tekhn. izd-vo mashinostroit.
i sudostroit. lit-ry [Leningradskoe otd-nie] 1954. 335 p. (MLRA 7:6)
(Tools)

SERGEYEV, Mikhail Afanas'yevich; SHESTINSKIY, N.N., red.; CHERNOVA, M.S.,
red.; KONTOROVICH, A.I., tekhn. red.

[Manual of a machinist] Spravochnik slesaria. Pod red. N.N.Shestin-
skogo. Leningrad, Lenizdat, 1961. 415 p. (MIRA 14:10)
(Machine-shop practice)

SUDAKOVICH, David Isaakovich, inzh.; BERNADSKIY, Georgiy Ivanovich, inzh.;
KUZNITSYN, G.I., kand. tekhn. nauk, retsenzent; SHESTINSKIY, N.N.,
inzh., red.; DUDUSOVA, G.A. red. izd-va; SPERANSKAYA, O.V., tekhn.
red.

[Manual on portable power tools] Spravochnik po mekhanizirovannomu
ruchnomu instrumentu. Izd.2., dop. i perer. Moskva, Gos.nauchno-
tekhn. izd-vo mashinostroit. lit-ry, 1961. 335 p. (MIRA 14:6)
(Power tools)

SHESTIPEROV, A. A.

Shestiperov, A. A. -- "Increasing the Effectiveness of Interbreed Hybridization in Swine Husbandry." Min Higher Education USSR, Leningrad Agricultural Inst, Leningrad, 1955 (Dissertation for the Degree of Candidate in Agricultural Sciences)

SO: Knizhnaya Letopis', No. 23, Moscow, Jun 55, pp 87-104

SHESTIPEROVA, Z. I.

Some biological characteristics of the common wheat rust (*Puccinia graminis Pers.*) under conditions prevailing in the northwestern zone. Bot. zhur. 45 no.5:735-737 My '60. (MIRA 13:7)

1. Leningradskiy sel'skokhozyaystvennyy institut, g. Pushkin.
(Russia, Northwestern--Wheat rusts)

SHESTIPEROVA, Z. I.

Cand Agr Sci - (diss) "Biological foundation of agrotechnical measures in the battle against stem rust of grain crops under conditions of the North-Western zone." Leningrad, 1961. 20 pp; (All-Union Order of Lenin Academy of Agricultural Sciences imeni V. I. Lenin, All-Union Scientific Research Inst of Plant Protection); 200 copies; price not given; (KL, 5-61 sup, 198)

SHESTITS, Z. [Sestić, Z.] (Zagreb, Yugoslaviya)

Renal pathology in pregnancy. Urologia no.5:60-61 '61.

(KIDNEY—DISEASES) (PREGNANCY, COMPLICATIONS OF) (MIRA 14:11)

SHESTOCHENKO, M.A.

Detecting Mycoplasma antigens by the use of fluorescent antibodies. Veterinariia 42 no.8:110-111 Ag '65.

(MIRA 18:11)

1. Respublikanskaya nauchno-proizvodstvennaya laboratoriya po bor'be s boleznyami molodnyaka sel'skokhozyaystvennykh zhivotnykh Ministerstva sel'skogo khozyaystva RSFSR.

L 23101-06 SWT(1)/T JK

ACC NR: AP5023738 (A) SOURCE CODE: UR/0346/65/000/008/0110/0111

AUTHOR: Shestochenko, M. A.

ORG: Republic Scientific Production Laboratory for the Control of Young Farm Animal Diseases, Ministry of Agriculture RSFSR
(Respublikanskaya nauchno-proizvodstvennaya laboratoriya po bor'be s boleznyami molodnyaka sel'skokhozyay stvennykh zhivotnykh Ministerstvo sel'skogo khozyaystva RSFSR)

TITLE: Identification of a mycoplasmic antigen by means of fluorescent antibodies

SOURCE: Veterinariya, no. 8, 1965, 110-111

TOPIC TAGS: experiment animal, antigen, antibody, chemical labelling, fluorescence, blood serum

