

MINKOV, N. and others.

MINKOV, N. and others. Measuring the carrying ropes of cable tramways. P. 46.

Vol. 5, no. 10, 1956  
TEZHKA PROMISHLENOST  
TECHNOLOGY  
Sofia, Bulgaria

So: East European Accession, Vol. 6, no. 3, Mar. 1957

MINKOV, N., and others.

Nomograms for determining the size of logs. p. 40.  
(Tezhka Promishlenost, Vol. 5, no. 12, 1956, Bulgaria)

SO: Monthly List of East European Accessions (EEAL) LC, Vol. 6, no. 6, June 1957, Uncl.

MINKOV, N., AND OTHERS

On the profitability of saw logs. p. 239.

NAUCHNI TRUDOVE. Vissh lesotekhnicheski institut. Sofia, Bulgaria, Vol. 6, 1958.

Monthly list of East European Accessions (EEAI) LC, Vol. 9, No. 1, January 1960.

Uncl.

~~MINKOV, N.~~  
AGRICULTURE

Periodical: NAUCHNI TRUDOVE. Vol. 5, 1957.

MINKOV, N. Entire functions, presented in integral form. p. 209.

Monthly List of East European Accessions (EEAI), LC. Vol. 8, No. 2  
February 1959, unclass.

MINKOV, N.

Rectangular nomograms. p. 249.

NAUCHNI TRUDOVE. Visssh lesotekhnicheski institut. Sofia, Bulgaria, Vol. 6, 1958.

Monthly list of East European Accessions (EEAI) LC, Vol. 9, No. 1, January 1960.

Uncl.

MINKOV, N.

Polar nomograms. p. 263.

NAUCHNI TRUDOVE. Vissh lesotekhnicheski institut. Sofia, Bulgaria, Vol. 6, 1958.

Monthly list of East European Accessions (EEAI) LC, Vol. 9, No. 1, January 1960.

Uncl.

MINKOV, N., AND OTHERS

Nomograms for determining the porosity of rock samples. p. 275.

NAUCHNI TRUDOVE. Vissh lesotekhnicheski institut. Sofia, Bulgaria, Vol. 6, 1958.

MONTHly list of East European Accessions (EEAI) LC, Vol. 9, No. 1, January 1960.

Uncl.

KARAPANDOV, M.; MINKOV, N.

Urinary tract infection in old age. Khirurgiia 17  
no.2:240-241 '64.

1. Iz Katedrata po urologiia pri ISUL [Institut za spetsializatsiia i usuvurshenstvuvane na lekarite], Sofiia.



CHERVENAKOV, A., prof.; GOSPODINOV, G.; MINKOV, N.

Transfemoral renovasography by the Zel'dinger method. Urologia  
no.1:33-35 '62. (MIRA 15:11)

1. Iz urologicheskoy kliniki (zav. - prof. A. Chervenakov) i  
kafedry rentgenologii i radiologii (zav. - dotsent G. Khadzhi-  
dekov) Instituta spetsializatsii i usovershenstvovaniya vrachey,  
Sofiya.

(KIDNEYS—DISEASES) (ANGIOGRAPHY)

MINKOV, N.; TABAKOV, Iv.

Urethral injuries in severe pelvic trauma. Khirurgia 15.  
no.9/10:858-860 '62.

1. Iz Katedrata po urologia pri ISUL [Institut za spetsializatsia i usuvurshenstvuvane na lekarite].  
(URETHRA) (PELVIS)

GOSPODINOV, G.; MINKOV, N.

Diagnostic value of renovasography. *Khirurgia* 15 no.9/10:  
954-956 '62.

1. Is katedrite po rentgenologija i radiologija i po urologija  
pri ISUL [Institut za spetsializatsija i usuvurshenstvuvane na  
lekarite].

(ANGIOGRAPHY) (RENAL ARTERY)

MINKOV, P., inzh.

"Bases of safety technique" by [inzh.] Georgi Nikolov. Tekhnika  
Bulg 2 no.11:3 of cover N '53.

MAIDENOV, G.; MALINOV, T.; MINKOV, P.; ANCHEVA, G.; DIMITROVA, R.

Balneological treatment of chronic hepatitis in the Hissar resort. Suvrem. med., Sofia 9 no.9:33-41 1958.

1. Iz Sanatorium no-1--Khisaria (Gl. Lekar: Gr. Maidenov)  
(BALNEOLOGY, in various dis.  
hepatitis, chronic (Bul))  
(HEPATITIS, ther.  
balneol. in chronic hepatitis (Bul))

MINKOV, P., inzh.

Nomographic computation of the V-shaped belts.  
Mashinostroe. e 11 no. 2:31-33 F '62

1. MGI.

Poisonings

BULGARIA

KOPCHEV, Iv., Docent, Colonel of the Medical Service, ANGELOV, A., KUNEV, K., and MINKOV, P., Lieutenant Colonels of the Medical Service; Chair of Military Field Surgery (Katedra po VPKh, Head Prof. G. Krustinov), Higher Military Medical Institute

"Study of the Effect of Blood Transfusion Upon Acute Poisoning with Dichlorodiethyl Sulfide"

Sofia, Voenno Meditsinsko Delo, Vol 21, No 5, Oct 66, pp 28-30

Abstract: Dogs were poisoned by subcutaneous injection of yperite in a dose of 20 mg/kg (LD<sub>100</sub>) dissolved in olive oil. The animals that had been poisoned were given daily to the 5th day of survival a transfusion of 15 ml/kg glucose-citrate donor blood. The first transfusion was made 2 hours after the dogs had been poisoned. The blood transfusions prolonged the life of the poisoned dogs for a length of time reaching three days as compared with control animals, but did not prevent their death. Table, 11 references (8 Bulgarian, 3 Western). Russian summary. Manuscript received 30 Jul 66.

1/1

KACHEV, Vladimir; MINKOV, Petur; IVANOV, Ivan

New regulations of bonuses in building. Stroitelstvo 10  
no.1:22-23 Jan '63.



MINKOV, Petur

For a more extensive application of the piecework system in building. Trud tzeni 5 no.3:52-60 '63.

~~MINKOV, P., inzh.~~

Some data on the thermodynamic properties of Freon 113 from 0 to 150°C. Mashinostroene 11 no.5:19-21 My '62.

1. Minno-geolozhki institut.

MINKOV, R. Ya.

"Experience of Operating 35-kv Cables in Lenenergo Networks," "Operation of Cable Networks" (Ekspluatatsiya kabeley i kabel'nykh setey), Gosenergoizdat, 1949, 384 pp.

KARPINSKI, V., k. t. n.; MINKOV, S., inzh.

Foundations of composite reinforced concrete piles.

Stroitelstvo 10 no. 6: 6-8 N-D '63.

MINKOV, ST

Book

Unclassified

CD

Author: Minkov, St.

Title: Textbook on Machine Tools for Mechano-Technical High School

Publishing Data: 1951, 198pp. Sofia

Available: E. E. A. L. Feb. 1952

act  
7/19/55

~~8/1~~

MINKOV, ST.

TECHNOLOGY

An analytic method for establishing the thread breaking on spinning machines. p. 12.

LEKA PROMISHLENOST. TEKSTIL. (Ministerstvo na lekata promishlenost) Sofia.

Vol. 7, no. 6, 1958.

SO: Monthly List of East European Accessions (EEAI) LC

Vol. 8, No. 3  
Uncl. March 1959

MINKOV, S.

Basic brake on looms for woolen textiles. p. 18.

