Theory of Ferromagnetic Amplifiers Based   77199
on the Disturbance Principle   SOV/109-5-1-12/20

also has a wave character. The results obtained in
Parts 4 and 5 are similar to the results obtained in
Parts 2 and 3, respectively. In the conclusions it is
said that the results obtained are valid independently
of the type of natural oscillations (waves). The
initial quality Q_o, the attenuations coefficients Γ,
and fill-in factors $\dot{F}$ can be calculated or measured.
There are 7 references, 4 Soviet, 3 U.S. The U.S.
references are: H. Suhl, Phys. Rev., 1957, 106, 384;
H. Suhl, J. Appl. Phys. 1957, 28, 1225; P. K. Tien,
H. Suhl, Proc. I.R.E. 1958, 46, 700.

SUBMITTED: February 23, 1959

Card 6/6

9.1300 (A150 1006)

S/109/60/005/011/006/014
E140/E485

AUTHOR: Nikol'skiy, V. V.

TITLE: The Investigation of Hollow Systems With Anisotropic Regions by the Method of Eigenfunctions (b Pt.I. Resonators

PERIODICAL: Radiotekhnika i elektronika, 1960, Vol.5, No.11, pp.1802-1810

TEXT: This paper was presented at the Session of the Section for Ferrites of the Society of Radioengineering and Telecommunications imeni A.S.Popov, January 13, 1960, and also at the Jubilee Session of the Society (May 19, 1960).

Three groups of problems have been posed in applied electro-dynamics; study of the general properties of hollow systems containing gyrotropic bodies, to determine their possible applications in radioengineering, and methods of realizing the corresponding devices, the detailed analysis of specific devices for the purpose of engineering design and problems in connection with ferrite-parameter measurement.   Problems of the first two groups have not as yet been solved to a satisfactory completeness.
Card 1/3

88158
S/109/60/005/011/006/014
E140/E483

The Investigation of Hollow Systems With Anisotropic Regions by the Method of Eigenfunctions.   Pt.I.   Resonators

After Walker's (Ref.14) contribution, the lack of information on the eigenvalue spectra of gyrotropic systems has been particularly strongly felt.   As for the calculation of specific devices, their irregularity constitutes an obstacle in view of the non-quasi-stationarity of ferrite elements.   For generality, this article applies to anisotropic regions the ordinary method of eigenfunctions, in resonators, waveguide and a particular type of waveguide transformer.   The problem is reduced to an infinite system of equations from which numerical methods are derived for use with electronic computers.   The methods developed permit, in principle, consideration of all geometrical features of real microwave devices.   The derivation leads to matrix equations with the unknown frequencies in the principle diagonal if the dispersion of the anisotropic medium is neglected.   In the presence of dispersion, the unknowns also enter into the remaining elements of the determinant.   The example of a generalized cylindrical resonator completely filled by ferrite is presented to illustrate

Card 2/3

88158
S/109/60/005/011/006/014
E140/E483

The Investigation of Hollow Systems With Anisotropic Regions by the
Method of Eigenfunctions.   Pt.I.   Resonators

certain points of the article.   There are 1 figure and
15 references: 9 Soviet and 6 English.

SUBMITTED: February 15, 1960

Card 3/3

20416

S/109/60/005/012/014/035
E192/E382

9. 1300 (also 1006)

AUTHOR: Nikol'skiy, V.V.

TITLE: Investigation of the Cavity Systems with
          Anisotropic Regions by the Method of Eigen
          Functions.   II.   Waveguide Transformer

PERIODICAL: Radiotekhnika i elektronika, 1960, Vol. 5,
              No. 12, pp. 1960 - 1967

TEXT: The first part of this work (Ref. 1) was concerned
with the problem of a resonator with an anisotropic region
so that it is now possible to consider a waveguide trans-
former based on such a resonator (or equivalent to it).   The
transformer is shown diagrammatically in Fig. 1.   This is
a cavity containing one or several anisotropic regions
V and having N external ports through which waveguides
are connected to the system.   If only a basic field exists
in each waveguide, the system can be regarded as a 2N-pole
relative to far objects.   The problem of the transformer
differs from that considered in the first part of this work
by virtue of the nonhomogeneity of the boundary conditions.