ABSTRACT: The specificity of labelled mycoplasmic serum was tested by a fluorescent antibody technique in smears taken from mucous membranes of sick and healthy birds. Immune sera were produced by immunizing rabbits with a Canadian mycoplasmic antigen (K) or a Ukrainian PPLO-antigen (P). Following precipitation the sera were labelled with fluorescein. In control experiments heterological antigens were stained

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UDC: 619:616.981.2-097.2:636.5

L 23161-66

ACC NR: AP5023738

with labelled sera K and P. An ML-1 ultraviolet microscope was used to examine smears stained with the labelled sera. Smears prepared from mycoplasma cultures stained with labelled sera K or P were marked by the bright green-yellow fluorescence of large groups of mycoplasma. In control experiments, mycoplasma stained with heterological labelled sera displayed no specific fluorescence. In tests with labelled serum staining of smears taken from the chorioallantoic membrane of chick embryos infected with viruses of pox-diphtheria and New Castle disease, no specific fluorescence was observed. Fluorescent reactions of labelled sera K and P were specific in mucus smears taken from the throat and conjunctiva of sick birds. Most of the mycoplasmic antigens were identified in the throat mucus rather than in the conjunctiva mucus smears. Orig. art. has: 1 table.

SUB CODE: 06/ SUBM DATE: none.

Card 2/2 PB

SHESTOCHENKO, M.A.

Studies of methods for the diagnosis of Q fever in poultry.
Zhur.mikrobiol.epid.i immun. 31 no.9:25-30 S '60. (MIRA 13:11)

1. Iz Vsesoyuznogo instituta eksperimental'noy veterinarii.
(Q FEVER) (POULTRY DISEASES AND PESTS)

SHESTOCHENKO, M. A., Cand. Veter. Sci. (diss) "Investigations of
Ku-fever of Domestic Fowl," Moscow, 1961, 15 pp. (Moscow Tech.
Inst. Meat and Dairy Industries) 180 copies (KL Supp 12-61, 281).

SERBIN, V.I.; BERESNEVICH, P.V.; ANDRYUSHCHENKO, A.V.; SAZONOV, V.I.;
SHESTOKOV, M.M.

Experience in waste stacking in the zones of caving of operating
mines. Gor. zhur. no.10:41-45 O '65. (MIR# 18:11)

1. Institut Krivbassproyekt (for Serbin, Beresnevich, Andryushchenko).
2. Tsentral'nyy gornoobogatitel'nyy kombinat (for Sazonov, Shestakov).

16(1),16(2)

5783

AUTHORS:

Berezovskiy,A.A., and Shestopal,A.F.(Kiyev) SOV/41-11-4-9/15

TITLE:

Integro-Differential Equations for the Local Stability of Flat Shells

PERIODICAL:

Ukrainskiy matematicheskiy zhurnal. 1959.Vol 11,Nr 4.pp 434-438 (USSR)

ABSTRACT:

According to [Ref 3] the examination of stability of flat thin shells leads to a certain system of differential equations. Starting from this system,the authors consider two states of equilibrium (an undisturbed and a disturbed state) and formulate a theorem on the duality of the work with respect to the disturbances (compare [Ref 2]). The theorem is used in order to describe the local stability by a system of integro-differential equations. An approximate equation for the local stability of the bending is obtained. An example is given. There are 4 Soviet references.

SUBMITTED: November 25, 1958

Card 1/1

00294

S/041/60/012/001/001/007
C111/C222

16.7300

AUTHOR: Shestopal, A.F.

TITLE: Application of the Operator Method to Some Problems of the Statics of Cylindrical Shells

PERIODICAL: Ukrainskiy matematicheskiy zhurnal, 1960, Vol.12, No. 1, pp. 55 - 71

TEXT: The author considers the equilibrium of thin cylindrical shells under the influence of single loads. If the problem is treated with the aid of the generalization of the method proposed by B.G. Galerkin for plates then a system of 24 equations must be solved. By application of the operator method the same problem can be reduced to the solution of four algebraic equations.