TEKSTIINA PROMISHLENOST, Sofia, Bulgaria, Vol. 8, no. 2, 1959.

Monthly List of East European Accessions (EEAI) LC, Vol. 8, no. 10, Oct. 1959, Uncl.

MIN'KOV, S. S.

33368. Pchelovodstvo V Poyme Reki Urala. Pchelovodstvo, 1949, No. 10, c. 25-29.

50. "Metodis" Zhurnal'nykh Statev, Vol. 45, Moskva, 1949



1. MIN'KOV, L. G.; MOYSEYEV, K. V.;
2. USSR (600)
4. Parasites - Bees
7. Control of blister beetle larvae [Meloe]. Pchelovodstvo, 30, No. 5, 1953.

9. Monthly List of Russian Accessions, Library of Congress, April 1953, Uncl.

~~MIN'KOV, Sergey Georgiyevich~~, nauchnyy sotrudnik respublikanskoy opytney  
stantsii pchelovodstva; SAVICH, M.P., redaktor; ZLOBIN, M.V.,  
tekhnicheskiy redaktor

[Honey plant resources of Northern Kazakhstan] Medonosnaya baza  
Severnogo Kazakhstana. Alma-Ata, Kazakhskoe gos. izd-vo, 1956. 60 p.  
(Kazakhstan--Bee culture) (MIRA 10:2)  
(Honey plants)

USSR / Farm Animals, Honey-Bees

Q-8

Abs Jour: Ref Zhur-Biol., No 2, 1958, 7266

Author : S. G. Min'kov

Inst : ~~Not given~~

Title : Nectar-Bearing Of Cotton Plants and the Role  
Of Bees In the Cross-Pollination Of These Plants

Orig Pub: Tr. Kazakhsk. opytn. st. pchelovodstva, 1956,  
vyp. 1, 109-150

Abstract: The production of nectar by cotton plants varies considerably with the seasons and the varieties of the plant. The variety 108-F produces considerably more nectar than 611-b, K-1430, K-1449, and K-1588. Bees can pollinate the plants only when they collect the pollen. According to the author's observations during three years, honeybees never collect the pollen of the cotton

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USSR / Farm Animals, Honey-Bees

Q-8

Abs Jour: Ref Zhur-Biol., No 2, 1958, 7266

Abstract: plants, and consequently do not participate in the pollination of these plants.

Card 2/2

41

MIN'KOV, S. G.

USSR/Farm Animals - Honey Bee

Q-7

Abs Jour : Ref Zhur - Biol., No 6, 1956, No 26260

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R001134420015-0"

Author : Min'kov S.G., Ovsyennikov I.I.

Inst : Not Given

Title : Apiculture in Kazakhstan for the Last 40 Years (Pchelovodstvo v Kazakhstano za 40 let)

Orig Pub : Pchelovodstvo, 1957, No 7, 11-16

Abstract : Honey bees were first brought in 1786 and at present they number over 250 thousand colonies; log-hives number less than one percent. Apiculture has been concentrated mainly in the eastern and southern parts of the country from 1930 on. Experimental and supporting stations for apiculture are in operation.

Card : 1/1

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MINKOV, S.I.

Isolated pancreatic lesions in a closed abdominal trauma.  
Khirurgiya 39 no.5:124-125 My '63. (MIRA 17:1)

1. Iz khirurgicheskogo otdeleniya (zav. S.I. Monkov)  
Skopinskoy gorodskoy bol'nitsy (glavnyy vrach - zaslužhennyy  
vrach RSFSR M.I. Dronova) Ryzanskoy oblasti.

MINKOV, S.I. (Skopin, Ryazanskoy oblasti, poselok Metallurg, Fabrichnaya ul.,4)

Isolated lesions of the pancreas in closed abdominal trauma.  
Vest. khir. 92 no.2:90-92 F '64. (MIRA 17:9)

1. Iz khirurgicheskogo otdeleniya (zav.- S.I. Minkov) Skopinskoy gorodskoy bol'nitsy (glavnyy vrach - zasluzhenny vrach RSFSR M.I. Dronova) Ryazanskoy oblasti.

DRONOVA, M.I.; MINKOV, S.I.; LAPIN, V.V.

Closed abdominal trauma and acute appendicitis. Vest. khir. 94 no.1:  
112-113 Ja '65. (MIRA 18:7)

1. Iz khirurgicheskogo otdeleniya (zav. - S.I.Minkov) Skopinskoy  
gorodskoy bol'nitsy Ryazanskoy oblasti.

MINKOV, S.I.; TUCHIN, A.S.

Abstracts. Sov. med. 28 no.9:146-147 S '65. (MIRA 12:9)

1. Skopinskaya gorodskaya bol'nitsa Ryazanskoy oblasti.



*MINKOV, T. YA*

KOLESNIK, P.A.; MINKOV, T.Ye.; PAPCEL', S.V.; SHESTOPALOV, K.S.;

LYZO, G.P., kandidat tekhnicheskikh nauk, redaktor; KOVALIKHINA, N.F.,  
tekhnicheskii redaktor.

[Textbook for automobile mechanics] Uchebnik avtomobil'nogo mekhanika.  
Pod obshchei redaktsiei G.P.Lyzo. Moskva, Avtotransisdat, Ministerstva  
avtomobil'nogo transporta i shosseinykh dorog SSSR, 1954. 467 p.

(Automobiles--Maintenance and repair)

(MLRA 7:12)

MINKOV, V.; TODOROV, T.

MINKOV, V.; TODOROV, T. Throwing away the frostbitten seedlings planted during the autumn.  
p. 261.

Vol. 12, No. 6, June 1956.  
GORSKO STOPANSTVO  
AGRICULTURE  
Sofia, Bulgaria

So: Ease European Accession, Vol. 6, No. 2, February 1957

MINKOV, V.

"Review of the rationalization in the Stalin Chemical Combine"

p. 2 (Ratsionalizatsiia) Vol. 7, no. 4, Apr. 1957  
Sofia, Bulgaria

SO: Monthly Index of East European Accessions (EEAI) LC. Vol. 7, no. 4,  
April 1958

MINKOV, VAL

Minkov, Val - Fundirane. Sofiya, Nauka i iskustvo (1952) 335 p. (Foundations;  
earthwork in engineering operations. Illus.)

SO: Monthly List of East European Accessions, Library of Congress, Vol. 2, No. 9,  
Oct. 1953, Uncl.

MINKOV, Valerian, prof.

~~Thin-walled hollow piles. Stroitelstvo 10 no.5:9-13~~  
S-0'63.

MINKOV, V., prof. inzh.

Method of determining the general and relative deformations of the ground beneath the column foundations in buildings and industrial constructions. Stroitelstvo 9 no.2:21-27 '62.

ZHUKOVSKAYA, Zoya Iosifovna; MINKOV, Vladimir Afroimovich; PEKELIS, Grigoriy Borisovich; FUT'KO, Ivan Ivanovich; Prinimali ucha-  
stiye: GALENCHIK, E.M.; KULAGA, T.N.; BEL'ZATSKAYA, L., red.  
iad-va; TURTSEVICH, L., ~~tekhn.~~ red.

[Use of natural gas in power engineering] Ispol'zovanie prirod-  
nogo gaza v energetike. Minsk, Izd-vo Akad. nauk BSSR, 1962.  
191 p. (MIRA 16:2)

1. Otdel obshchey energetiki Energeticheskogo instituta  
Akademii nauk Belorusskoy SSR (for all ~~except~~ Bel'zatskaya,  
Turtsevich).

