

Call Nr: AF 1138798

Calculation of Low-powered Transformers (Cont.)

5.	Determination of the number of transformer winding turns	117
6.	Determination of winding wire section and diameter	117
7.	Arrangement of windings and making more precise the sizes of transformer core openings	118
8.	Average lengths of transformer winding turns	121
9.	Copper weight and winding resistance	122
10.	Losses in winding copper	122
11.	Steel weight of transformer core	122
12.	Losses in steel core	123
13.	Transformer efficiency	123

Card 11/12

Calculation of Low-powered Transformers (Cont.) Call Nr: AF 1138798

14. Transformer magnetizing current	123
15. Pulse transformer parameters and distortion check of transformed voltage pulse	124
16. Temperature test of transformer	125
III. Sample Calculation of Pulse Transformer	126
Appendices	133
Bibliography	141

AVAILABLE: Library of Congress

Card 12/12

VAGANOV, A. F.

"New Information Regarding the Physiological Reasons for Feeding of
Agricultural Plants (Ordinary and Extraradical)." Cand Biol Sci,
Khar'kov Agricultural Inst, Khar'kov, 1953. (RZhBiol, No 1, Sep 54)

SO: Sum 432, 29 Mar 55

VAGANOV, A.P.; ONISHCHENKO, A.I.

Investigation of the efficiency of top dressing potatoes with
superphosphates. Dop. UN URSR no.2:152-156 '56. (MLRA 9:12)

1. Kharkivs'kiy sil's'kogos'podars'kiy insitut imeni Dokuchayeva
i Ukrain's'kiy n.-d. institut ovochivnitstva. Predstavleno akademikom
Akademii nauk USSR i Vsesoyuznoy Akademii sel'skokhozyaystvennykh
nauk imeni Lenina P.A. Vlas'yukom.
(Phosphates) (Potatoes)

USSR/Plant Physiology. Mineral Nutrition

Abs Jour : Raf Zhur - Biol., No 19, 1956, No 86644

Author : ~~Vaganov A.P.~~
Inst : Khar'kov Agricultural Institute
Title : Trophoperiodism in Plants

Orig Pub : Zap. Khar'kovsk. S.-Ka. In-ta, 13 (50, 61-73, 1957

Abstract : Oat plants were placed in a nutrient solution (Bel'riyel's mixture plus B and Mn) during periods of 1 minute, 1 hour and 3 hours, respectively, daily, and they were also grown for day-long periods in tap water or nutrient solution. It was found that there does not exist any direct relationship between the duration of daily nutrition and the accumulation of the dry mass or of the general P_2O_5 . Upon short-time exposure to nutrient solution the process of P admission was accelerated. At 3-hour and round-the-clock nutrition the production of dry mass was the same in both cases. Fractionated nutrition - three times daily for 1 hour - yielded better

Card : 1/2

USSR/Plant Physiology. Mineral Nutrition

Abs Jour : Ref Zhur - Biol., No 19, 1956, No 86644

results than a continuous 3-hour long nutrition. At an increase in the duration of exposure to nutrient solution from 1 minute to 3 hours, the specific weight of the root mass was lower upon harvesting, and that of the above-ground mass, higher. The shorter is the time of sojourn in nutrient solution, the more extended are the axial organs, especially the roots. Bibliography cites 10 titles.---

B.Ye. Kravtsova

Card : 2/2

SOBYUKOV, V.I., inzh.; VAGANOV, B.I., inzh.

Recording two or more parameters of machinery using a stroboscopic oscillator. Trakt. i sel'shozmash. no.12:40-41 1965.

1. Chelyabinskiy traktornyy zavod.

VAGANOV, B. S.

Voprosy Organizatsii Vnes'ney Torgovli: Stran Narodnoy Demokratii (Problems
of the Organization of Foreign Trade in the Countries of People's Democracy)
Moskva, Vneshtorgizdat, 1954.
106 P.

SO: M/6
751
.VI

VAGANOV, B. S.

"Problems of the Organization of Foreign Trade of the People's Democracies."
Moscow, Vneshtorgizdat, 1954. Trans. of pp. 5-46, 55-83, 85-101, 103-107
in [redacted] Trans. 463, 23 Sep 1955.

SHERESHEVSKIY, M.G., prof.; VAGANOV, B.S., dots.; VORONOV, K.G., dots.;
ROZENBERG, M.G.; ZLOTNIKOV, A.L., dots. [deceased]; GRYAZNOV,
E.A.; GORYUNOV, F.A.; NETRUSOV, A.A., kand. ekon. nauk;
YEPIFANOV, M.P., red.; YERKHOVA, Ye.A., tekhn. red.

[Organization and technique of the foreign trade of the
U.S.S.R. and other socialist countries] Organizatsiya i tekhnika
vneshnei torgovli SSSR i drugikh sotsialisticheskikh stran;
uchebnoe posobie pod red. B.S.Vaganova. Moskva, 1963. 343 p.
(MIRA 16:9)

1. Moscow. Institut mezhdunarodnykh otnosheniy.
(Communist countries--Commerce)
(Russia--Commerce)

VAGANOV, G.

Cooperation among workers of science and industry. Rechi. transp.
22 no.2:42 F '63. (MIRA 16:5)

1. Predsedatel' Soveta Obshchestvennogo instituta novatorov-vodnikov
pri Gor'kovskom institute inzhenerov vodnogo transporta.
(Inland water transportation--Technological innovations)

VAGANOV, G., kand. tekhn. nauk

Ways of increasing the effectiveness of the use of integrated
tows. Rech. transp. 24 no.11:9-11 '65. (MIRA 19:1)

VAGANOV, G. I.

VAGANOV, G. I. -- "Investigation of the Shaking of Oil Barrels." Min
River Fleet USSR. Gor'kiy Inst of Water Transport Engineers.
Chair of the Organization of Movement. Gor'kiy, 1955. (Disserta-
tion for the Degree of Candidate in Technical Sciences)

No 1
SO: Knizhnaya Letopis', 1956, pp 102-122, 124

YAGANOV, G.I., kandidat tekhnicheskikh nauk.

Correlation between the size of the waterway and pusher-tug barge-trains. Rech.transp. 14 [i.e. 15] no.3:26-28 Mr '56. (MLRA 9:8)
(Towing) (Inland water navigation) (Barges)

BORISOV, I.G., VAGANOV, G.I., RYZHOV, L.M., SHANCHUROV, P.N., SHACHUROVA, V.K.

Needed book("Ship propulsion calculations" by V.V.Zvonkov. Reviewed
by I.G.Borisov and others). Rech. transp. 17 no. 7:55-56 J1 '58.
(MIRA 11:8)

(Ship propulsion)
(Zvonkov, V.V.)

VAGANOV, G.I. , kand.tekhn.nauk; MIKHAYLOV, V.A., inzh.

Towing rafts equipped with deflectors. Rech.transp. 18 no.5:16-17
My '59. (MIRA 12:9)

(Lumber--Transportation)
(Towing)

VAGANOV, G., kand.tekhn.nauk

Operational characteristics required in a landing stage. Rech.
transp. 19 no.10:11-12 0 '60. (MIRA 13:11)
(Piers)

VAGANOV, Gennadiy Ivanovich, dots., kand. tekhn. nauk; SHANCHUROVA, Valentina Konstantinovna, kand. tekhn. nauk; SHERSTINSKIY, Efraim Khaimovich, inzh.; Primali uchastiye: SILOTINA, G.N., dots., kand. tekhn. nauk; POSTNOV, A.V., kand. tekhn. nauk; LESYUKOV, V.A., inzh. vodnogo transporta, dots., kand. tekhn. nauk, retsenzent; FOMKINSKIY, L.I., starshiy nauchnyy sotr., retsenzent; KARLUSHINA, A.N., red. isd-va; RIDNAYA, I.V., tekhn. red.

[Ship propulsion; methods and examples for carrying out ship propulsion calculations]Tiaga sudov; metodika i primery vypolnenia sudovykh tiagovykh raschetov. Moskva, Rechnoi transport, 1962. 241 p. (MIRA 15:8)

1. Kafedra organizatsii dvizheniya Gor'kovskogo instituta inzhenerov vodnogo transporta (for Lesyukov). 2. Tsentral'nyy nauchno-issledovatel'skiy institut ekonomiki i ekspluatatsii vodnogo transporta (for Fomkinskiy).
(Ship propulsion)

VAGANOV, G. I.

"Pushing the vessels in the USSR rivers"

report to be submitted for the United Nations Conference on the
Application of Science and Technology for the Benefit of the
Developed Areas - Geneva, Switzerland, 1-10 Feb 61

BOGDANOV, B., konstruktor; VAGANOV, G., kand. tekhn. nauk; RYZHOV, L.,
kand. tekhn. nauk

The semi-integrated barge train "Pervyi" with a 7500-ton carrying
capacity. Rech. transp. 23 no.1:20-22 Ja '64. (MIRA 18:11)

PAKHOMOV, V.B., kand. tekhn. nauk; NAUMOV, A.I., inzh.; SHELMANOV, V.S., inzh.; KONSTANTINOV, V.P., inzh.; KOSTIN, A.M., inzh.; SEMENOV, YU.K., inzh.; PYATLIN, A.A., kapitan; VAGANOV, G.I., kand. tekhn. nauk; SVIRIDOV, A.A., inzh. KHODUNOV, M.Ye., kand. yurid. nauk; SAPOGOVA, A.Ye., inzh.; SOYUZOV, A.A., doktor tekhn. nauk, prof., red.; VASIL'YEV, A.V., kand. tekhn. nauk; ALEKSEYEV, V.I., red.; KUSTOV, L.I., red.; VITSINSKIY, V.V., red.; BORISOV, I.G., red.; SOLAREV, N.F., red.; ANDRIYENKO, V.I., red.; SUTYRIN, M.A., red.; GOLOVNIKOV, V.I., red.; ZOTOVA, V.V., red.

[Manual for the navigator of a river fleet] Spravochnik sudovoditelia rechnogo flota. Izd.2., dop. Moskva, Transport, 1965. 423 p. (MIRA 18:2)

1. Gor'kovskiy institut inzhenerov vodnogo transporta (for Pakhomov, Semenov, Vaganov, Vasil'yev). 2. Moskovskiy rechnoy tekhnikum (for Naumov). 3. Volzhskoye ob'yedinennoye rechnoye parokhodstvo (for Shelmanov, Sapogova). 4. Ministerstvo rechnogo flota (for Konstantinov, Sviridov). 5. Kazanskiy port (for Kostin). 6. Moskovskoye rechnoye parokhodstvo (for Pyatlin).

VAGANOV, G. P.