At first, the single load P acting in the point Q(ξ, η) is represented by a (divergent) series

$$(1.4) \quad q_{\xi\eta}(x,y) = \frac{2P}{a} \sigma_1(y-\eta) \sum_{k=1}^{\infty} \sin \alpha_k \xi \sin \alpha_k x,$$

where $\alpha_k = \frac{k\pi}{a}$ and $\sigma_1(y-\eta)$ is the unit impulse function. Then the

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C111/C222

Application of the Operator Method to Some Problems of the Statics of Cylindrical Shells

author considers a cylindrical shell being rectangular in plan form the boundaries of which $x = 0$ and $x = a$ are pin-jointed and the boundaries $y = 0$ and $y = b$ are supported arbitrarily. The tension $F(x,y)$ and the bending $w(x,y)$ satisfy

$$(2.1) \quad \nabla^2 \nabla^2 F = - \frac{E}{R} \frac{\partial^2 w}{\partial x^2} ,$$

$$D \nabla^2 \nabla^2 w = \frac{h}{R} \frac{\partial^2 F}{\partial x^2} + q(x,y) .$$

The boundary conditions for $x = 0, x = a$ are satisfied if

$$(2.2) \quad w(x,y) = \sum_{k=1}^{\infty} w_k(y) \sin \alpha_k x ,$$

$$F(x,y) = \sum_{k=1}^{\infty} F_k(y) \sin \alpha_k x ,$$

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S/041/60/012/001/001/007
C111/C222

Application of the Operator Method to Some Problems of the Statics of Cylindrical Shells

where $\alpha_k = \frac{k\bar{h}}{a}$. Considering (1.4) then, for the determination of $F_k(y)$, $w_k(y)$, one obtains two ordinary differential equations each (for every k) to which the transformation of Laplace-Carson is applied. The appearing algebraic image equations can be solved, whereafter, according to the usual formulas, the reverse transformation is carried out. That yields explicit expressions for $w_k(y)$, $F_k(y)$.

According to the same scheme the author calculates a shell pin-jointed at all four boundaries. That leads to four algebraic equations. Then the author constructs the Green's tensor for a closed cylindrical shell. The equilibrium equations with respect to shifts lead to

$$(3.7) \left(\frac{\partial^8}{\partial x^8} + 4 \frac{\partial^8}{\partial x^6 \partial \varphi^2} + 6 \frac{\partial^8}{\partial x^4 \partial \varphi^4} + (1 - \nu^2) a^{-2} \frac{\partial^4}{\partial x^4} + 4 \frac{\partial^8}{\partial x^2 \partial \varphi^6} + 8 \frac{\partial^6}{\partial x^2 \partial \varphi^4} + 4 \frac{\partial^4}{\partial x^2 \partial \varphi^2} + \frac{\partial^8}{\partial \varphi^8} + 2 \frac{\partial^6}{\partial \varphi^6} + \frac{\partial^4}{\partial \varphi^4} \right) \phi = \frac{R^2}{a^2 B} q_5^3 \varphi_0(x, \varphi)$$

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Application of the Operator Method to Some Problems of the Statics of
Cylindrical Shells

(cf. (Ref. 7)), where the shifts u, v, w of the middle surface can be expressed by ϕ . The load is decomposed into components $q_1^j \varphi_0, q_2^j \varphi_0, q_3^j \varphi_0$, where

$$(3.9) \quad q_1^j \varphi_0 = \frac{P^j}{\pi R^2} \sigma_1(x - \xi) \left[\sum_{k=1}^{\infty} \cos k(\varphi - \varphi_0) + \frac{1}{2} \right].$$

Seeking $\phi(x, \varphi)$ in the form

$$(3.10) \quad \phi(x, \varphi) = \sum_{k=0}^{\infty} \phi_k(x) \cos k(\varphi - \varphi_0)$$

then for ϕ_k one obtains the equations

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$$(3.11) \quad \frac{d^8 \phi_k}{dx^8} - 4k^2 \frac{d^6 \phi_k}{dx^6} + (1-\nu^2)a^{-2} \frac{d^4 \phi_k}{dx^4} - 4k^2 (k^2 - 1) \frac{d^2 \phi_k}{dx^2} + k^4 (k^2 - 1)^2 \phi_k = \frac{\sigma_1(x - \xi)}{B \tilde{\nu} a^2} p^3$$

The transformation of Laplace-Carson is applied to these equations. After the determination of ϕ_k the Green's tensor is theoretically found. The formulas for the calculation of the shifts of the middle surface as well as the characteristic equation, however, are so complicated that the author holds out a prospect of other formulas being more suitable for the calculation in his next paper.