(Power engineering) (Gas distribution)

EL'PERIN, I.T.; MINKOV, V.A.

Thermodynamic optimization of technological heat exchange  
systems with cascade fluidized beds. Inzh.-fiz. zhur. 6  
no.11:32-41 N '63. (MIRA 16:11)

1. Institut teplo- i massobmena AN BSSR, Minsk.



EL'PERIN, I. T.; MINKOV, V. A.

"Thermodynamic optimization of technological heat-transfer systems with multistage fluidized beds."

report submitted for 2nd All-Union Conf on Heat & Mass Transfer, Minsk, 4-12 May 1964.

Inst of Heat & Mass Transfer, AS BSSR.

LEONKOV, A.M., kand.tekhn.nauk, dotsent; PEKELIS, G.B., kand.tekhn.nauk,  
dotsent; MINKOV, V.A., inzh.

Coverage of the peak loads of power systems. Izv. vys. ucheb. zav.;  
energ. 7 no.3:119-121 Mr '64. (MIRA 17:4)

1. Belorusskiy politekhnicheskii institut i Institut ekonomiki  
AN BSSR.

L 12438-65 EWT(1)/EWT(m) Pa-4 APGG(c)/AEDC(b) JP/JW

ACCESSION NR: AP4047447

S/0170/64/000/009/0102/0107

AUTHORS: El'perin, I. T.; Minkov, V. A.

TITLE: On the problem of using two-phase systems as thermodynamic working substances B

SOURCE: Inzhenerno-fizicheskiy zhurnal, no. 9, 1964, 102-107

TOPIC TAGS: heat engine, two phase system, aerosol, polytropic index, adiabatic index

ABSTRACT: The authors analyzed the thermodynamic cycles of the operation of heat engines using two-phase systems of the gaseous suspension type (aerosol) as working substances. They found that the use of such substances could increase the thermal efficiency of the cycle. The particle size in the aerosol was assumed to be less than  $5 \mu$ . The index of polytropy is given by

$$\eta = \frac{k + \mu C_M / C_V}{1 + \mu C_M / C_V},$$

where  $k$  is the adiabatic index,  $\mu$  the mass concentration of the solid phase,  $C_M$  the Card 1/2.

L 12438-65

ACCESSION NR: AP4047447

specific heat of the solid phase, and  $C_v$  the specific heat of the gas at constant volume. Both open and closed cycles were analyzed with and without regeneration. The following expressions were derived for the thermal efficiencies with  $(\eta_{tot}^R)$  and without  $(\eta_{tot}^{NR})$  regeneration for closed cycles:

$$\eta_{tot}^{NR} = 1 - \varphi^{\frac{1-k}{k+\alpha c_w/c_v}}$$

$$\eta_{tot}^{NR} = 1 - \varphi^{\frac{k-1}{k+\alpha c_w/c_v} \zeta^{-1}}$$

where  $\varphi$  is the degree of pressure rise in the cycle and  $\zeta$  the relative initial temperature. Orig. art. has: 14 formulas and 4 figures.

ASSOCIATION: Institut teplo- i massobmena AN BSSR, g.Minsk (Institute of Heat and Mass Transfer, AN BSSR)

SUBMITTED: 07Apr64

ENCL: 00

SUB CODE: TD

NO REF SOV: 002

OTHER: 000

Card 2/2

EL'PERIN, I.T.; MINKOV, V.A.

Use of two-phase systems as thermodynamic working substances. Inzh.-fiz.  
zhur. 7 no.9:102-107 S '64. (MIRA 17:12)

1. Institut teplo- i massobmena AN Belorusskoy SSR, Minsk.

L 27807-65 EWT(1)/EPA(sp)-2/EWG(v)/T-2/EPA(w)-2/EPR Pz-6/Pab-10/Pe-5/Pe-4/  
PI-4 IJP(c) WW/AT

ACCESSION NR: AP5004942

S/0286/65/000/002/0038/0038

AUTHORS: El'perin, I. T.; Minkov, V. A.

TITLE: Method for utilizing exhaust gases from MHD-generators. Class 21, No. 167585

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 2, 1965, 38

TOPIC TAGS: MHD generator, heat exchanger, regenerative circuit, exhaust gas

ABSTRACT: This Author Certificate presents a method for utilizing the exhaust gases from an MHD-generator to preheat the air entering the combustion chamber of the generator (see Fig. 1 on the Enclosure). To utilize the heat more fully, the exhaust gases are directed consecutively through a reactor for high-temperature treatment with loose materials such as, cement, limestone, etc., through a regenerative air preheater, and through two- or multi-staged contact heat exchangers to preheat the raw material before feeding it to the reactor. The thermally treated material is then used as a moving, finely granular filling in the regenerative heat exchanger for further heating of the air. The exhaust gases heat the thermally treated material, moving through the regenerative air preheater, in the contact heat exchanger with physical heat. This is done in order to increase

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L 27807-65

ACCESSION NR: AP5004942

the thermal potential before feeding the gas into the first stage of the heat exchanger for the purpose of preheating the moist material. Orig. art. has: 1 figure.

ASSOCIATION: none

SUBMITTED: 25Dec 62

ENCL: 01

SUB CODE: ME, PR

NO REF SOV: 000

OTHER: 000

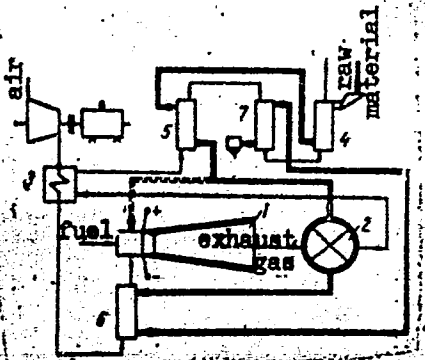
Card 2/3

L 27007-65

ACCESSION NR: AP5004942

ENCLOSURE: 01

Fig. 1. 1- MHD-generator; 2- reactor;  
3- regenerative air preheater;  
4- first-stage heat exchanger for  
preheating moist material;  
5- second-stage heat exchanger for  
preheating moist material;  
6- regenerative air preheater;  
7- contact heat exchanger for  
heating exhaust gases



Card 3/3



YERMAKOV, V.S., kand. tekhn. nauk; MINKOV, V.A., kand. tekhn. nauk

Regulation of the load graph of a power system by industrial consumers. Elek. sta. 36 no.6:56-59 Je '65. (MIRA 18:7)

YERMAKOV, V.S., kand. tekhn. nauk, glav. red.; LEONKOV, A.M.,  
red.; MINKOV, V.A., red.; PEKELIS, G.B., kand. tekhn.  
nauk; RESHEINIKOV, D.V., red.

[Coverage of fluctuating electrical loads in electric  
power systems] Problemy pokrytiya peremennykh elektro-  
nagruzok v energosistemakh. Minsk, Nauka i tekhnika,  
1965. 144 p. (MIRA 18:10)

1. Nauchno-tekhnicheskaya konferentsiya po problemam  
pokrytiya pikovykh nagruzok ob'yedinennoy energosistemy  
Severo-Zapada. Minsk, 1965.

MIN'KOV, V.N., inzh.; TRAMPOL'SKIY, V.D., inzh.