EQUINE RESPIRATORY INFLUENZA AFTER HUMAN INFLUENZA 505

Disease of the Upper Respiratory Tract in Horses Following the Human Influenza Epidemic of 1957

A. M. G. GONCHAROVA, G. P. VAGANOV, A. S. DUBINSKIY, B. D. SOKOLOVSKAYA and D. D. FRANKS, *Medical Institute of Vets and Equine, Kharkov, USSR*

In Kharkov in October 1957 there was a high rate of infection with Asian influenza among the human population. The morbidity rate varied according to conditions of contact but it reached 80% in some groups. Against this background an outbreak of disease of the upper respiratory tract occurred among the horses at the Kharkov race course, following the influenza epidemic among the race course staff.

Until recently, horses were not considered to be susceptible to the influenza virus. The existing forms of disease known as "equine influenza" differ somewhat in their clinical picture from the illnesses observed on this occasion although that picture is compatible with the disease described in Czechoslovakia and shown to be due to A/Asian/Praha/56. The basic symptom was an infection of the upper respiratory tract diagnosed as an infectious catarrh. The disease was marked, however, by an unusually severe course in certain cases and was characterized by loss of appetite, general debility and an increase in temperature to 40.5 C. The pyrexia lasted from three to five days, but in individual cases for as long as fifteen days. In four horses out of fifteen a second pyrexial phase occurred.

The disease in its marked form began on 1 November and lasted until 5 November. As early as 29 October, however, a few signs including bronchitis and tracheitis, with loss of appetite but normal temperature, had been observed among the horses. Illness among the race course staff began on 15 October 1957 and ended on 1 November, thus the clinically marked forms of the disease among the horses began immediately after influenza among the staff had ended.

Whereas infections among horses occurred in all the departments, the clinically marked forms were concentrated in Department II, where 19 out of 25 horses were affected. There were one to three cases in each of the remaining ten departments. Attempts to trace the reasons for this concentration of the disease in Department II met with no success.

Attempts to find out the cause of the disease by isolating the virus in chick-embryos (amniotic inoculation) brought no results. In view of the fact that the disease in horses was connected epidemiologically with influenza among people, an attempt was made to establish the presence of antibodies to viruses A2 and A by means of the haemagglutination-inhibition test and the neutralization test in chick-embryos. The haemagglutination-inhibition test was set up with four doses of 0.25 ml of antigens with viruses A 152 and A Asia/57 (Singapore) and Berezki strains, of which the first is avian and the second non-avian. Two modifications of the test were carried out. In the first, after the virus had been mixed with the serum, 0.5 ml of

Bulletin of the World Health Organization, Vol. 20- No.2-3, 1959 (Study devoted to influenza)

VAGANOV, I., polkovnik

Conference of our readers. Av.1 kosm. 45 no.5:95 My '63.
(MIRA 16:5)

(Aeronautics, Military—Periodicals)

VAGANOV, I. Maj

Listed as coauthor, with Lt Col I. DRACHEV, of article, "The Concern Shown by Air Force Unit Komsomol Organization Over Improving the Technical Knowledge of Personnel," published in Propahandist i Agitator, No 20, 1953, of the Main Political Administration, Ministry of Defense USSR. (Krasnaya Zvezda, 1 Nov 53)

SO: Sum 145, 1 June 1954

VAGANOV, I.F.

Small conveyers with multiple-pair feed of materials to work areas. Kosh.-obuv.prom. 2 no.8:30-33 Ag '60. (MIRA 13:9)

1. Glavnyy inzhener Kurskoy obuvnoy fabriki.
(Shoe manufacture) (Conveying machinery)

212047
S/193/64/000/008/0043/0046

ACCESSION NR: AP4044016

S/0193/64/000/008/0043/0046

AUTHOR: Yashunskaya, G. V.; Gaganov, I. M.; Bloshkin, Ye. G.; Berg,
I. I.

TITLE: Electrodes for welding and surfacing

SOURCE: Byulleten' tekhniko-ekonomicheskoy informatsii, no. 8, 1964,
43-46

TOPIC TAGS: aluminum welding electrode, stainless steel welding
electrode

ABSTRACT: The Moscow Experimental Welding Plant has developed several new welding electrodes, among them the OZL-14 electrode for welding 18-8 type stainless steels, the OZL-13 electrode for welding low-carbon steel structures, and the OZL-12 electrode for welding aluminum. The OZL-14 electrodes yield a weld metal which contains 6-10% ferrite, and is resistant to intergranular corrosion even in a sensitized condition. The OZL-13 electrode can be used for welding chemical equipment. The OZL-12 electrode is suitable for the repair of aluminum castings.

Card 1/2

L. 12947-65

ACCESSION NR: AP4044016

Both electrodes underwent extensive tests and are now used in various plants of the Soviet Union. Orig. art. has: 1 figure and 1 table.

ASSOCIATION: none

SUBMITTED: 00

ATD PRESS: 3097

ENCL: 00

S. R. ...

REF: 000

Card 2/2

VAGANOV, I.P.

2N(O): 5(+); 6(2) PHASE I BOOK EXPLOITATION SOV/2215
Vsesoyuznyy nauchno-issledovatel'skiy institut metrologii iazni
D.I. Mendeleeva

Referaty nauchno-issledovatel'skikh rabot; sbornik No.2 (Scientific
Research Abstracts; Collection of Articles, No.2) Moscow,
Standartgiz, 1958. 139 p. 1,000 copies printed.

Additional Sponsoring Agency: USSR. Komitet standartov, ser 1
izmeritel'nykh priborov.

Ed.: S. V. Rashedina; Tech. Ed.: M. A. Kondrat'yeva.

PURPOSE: These reports are intended for scientists, researchers,
and engineers engaged in developing standards, measures, and
gages for the various industries.

COVERAGES: The volume contains 128 reports on standards of measure-
ment and control. The reports were prepared by scientists of
institutes of the Komitet standartov, prepared by scientists of
priborov pri Sovete Ministrov SSSR (Commission on Standards,
Measures, and Measuring Instruments) under the USSR Council of
Ministers). The participating institutes are: VNIIM -
Vsesoyuznyy nauchno-issledovatel'skiy metrologi iazni D.I.
Mendeleeva (All-Union Scientific Research Institute of Metro-
logy iazni D.I.-Mendeleev) in Leningrad; Sverdlovsk branch
of this institute; VNIK - Vsesoyuznyy nauchno-issledovatel'skiy
institut Komiteta standartov, ser 1 izmeritel'nykh priborov
(All-Union Scientific Research Institute of the Commission
on Standards, Measures, and Measuring Instruments), created
from NIIMF - Moskovskiy gosudarstvennyy institut ser 1
izmeritel'nykh priborov (Moscow State Institute of Measures
and Measuring Instruments) October 1, 1955; VNIIFPI -
Vsesoyuznyy nauchno-issledovatel'skiy institut fiziko-tekhnol-
ogicheskikh izmereniy (All-Union Scientific
Research Institute of Physico-Chemical and Radio-engineering
Measurements) in Moscow; ENGIKIP - Nauchno-issledovatel'skiy
institut ser 1 izmeritel'nykh priborov, Chuvstvitel'nyy gosudarstvennyy
institut ser 1 izmeritel'nykh priborov (State Scientific Institute
of Measures and Measuring Instruments); (Chuvstvitel'nyy gosud-
stvennyy gosudarstvennyy institut ser 1 izmeritel'nykh priborov
(Vorotbivsk State Institute of Measures and Measuring Instru-
ments)). No personalities are mentioned. There are no references.

Card 2/27
Brazhinskii, M.L., and L.K. Kayak (VNIIM). Developing a Method
and a System of Unit Length Transfer from Standards to Working
Measures (to 12 m in length) With the Highest Accuracy 9

Vaganov, I.P. (Sverdlovsk Branch of VNIIM). Studying and Impro-
ving Methods and Methods of Measuring Great Lengths and Diameters
in Heavy Machine Manufacturing 9
Card 3/27

VAGANOV, I. P.

Vaganov, I. P. (Sverdlovsk). Some Improvements in the "Encircling" Method of Measurement [Determination of diameter by measuring circumference] p. 220

Interchangeability, Accuracy and Measuring Methods in Machine Building, Moscow, Mashgiz, 1958, 251 pp. (Sbornik Nauchno-tekh. obshch. mashinostroitel'noy promyshlennosti, Leningradskoye oblast pravleniya, kn. 47).

This collection of articles deals with the topics discussed at the 3rd Leningrad Sci. and Engineering Conference on Interchangeability, accuracy and Inspection Methods in Machine-building and Instrument-making, held 18-22 Mar 1957.

AUTHOR: Vaganov, I.P. SOV/115-58-6-40/43

TITLE: Simplification of the Calculation of Diameters in Measurements by the Encircling Method (Uproshcheniye podschëta diametrov pri izmereniyakh metodom opoyasyvaniya)

PERIODICAL: Izmeritel'naya tekhnika, 1958, Nr 6, p 98 (USSR)

ABSTRACT: Large diameters are calculated by obtaining the circumference and dividing it by π . The value of π is mostly taken as 3.14, omitting all of the following numbers. This causes an error of 2-3 mm. A table is given here in which the circumference is more exactly divided by π . The diameter can be calculated more easily. There is 1 table.

Card 1/1

VAGANOV, I.P. (Sverdlovsk)

Improving the girdling method of measurements. [Izd.] LOHITOMASH
47:220-222 '58. (MIRA 11:10)
(Length measurement)

VAGANOV, I. P.

Corrections to inside micrometer readings in measuring large
vertical dimensions. Izv. tekhn. no. 8:6-8 Ag '60. (MIRA 13:9)
(Micrometer)

VAGANOV, I.P.

Temperature errors of devices for measuring large dimensions.
Izm.tekh. no.8:20-22 Ag '62. (MIRA 16:4)
(Measuring instruments--Thermal properties)

VAGANOV, I.P.

Rigidity and precision of large-sized wooden clamps. Izv.tekh.
no.3:7-9 Mr '63. (MIRA 16:4)

(Fastenings)

VAGANOV, I.P.; SHCHIPACHEVA, N.M.

Large gauge blocks. Izm. tekhn. no.8:15-16 Ag '63.
(MIRA 16:10)

ACCESSION NR: AT4042612

B/0000/64/000/000/0360/0366

AUTHOR: Vaganov, I. P.