There are 3 figures and 8 Soviet references.

[Abstracter's note : (Ref. 7) concerns A.L. Gol'denveyzer, Theory of Elastic Thin Shells]

SUBMITTED: March 3, 1959

Card 5/5

SHOSTOPAL, A. F., Cand. Phys-Math. Sci. (diss) "Use of Methods of Reflections and Integral Transformations in Theory of Elasticity." Kiev, 1961, 6 pp. (Combined Scientific Council of Institutes of Math., Physics, and Metallic Physics) 170 copies (KL SUPP 12-61, 284).

22767
S/041/61/013/001/006/008
B112/B202

16.3500

AUTHOR: Shestopal, A. F.

TITLE: Application of the reflection method to certain biharmonic problems

PERIODICAL: Ukrainskiy matematicheskiy zhurnal, v. 13, no. 1, 1961, 80-90

TEXT: The author deals with problems of the bending of rectangular rods by concentrical forces P. These problems are solved by the integration of biharmonic differential equations with boundary conditions of the following three types: ball bearing end, fixed end, and free end. The

author bases his studies on the solution $(-P/16\pi)R^2 \ln R^2$ of the biharmonic equation. In the first case (ball bearing end) the author obtains an influence function of the form: $\frac{P}{4\pi} \int_{-\infty}^{x-\xi} z \ln \frac{R_-(z)}{R_+(z)} dz$ with $R_-(x-\xi) = \text{ch} \frac{\pi}{b}(x-\xi)$

$-\cos \frac{\pi}{b}(y - \eta), R_+(x - \xi) = \text{ch} \frac{\pi}{b}(x - \xi) - \cos \frac{\pi}{b}(y + \eta)$. This expression
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Application of the...

can be replaced by the Magnus expansion:

$$\frac{b^2 P}{2\pi^3} \sum_{n=1}^{\infty} \frac{1}{n^3} [1 + \beta_n |\xi - x|] e^{-\beta_n |\xi - x|} \sin \beta_n \eta \sin \beta_n y \text{ with } \beta_n = n\pi/b.$$

In the second case (fixed end) the author obtains the following influence

function: $\frac{P}{4\pi} \left[\int_{\xi+x}^{\xi-x} z \ln \frac{R_-(z)}{R_+(z)} dz + 2x \xi \ln \frac{R_-(x+\xi)}{R_+(x+\xi)} \right]$. Similar expressions

occur in a series of further problems, especially expressions of the form:

$$\sum_{k=-\infty}^{\infty} (-1)^k \ln \frac{R_-(x-\xi_k)}{R_+(x-\xi_k)}$$

which, by means of the theta function:

$$\vartheta_1(u, q) = 2 \sqrt[4]{q} \sin u \prod_{n=1}^{\infty} (1 - 2q^{2n} \cos 2u + q^{4n})(1 - q^{2n})$$

are transformed into expressions of the form: $\text{Re} \ln \frac{\vartheta_1\left(\frac{z+\xi}{2b}, q\right) \vartheta_1\left(\frac{z-\xi}{2b}, q\right)}{\vartheta_1\left(\frac{z-\xi}{2b}, q\right) \vartheta_1\left(\frac{z+\xi}{2b}, q\right)}$ ($z = x + iy,$

$\xi = \xi + i\eta$). There are 11 references: 4 Soviet-bloc and 7 non-Soviet-bloc.

SUBMITTED: November 29, 1960
Card 2/2

S/041/63/015/001/009/009
B187/B102

AUTHOR: Shostopal, A. F. (Kiyev)

TITLE: Equilibrium of closed cylindrical shells under the action of concentric forces

PERIODICAL: Ukrainskiy matematicheskiy zhurnal, v. 15, no. 1, 1963, 106-114

TEXT: The author studied the use of operational calculus for solving some static problems of thin-walled, closed cylindrical plates hinged on the front sides under the action of concentric forces (UMZh, v. 12, no. 1, 1960). The solutions obtained there are much simplified in the present paper and are extended to other boundary conditions, namely to various combinations of hinged, tightly clamped and free front sides of the plate. The results expressed by formulas for the different boundary conditions are compiled at the end of the paper. To simplify the results the stress-deformation state is divided into two components: the basic state of stress and the boundary effect. This is possible because the roots λ^2 of the characteristic equation can be classified, according to their
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Equilibrium of closed cylindrical ...