Boring of sectors in the thrust bearings of hydraulic turbines using a special grouping device. Energomashinstroenie 10 no.2:39-40 F '64. (MIRA 17:6)

BORISOGLEBSKIY, B.N., inshener; MINKOV, V.P., inshener, VEKSLER, G.H.  
inshener, MIKHLIN, Ye.L.; ~~SARANTOV, I.I.~~ inshener, redaktor;  
STUPIN, A.K., redaktor; TIKHONOV, A.Ya., tekhnicheskiy redaktor

[Centrifuges; a catalog and reference book] Sentrifugi; katalog-  
spravochnik. Moskva, Gos.nauchno-tekhn.izd-vo mashinostroit.  
lit-ry, 1955. 90 p. (MLRA 8:11)

1. Russia(1923- U.S.S.R.)Ministerstvo mashinostroyeniya i priborostroyeniya.  
(Centrifuges)

NAUMCHENKOV, Nikolay Yermolayevich; MINKOV, Yakov L'vovich; ZAKS, Iosif Aronovich; RAGAZINA, M.F., inzh., ved. red.; SOROKINA, T.M., tekhn. red.

[Fatigue strength of the joints in 35L steel castings made by electric slag welding. Properties of metal deposited by GIAP-4 electrodes] Ustalostnaya prochnost' soedinenii litoi stali 35L, vypolnennykh elektroshlakovoi svarkoi. Svoistva metalla, naplavlennogo elektrodami GIAP-4. [By] I.A.Zaks. Moskva, Filial Vses. in-ta nauchn. i tekhn. informatsii, 1958. 12 p. (Peredovoi nauchno-tekhnicheskii i proizvodstvennyi opyt. Tema 12. No.M-58-396/31) (MIRA 16:2)  
(Steel castings--Welding) (Welding--Testing)

SOV/32-25-4-33/71

28(5)

AUTHOR: Minkov, Ya. L.

TITLE: Simplifying the Shape of Samples for Testing Metals for Fatigue  
(Ob uproshchenii formy obraztsov dlya ispytaniy metallov na ustalost')

PERIODICAL: Zavodskaya Laboratoriya, 1959, Vol 25, Nr 4, pp 464-466 (USSR)

ABSTRACT: A note by the editors points out that the papers by Minkov, Belkin (ibid pp 466-469) and Sologub (ibid pp 469-470) bring results of experiments carried out on the basis of indications by I. V. Kudryavtsev (Zavodskaya Laboratoriya, 1957, Nr 4).

I

Methods are described which permit simplified sample shapes to be used for the fatigue tests of many steel types. The methods were tested on samples of steel 45 and U8A (in hardened state), of austenite steel E I 257, of steel 35 L, as well as aluminum AD-1, and other metals. Round samples with no head piece, with the same diameter on the whole length of the sample, were tested on machines UIPM-20 (designed by the TsNIITMASH). The processing conditions of the samples as well as the results of the fatigue tests on hardened steel 45 and U8A (Tables 1,2),

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Simplifying the Shape of Samples for Testing Metals for Fatigue SOV/32-25-4-33/71

as well as aluminum AD-1 (Table 3), are given. In connection with the latter, tests on instrument iron were carried out at the Tsentral'nyy nauchno-issledovatel'skiy institut stroitel'nykh konstruktsiy (Central Scientific Research Institute of Constructions). The test results lead to the statement that samples of the simplified form according to Kudryavtsev (Ref 3) are convenient for transverse-fatigue tests of steel and non-ferrous metals. The influence of the supports can be eliminated by partial hardening. The latter enables a diminution of the head pieces in materials with greater hardness which can also be regarded as a simplification of the sample form. There are 3 tables and 2 Soviet references.

ASSOCIATION: Tsentral'nyy nauchno-issledovatel'skiy institut tekhnologii i mashinostroyeniya (Central Scientific Research Institute of Technology and Machine-building)

Card 2/2

15.8510

28155  
S/122/61/000/003/007/013  
D241/D305

AUTHORS: Yatskevich, S.I. (deceased), Candidate of Technical Sciences, and Minkov, Ya. L., Engineer

TITLE: Fatigue resistance of plastic glass

PERIODICAL: Vestnik mashinostroyeniya, no. 3, 1961, 46-48

TEXT: Experiments established that fibrous glass-reinforced plastics are 1.5 - 2 times stronger than other plastics, e.g., the limit of endurance in bending for "steklotekstolit" is  $600 \text{ kg/cm}^2$ , that of "getinaks" -  $350-490 \text{ kg/cm}^2$ , and "tekstolit" -  $275-300 \text{ kg/cm}^2$ . The strength of laminated plastics depends on the filler, content of resin and temperature. Some experiments carried out by Soviet research institutes revealed that these materials stand up well to variable loads. According to Ya. L. Shugal, V.V. Baranovskiy (Ref. 4: Sloistye plastiki (Laminated Plastics), Goskhimizdat, 1953), cooling increases the number of cycles of variable loads that can be sustained by these materials. The arbitrary base for reinforced glass fiber is  $10^7$  cycles; for polyester resin the

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89155

S/122/61/000/003/007/013  
D241/D305

Fatigue resistance of ...

fatigue limit is then  $9.5 \text{ kg/cm}^2$ , for epoxy resin -  $11 \text{ kg/cm}^2$ , and for phenolic resin -  $13 \text{ kg/cm}^2$ . This forms about 25% of the limit due to static bending. The fatigue strength of plastics reinforced by glass fiber is 40-50% greater than that reinforced by "steklo-mat". [Abstractor's note: This appears to mean plexiglass.] The Department of Strength of Materials at TSNIITMASH carried out experiments to determine the fatigue characteristics of glass-reinforced plastics as well as the effect of some stress concentrators (sharp undercutting, step and shrink bush). Tests were carried out on a Y(U)-12 machine, designed by S.I. Yatskevich. The experiments showed that laminated plastics are insensitive to undercutting, but are prone to the effects of stress concentration in the form of step or bush. The latter may be due to radial pressure. In the case of simple undercutting this pressure does not exist, and the cut fibers take up force only weakly from fibers below the undercutting. Plastics with a fibrous glass basis revealed the greatest strength. Thermal treatment of "steklotekstolit" on the base of ПЭМ(PEM)-2 resin increased its strength by 6.5 times. A

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28155

S/122/61/000/003/007/013  
D241/D305

Fatigue resistance of ...

step or a forced bush lower the fatigue strength by about 40%. The increase of diameter of specimen from 9 to 16 mm reduced the limit of endurance by 2.5 times. This can be due to different conditions of heat transfer on account of absent forced cooling. There are 4 figures, 2 tables and 9 references: 5 Soviet-bloc and 4 non-Soviet-bloc. The references to the English-language publications read as follows: A. W. Thompson, The fatigue and creep properties of plastic laminates, Reinforced plastics, vol. 1, no. 11, 1957; K.H. Boller, Fatigue properties of fibrous glassreinforced plastics laminates subjected to various conditions. Materials in design engineering. 1957, July, vol. 46, no. 1, 108-111; Modern plastics, 1957, June, vol. 34, no. 10, 163-164, 166, 168, 170, 172, 174, 176, 178, 180, 185-186, 293 / Abstractor's note: the words July and June are misspelt /; R. H. Carej, Fatigue testing of nonrigid plastics. ASTM-Bulletin, 1955, no. 206, 52-54.

X

Card 3/3

MINKOV, Ya.L.

Hard facing of parts by means of plastic deformations.  
Mashinostroitel' no.4:40-42 Ap '63.  
(Hard facing)

(MIRA 16:5)

ZAYTSEV, G.Z., kand. tekhn. nauk; NAUMCHENKOV, N.Ye., kand. tekhn. nauk;  
MINKOV, Ya.L., inzh.