TITLE: Results of experimental investigations of the precision and rigidity of some universal devices for measuring large dimensions

SOURCE: Soveshchaniye po tochnosti, vzaimozamenyayemosti i tekhnicheskim izmereniyam v mashinostroyenii, 2d, 1962. Tochnost', vzaimozamenyayemost' i tekhnicheskiye izmereniya v mashinostroyenii (Precision, interchangeability and technical measurements in machine building); trudy* soveshchaniya, Moscow, Izd-vo Nauka, 1964, 360-366

TOPIC TAGS: measuring instrument, measuring bar, micrometer, micrometer accuracy, micrometer extension, micrometer support

ABSTRACT: In heavy machine-building plants at the present time, measuring bars of the most varied construction are in use, and many plants are forced to use home-made instruments for measuring large internal dimensions. The author therefore reworked and generalized the results of his own and other experimental investigations of the rigidity of micrometric measuring bars of different types and designs, in the hope that these results could be used for the standardization of optimum designs. Fig. 1. of the Enclosure shows

Card 1/5

ACCESSION NR: AT4042612

the changes in measuring bar length with variations in the location of its supports. From this figure it follows that only measuring bars 2, 3 and 5 (cigar-shaped extensions, Uralmashzavod, conical extensions, EZTM; cylindrical assembled micrometric measuring bar, ChIZ, 150-4000 mm) satisfy the standard requirements of GOST 10-58. Fig. 2. of the Enclosure shows the changes in measuring bar length during rotation around the axis while being supported at the ends. This figure shows that only bars 1, 2 and 3 (cigar-shaped extensions, Uralmashzavod; conical and cylindrical extensions, EZTM; micrometric measuring bar, ChIZ, 150-4000 mm) show sufficient rigidity on rotation. Data on the shortening of measuring bars due to their own weight during vertical measurements are also presented. For vertical measurements, spherical tips on the ends of the bar are recommended only for material having a compressive strength of a least 30 kg/mm^2 ; for softer materials, flat tips are recommended. Wooden measuring devices have recently been proposed for measuring large pieces. Preliminary experiments made in Czechoslovakia with wooden frames for large micrometers and with wooden measuring bars demonstrated their handling convenience and high precision. The design and fabrication of wooden measuring devices has therefore been included in the planning of the VNIM division in Sverdlovsk and of Uralmashzavod. At the present time, large spruce frames

Card 2/5

ACCESSION NR: AT4042612

are under investigation for the following ranges of measurement: 1000-1250 mm (height of section H=175 mm); 2000-2250 mm (H=350 mm); 2000-2250 mm (H=500 mm); and 3750-4000 mm (H=500 mm). The third one has been found to be much superior in rigidity compared with metallic frames for the same measuring range. Another advantage of wooden frames is their lower sensitivity to temperature. A disadvantage, however, is sensitivity to variations in air humidity. Therefore, protective coatings or soaking in appropriate compounds have been recommended. Aluminum foil (3 layers) on a bituminous base has been recommended, and it has been found that five layers of perchlorovinyl resin paint PKhV-715 give practically complete protection. Orig. art. has: 4 figures and 2 tables.

ASSOCIATION: none

SUBMITTED: 17Jan64

ENCL: 02

SUB CODE: IE

NO REF SOV: 003

OTHER: 000

Card 3/5

ACCESSION NR: AT4042612

ENCLOSURE: 01

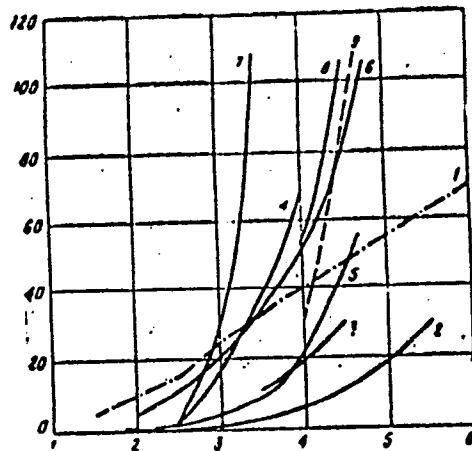


Fig. 1. Change in measuring bar length with variations in the location of supports
 1 - GOST 10-58: standard for micrometric measuring bars, 2 - Cigar-shaped extensions, Uralsmashzavod, 3 - Conical extensions, EZTM, 4 - Cylindrical extensions, EZTM, together with sma extensions not more than 500 mm at each end, 5 - Cylindrical assembled micrometric measuring bar, ChIZ, 150-4000 mm, 6 - Cylindrical assembled micrometric measuring bar, type NMI, ChIZ, 500-10000 mm, 7 - Extensible micrometric measuring bar, Hommel-Werke, 2300-4300 mm, 8 - Extensible micrometric measuring bar, Hommel-Werke, 4000-6000 mm, 9 - Extensible micrometric measuring bar, Carl Maar, 4000-6000 mm

Card 4/5

ACCESSION NR: AT4042612

ENCLOSURE: 02

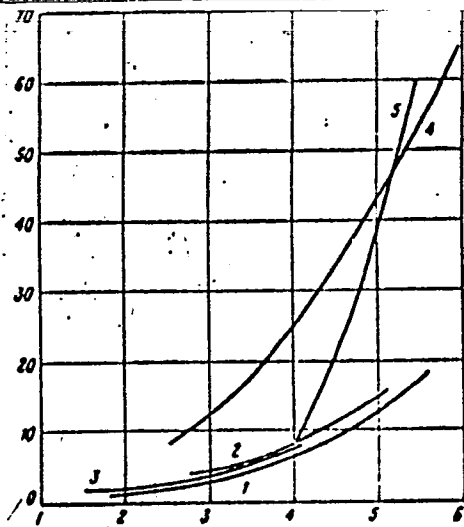


Fig. 2. Change in measuring bar length during rotation around its axis while supported at the ends. 1 - Cigar-shaped extensions, Uralmashzavod, 2 - Conical and cylindrical extensions, EZTM, 3 - Micrometric measuring bar, ChIZ, 150-4000 mm, 4 - Micrometric measuring bar, type ChIZ, 500-10000 mm, 5 - Extensible micrometric measuring bar, Carl Maar, 4000-6000 mm.

Card 5/5

FARAFONOV, I.I., kand. tekhn. nauk; SEYFI, R.N.; VAGANOV, L.L.
RUBARKH, V.M.

Percussion roller bit. Met. i gornorud. prom. no.3:60-61
My-Je '64. (MIRA 17:10)

FARAFANOV, I.I., kand. tekhn. nauk; SEYFI, R.N., inzh.; VAGANOV, L.I., inzh.;
RUBARKH, V.M., inzh.

New type of combination drilling bits. Gor. zhur. no.6:69-70
Je '64. (MIRA 17:11)

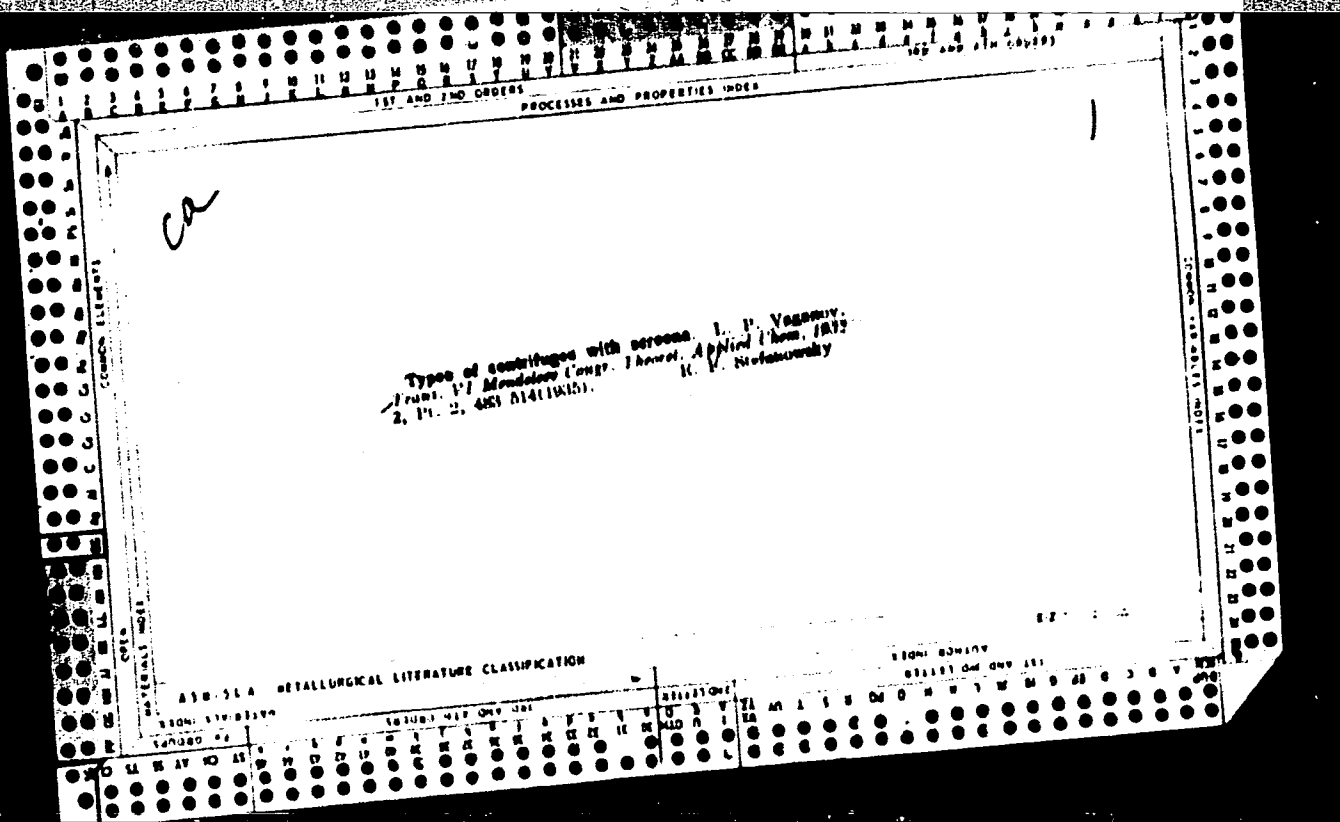
1. UkrNIIGiproneft', Kiyev.

VAGANOV L.M.

"SSR"

77B1* Electrodes for Wear-Resistant Deposits of Medium and High Hardness. Elektrody dlia iznosostoiichivylak nap-
lavok srednei i vysokoi tverdosti. (Russian) L. M. Vaganov.
Stavochnoe Proizvodstvo, 1955, no. 2, Feb., p. 16-20.
Composition, structure, and optimum conditions of operation;
physical properties of deposited metal. Tables, graphs, micro-
graphs.