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amounts, into "small" (basic state of stress) and "great" (boundary effect) roots. They can be obtained from very simple equations, the "small" λ_1, λ_2 from

$$\lambda^4 + \frac{a^2}{1-\nu^2} \omega^4 (\omega^2 - 1)^2 = 0 \quad (3.2)$$

and the "great" λ_3, λ_4 from

$$\lambda^4 + (1-\nu^2)a^{-2} = 0, \quad (3.1),$$

where ν is Poisson's ratio, and $a = \frac{1}{\sqrt{12}} \frac{h}{R}$, h being the thickness of the plate and R the cylinder radius. The original equation is much simplified by suppressing the terms of small order of magnitude, which can be estimated. The results for a hinged cylinder are given as an example: For the displacements u , v , and w :

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$$u = \frac{\partial^3 \phi_{\text{boundary}}}{\partial x^3} - \frac{\partial^3 \phi_{\text{basic}}}{\partial x \partial y^2}, \quad v = (2+\nu) \frac{\partial^3 \phi_{\text{boundary}}}{\partial x^2 \partial y} + \frac{\partial^3 \phi_{\text{basic}}}{\partial y^3},$$

$$w = \frac{\partial^4 \phi_{\text{boundary}}}{\partial x^4} + \frac{\partial^4 \phi_{\text{basic}}}{\partial y^4}. \quad (3.7)$$

where

$$\phi_{\text{boundary}}(x) = \frac{ia^3}{2\sqrt{1-\nu^2}} \left[\frac{\text{sh } \lambda_3 (\xi - \bar{l}) \text{sh } \lambda_3 x}{\lambda_3 \text{sh } \lambda_3 \bar{l}} - \frac{\text{sh } \lambda_2 (\xi - \bar{l}) \text{sh } \lambda_2 x}{\lambda_2 \text{sh } \lambda_2 \bar{l}} \right] \quad (3.3)$$

and

$$\phi_{\text{basic}}(x, \omega) = \frac{ia}{2\sqrt{1-\nu^2}} \frac{1}{\omega^2(\omega^2-1)} \left[\frac{\text{sh } \lambda_1 (\xi - \bar{l}) \text{sh } \lambda_1 x}{\lambda_1 \text{sh } \lambda_1 \bar{l}} - \frac{\text{sh } \lambda_2 (\xi - \bar{l}) \text{sh } \lambda_2 x}{\lambda_2 \text{sh } \lambda_2 \bar{l}} \right], \quad (3.3)$$

x and y are the dimensionless cylindrical coordinates of the central plane of the plate, ξ is the application coordinate of the concentric forces.

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Equilibrium of closed cylindrical ...

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B187/B102

and l the length of the cylinder. $\psi(x)$ ^{boundary} is independent of ω .

SUBMITTED: May 10, 1961

Card 4/4

MANHELEON, D. [Mangeron, D.]; SHESTOPAL, A.F.

Contribution to the problem of applications of the Green
Functions. Pt. 1. Rev math Roum 9 no.9:863-875 '64.

1. Polytechnic Institute, Uasi (for Mangeron). 2. Academy
of Sciences of the U.R.S.R., Kiev (for Shestopal).

ACCESSION NR: AP4042090

R/0008/64/015/002/0289/0296

AUTHOR: Mangeron, D., Sestopal, A. F. (Shestopal, A.F.)