Fatigue strength of unilaterally welded joints. Svar. proizvod.  
no.6:26-29 Je '63. (MIRA 16:12)

1. Tsentral'nyy nauchno-issledovatel'skiy institut tekhnologii  
i mashinostroyeniya.

ORICHESACHEV, Ya.S., inzh.; MINAY, Ya.S., inzh.

Strength of the joints with a guaranteed tightness to shear under the conditions of variable torsion and cyclical shaft bend. Trudy VNIIL no.19:167-175 '64. (MIRA 18:3)

i. Tsentral'nyy nauchno-issledovatel'skiy institut tekhnologii i mashinostroyeniya.

L 46635-66 EWT(m)/T IJP(c)

ACC NR: AP6026271

SOURCE CODE: BU/0011/65/018/007/0619/0621

AUTHOR: Peeva, A.; Minkova, A.ORG: Faculty of Physics, Sofia UniversityTITLE: Study of the dead time of self-quenching Geiger counters 19

SOURCE: Bulgarska akademiya na naukite. Doklady, v. 18, no. 7, 1965, 619-621

TOPIC TAGS: Geiger counter, temperature dependence, pressure effect

ABSTRACT: Following the A. G. Stever method (Phys. Rev., 61, 1942, 38), the authors studied the temperature dependence of the dead time of three self-quenching Geiger counters of identical geometry (cylindrical brass cathode with a 20 mm diameter and a tungsten anode-wire with a 0.2 mm diameter) and alcohol/argon gas mixtures in a ratio of 1:10, but under 7/70, 10/100, and 15/150 pressures. Results show that 1) the dead time decreases with temperature; 2) the temperature dependence of dead time is larger with higher pressures and weaker overvoltages; and 3) the dependence of dead time on pressure and overvoltage is much more pronounced at two temperatures. This paper was presented by Corresponding Member BAN E. Djakov on 25 March 1965. Orig. art. has: 2 figures. [Orig. art. in Eng.] [JPRS: 33,545]

SUB CODE: 18 / SUEM DATE: none / OTH REF: 004

Card 1/1

mjs

MOROZOVSKAYA, I.S., kand. tekhn. nauk; YAROSLAVTSEVA, K.V.,  
red.; MINKOVA, A.M., red.

[Modern methods and instruments for evaluating the quality  
of fabrics] Sovremennye metody i pribory dlia otsenki ka-  
chestva tkanei. Moskva, 1963. 75 p. (MIRA 17:9)

1. Moscow. Tsentral'nyy institut nauchno-tekhnicheskoy in-  
formatsii legkoy promyshlennosti.

USSR / Farm Animals. Silkworms.

Q-7

Abs Jour : Ref Zhur - Biol., No 10, 1958, No 45334

Author : ~~Min'kova, K. A.~~

Inst : Not given

Title : On the Increase of the Crop and Improvement of the Quality of Cocoons of the Mulberry-Feeding Silkworm.

Orig Pub : Turkmenistanyň oba khodzhalgy, 1957, No. 2, 76-80; S. kh. Turkmenistana, 1957, No. 2, 74-77.

Abstract : If the beginning of the vernal rearing of silkworms is retarded by 10 days, then at the time the larvae attain period V of growth, the mulberry leaves become overgrown and the cocoon crop drops up to 20%. It is important that the time of hatching of larvae coincide with the development of the 3-5th leaf and that the incubation of silk seed should start when the leaf-bud reaches its 2nd stage, i.e. 150%. Normal humidity at all stages of incubation is 75%.

Catd 1/2



MINKOVA, L.

Scientific Session in commemoration of the one hundredth anniversary  
of the birth of Anton Pavlovich Chekhov. Spisanie BAN 5 no.2:84-88  
'60. (EEAI 9:11)

(Chekhov, Anton Pavlovich)  
(Russian literature--History and criticism)

PROYNOVA, Z.A.; MINKOVA, N.L.

Production of concentrated phosphorus fertilizers by the distillation of nitrate extracts. *Khim.prom.* no.9:665-670 S. 148. (MIRA 16:12)

1. Institut khimicheskoy promyshlennosti Narodnoy Respubliki Belgarii.

ENEV, Stoiko, dots. inzh.; MINKOVA, Rosa, inzh., nauch.sutrudnik

Improving antcrease finish of cellulose fabrics without sharp decrease in their resistance to rubbing. Tekstilna prom 13 no.5:26-30 '64.

1. The Karl Marx Higher Institute of Economics, Sofia (for Enev).
2. Scientific Research Institute of the Textile Industry, Sofia (for Minkova).

MINKOVA, S.

Research on the formation of the species Tribus Dorcadionini (Col:  
Cerambycidae) in Bulgaria. Izv Zool inst BAN 10:293-309 '61.  
(EEAI 10:9/10)

(Beetles)

MINKOVA, T.

BULGARIL/General and Special Zoology. Insects

P-2

Abs Jour : Ref Zhur - Biol., No 15, 1953, No 68882

Author : Nikolaeva V., Minkova T. Andev R.

Inst : Zoological Institute of the Bulgarian Acad Sci

Title : Harmful Fireworms in Bulgaria and Experiments in  
the Use of Chemical Substances Against Them.

Orig Pub : Izv. Ecol. in0t, 3"1j. AN, 1957, kn. 6, 253-275

Abstract : No abstract

Card : 1/1

19

42751

B/503/62/010/001/001/001  
B104/B186

9.4160  
9.4170

AUTHORS: Borisov, M., Milyashev, M., and Minkova, V.

TITLE: Nature of electrically stimulated currents in CdS

SOURCE: Bulgarska akademiya na naukite. Fizicheski institut.  
Izvestiya na Fizicheskiya institut s ANEB. v. 10, no. 1.  
1962. 5-45

TEXT: In this review paper the characteristic features of electrically stimulated currents excited by light of different wavelengths are discussed. The discussion is based on data published between 1920 and 1960 covering the following subjects: (1) experimental investigation of the stimulation process; (2) excitation of a current which is electrically stimulated by light of a wavelength to the impurity absorption range; (3) excitation of a current which is electrically stimulated by light of wavelength corresponding to the fundamental absorption range; (4) effect of infrared radiation and of high voltage applied to the crystal on the electrically stimulated current; (5) conduction mechanism in CdS due to excitation by light of the above mentioned wavelengths, and comparison

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Nature of electrically stimulated ...

B/503/62/010/001/001/001  
B104/B186

between theoretical and experimental data. A theory is developed for explaining the electrically stimulated currents which are excited by light having the frequency of the impurity absorption range. In this theory, electrons are assumed to be raised from the traps to the conduction band by an electric field. The electrically stimulated currents excited by light having the frequency of the fundamental absorption range are explained by the formation of a positive space charge (holes) around the cathode if the anode is irradiated. The electrically stimulated currents excited by irradiation with IR light are explained by the release of electrons from traps and of holes from activator levels. It is assumed that even weak electric fields ( $\sim 1000$  v/cm) raise a considerable number of electrons from the traps to the conduction band. There are 24 figures and 1 table. ✓

ASSOCIATION: Fiziko-matematicheski fakultet pri Sofiyskiya d"rzhaven universitet (Division of Physics and Mathematics at the Sofiya State University)

SUBMITTED: August 30, 1961 -

Card 2/2

BABUSHKIN, N.P.; MIN'KOVA, V.S.; BEZRUKOV, V.A.; STREL'TSOV, V.V.

Removal of sulfur compounds from fuel gases in a fluidized bed of cinder at high temperatures. Izv. vys. ucheb. zav.; khim. i khim. tekhn. 7 no.3:445-449 '64.