77 B1



ALEKSANDROV, A.M., inzh.; BAZHENOV, V.S., inzh.; BOBROVNIKOV, B.N.,
inzh.; VAGANOV, M.P., inzh.; GUREVICH, B.M., inzh.;
DZHIBELLI, V.S., inzh.; DROBAKH, V.T., inzh.; ISAKOVICH,
R.Ya., kand. tekhn. nauk; KAPUSTIN, A.G., inzh.; KONENKOV,
K.S., inzh.; MININ, A.A., kand.tekhn.nauk; PEVZNER, V.B.,
inzh.; PESKIN, G.L., inzh.; PORTER, L.G., inzh.; PRYADILOV,
A.N., inzh.; SLUTSKIY, L.B., inzh.; FEDOSOV, I.V., inzh.;
FRENKEL', B.A., inzh.; TSIMBLER, Yu.A., inzh.; SHUL'GIN,
V.Kh., inzh.; ESKIN, M.G., kand. tekhn. nauk; VOROB'YEV,
D.T., inzh. [deceased]; SINEL'NIKOV, A.V., kand. tekhn.
nauk; SHENDLER, Yu.I., kand. tekhn. nauk, red.; NESMELOV,
S.V., inzh., zam. glav. red.; NOVIKOVA, M.M., ved. red.;
RASTOVA, G.V., ved. red.; SOLGANIK, G.Ya., ved. red.;
VORONOVA, V.V., tekhn. red.

[Automation and apparatus for controlling and regulating produc-
tion processes in the petroleum and petroleum chemical industries]
Avtomatizatsiia, pribory kontrolya i regulirovaniia proizvodstven-
nykh protsessov v neftianoi i neftekhimicheskoi promyshlennosti.
Moskva, Gostoptekhizdat. Book 3. [Control and automation of the
processes of well drilling, recovery, transportation, and storage
of oil and gas] Kontrol' i avtomatizatsiia protsessov bureniia
skvazhin, dobychi, transporta i khraneniia nefti i gaza. 1963.
551 p. (Automation) (MIRA 16:7)

(Petroleum production - Equipment and supplies)

VAGANOV, M.P.

Standardization of articles and materials used in the manu-
facture of instruments. Standartizatsiia 29 no.10:17-19
0 '65. (MIRA 18:12)

VAGANOV, N.

1930 [2] 100-101. The authors describe different German and Russian methods for preparing slag brick. Data on their composition and properties are given.

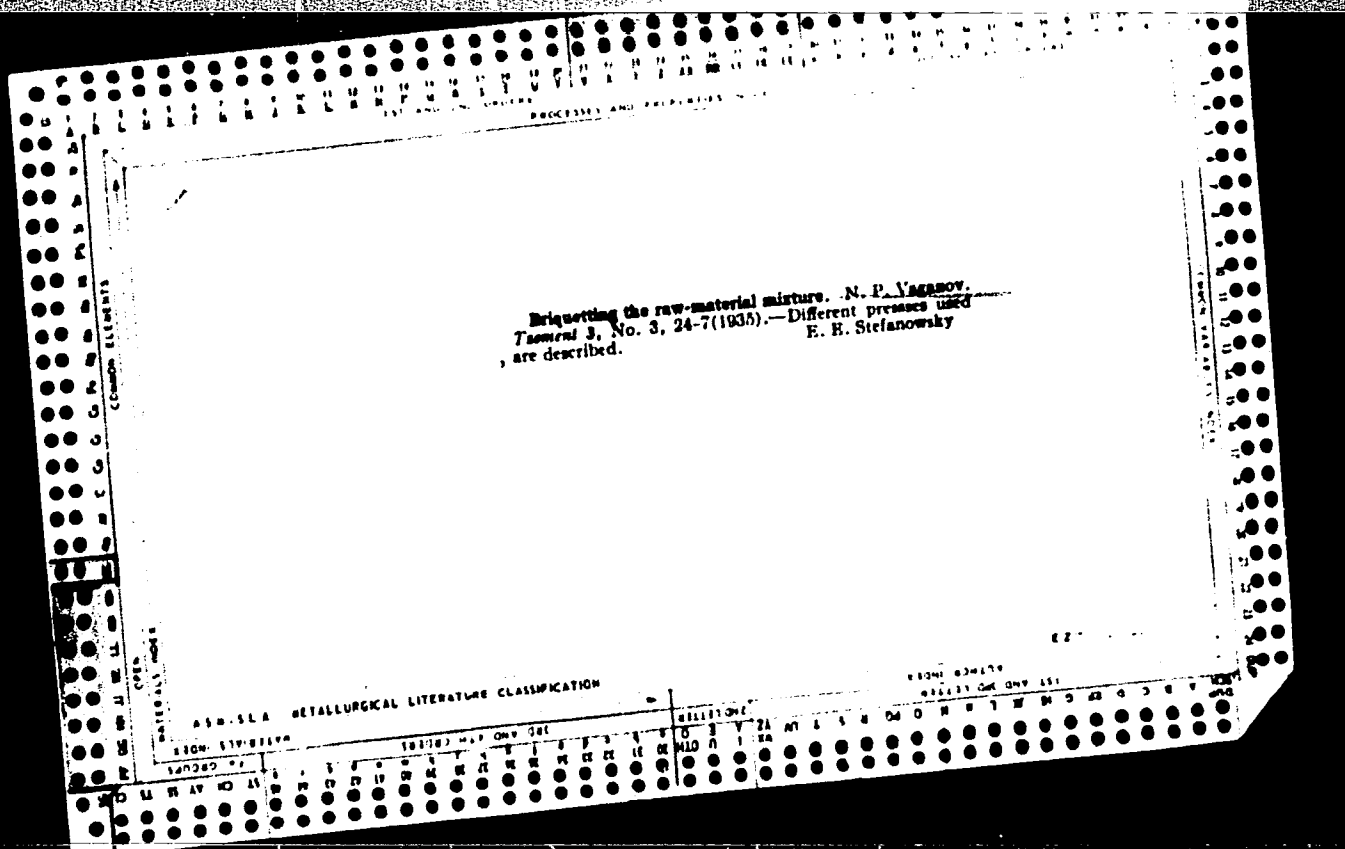
Microfilm frame containing a document page. The page is titled "SLAG BRICK" and contains a reference to "Ewald, B., and Vaganov, N." and "Materialy, 1930 [2] (6) 83". The text describes German and Russian methods for preparing slag brick and mentions data on their composition and properties.

SLAG BRICK

Ewald, B., and Vaganov, N. *Slag brick. Stroitel. Materialy*, 1930 [2] (6) 83. -The authors describe different German and Russian methods for preparing slag brick. Data on their composition and properties are given.

ARABADZHYAN, A.Z., otv. red.; VAGANOV, N.A., otv. red.; GRISHECHKIN, K.I.,
otv. red.; BOGOSLOVSKIY, V.V., otv. red.; BIRYUKOV, V.V., red.
izd-va; TSVETKOVA, S.V., tekhn. red.

[Economic conditions of Asian and African countries in 1961]
Ekonomicheskoe polozhenie stran Azii i Afriki v 1961 g. Mo-
skva, Izd-vo vostochnoi lit-ry, 1963. 616 p. (MIRA 17:1)



1

ca

Roller crushers. N. P. Vaganov. *Ognesovskii* 3, No. 10, 44-6(1984).—Theoretical calcns. on the work of roller crushers are given. E. E. Stefanovsky

PROCESSES AND PROPERTIES INDEX

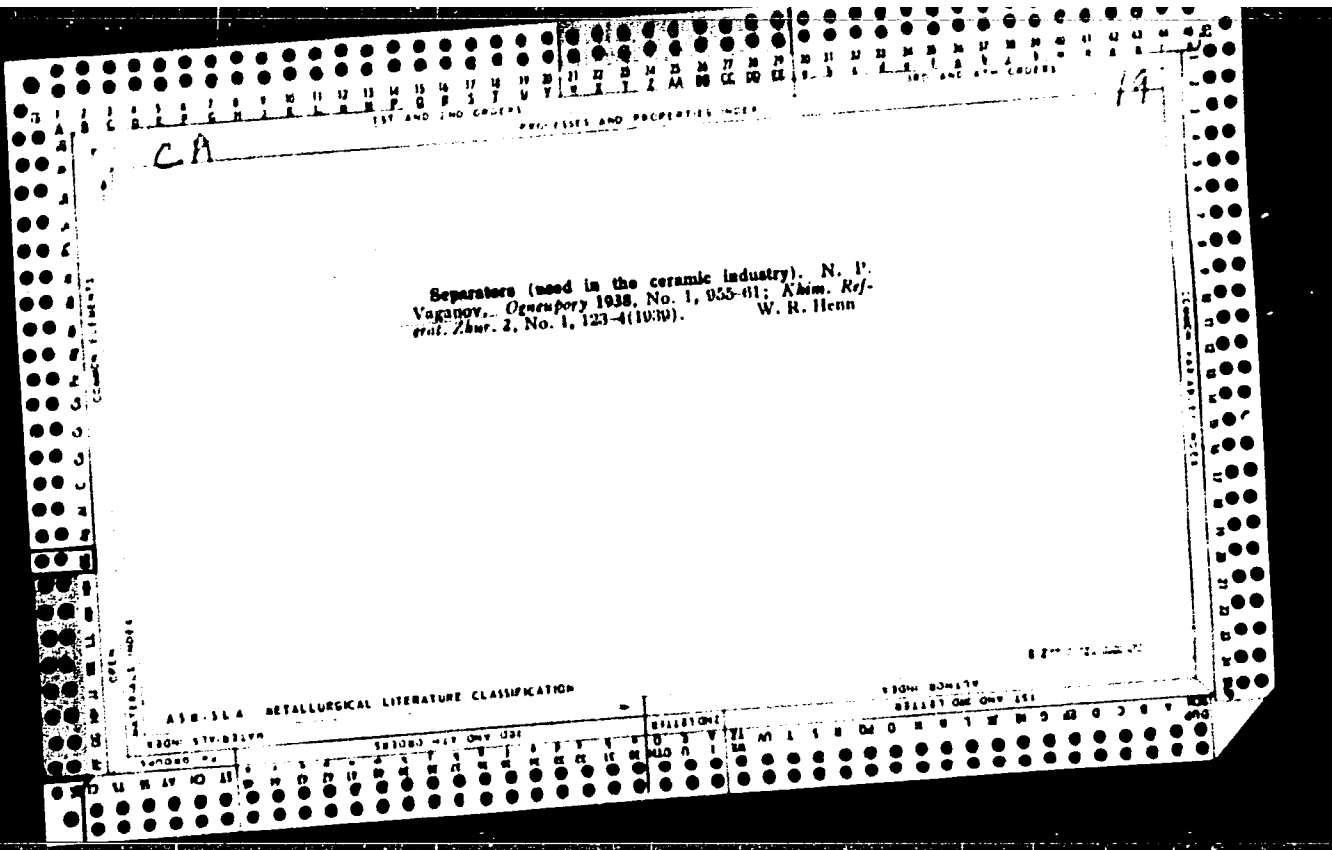
GENERAL ELEMENTS

COMPONENTS

MATERIALS INDEX

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	-----



VAGANOV, N. P.