TITLE: The problem of the spectra of triangular plates

SOURCE: Studii si cercetari de mecanica aplicata, v. 15, no. 2, 1964, 289-296

TOPIC TAGS: Green function, triangular plate, vibrating system, characteristic oscillations

ABSTRACT: Starting from results published earlier, the authors develop the Green functions corresponding to linear operators with partial derivatives in series of fundamental solutions, determining the characteristic values (spectrum) and characteristic functions of plates in the shape of equilateral triangles or of triangles resulting by the division of an equilateral triangle into two equal parts. The mathematical derivation is shown to consist essentially of analysing a known differential system as defined by

$$\nabla^2 \nabla^2 w - \lambda^2 w = 0, \quad (1)$$

and

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$$w|_n = 0, \quad \frac{d^2 w}{dn^2}|_n = 0, \quad (2)$$

Using the differential operator

$$\nabla^2 \nabla^2 - \lambda^2, \quad (3)$$

it is shown that the Green function has the form

$$+ \frac{8}{9\sqrt{3}a^2} \sum_{k=0}^{\infty} \frac{1 + \cos(n-k)\pi}{\frac{4n^2\pi^2}{9a^2} + \frac{4k^2\pi^2}{9a^2} - \lambda^2} [\psi_{in}(x_1, x_2) \psi_{in}(\xi, \eta) + \psi_{in}(x_1, x_2) \psi_{in}(\xi, \eta)], \quad (15)$$

Applying these results to plates obtained by dividing equilateral triangles into equal halves leads to characteristic values

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$$v_{in}^2 = \left(\frac{4 n^2 \pi^2}{9 a^2} + \frac{4 k^2 \pi^2}{3 a^2} \right)^2 \quad (22)$$

and characteristic solutions

$$[1 + \cos(n - k) \pi] [\psi_{in}^i(x_1, x_2) - \psi_{in}^i(a - x_1, x_2)] \quad (23)$$

and

$$[1 + \cos(n - k) \pi] [\psi_{in}^i(x_1, x_2) - \psi_{in}^i(a - x_1, x_2)]. \quad (24)$$

ASSOCIATION: none

SUBMITTED: 06Nov63

ENCL: 00

SUB CODE: MA, GP

NO REF SOV: 005

OTHER: 011

Card 3/3

MANGERON, B.; SHESTOPAL, A. F. [Shestopal, A. F.]

Contributions to the study of Green's functions. *Studia cere mat*
no. no. 727-739 1964.

1. Polytechnic Institute, East (for Mangeron). 2. Academy of
Sciences of the Ukrainian S. S. R. (for Shestopal).

SHESTOPAL', A.N.

Simpler and more accurate. Nauka i pered.op. v sel'khoz. 7 no.2:69
F '57. (MLRA 10:3)

1. Glavnyy agronom Nemirinetskoy Mashinno-traktornoy stantsii,
Khmel'nitskoy oblasti.
(Collective farms--Accounts)

L 31904-66 EWT(1) JM
ACC NR: AP6010722 SOURCE CODE: UR/0142/66/009/001/0052/0058

AUTHOR: Sovetov, N. M.; Shestoperov, A. N.

ORG: none

45
B

TITLE: Linear theory of the relativistic TW tube 25

SOURCE: IVUZ. Radiotekhnika, v. 9, no. 1, 1966, 52-58

TOPIC TAGS: ~~TW tube, SHF tube~~ TRAVELING WAVE TUBE, NONLINEAR EQUATION

ABSTRACT: It is claimed that one of the D. Rowe fundamental TW-tube nonlinear equations contains "a number of inaccuracies." This equation is claimed to be more accurate: $\left[\frac{\partial^2}{\partial t^2} - v_0^2 \frac{\partial^2}{\partial z^2} + 2\omega Cd \frac{\partial}{\partial t} \right] V(z, t) = Kv_0 \left[\frac{\partial^2}{\partial t^2} + \omega Cd \frac{\partial}{\partial t} \right] \rho(z, t)$. It differs from the Rowe equation in these respects: (1) No factor 2 in the second term of the right-hand member; (2) The attenuation parameter d is not equal to the Pierce

Card 1/2

UDC: 621.385.632

SHESTOPAL, A. O.

Shestopal, A. O. and Shestakov, V. M. - "Leaks and the appearance of washouts in hydro-technical equipment", Sbornik trudov Studench. nauch.-tekh. o-va (Mosk. inzh.-stroit. in-t im. Kuybysheva), Moscow, 1949, p. 41-43.

SO; U-411, 17 July 53, (Letopis 'Zhurnal 'nykh Statey, No. 20, 1949).