(MIRA 17:10)

1. Ivanovskiy khimiko-tekhnologicheskii institut, kafedra khimicheskogo mashinostroyeniya.



KRASNOBAYEV, A.I.; MIN'KOVETSKIY, S.I.

Overhead catenary of the contact wires of streetcars with  
semiautomatic voltage regulation. Rats. predl. na gor.  
elektrotransp. no.9:66-67 '64.

(MIRA 18:2)

1. Trest "Moselektrotrans".

MINOVIC, Miloje, inz. (Beograd, Solitoer D-11, stan 105)

Driving power and mechanism of electric apparatus. Tehnika Jug  
18 no.6:Suppl.:Elektrotehnika 12 no.6:1100-1111 Jo. '63.

1. Rukovodilac razvoja fabrike niskonaponske opreme proizvedaca  
"Elektrosrbija", Beograd.

GRINEBAUM, N.B., kand. med. nauk; MINKOVICH, A.Ye.

Late observations of children following recovery from kidney disease. Sov. med. 28 no.8:118-121 Ag '65. (MIRA 18:9)

1. Kafedra pediatrii (zav. - prof. E.A.Gornitskaya) I Leningradskogo meditsinskogo instituta imeni akademika I.P.Pavlova i detskaya bol'nitsa No.1 Oktyabr'skogo rayona Leningrada (glavnyy vrach Ye.N. Speranskaya).

MINKOVICH, B. D.

Use of broken chrome magnesite firebrick in the production of new  
chrome magnesite refractories. Ogneupory 22 no.4:153-157 '57.  
(MLRA 10:6)

1. Khar'kovskiy insitut ogneuporov.  
(Firebrick)

80316

SOV/81-59-7-24149

15.2210

Translation from: Referativnyy zhurnal. Khimiya, 1959, Nr 7, p 348 (USSR)

AUTHORS: Frenkel', A.S., Shmukler, K.M., Minkovich, B.D.

TITLE: High-Alumina Articles on the Base of Commercial Alumina

PERIODICAL: Sb. nauchn. tr. Vses. n.-1. in-ta ogneuporov, 1958, Nr 2 (49), pp 100 - 158

ABSTRACT: The results were laid down of investigations on the problem of obtaining dense high-alumina products for lining the reservoir of bath furnaces intended for melting heavy-duty boro-silicate glasses. It was established that: 1) An increase in the dispersion of commercial alumina which was burnt at 1,550°C (in briquets) considerably improves sintering. 2) The introduction of 1% of caustic magnesite into the charge decreases the sintering temperature of chamotte by 100°C, decreasing its refractoriness by 20°C only. 3) In the case of burning in a revolving furnace, it is possible to obtain sintered chamotte even at an Al<sub>2</sub>O<sub>3</sub> content of up to 90%, but in this case material is lost with the waste gases. Preliminary calcination of the

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SOV/81-59-7-24149

High-Alumina Articles on the Base of Commercial Alumina

briquet at 600°C with a holding time of 4 hours reduces the loss by ~ 4 times.

4) The porosity of high-alumina products from the charge with 2% binding clay or without it, in the case of application of granulated chamotte, decreases approximately twice. 5) A favorable effect on the sintering of high-alumina products is obtained by the replacement of clay in their charge by thin chamotte fractions. 6) The growth of mullite-corundum products in burning is the result of the formation of mullite from corundum and clay. 7) The properties of high-alumina products, even in the case of their equal final porosity, are different if the porosity of the raw material is different. If at high burning temperatures dense products are obtained from a raw material with increased porosity, a large number of shrinkage cracks are formed between the grains of the chamotte and the binding material, which decreases the resistance of the products to aggressive melts of low viscosity. 8) The application of high-density raw material, especially in the case of introducing granulated chamotte with a simultaneous increase in the content of its thin fractions, permits the burning of these products to be carried out even in furnaces on solid fuel at temperatures of the order of 1,450°C and does not require the

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High-Alumina Articles on the Base of Commercial Alumina

construction of special high-temperature furnaces for these purposes. The high resistance of dense (with a porosity below 12%) high-alumina refractories with a content of 65%  $Al_2O_3$  was established by comparative tests of various types of refractories in the wall of glass-melting bath furnaces and by the investigation of worked-out refractories. In the inner lining of caissons dense products containing 76 - 80%  $Al_2O_3$  were distinguished by good resistance in operation tests. In the upper checker rows of gas regenerators a dense high-alumina brick with a content of about 76%  $Al_2O_3$  was distinguished by good resistance.

S. Tumanov

Card 3/3

S/131/60/000/05/02/016  
EO15/B011

AUTHORS: Miroshnichenko, A. H., Vinokur, S. E., Antonov, G. I.,  
Minkovich, B. D., Molchanova, M. H., Paynerman, E. A.,  
Khil'ko, M. M.

TITLE: Magnesite Bricks for Checkerworks of Regenerators in Open-  
hearth Furnaces

PERIODICAL: Ogneupory, 1960, No. 5, pp. 197-207

TEXT: A. S. Frenkel' found out that the cause underlying the loosening of  
forsterite bricks hitherto used in gas generator checkerworks is in the  
change taking place in the volume of iron oxides contained in them. This is  
particularly felt in an increased magnesioferrite content and a temperature  
of over 800° (Fig. 1). Magnesite has a higher heat conduction number (Fig. 2)  
and a higher heat capacity (Fig. 3) than fire-clay and Dinas clay. A. S.  
Frenkel', K. M. Shmukler of the Ukrainskiy institut ogneuporov (Ukrainian  
Institute of Refractories) tested magnesite bricks in regenerator checker-  
works. Bricks 380 x 150 x 75 mm large were produced by the opytnyy zavod

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Magnesite Bricks for Checkerworks of  
Regenerators in Open-hearth Furnaces

S/131/60/000/05/02, 016  
BU15/BC11

UNIIO (Test Plant UNIIO). Table 1 shows the characteristics of magnesite products before their utilization, and table 2 after utilization, with part of them used in the unburned state. In gas regenerator checkerworks, these bricks showed good stability, and no important differences were found between burned and unburned products. With a view to conducting comprehensive operational tests, a set of 120 tons of burned and unburned small-size bricks 182 x 150 x 65 mm large was produced under the supervision of A. S. Frenkel' at the Panteleymonovskiy zavod im. K. Marksa (Panteleymonovka Works imeni K. Marx) in accordance with the standards of the test plant UNIIO and in compliance with specifications laid down by the Panteleymonovka Works. The usual magnesite powder, the grain size of which is specified in table 3, was used for the purpose. Table 4 describes the raw masses and the weight by volume of brick clays, and table 5 shows the properties exhibited by the experimental sets. After 345 melts in the gas regenerator of a 370-ton open-hearth furnace, both unburned and burned magnesite bricks were in good condition (Figs. 4 and 5). Table 6 shows the indices of the furnace performance with magnesite and fire-clay checkerworks. Tables 7 and 8 show the chemical composition of the bricks after their use, as well as the

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Magnesite Bricks for Checkerworks of  
Regenerators in Open-hearth Furnaces

S/131/60/000/05/02/016  
B015/B011

results of the petrographic analyses conducted by M. Ye. Drizheruk. No difference was found between burned and unburned bricks (Fig. 6). It is stated in conclusion that metallurgical magnesite powder products with low iron-oxide contents do not loosen up in gas regenerator checkerworks of open-hearth furnaces and exhibit high stability. Also checkerworks of burned and unburned bricks in gas regenerators of 370-ton furnaces, for which the oxygen technique was used, exhibited high stability. There are 6 figures, 8 tables, and 1 Soviet reference. ✓

Card 3/3

S/131/60/000/06/02/012  
B015/B007

AUTHORS: Antonov, G. I., Minkovich, B. D., Shvartser, M. A.,  
Shakhov, G. S., Semenov, I. N., Khil'ko, M. M.,  
Molchanova, M. I.