  Card 1/8

23416

S/109/60/005/012/014/035
E192/E382

**Investigation of the Cavity Systems with Anisotropic Regions
by the Method of Eigen Functions. II. Waveguide Transformer**

Here, it is necessary to know the tangential components of
the vector $\vec{E}$ or $\vec{H}$ at the terminal cross-sections
(S_1, S_2, ..., S_N in Fig. 1). If E_τ and H_τ are not
given on all the cross-sections on the remaining ones it is
necessary to know the relationship between E_τ and H_τ ,
i.e. the external loads of the corresponding waveguides.
In this case, the solution of the problem leads to the
determination of the field of the transformer $\vec{E}$ and $\vec{H}$
and the matrices of its input admittances which relate the
fields at all the terminal cross-sections. First, an
auxiliary problem relating to a resonator with a nonuniform
anisotropic medium, which is excited through one or several
apertures in its envelope S_0 , is considered. It is shown

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5/109/60/005/012/014/035
E192/E302

Investigation of the Cavity Systems with Anisotropic Regions
by the Method of Eigen Functions.   II.   Waveguide Transformer

that the system is described by (see Part I. of the article):

$$B = -j\omega \left(\|\mathfrak{R}_{in}\| - \{\omega^2\}\right)^{-1}F,$$
$$A = -j\left(\|\omega_t M_{in}\| + \{\omega_t\}\right)\left(\|\mathfrak{R}_{in}\| - \{\omega^2\}\right)^{-1}F. \quad\Big\}\qquad (4)$$

The expressions defined by:

$$A = j\,\|Q_{ik}\|\,F, \quad B = j\,\|T_{ik}\|\,F \qquad\qquad (6)$$

are also introduced, where A and B are composed of the
coefficients of expansion of $\vec{E}$ and $\vec{H}$ and the matrices
$\|Q_{ik}\|$ and $\|T_{ik}\|$ are expressed on the basis of Eqs. (4).

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S/109/60/005/012/014/035
E192/E382

Investigation of the Cavity Systems with Anisotropic Regions
by the Method of Eigen Functions.   II.   Waveguide Transformer

The problem of a waveguide transformer with two ports was
solved by G.V. Kisun'ko (Ref. 2).   By using the above results
it is now possible to investigate such a transformer when it
contains a nonhomogeneous anisotropic medium.   The transverse
eigen functions of the waveguides are chosen so that the
conditions:

$$\left[\vec{n}_o, \vec{e}_{i(1)}\right] = \vec{h}_{i(1)} \text{ on } S_1; \quad \left[\vec{n}_o, \vec{e}_{i(2)}\right] = \vec{h}_{i(2)} \text{ on } S_2 \qquad (7)$$

are fulfilled, where $\vec{e}_i$ are electrical transverse functions
of the first and second waveguides and $\vec{h}_i$ are magnetic
transverse functions.   It is shown that the solution is
in the form:

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29416

S/109/60/005/012/014/035
E192/E382

Investigation of the Cavity Systems with Anisotropic Regions
by the Method of Eigen Functions. II. Waveguide Transformer

$$B_1 = \| Y_{i(11)k} \| A_1 + \| Y_{i(12)k} \| A_2$$

$$B_2 = \| Y_{i(21)k} \| A_1 + \| Y_{i(22)k} \| A_2 \tag{15}$$

where:

$$\| Y_{i(\alpha\beta)k} = j \| M_{k(\alpha)i} \| \| T_{jk} \| \| M_{k(\beta)i} \| \quad (\alpha,\beta = 1,2) \tag{16}$$

are the admittance matrices of the transformer and $B_{1,2}$
are the vectors with components b_1, b_2, ... (which are
elements of the preliminary matrices). Eqs. (15) can be
extended to a system with N external ports (Fig. 1). One

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20416

S/109/60/005/012/014/035
E192/E382

Investigation of the Cavity Systems with Anisotropic Regions
by the Method of Eigen Functions.   II.   Waveguide Transformer

of the simplest transformers is the system based on a
regular waveguide; the waveguide is usually such that it
can contain only the fundamental field. In the case of an
arbitrary waveguide transformer such as shown in Fig. 1, the
field can be approximated by the eigen functions of the
corresponding E-problem, for which $E_y = 0$ on S_0 .

However, for a simple regular-waveguide transformer it is
possible to choose such a system of eigen functions that
they have a tangential component of the vector $\vec{E}$ at the
terminal cross-sections. There exist other methods of
investigating the waveguide transformer by employing eigen
functions. One of these methods, which is based on a
different solution of the auxiliary problem of the resonator
excitation, is discussed. It is now assumed that the field
$\vec{E}, \vec{H}$ of the resonator with nonuniform anisotropic medium
can be expressed in terms of the eigen functions by:

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S/109/60/005/012/014/033

E192/E382

Investigation of the Cavity Systems with Anisotropic Regions by the Method of Eigen Functions. II. Waveguide Transformer

$$\text{rot } \vec{H}_n^a = j\omega_n^a \overleftrightarrow{\varepsilon}(r) \vec{E}_n^a,$$

$$\text{rot } \vec{E}_n^a = -j\omega_n^a \overleftrightarrow{\mu}(r) \vec{H}_n^a, \quad \left. \right\} \text{ внутри } V_e \qquad (25)$$

$$E_\tau = 0 \text{ на } S_e.$$

It is shown that the solution obtained by this method is identical with that expressed by Eqs. (6). The above methods of calculation are suitable for the investigation of various waveguide problems such as circulators, phase-shifters, directional attenuators and other devices which contain magnetised ferrites of comparatively large dimensions.