MEDVEDEV, S.R., inzhener; SHESTOPAL, A.O., inzhener.

Constructing a cellular grooved pile enclosure with the use of a vibration
pile driver. Gidr.stroi. 22 no.11:1-6 N-D '53. (MIRA 6:11)

(Pile driving)

MEDVEDEV, S.R., inzhener; SHESTOPAL, A.O., inzhener

Automatic deep water drainage in the Stalingrad Hydroelectric
Power Station project. Mekh.trud.rab. 9 no.5:30-34 My '55.
(MLRA 8:7)

(Stalingrad Hydroelectric Power Station --Hydraulic machinery)

SHESTOPAL, Aleksandr Osipovich, inzh.; FUKSON, M.M., kand.tekhn.nauk, retsenzent; SHESTAKOV, V.M., kand.tekhn.nauk, retsenzent; ENGEL', F.F., inzh., retsenzent; PETROV, G.D., inzh., nauchnyy red.; ORLOV, A.G., inzh., nauchnyy red.; MAR'YANSKIY, L.M., inzh., red.; AKULOV, D.A., tekhn.red.

[Using hydraulic methods in submerging pipes, piles, and pile planks] Gidravlichesкое pogruzhenie trub, svai i shpunta. Moskva, Gidroproekt, 1959. 67 p. (MIRA 13:6)
(Pipelines) (Piling (Civil engineering))

SOV/98-59-9-12/29

10(4)
AUTHOR:

Shestopal, A.O., Engineer

TITLE:

Research into Lowering Tubes and Piles by the Wash-out Method

PERIODICAL:

Gidrotekhnicheskoye stroitel'stvo, 1959, Nr 9,
pp 42-43 (USSR)

ABSTRACT:

The author gives results of laboratory experiments and field tests on lowering tubes by the washout method. The field tests have been carried out by drilling more than 400 ground-water lowering wells at the foundation pit of the Stalingrad GES. The tests enabled preparing of an empiric formula and 2 appropriate nomograms (Fig 3) which show the ratio between the quantities of water consumed in the washing out process, the diameter of the tube placed, average diameter of ground particles, penetration of tube, coefficient of ground permeability and level of ground water. The tests indicated that the most washed part of the sinking funnel is located at the deepest point

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307/98-59-9-12/29

Research into Lowering Tubes and Piles by the Washout Method

of the lowered tube. The relation between the undisturbed and washedout, changed density of ground could not be obtained by penetration tests; the density in generally was decreased by the washout process, but in some wells it was also increased. There are 2 diagrams and 2 sets of graphs.

Card 2/2

SHESTOPAL, A. O. Cand Tech Sci -- (diss) "Experimental research
on hydraulic sinking of pipes and piles in sandy soils," Moscow, 1960,
14 pp, 160 cop. (Moscow Engineering Construction Institute im B.B.
Kuybyshev) (KL, 42-60, 115)

LYAFANOV, A.A. (Moscow); SHESTOPAL, G.A. (Moscow)

Elementary information on the solution of problems by electronic
calculating machines. Mat. pros. no.1:57-74 '57. (MIRA 11:7)
(Electronic calculating machines)

SHESTOPAL, G.A. [translator]

Motivation for working in numerical analysis. Translated from the
English by G.A. Shestopal. Mat. pros. no.1:75-86 '57. (MIRA 11:7)
(Mathematical analysis)
(Todd, J.)

LYAPUNOV, A.A. (Moscow); SHESTOPAL, G.A. (Moscow)

Algorithmic description of control processes. Mat. pros.no.2:81-95 '57.
(MIRA 11:7)

(Cybernetics)

SHESTOPAL, G.: LIAPUNOV, A.

"First principles of solving problems on electronic computers"

Fiziko-Matematicheskoe Spisanie. Sofia, Bulgaria. Vol. 1, no. 3/4, 1958

Monthly list of East European Accessions (EEAI), LC, Vol. 8, No. 6, Jun 59, Unclas

KHAIMOSH, P.R. [Halmos, P.R.] (SSHA); VARPAKHOVSKIY, F.L. [translator];
SHESTOPAL, G.A. [translator]

Nicolas Bourbaki. Mat. pros. no.5:229-239 '60. (MIRA 13:12)
(France--Mathematics)

KAGAN, Veniamin Fedorovich [1869-1953]; SHESTOPAL, G.A [translator]; BRON-SHTEYN, I.N. [translator]; LOPSHITS, A.M., red.; RASHEVSKIY, P.K., red.; LAPKO, A.F., red.; KRYUGKOVA, V.N., tekhn. red.