The organization of planned preventive repair of glass plant equipment Moskva, Gos.
izd-vo legkoi promyshl., 1939 135 p. (49-57841)

TP

MERIAKRI, V.V.; VAGANOV, R.B.

Methodology for the experimental study of the conversion
of waves in short wave guide sections. Radiotekh. i
elektron. 7 no.12:1997-2002 D '62. (MIRA 15:11)

1. Institut radiotekhniki i elektroniki AN SSSR.
(Wave guides) (Microwaves)

L 18392-63

ACCESSION NR: AP3003727

AUTHOR: Vaganov, R. B.

TITLE: Measuring losses in some quasi-optical waveguide elements

SOURCE: Radiotekhnika i elektronika, v. 8, no. 7, 1963, 1264-1266

TOPIC TAGS: measuring loss, waveguide

ABSTRACT: Experimental results are reported which verify the theory set forth by B. Z. Katsenelenbaum (Radiotekhnika i Elektronika, 1963, 8, 7, 1111-1119). A slot in a circular waveguide was selected as a quasi-optical element; the slot width was varied to determine the limits of validity of the theory. Strong unaccounted-for oscillations were observed when the waveguide had a flange or thick walls. Otherwise, the theoretical results were close to experimental. Next, a number of bends with mirrors were prepared and losses therein determined. A good agreement with the theory and other published experimental data

Card 1/2

66
64

L 18392-63
ACCESSION NR: AP3003727

is noted. "The author is deeply grateful to B. Z. Katsenelenbaum for his attention to this work." Orig. art. has: 3 figures and 2 formulas.

ASSOCIATION: Institut radiotekhniki i elektroniki AN SSSR (Institute of Radio Engineering and Electronics, AN SSSR)

SUBMITTED: 08Oct62

DATE ACQ: 02Aug63

ENCL: 00

SUB CODE: CO, GE

NO REF SOV: 002

OTHER: 003

Card 2/2

BLAGONRAVOV, S.I.; BREK, B.M.; BYAKOV, P.T.; VIKTOROV, V.S.; VAGANOV,
V.I.; GUSEV, S.A.; GLEBOV, V.V.; GURILEV, A.M.; DANILOV, G.D.;
ZAV'YALOV, V.G.; IOFFE, Ye.F.; IZVEKOV, G.M.; KONGVALOV, S.A.;
KULIGIN, A.S.; KASATKIN, A.P.; KUZNETSOV, N.I.; LEBEDEV, A.I.;
LEMPERT, Ye.N.; MARGEVICH, Ya.I.; MAYZEL', M.A.; MITYAKOV, V.S.;
NOSKOV, M.M.; RYABCHIKOV, M.Ya.; RATSMAN, N.I.; TVOROGOV, M.K.;
UGOL'NIKOV, V.Ya.; KHAR'KOV, G.I.; CHADOV, S.L.

Lev Mil'evich Matveev; obituary. Torf. prom. 38 no.4:38 '61.

(MIRA 14:9)
(Matveev, Lev Mil'evich, 1914-1961)

VAGANOV, P.A. (L'vov)

Microflora in chronic purulent otitis media. Vest.oto-rin. 18 no.3:
75 My-Je '56. (MLBA 9:8)

(EAR--DISEASES)

VAGANOV, P.A. (L'vov)

Spontaneous emphysema of the face. Vest.oto-rin. 18 no.5:118 S-0 '56.
(EMPHYSEMA) (MLRA 9:11)
(FACE--WOUNDS AND INJURIES)

VAGANOV, P.A. (L'vov)

Fusospirillary ulceromembranous laryngitis. Vest.oto-rin. 18 no.5:
132 S-0 '56. (MIRA 9:11)
(LARYNX--DISEASES)

VAGANOV, P. A.

AUTHORS: Vaganov, P. A., Ostromov, V. I., 56-5-8/46

TITLE: α -Particles Emitted by Heavy Nuclei in Emulsions Under the Action of High-Energy Protons (α -chastitey, ispuskayemye tyazhelymi yadrami emul'sii pod deystviyem protonov vysokikh energiy)

PERIODICAL: Zhurnal Eksperimental'noy i Teoreticheskoy Fiziki, 1957
Vol. 33, Nr 5, pp. 1131-1139 (USSR)

ABSTRACT: A fine-grained emulsion side P-9 was exposed in such a way to the proton-ray of the synchrocyclotron that the ray and the emulsion side are in a parallel position to each other. The energy of the protons was 360, 560 and 660 MeV. The low energies were obtained by slowing down of the 660 MeV-protons in graphite. From the ad-measurement of the range of the α -particles their energy spectrum was determined. The theoretically calculated evaporation spectra have shown a good accordance with the experimentally obtained data up to α -energies of 14 MeV. The hypothesis that a reduction of Coulombs "threshold" according to the Le Coateur, is required, was not applied. By subtracting the calculated from the experimentally found spectrum, the energy distribution of the cascades α -particles and their relative number occurring with each process of evaporation (all represented by curves) could be determined for all 3 proton energies. There are 3 tables, 4 figures, and 27 references,

Card 1/2

α-Particles emitted by Heavy Nuclei in Emulsions Under the Action of High - Energy Protons. 56-5-8/46

9 of which are Slavic.

ASSOCIATION: Leningrad Polytechnical Institute (Leningradskiy politekhnicheskii institut)

SUBMITTED: May 25, 1957

AVAILABLE: Library of Congress

Card 2/2

VAGANOV,

BULYCHEV, V.V.; GOLOVIN, G.M.; ZURKOV, P.E.; KARPOV, A.F.; NIKOL'SKIY, N.A.; OGIYEVSKIY, V.M.; POPOV, S.I.; TRIFYUS, M.N.; SHITOV, I.S.; SHREMT, A.A.; ZURKOV, P.E., kandidat tekhnicheskikh nauk, redaktor; KOMPANEYETS, V.P., kandidat tekhnicheskikh nauk, retsenzent; VAGANOV, P.V., kandidat tekhnicheskikh nauk, retsenzent; IKONNIKOV, A.N., kandidat tekhnicheskikh nauk, retsenzent; SAUKHAT, I.G., kandidat tekhnicheskikh nauk, retsenzent; NIKOLAYEV, S.I., retsenzent.

[Mining iron ore by the opencast method] Razrabotka zheleznykh rud otkrytym sposobom. Pod. obshchei red. P.E.Zurkova. Sverdlovsk. Gos. nauchno-tekhn. izd-vo lit-ry po chernoi i tsvetnoi metallurgii, 1953. 632 p. (Iron mines and mining) (MLRA 7:8)

ROZHNOVSKIY, Al'bin Antonovich; VAGANOV, P.V., kand.tekhn.nauk, retsenzent;
SMIRNOV, V.P., gornyy inzh., retsenzent; NEGANOV, I.I., gornyy
inzh., red.; SKOROBOGACHEVA, A.P., red.izd-va; ZEP, Ye.M.,
tekhn.red.

[Placer mining] Razrabotka rossypnykh mestorozhdenii. Sverdlovsk,
Gos.nauchno-tekhn.izd-vo lit-ry po chernoi i tsvetnoi metallurgii,
1959. 336 p. (MIRA 12:8)
(Hydraulic mining) (Dredging) (Mining engineering)

VAGANOV, P.V., dots.; IKONNIKOV, A.H., dots.; KOMPANEYETS, V.P., dots.

Determining the economic efficiency of mining new, small iron ore deposits. Izv.vys.ucheb.sav.; gor.zhur. no.3:12-25 '59.
(MIRA 13:4)

1. Sverdlovskiy gornyy institut imeni V.V.Vakhrusheva. Rekomendovana kafedroy razrabotki rudnykh i rossypnykh mesto-roshdeniy.

(Iron mines and mining)

(Ores--Sampling and estimation)

VAGANOV, P.V.; IKONNIKOV, A.N.; KOMPANEYETS, V.P.; SHKUTA, F.I.

Basic problems of mining low-grade iron ore deposits. Trudy
Gor.-geol.inst.UFAN SSSR no.41:181-187 '59. (MIRA 13:5)
(Iron mines and mining)

VAGANOV P.O.

SOV/5298

PHASE I BOOK EXPLOITATION

Akademiya nauk SSSR. Ural'skiy filial. Gorno-geologicheskii institut.

Podzemnaya razrabotka rudnykh mestorozhdeniy (Underground Exploitation of Ore Deposits) Sverdlovsk [1960] 165 p. (Series: Its: Trudy, v. 77, 54) 1,000 copies printed.

Editorial Board: K. V. Kochnev, Professor, Doctor of Technical Sciences; L. Ye. Zubrilov, Candidate of Technical Sciences; A. A. Ilyitskiy, Candidate of Technical Sciences. Ed. of Publishing House: M. S. Ebergardt; Tech. Ed.: M. P. Serezhkina.

PURPOSE: This publication is intended for engineering and technical personnel in the mining industry.

COVERAGE: This is a collection of 22 articles by different authors on problems of underground exploitation of large massive ore deposits in the Ural. The articles are based on studies carried out in the Laboratory for the Exploitation of Ore Deposits of the Gorno-geologicheskii institut UPAN SSSR (Institute of Mining Geology, Ural Branch AS USSR), between 1958-1959. No personalities are mentioned. Most of the articles are accompanied by references.

TECHNOLOGY OF UNDERGROUND EXPLOITATION

Alekseyevskiy, I. O. On Reducing the Volume of Drainage Sumps in Metal Mines	53
Alekseyevskiy, I. O. Shaft Drainage Sump With Vertical Well-Type Water Pits	59
Urvantsev, V. P. New Methods of Overhand Stopping (Foreign Practice)	65
Ilin, A. M., and R. A. Pizrok. Comparison of the System of Forced Level Caving With the Combined System Under the Conditions of the Vysokogorakiy Mine	79
Zubrilov, L. Ye., and A. I. Shuryzda. Selective and Total Extraction of Copper and Sulphur Ores of the Degt'yarskiye Deposits	85
Zubrilov, L. Ye., and B. M. Shal'min. Analysis of Labor Input in Forced Level Caving at the Vysokogorakiy Mine	91
Ovcharenko, V. M., and V. A. Shchelkanov. Improvement of Inclined Diker Exploitation at the Borzovakiy Mine	103
Shuryzda, A. I. Practice in Exploiting Thin Ore Sections of the Degt'yarskiye Deposit	111
Shal'min, B. M. On the Transition Boundary From Mining to Pit Extraction in Exploiting Deposits of Massive Ores	115
Danchey, L. S. On the Influence of the Coefficient of Loading on the Effect of Explosion in Slope Cutting	121
Rutkina, L. A. Towards a Study of the Seismic Effect of Strong Explosions	125
Mikolin, V. I. Evaluating the Different Methods of Forming Tunnels in the Floors of (Chamber) Blocks	131
Yegorov, E. V., A. M. Khrushchev, V. P. Kompaneyets, Yu. A. Kabakov, and T. M. Chirchugov. Use of Underground Excavators at Steeply Dipping Ore Deposits	137
Shchelkanov, V. A. Utilizing the Force of Explosion and the Ore's Own Weight for Transporting Crushed Ore in Exploiting Inclined Deposits	149
Shchelkanov, V. A. Evaluating Methods of Delivering Crushed Ore in Exploiting Inclined Deposits	155

JA/dwm/ec
8-1-61

AVAILABLE: Library of Congress
Card 6/6

VAGANOV, P.V., dotsent; IKONNIKOV, A.N., dotsent; KOMPANEYETS, V.P., dotsent; KABAKOV, Yu.A., starshiy prepodavatel'; CHEPCHUGOV, P.M., inzh.