TITLE: Production and Practical Testing of Burned and Unburned  
Small-size Forsterite Bricks ✓

PERIODICAL: Ogneupory, 1960, No. 6, pp. 244-251

TEXT: A. S. Frenkel', Ukrainskiy nauchno-issledovatel'skiy institut  
ogneuporov (Ukrainian Scientific Research Institute of Fireproof Materials)  
recommended measures for the purpose of increasing the production of re-  
fractory regenerator forsterite bricks as well as for the simultaneous ✓  
reduction of their actual costs. This may be brought about by using unburn-  
ed small-size bricks. For the purpose of checking these measures, the  
Panteleymonovskiy ogneuporny zavod (Panteleymonovka Works of Fireproof Ma-  
terials) together with the Ukrainian Scientific Research Institute of Fire-  
proof Materials in 1957 produced industrial batches of burned and unburned  
small-size forsterite bricks. S. B. Vinokur, N. S. Mitrokhina, and B. A.

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Production and Practical Testing of Burned  
and Unburned Small-size Forsterite Bricks

S/131/60/000/06/02/012  
B015/B007

Faynerman (Footnote p. 245) took part in this work. The chemical composition of the ground powders may be seen from Table 1, the characteristics of the pastes and blanks from Table 2, and the properties of the burned and unburned products from Table 3. The burned small-size forsterite bricks corresponded to 4MTY 5127-55 (ChMTU 5127-55) and were not inferior to bricks of normal size. Fig. 1 shows the checkerwork of a regenerator made from small-size bricks. Experiments with these bricks were carried out at the zavod im. Kirova (Works imeni Kirov). The characteristics and mineralogical composition of the burned small-size forsterite bricks after their use are given in Tables 4 and 5. Table 6 shows the results of a furnace campaign, and Fig. 2 the temperature course of the regenerator. Figs. 3 and 4 show unburned forsterite bricks after being used, and Table 6 and Fig. 5 show the operational conditions of furnaces. Tables 7 and 8 give the characteristics and the mineralogical composition of unburned small-size forsterite bricks after use. Petrographical investigations were carried out by L. I. Karyakin (Ref. 2). By way of a summary, the authors declare that burned small-size bricks are in no way inferior to standard-size bricks. By the use of 50-60% of unburned bricks in furnace construction, the production of refractory forsterite bricks for generators may

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Production and Practical Testing of Burned and Unburned Small-size Forsterite Bricks S/131/60/000/06/02/012  
B015/B007

be increased and their actual costs may be reduced by roughly 25%.  
There are 5 figures, and 8 tables.

ASSOCIATION: Ukrainskiy nauchno-issledovatel'skiy institut ogneuporov  
(Ukrainian Scientific Research Institute of Fireproof  
Materials) Antonov, G. I., Minkovich, B. D.;  
Panteleymonovskiy ogneupornyy zavod im. K. Marksa  
(Panteleymonovka Works of Fireproof Materials imeni K. Marx)  
Shvarts'er, M. A., Shakhov, G. S., Semenov, I. N.;  
Makeyevskiy metallurgicheskiy zavod im. Kirova (Makeyevka  
Metallurgical Plant imeni Kirov) Khil'ko, M. M., Molchanova,  
M. I.)

Card 3/3

FRENKEL', A.S.; SHUKLER, K.M.; ANTONOV, G.I.; MINKOVICH, B.D.; SHAPOVALOV,  
V.S.'

Use of synthetic forsterite brick for the checkerwork in open-  
hearth furnace gas regenerators. Sbor.nauch.trud. UNITO no.5:168-  
180 '61. (MIRA 15:12)  
(Firebrick) (Open-hearth furnaces—Design and construction)

VINOKUR, S.B.; MIKHAYLETS, I.D.; ANTONOV, G.I.; KOSOGOLOV, V.V.;  
MINKOVICH, B.D.

Manufacture of magnesite-chrome brick for the dome of an  
open-hearth furnace with insulation. Ogneupory, 26 no.8:  
351-354 '61. (MIRA 14:9)

1. Panteleymonovskiy ogneuporny zavod im. K. Marksa (for  
Vinokur, Mikhaylets). 2. Ukrainskiy nauchno-issledovatel'skiy  
institut ogneuporov (for Antonov, Kosogolov, Minkovich).  
(Firebrick) (Open-hearth furnaces)

KARYAKIN, L.I.; MINKOVICH, E.D.

Petrographic investigation of rejected magnesite (periclase)  
firebrick. Ogneupory 27 no.4:172-178 '62. (MIRA 15:4)

1. Ukrainskiy nauchno-issledovatel'skiy institut ogneuporov.  
(Refractory materials--Quality control)



MINKOVICH, B.D.; ANTONOV, G.I.; KOSOGOLOV, V.V.; KOTIK, P.L.

Manufacture of dense magnesite-chromite refractories. Ogneupory 28 no.7:305-311 '63. (MIRA 16:9)

1. Ukrainskiy nauchno-issledovatel'skiy institut ogneuporov (for Minkovich, Antonov, Kosogolov). 2. Nikitovskiy dolomitnyy kombinat (for Kotik).

ANTONOV, G.I.; DOUGINA, G.Z.; MINKOVICH, B.D.; PROKUDIN, V.Yu.

Stabilized dolomite brick in the checkerwork of an open hearth  
furnace. Ogneupory 30 no.9:21-25 '65. (MIRA 18:9)

1. Ukrainskiy nauchno-issledovatel'skiy institut ogneuporov.

1 09281-01 EN:(e)/INT(r) III  
ACC NR: AP6029974 SOURCE CODE: UR/0413/66/000/015/0166/0166 45

INVENTORS: Frenkel', A. S.; Antonov, G. I.; Berman, Sh. M.; Shapovalov, V. S.;  
Minkovich, B. D.; Revzina, T. S.

ORG: none

TITLE: A method for producing basic refractory products. Class 80, No. 184693  
[announced by Ukrainian Scientific Research Institute of Refractories (Ukrainskiy  
nauchno-issledovatel'skiy institut ognouporov)]

SOURCE: Izobret prom obraz tov zn, no. 15, 1966, 166

TOPIC TAGS: refractory product, refractory compound, powder metal, powder metallurgy,  
magnesite, magnesium compound

ABSTRACT: This Author Certificate presents a method for producing basic refractory  
products from pressed powder containing magnesite by forming this powder. To produce  
a consistently uniform volume of the products, melted materials such as magnesite,  
spinel, and forsterite are introduced into the pressing powder. Their amount is  
30--70% of the pressed powder by weight. The products may be fired in an oxidizing  
medium at a temperature of 1750--1800.