[Subprojective spaces] Subproektivnye prostranstva. Moskva, Gos. izd-vo fiziko-matem. lit-ry, 1961. 218 p. (MIRA 14:6)
(Projection) (Spaces, Generalized)

28662

S/020/61/140/002/007/023
C111/C444

16.0200

AUTHOR: Shestopal, G. A.

TITLE: On the number of the simple bases of Boole's functions

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 140, no. 2, 1961,
314-317

TEXT: A base is called simple, if none of the functions contained in it can be replaced with aid of identification of any of its variables by one or more functions of a smaller number of variables such that the system of functions obtained that way remains complete.

Considered is the question concerning the number of all simple bases.

First of all it is shown (theorem 1) that a simple base can only consist of simple functions; a simple function is understood to be a function possessing at least one of the properties mentioned in the theorem of Post (on the necessary and sufficient conditions for the completeness of a system of functions), yet losing this property under arbitrary identification of its variables. Then it is shown that the number of simple functions is finite, this being the fact out of which it follows the basic theorem: There exists a finite number of
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S/020/61/140/002/007/023

C111/C444

On the number of the simple bases . . . C111/C444
simple bases. By combination of the simple functions one obtains the following complete table of the 48 simple bases:

Simple bases

X

I. Bases, consisting of one function

- 1. $\bar{x}_1 \cdot \bar{x}_2$
- 2. $\bar{x}_1 \vee x_2$

II. Bases, consisting of two functions

- 3.-8. 1.) a) $x_1 \bar{x}_2$;
- b) $x_1 x_2 + x_1 x_3 + x_2 x_3 + x_1$;
- c) $x_1 x_2 + x_1 x_3 + x_2 x_3 + x_1 + x_2 + x_3$;
- 2.) a) \bar{x} ;
- b) 1.

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S/020/61/140/002/007/023

On the number of the simple bases . . . C111/C444

9. - 14. 1.) a) $x_1 \sqrt{x_2}$;
 b) $x_1 x_2 + x_1 x_3 + x_2 x_3 + x_1 + 1$;
 c) $x_1 x_2 + x_1 x_3 + x_2 x_3 + x_1 + x_2 + x_3 + 1$.
 2.) a) \bar{x} ;
 b) 0.

X

15. - 22. 1.) a) $x_1 x_2 + x_1 x_3 + x_2 x_3 + 1$;
 b) $x_1 x_2 + x_1 x_3 + x_2 x_3 + x_1 + x_2 + 1$;
 2.) a) 0;
 b) 1;
 c) $x_1 x_2$;
 d) $x_1 \sqrt{x_2}$.

23. - 24. 1.) a) $x_1 x_2$;
 b) $x_1 \sqrt{x_2}$;

Card 3/7 2.) x

28662

S/020/61/140/002/007/023

On the number of the simple bases ... C111/C444

III. Bases, consisting of three functions

- 25. - 34. 1.) a) $x_1x_2x_3 + x_1x_2 + x_1x_3 + x_2x_3 + x_1$;
- b) $x_1x_2x_3 + x_1x_2 + x_1x_3 + x_1 + x_2$;
- c) $x_1x_2x_3 + x_1x_2 + x_1x_3 + x_2x_3$;
- d) $x_1x_2x_3 + x_1x_2 + x_1 + x_2 + x_3$;
- e) $x_1x_2x_3 + x_1x_2 + x_1$;
- f) $x_1x_2x_3 + x_1 + x_2$;
- g) $x_1x_2 + x_1x_3 + x_1 + x_2 + x_3$;
- h) $x_1x_2 + x_1x_3 + x_1$;
- i) $x_1x_2 + x_2 + x_3$;
- j) $x_1x_2 + x_1x_3 + x_2$

2.) 0;

3.) 1.

Card 4/7

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