Investigation of ore chuting in loading with excavators. Izv. vys.ucheb.zav.; gor.zhur. no.4:42-47 '60. (MIRA 14:4)

1. Sverdlovskiy gornyy institut imeni V.V.Vakhrusheva. Rekomendatsiya kafedroy rudnykh i rossypnykh mestorozhdeniy.

(Mine haulage)

VAGANOV, P.V.; IKONNIKOV, A.N.; KOMPANEYETS, V.P.; KABAKOV, Yu.A.;
CHEPCHUGOV, P.M.

Use of underground excavators in steeply pitching ore deposits.
Trudy Gor.-geol.inst.UFAN SSSR no.54:137-147 '60. (MIRA 14:6)
(Mining engineering) (Excavating machinery)

VAGANOV, P.V.; IKONNIKOV, A.H.; **KOMPANEYETS**, V.P. [deceased]

Generalization of experience in the working of small Ural iron-
ore deposits. Trudy Gor.-geol. inst. UFAN SSSR no.57:73-82
'61. (MIRA 15:3)
(Sverdlovsk Province--Iron mines and mining)

VAGANOV, R. B.

В. В. Сатурнов,
А. А. Рогозин
Исследования девиации сигнала Ш-волноводов
11 июня
(с 18 до 22 часов)

В. А. Кузнецов
Связь между потенциалом функции уральной ин-
теграции и неэргодичностью эргодической систе-
мы вращений, которая зависит от знака от одной
координаты

В. Н. Корсаков
Относительная форма кривой волноводов в условиях
нестационарности

Ю. М. Шаповалов
Термодинамическое описание плазмы в свободном
поле H₁ в волновод с круглым сечением

Р. В. Волков
Экспериментальный анализ неэргодичности поля
взаимодействия волноводов, плазмы и критиче-
ского сечения

В. Н. Шаповалов
Дифракционные свойства и пространственный резонанс
в волноводном волноводном волноводном и нелинейно
электрической среде

11

А. СЕМИН ПОЛУПРОВОДНИКОВЫЕ ПРИБОРЫ
Руководитель: Е. В. Галанин
9 июня
(с 10 до 16 часов)

А. А. Волков
Новые полупроводниковые приборы для радиотех-
нической аппаратуры

Р. Е. Савицкий,
М. И. Лукин
Новый полупроводниковый прибор на базе тран-
зистора — диода транзистора

Г. М. Агалаев,
А. В. Петров
Работа дрейфового транзистора при большой со-
статке

Ю. К. Баранов
Переходный процесс дрейфового транзистора при
составном режиме при большой частоте

9 июня
(с 18 до 22 часов)

papers submitted for the Combined Meeting of the Scientific Technological Society of
Radio Engineering and Electrical Communications in A. S. Popov (VSEIEM), Moscow,
6-12 June, 1957

69915

S/109/60/005/05/003/021
E140/E435

9.1300

AUTHOR: Vaganov, R.B.

TITLE: The Experimental Analysis of the Electromagnetic Field
in Waveguide Junctions Containing Critical Sections

PERIODICAL: Radiotekhnika i elektronika, 1960, Vol 5, Nr 5,
pp 727-732 (USSR)

ABSTRACT: This paper was presented at the June 11, 1959 meeting of
the A.S. Popov Scientific-Technical Radio Engineering and
Electrical Communications Society.

The basic criterion of matching-junction efficiency in waveguide systems is the conversion factor of fundamental-wave energy into parasitic-wave energy. The present article gives an experimental method for measuring the parasitic waves arising in waveguide junctions. The method is based on parasitic-wave resonance described in Ref 1. A broad diagram of the system is given in Fig 4. The system permits measurement of the following quantities:
1. λ_2 the parasitic-wave wavelength in the waveguide;
2. The displacement of the piston necessary to preserve resonance with change of frequency;

Card 1/2

69915

S/109/60/005/05/003/021
E140/E435

The Experimental Analysis of the Electromagnetic Field in Waveguide Junctions Containing Critical Sections

3. The half-width of the resonance curve;
 4. The reflection factor at maximum resonance.
- Isayenko first suggested to the author the use of parasitic-wave resonance phenomena to analyse electromagnetic field. It is stated in a supplementary note that Klinger, Proc. IEE, 1959, B106 suppl. Nr 13, p 89, has published a system based on the same general principles. There are 5 figures and 4 references, 3 of which are Soviet and 1 English.

ASSOCIATION: Institut radiotekhniki i elektroniki AN SSSR
(Institute of Radio Engineering and Electronics AS USSR)

SUBMITTED: September 23, 1959

Card 2/2

2-884

S/109/61/006/008/004/018
D207/D304

9.1300

AUTHORS: Vaganov, R.B., and Meriakri, V.V.

TITLE: Suppression of resonance effects in multimode waveguides

PERIODICAL: Radiotekhnika i elektronika, v. 6, no. 8, 1961,
1284 - 1292

TEXT: Waveguides with larger than necessary cross sections find an increasing number of applications in antenna techniques. In such waveguides besides the wanted, the unwanted (parasitic) modes can propagate. Of most interest are circular type waveguides for the H_{01} mode, in which attenuation of the order of a few decibels per km can be achieved. The unwanted modes resulting from the line inhomogeneities have usually very small amplitudes. In the present article, the authors analyze the harmful effects due to the resonance of unwanted (parasitic) waves in multimode waveguides. This analysis permits the evaluation of the increase in losses and VSWR

Card 1/5



S/109/61/006/008/004/018
D207/D304

Suppression of resonance ... 2483-

of the basic mode and resulting surges in feeders having several modes of propagation. From the obtained relationships the best model of avoiding resonance effects can be determined. The losses in the basic mode and the $VSWR = (1 + |R|)/(1 - |R|)$ can be decreased by making $\alpha_2 L \gg 2\Gamma^2 (1 - \Gamma^2)$. The maximum value of the surge voltage at max. of the resonance and small losses follows from

$$\beta_2 L - \varphi_{22} = \pi p, \quad p = 1, 2, 3, \dots \quad (3)$$

and

$$(\beta_2 L - \varphi_{22}) - (\beta_1 L - \varphi_{11}) = (2q - 1)\pi, \quad q = 1, 2, 3, \dots \quad (4)$$

and is equal to $1/[\Gamma + (\alpha_2 L/2\Gamma)]$ and to avoid surges the condition $\alpha_2 L \gg 2\Gamma(1 - \Gamma)$ must be satisfied. The authors suggest further methods of experimental determination of resonance effects by measuring the transformation coefficients Γ^2 of the transitions and the

Card 2/5

S/109/61/006/008/004/018
D207/D304

Suppression of resonance ...

attenuation of parasitic wave $\alpha_2 L$ assuming both Γ^2 and $\alpha_2 L$ to be small. Γ^2 is determined from transmission measurements, by determining the transmission coefficient $/D/$ between two transitions at maximum resonance and by changing the length of resonating line δL in such a manner that the power transmission factor is

$$|D_0|^2 = \frac{1 + |D|^2}{2} \quad (7)$$

To determine Γ^2 and small attenuation $\alpha_2 L$ the knowledge of $/D/$ and δL is said to be sufficient. It is stated that until now no method has been found which would permit filtering off the modes similar in their field structure to the basic mode (in particular to the mode H_{02}). The authors suggest such a method based on the use of strongly coupled branchings as given by S. Miller (Ref. 8: Waveguide transmission lines with small losses. Translation from English II, 1960, 139) which permits solving the problem to some extent. This approximate method is used for designing branchings for a filter of H_{02} wave in a circular waveguide 25 mm in diameter for

Card 3/5

S/109/61/006/008/004/018
D207/D304

Suppression of resonance ...

transmitting waves of the order of 8 mm. In the experimental model of the filter this coefficient was about -19 db. The number of slots was taken as 16. Losses were determined experimentally, giving H_{02}^0 losses, due to filter at $\lambda = 8 \pm 8.3$ mm of about 10 db, with corresponding losses of H_{01}^0 mode less than 0.2 db. When the attenuation of the basic mode has to be made less, waveguides with larger diameters have to be used. Then, the coupling of the filter as given by

$$c_N = \sqrt{\frac{\pi}{2} \frac{\mu_{0n} N M^2}{\rho_{0n} \sqrt{a^2 b^2}} e^{j\theta_{0n} r}} \quad (15)$$

[Abstractor's note: Erroneously given in text as Eq. (18) which does not exist] decreases. It follows that in order to suppress the resonance effects in waveguides with large kr , the filters should be placed in the vicinity of the critical cross section for the wave to be suppressed, i.e. near the minimum values of kr . If transition

Card 4/5

24884

S 10010/000/009/001/018
D207-B704

Suppression of resonance ...

with a smaller diameter is appreciable. Filters with a row of azimuth channels should be used. The authors acknowledge the interest in their work by N.V. Ivanov. There are 2 figures and 13 references: 9 Soviet-born and 4 non-Soviet-born. Two references to the English-language periodicals read as follows: Y. Kramer, Proc. Instn. Electr. Engrs. 1961, 107, Pt. 3, 89; P.W. Dawson, Bell System Techn. J. 1961, 40, Pt. 3, 1417.

ASSOCIATION: Institut radiofiziki i elektroniki AN SSSR (Institute of Radio Engineering and Electronics of the Academy of Sciences of the USSR)

SUBMITTED: August 22, 1961

Card 5/5

hh187

S/109/62/007/012/002/021
D266/D308

AUTHORS:

Meriakri, V. V. and Vaganov, R. B.