SUB CODE: 13/11/ SUBM DATE: 22Jun61 UDC: 666.763.002.2

Page 2/2

AUTHOR: Minkovich, B.M. SOV/109-4-6-21/27

TITLE: The Problem of Quasi-optimum Linear In-phase Antennae With a Continuous Current Distribution (K voprosu o kvazioptimal'nykh lineynykh sinfaznykh antennakh s nepreryvnym raspredeleniyem toka)

PERIODICAL: Radiotekhnika i elektronika, 1959, Vol 4, Nr 6, pp 1057 - 1058 (USSR)

ABSTRACT: The possibility of a "transition" from the optimum antenna consisting of discrete radiators to the so-called quasi-optimum antennae with a continuous current distribution was considered by I.F. Sokolov (Ref 1). However, the formulae obtained in Ref 1 were rather cumbersome. It is shown by the author that the procedure can be simplified if the following approach is adopted. The main design parameter is the relative level of the side lobes  $R$ . The amplitude current distribution in the antenna is then evaluated on the basis of the formulae which give the envelope of the current distribution for the optimum antennae when the relative level of the side lobes is  $2R$ .

Card1/2

SOV/109-4-6-21/27

The Problem of Quasi-optimum Linear In-phase Antennae With a  
Continuous Current Distribution

The width of the main beam of the radiation pattern  
is then calculated by using Eq (10) of Ref 1, but instead  
of  $R$ , it is necessary to substitute  $2R$ .  
There are 3 references, of which 2 are Soviet and  
1 English.

SUBMITTED: December 27, 1958

Card 2/2

S/109/60/005/009/023/026  
E140/E455

AUTHORS: Davidchevskiy, Yu.I., Minkovich, B.M. and  
Kalinin, V.A.

TITLE: <sup>250</sup> Antennas with Quasi-Optimal Apertures

PERIODICAL: Radiotekhnika i elektronika, 1960, Vol.5, No.9,  
pp.1545-1546

TEXT: It is shown that the current distribution of an optimal linear antenna is equivalent to variations of effective height. The results are in agreement with those of Shanks and Bickmore (Ref.6). There are 1 figure and 6 references: 4 Soviet and 2 English. ✓

SUBMITTED: January 7, 1960

Card 1/1

24894

S/109/61/006/008/014/018  
D207/D304

9.1700

AUTHORS: Minkovich, B.M., and Davidchevskiy, Yu.I.

TITLE: Synthesis of an antenna with circular aperture

PERIODICAL: Radiotekhnika i elektronika, v. 6, no. 8, 1961,  
1395 - 1396

TEXT: The author describe a new method for synthesis of amplitude distribution for an assumed directivity pattern of a circular aperture with symmetrical in-phase amplitude distribution. The equivalent antenna is the same for all planes and the amplitude distribution is determined from

$$I_1(\xi) = \sqrt{1 - \xi^2} \int_0^{\xi} A(\rho) d\rho, \quad (1)$$

where  $I_1(\xi)$  - the amplitude distribution of the equivalent linear

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S/109/61/006/008/014/018  
D207/D304

Synthesis of an antenna ...

antenna;  $A(\rho)$  - the amplitude distribution of the circular aperture antenna,  $\xi, \eta$  - cartesian coordinates reduced to the aperture plane

$$\rho = \sqrt{\xi^2 + \eta^2}; \quad = \sqrt{1 - \xi^2} -$$

the aperture envelope. In cases when  $I_1(\xi)$  can be determined from a given space directivity diagram of a circular aperture antenna Eq. (1) may be used to determine  $A(\rho)$ . The solution Eq. (1) becomes

$$A(\rho) = \frac{2}{\pi} \left[ \frac{I_1(1)}{\sqrt{1-\rho^2}} - \int_0^1 \frac{I_1(y) dy}{\sqrt{y^2-\rho^2}} \right] \quad (3)$$

with  $\rho$  as parameter in the integrand. The formula of Eq. (3) is valid for functions  $I_1(\xi)$  symmetrical with respect to the axis  $\xi = 0$  even when the variable  $\xi$  is included in the odd orders of  $I_1(\xi)$ . The term outside the integral in Eq. (3) is not zero only when  $I_1(\xi)$

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has a 'pedestal' at  $\xi = 1$ , i.e.  $I_1(1) \neq 0$ . Eq. (3) permits evaluation in a simple manner of the amplitude distribution of circular aperture antennae analogous to distribution of linear antennae. The above method is used to determine the quasi-optimum distribution of a circular aperture antenna. After further substitution the expression for quasi-optimum distribution of the circular aperture antenna is obtained

$$\frac{A(\rho)}{A(0)} = \frac{\beta^2}{\beta \operatorname{sh} \beta - \operatorname{ch} \beta + 1} A_1(\gamma). \quad (5)$$

where  $\beta$  determines the level of subsidiary lobes ( $\operatorname{ch} \beta$  is the relative level of the side lobes of optimal antenna). The graph of function  $A_1(\gamma)$  is given. Curves 1, 2 and 3 in Fig. 2 represent the normalized values of amplitude distribution as a function of  $\rho$  for three different values of  $\beta$ : 3; 4; 2 and 5; 3 respectively. These values give for the optimum antenna the level of side lobes 20; 30; 4 and 40 db, lower by 6 db for the quasi optimum antenna. After drawing the graphs of  $A_1(\gamma)$  further curves are drawn to a changing

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scale of  $\gamma$  for various  $\beta$ . It is stated in conclusion that formula (3) is also valid for out of phase symmetrical amplitude phase distributions. There are 2 figures and 5 references: 2 Soviet-bloc and 3 non-Soviet-bloc. The references to the English-language publications read as follows: G.H. Brown, Pattern synthesis-simplified methods of array design to obtain a desired directive pattern, RCA Rev. 1959, 20, 3, 398; R.C. Hansen, Tables of Taylor distributions for circular aperture antennas. IRE Trans. 1960, AP-8, 23.

SUBMITTED: June 30, 1960

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9:1610 (incl. 1031, 3902)

AUTHORS: Minkovich, B.M., and Davidchevskiy, Yu.I.

TITLE: Design of plane aperture antennae

PERIODICAL: Radiotekhnika i elektronika, v. 6, no. 9, 1961,  
1482 - 1488

TEXT: The authors give a method of plane antenna synthesis, which permits the general problem of synthesis to be solved by simultaneous choice of amplitude phase distribution and the shape of antenna aperture. The basic equations are derived from

$$F(\varphi, \theta) = \int_b A(\xi, \eta) e^{j(u_\xi \cos \varphi + u_\eta \sin \varphi)} d\xi d\eta, \quad (1)$$

which is used in the aperture method for evaluating patten in a remote region. In it  $A(\xi, \eta)$  - amplitude phase distribution for linear polarization;  $\xi, \eta$  - reduced Cartesian coordinates of the aperture;

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$$\begin{aligned} u_1 &= \frac{\pi l_1}{\lambda} \sin \theta, \\ u_2 &= \frac{\pi l_2}{\lambda} \sin \theta; \end{aligned} \quad (2)$$

$l_1$  and  $l_2$  - dimensions of the physical aperture along axes  $\xi$  and  $\eta$  respectively. In the main planes ( $\varphi = 0$  and  $\varphi = \pi/2$ ) Eq. (1) becomes

$$F(0, \theta) = \int_{-1}^1 \left[ \int_{b_1(\xi)}^{b_2(\xi)} A(\xi, \eta) d\eta \right] e^{j u_1 \xi} d\xi, \quad (3)$$

and

$$F\left(\frac{\pi}{2}, 0\right) = \int_{-1}^1 \left[ \int_{a_1(\eta)}^{a_2(\eta)} A(\xi, \eta) d\xi \right] e^{j u_2 \eta} d\eta, \quad (4)$$

where  $\eta = b(\xi)$  and  $\xi = a(\eta)$  - are the equations of the aperture envelope.

$$\int_{b_1(\xi)}^{b_2(\xi)} A(\xi, \eta) d\eta = b_1 J_1(\xi), \quad (6)$$

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