TITLE:

Methods for the experimental determination of mode conversion in short waveguide sections

PERIODICAL:

Radiotekhnika i elektronika, v. 7, no. 12, 1962, 1997-2002

TEXT: The basic arrangement consists of a real pipe limited by junctions. The fundamental mode can propagate through the device but the spurious modes are assumed to be 'trapped', i.e. there is a cut-off cross-section for each spurious mode somewhere along the taper. Introducing matrix notations and denoting the input wave by E_{in}

$$E_{in} = [I - (SI^*S^*I')] S^{-1} E_{out} \quad (1)$$

Card 1/4

S/109/62/007/012/002/021
D266/D308

Methods for the ...

where I - unit matrix, I", I', S - scattering matrices of the left-hand junction, right-hand junction and waveguide respectively. Restricting the analysis to two modes (fundamental and one spurious) using the formulas derived by J. Young and D. Marcuse (Proc. symposium on millimeter waves, N. Y., 1959, 513) for the self-coupling and cross-coupling coefficient, introducing the parameter

$$Q = \left| \int_0^L k_{12} e^{\int_0^z \gamma_{12} dt} dz \right|^2$$

(where k_{12} - distributed coupling coefficient between the fundamental and the spurious mode, $\gamma_{12} = \gamma_1 - \gamma_2$, $\gamma_1 = \alpha_1 + i\beta_1$ - propagation coefficient of the fundamental mode, L - length of the waveguide to be measured) and assuming that the mode conversion due to the tapers is much smaller than Q the following relationship is derived:

Card 2/4

S/109/62/007/012/002/021
D266/D308

Methods for the ...

$$Q = \eta \left(\frac{1}{|D|_p} - 1 \right) \tag{9}$$

η - attenuation of the spurious mode, $|D|_p$ - transmission coefficient of the fundamental mode at the resonance of the spurious mode. If η is known and $|D|_p$ is measured, Q can be determined from Eq. (9).

The method is extended to one particular case of 3-wave interaction. In the experimental part of the paper the mode conversion between the H_{01} and H_{02} , H_{12} modes is investigated. Experimental results are presented for both copper and steel waveguides in the 7.9 - 8.4 mm band. Maximum length of the waveguide section was 7.5 m because with larger lengths further resonances appeared. The diameter of the waveguides was 60 mm and a dielectric coating of 90 microns was applied. There are 2 figures and 1 table.

Card 3/4

Methods for the ...

S/109/62/007/012/002/021

ASSOCIATION: Institut radiotekhniki i elektroniki, AN SSSR (Insti-
tute of Radio Engineering and Electronics, AS USSR) ✓

SUBMITTED: January 12, 1962

Card 4/4

L 19630-65 ASD(a)-5/PAEM(a)/PATM(a)/PAPM(a)

ACCESSION NR: AP4048880

3/0109/64/009/011/1958/1967

AUTHOR: Vaganov, R. B. C

TITLE: Energy loss due to conversion into higher modes caused by deformations and offsets in a confocal beam waveguide

SOURCE: Radiotekhnika i elektronika, v. 9, no. 11, 1964, 1958-1967

TOPIC TAGS: beam waveguide, beam waveguide loss

ABSTRACT: The additional losses of energy in a beam waveguide caused by its geometrical imperfections are theoretically and experimentally investigated. The linear distortion, square-law distortion, longitudinal shift, and tilt of a dielectric phase-correcting lens are evaluated. Formulas (16, 17) for estimating the losses are developed. An experimental verification included a 37-Gc model of the beam waveguide consisting of ten biconvex lenses spaced at 175 cm from each other. The dielectric constant of the material was 1.14; $\text{tg } \delta = 1.2 \times 10^{-3}$; lens radius of

Card 1/2

L 19430-65

ACCESSION NR: AP4048880

curvature, 18.2 cm; lens max thickness, 8.3 cm; other data given. The highest self-filtration was observed at $c = 3.0 \cdot c = k a^2 / L$, where k is the wave number in vacuo, a is the beam half-width, L is the spacing between correctors. Both estimates and experiments have shown that the beam waveguide is very sensitive to linear distortion and relatively insensitive to longitudinal shifts and tilting. "In conclusion, the author wishes to thank B. Z. Katsenelenbaum for his interest in the work, and M. A. Miller for a valuable discussion." Orig. art. has: 4 figures and 31 formulas.

ASSOCIATION: none

SUBMITTED: 24Sep63

ENCL: 00

SUB CODE: EC

NO REF SOV: 001

OTHER: 004

Card 2/2

L 32637-66 EWT(d)/EWT(m)/EWP(w)/EWP(v)/EWP(j)/I/EWP(k) IJP(c) WII/EM/GD/RM

ACC NR: AT6010822

SOURCE CODE: UR/0000/65/000/000/0149/0158

AUTHORS: Vaganov, R. B.; Sinev, A. V.; Frolov, K. V.

ORG: none

TITLE: Certain characteristics of transverse shear of multilayered beams, the layers of which are joined by a deformable glueSOURCE: Moscow. Institut mashinovedeniya. Kolebaniya i prochnost' pri peremennykh napryazheniyakh (Vibrations and stability under variable stresses). Moscow, Izd-vo Nauka, 1965, 149-158

TOPIC TAGS: material behavior, composite beam, sandwich structure, shear strength, adhesion layer, material strength

ABSTRACT: A study is made of certain features of the transverse shear of composite beams. The work was conducted in the Laboratory of Dynamic Strength of the State Scientific Research Institute of Machine Behavior (Gosudarstvennyy nauchno-issledovatel'skiy institut mashinovedeniya). It is hypothesized that, up to a particular value of tangential stresses τ_0 (see Fig. 1) in the plane of adhesion, the glue rigidly bonds the layers. From the moment that the stress τ_0 is reached, plastic flow of the adhesive and slip between layers 1 and 2 (see Fig. 2) commence. This statement of the problem presupposes that the glue corresponds to a model of a "stiff plastic body" (L. M. Kachanov, Osnovy teorii plastichnosti. M. GITTL, 1956),

Card 1/3

L 32637-66

ACC NR: AT6010822

and the thickness of the adhesive is small in comparison with the thickness of the bonded layer and thus can be ignored. Basic equations of shear of an infinitely wide two-layered plate are written as

$$2GU = -\frac{\partial F}{\partial x} + 2\alpha\psi,$$

$$2GV = -\frac{\partial F}{\partial y}.$$

where U and V are displacements in the X and Y directions. The stresses are

$$\sigma_x = \frac{\partial^2 F}{\partial y^2} + \alpha \frac{\partial \psi}{\partial x},$$

$$\sigma_y = \frac{\partial^2 F}{\partial x^2} - \alpha \frac{\partial \psi}{\partial x},$$

$$\tau_{xy} = -\frac{\partial^2 F}{\partial x \partial y} + \alpha \frac{\partial \psi}{\partial y},$$

$$\sigma_z = \frac{2-\alpha}{2} \cdot \sigma_x.$$

where $F = \phi + \psi$, and $\phi(x, y)$ and $\psi(x, y)$ are harmonic functions. Two sets of related functions are stated: the first gives expressions for stresses and displacements arising from elastic deformations of the body; the other accounts for

Card 2/3

I 32637-66
 ACC NR: AT6010822

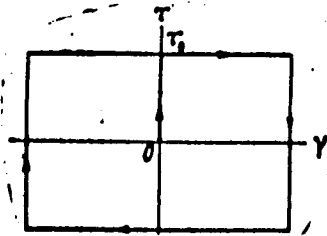


Fig. 1. Assumed dependence of tangential stress τ .

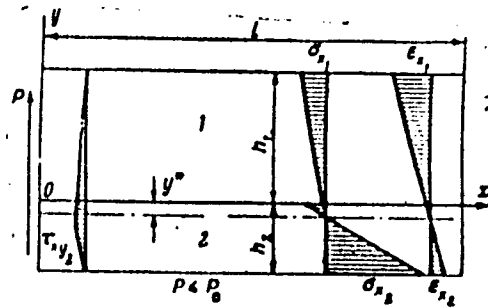


Fig. 2. Diagram of transverse shear of an infinitely wide two-layered plate.

plate distortion as a solid body. Several conditions of stress and deformation are developed in demonstration of the system solution. A description of an experimental method is given, and plots of longitudinal deformations of composite beams are shown. The authors thank mechanics V. I. Tereshchenko and B. N. Kashkov and laboratory technician N. O. Al'perova, who took part in the work, and N. P. Kandel', who directed the fabrication of the special double-layered samples. Orig. art. has: 27 equations and 7 figures.

SUB CODE: 13/

SUBM DATE: 05Aug65/

ORIG REF: 007/ OTH REF: 002

Card 3/3 - 20

L 32647-66 EWT(m)/EWP(w)/EWP(v)/T/EWP(t)/ETI/EWP(k) RM/JD/GD
ACC NR: AT6010823 SOURCE CODE: UR/0000/65/000/000/0159/0169

AUTHORS: Vaganov, R. B.; Sinev, A. V.

ORG: none

TITLE: Distribution of stresses in multilayered beams and their several dynamic and fatigue properties 26

SOURCE: Moscow. Institut mashinovedeniya. Kolebaniya i prochnost' pri peremennykh napryazheniyakh (Vibrations and stability under variable stresses). Moscow, Izd-vo Nauka, 1965, 159-169

TOPIC TAGS: stress distribution, material testing, fatigue property, dynamic property, composite beam, sandwich structure, structural mechanics, structural member

ABSTRACT: Triple-layered beams are studied for the purpose of analyzing stress distribution characteristics and dynamic and fatigue properties. The middle layer of the composite beams investigated consisted of high-strength plastic; the outer layers were of sheets of steel having a thickness of 0.5 mm or less. The modulus of elasticity of the plastic in axial longitudinal tension is several times lower than the modulus of elasticity of the steel. A detailed model is developed of the stress distribution in, and the deformation characteristics of, the three-layered beam. Plots are made of several test measurements: the variation of moments and normal stresses with load for varying beam dimensions; variation of natural frequency with

Card 1/2

L 32647-66

2

ACC NR: AT6010823

beam size and with loading on cantilever specimens; and fatigue properties. Computations and experimental work indicate that the natural frequency for given conditions of layer thickness can be higher than that of either plastic or steel of like dimensions. Test results showed that cracks always appear in the steel sheet as it is the most heavily loaded element. It is noted that there seems to be a possibility of measuring the strength of three-layered elements by the strength of the surface layer on the basis of the general fatigue curve $\sigma = f(N)$ (number of load cycles) with subsequent computation of moments which vary with the beam dimensions. The authors thank P. V. Malutin and I. V. Sobolev for raising the considered problems and for help in the experimental work. Orig. art. has: 35 equations and 8 figures.

SUB CODE: 11, 13/

SUBM DATE: 05Aug65/

ORIG REF: 011/ OTH REF: 001

Cord 2/2

PLG

L 32648-66 EWT(d)/EWT(m)/EWP(w)/EWP(v)/T/EWP(t)/ETI/EWP(k)/EWP(h)/EWP(l)
ACC NR: AT6010824 IJP(c) JD/EM/GD SOURCE CODE: UR/0000/65/000/000/0170/0183

AUTHOR: Vaganov, R. B.

ORG: none

TITLE: The effectiveness of stress concentration and the scale effect in two-stage cyclical loading 41
39
B+1

SOURCE: Moscow, Institut mashinovedeniya. Kolebaniya i prochnost' pri peremennykh napryazheniyakh (Vibrations and stability under variable stresses). Moscow, Izd-vo Nauka, 1965, 170-183

TOPIC TAGS: steel, fatigue limit, fatigue testing, stress concentration, material testing, durability/ Armco steel, 45 steel, NU testing machine 10

ABSTRACT: The roles of stress concentrations and the size of a specimen in its fatigue resistance are studied. Tests were conducted on Armco steel specimens some of which were smooth and others of which were notched in a manner similar to that shown in Fig. 1. Various stress paths σ_1 , σ_2 , and σ_3 were studied with the ratios of principal and secondary stresses to the fatigue limit as experimental parameters. For example (see Fig. 2), the coefficient

$$K'_s = \frac{\sigma}{\sigma_n} = \frac{K_n}{K_n - 1 + 1/K_s}$$

is used where

$$K_n = \sigma/\sigma_n$$

Card 1/3

L 32648-66
ACC NR: AT6010824

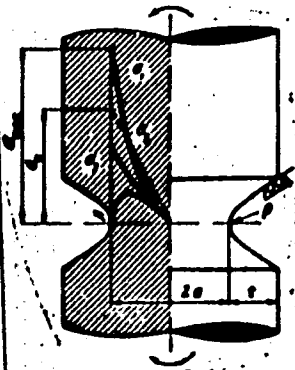


Fig. 1.

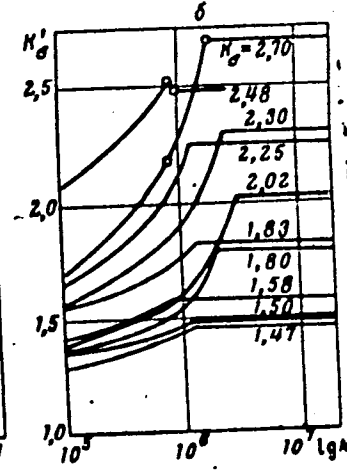
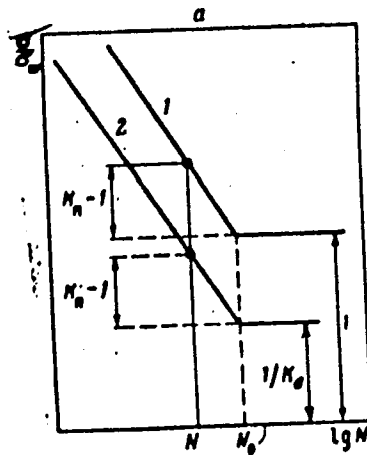


Fig. 2.

and σ and σ_w are respectively the curve ordinate and fatigue limit of a smooth specimen. The curves shown are for varying specimen configurations and N is the number of loading cycles. In additional test measurements note is made of the stages of specimen failure -- the appearance of cracks and ultimate specimen fracture. A discussion of probabilistic and regression methods is given and related to the fatigue limit and number of load cycles. The size effect was measured in extensive tests on steel 45 with the use of a wide variety of specimen sizes and configurations.

Card 2/3

L 32648-66

ACC NR: AT6010824

An MJ testing machine was used. Significant differences were noted in the fatigue behavior of notched versus smooth specimens. The author recommends extensions of this type of study in order to limit the need for other types of fatigue testing. Orig. art. has: 11 figures and 13 equations.

SUB CODE: 13, 11/

SUBM DATE: 05Aug65/

ORIG REF: 014

OTH REF: 001

Card 3/3

BLS

L 32649-66 EWT(d)/EWT(1)/EWT(m)/EWP(w)/EWP(v)/T/EWF(t)/ETI/EWP(k)/EWP(h)/EWP(1)
ACC NR: AT6010825 IJP(c) JD/GD SOURCE CODE: UR/0000/65/000/000/0184/0196

AUTHOR: Vaganov, R. B.

ORG: none

TITLE: Vibrorelaxation, vibrocreep, and the hysteresis loop with parameters varying with the number of cycles

SOURCE: Moscow. Institut mashinovedeniya. Kolebaniya i prochnost' pri peremennykh napryazheniyakh (Vibrations and stability under variable stresses). Moscow, Izd-vo Nauka, 1965, 184-196

TOPIC TAGS: creep characteristic, material strength, textolite, creep mechanism, hysteresis loop, relaxation process

ABSTRACT: An experimental study of creep, relaxation, and the hysteresis loop was conducted for synthetic materials under cyclical loading. The tests were conducted at the State Scientific Research Institute of Machine Behavior (Gosudarstvennyy nauchno-issledovatel'skiy institut mashinovedeniya) with cantilever specimens on a testing machine of original construction. The test mechanism is schematically diagrammed in Fig. 1. Variable quantities are the amplitude of the shear moment M_a and the deflection amplitude f_a . Measurements can be made of the variation of deflection and shear moment with the number of loading cycles N . The loading of specimens 1 for a given amplitude of the shear moment is actuated through the spring 2

Card 1/3

L 32649-66

ACC NR: AT6010825

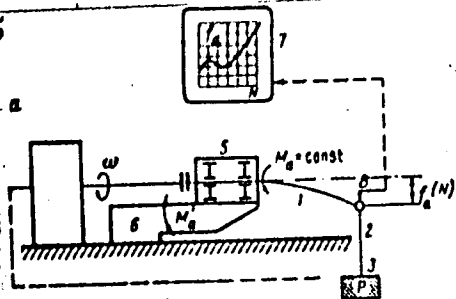
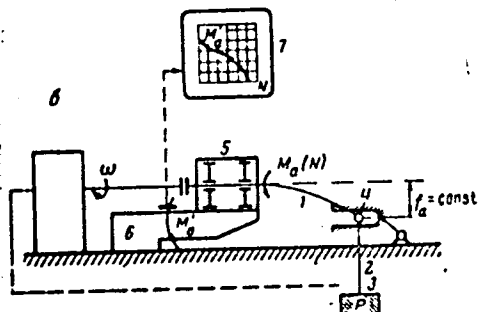


Fig. 1.



and changeable load 3. A friction joint device 4 is used in setting a given deflection f_a . Items 5, 6, and 7 respectively are a clamp, dynamometer, and a standard self-scribing recording device. Textolite specimens were prepared to the

Card 2/3

L 32649-66

ACC NR: AT6010825

dimensions (in mm) shown in Fig. 2. This material was found to exhibit a definite

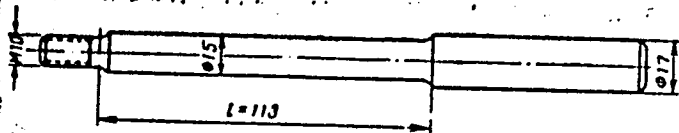


Fig. 2.

variation of durability with time and with the type of loading. Curves showing creep and relaxation characteristics versus the number of loading cycles and load stress are given. The creep and relaxation processes are discussed, and the hysteresis characteristics of this material are diagrammed. The experimental part of the work was conducted with the participation of B. I. Rus'kin. Orig. art. has: 16 equations and 9 figures.

SUB CODE: 11/

SUBM DATE: 05Aug65/

ORIG REF: 010/

OTH REF: 003

Card 3/3 BLG

L 8242-66

ACC NR: AP5022432

SOURCE CODE: UR/0109/65/010/009/1672/1675

AUTHOR: Vaganov, R. B.; Dogadkin, A. B.; Katsenelenbaum, B. Z. 29

ORG: Institut radiotekhniki i elektroniki AN SSSR (Institute of Radio Engineering and Electronics, AN SSSR)

TITLE: Periscopic mirror line

SOURCE: Radiotekhnika i elektronika, v. 10; no. 9, 1965, 1672-1675

TOPIC TAGS: beam waveguide, periscopic waveguide

ABSTRACT: It is proven that the use of spherical-surface mirrors, desirable for practical reasons in mirror beam waveguides, instead of the theoretically optimal ellipsoid-surface mirrors, does not seriously impair the waveguide parameters. Two mirrors with a spacing small in comparison with their focal lengths are regarded as a single phase corrector, and the radiation loss therein is evaluated after A. Fox and T. Li (IEEE, 1961, 51, 1, 80). Based on this evaluation and on

Card 1/2

UDC: 621.372.218:535.312

L 8242-66

ACC NR: AP5022432

the G. Boyd and J. Gordon loss/beam-cross-section curves (BSTJ, 1963, 40, 2, 489), a method for designing periscopic mirror lines is indicated. The radius of mirror curvature and the diffraction loss can be calculated from the formulas given. Orig. art. has: 1 figure and 11 formulas.

SUB CODE: 09 / SUBM DATE: 06Jun64 / ORIG REF: 004 / OTH REF: 003

PC
Card 2/2

I 11080-66

ACC NR: AP6000559

SOURCE CODE: UR/0109/65/010/012/2146/2156

AUTHOR: Vaganov, R. B.

16
B

ORG: none

TITLE: Losses in the nonhomogeneous segment of a beam waveguide and their compensation [After a report delivered at the 20th Conference of NTORIE, Moscow, May 1964]

SOURCE: Radiotekhnika i elektronika, v. 10, no. 12, 1965, 2146-2156

TOPIC TAGS: beam waveguide, waveguide loss

ABSTRACT: Propagation of TEM_{00} fundamental mode, with near-Gaussian radial distribution of field, along a beam waveguide is considered; the waveguide lenses have inaccuracies in their manufacture and mounting which are responsible for partial conversion of the fundamental mode into higher modes. The introduction of an artificial inhomogeneity is suggested as a means to reduce the higher-mode losses (compensation); the theory of multiwave channels is used to analyze the propagation conditions. Coupling factors between the modes at the principal inhomogeneities are

Card 1/2

UDC: 621.378.8:621.372.8

L 11080-66

ACC NR: AP6000559

0
determined. Formulas are developed for average losses in short waveguides containing random inhomogeneities. The cases of a waveguide bend and an offset lens are considered. An experimental verification is mentioned. "The author wishes to thank B. Z. Katsenelenbaum for the statement of the problem and a valuable discussion, R. F. Matveyev for his attention to the work, and A. A. Gordeyev for his help in experimental work." Orig. art. has: 5 figures and 26 formulas.

SUB CODE: 09 / SUBM DATE: 31Aug64 / ORIG REF: 007 / OTH REF: 004

Card 2/2