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S/109/60/005/012/014/035
E192/E382

Investigation of the Cavity Systems with Anisotropic Regions
by the Method of Eigen Functions.   II.   Waveguide Transformer

Fig. 1:
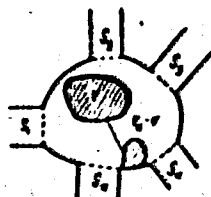
There are 5 figures and 3 Soviet references.

SUBMITTED: March 14, 1960

Card 8/8

20429

S/109/60/005/012/027/033
E192/E582

24.2500 (1140,1141,1163)

AUTHOR: Nikol'skiy, V. V.

TITLE: On the Method of Eigenfunctions for the External
             Problem of Electrodynamics

PERIODICAL: Radiotekhnika i elektronika, 1960, Vol.5, No.12,
             pp.2053-2054

TEXT: The method of eigenfunctions is widely used in the
solution of the internal problems of electrodynamics and it is
thought that it could be applied successfully to the external,
diffraction problems. In order to apply the method to a diffraction
problem (see Fig.1, where A is a body and F is a source), the
external space S is limited artificially by a sheath whose form
can be very simple (for instance a cube). The field produced by
the source is expressed in terms of the eigenfunctions of the
region V thus produced. As the region is expanded, the effect
of its boundary on the process is reduced until an instant is
reached when the solution does not differ significantly from the
true solution (in the absence of the boundary). The very principle
of the artificial limit of the region is known in quantum mechanics.
The question of a suitable choice of the boundary is quite important
Card 1/2

S/109/60/005/012/027/033
E192/E582

On the Method of Eigenfunctions for the External Problem of
Electrodynamics

since an exaggerated extension of the region V is undesirable
from the point of view of the calculation difficulties. There are
1 figure and 2 Soviet references.

SUBMITTED: April 4, 1960

Fig.1
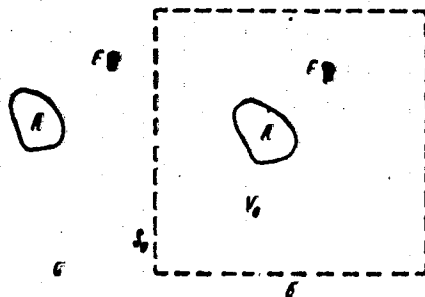
Card 2/2

NIKOL'SKIY, Vyacheslav Vladimirovich; FEDOROV, N.N., dots., retsenzent;
BRAGINSKII, V.B., kand. fiziko-matem. nauk, red.; PERKOVSKAYA,
G.Ye., red. izd-va; GARINA, T.D., tekhn. red.

[Electromagnetic field theory] Teoriia elektromagnitnogo polia.
Moskva, Gos. izd-vo "Vysshaia shkola," 1961. 370 p.
                                              (MIRA 15:2)

1. Kafedra teoreticheskikh osnov radiotekhniki Moskovskogo
energeticheskogo instituta im. Molotova (for Fedorov).
                 (Electromagnetic theory)

71431
S/109/61/006/001/009/023
E140/E165

9,1300 (incl.3301;also 1130)

AUTHOR: Nikol'skiy, V.V.

TITLE: Investigation of hollow systems with anisotropic
             regions by the method of eigenfunctions: Part III,
             Waveguides

PERIODICAL: Radiotekhnika i elektronika, Vol.6, No.1, 1961,
             pp. 74-80

TEXT: This is a continuation of the author's previous work
(on resonators, Ref.1, and on waveguide transformers, Ref.3).
The formulae are derived with a view to calculation on digital
computers. The waveguide considered consists of an ideally
conducting tube of cross-section S_0 with arbitrary contour L_0,
containing an anisotropic cylinder of cross-section S. The
propagation constants of the possible wave modes of the system are
found. The results arrived at are simpler than for the case of
the waveguide transformer (Ref.3) for a number of practical cases,
for example, the propagation constants of waveguides completely
filled by anisotropic (e.g. gyromagnetic) media. Two notes are
attached to the article discussing points raised by the

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21431

S/109/61/006/001/009/023
E140/E163

Investigation of hollow systems with anisotropic regions by the method of eigenfunctions: Part III, Waveguides

preceding two parts.
There are 1 figure and 3 Soviet references.

SUBMITTED: May 13 1960

Card 2/2

NIKOL'SKII, V.V.

Variation principle for hollow-space systems with anisotropic
medium. Radiotekh. i elektron. 6 no.9:1583-1585 S '61.
(MIRA 14:8)

(Wave guides)
(Electric resonators)
(Microwaves)

NIKOL'SKIY, V.V.; SUKHOV, V.G.

Ritz method for hollow systems with anisotropic medium. Radiotekh.
i elektron. 6 no.10:1677-1684 O '61.   (MIRA 14:9)
            (Wave guides) (Electric resonators)

S/109/62/007/004/003/010
D230/D302

4,1300

AUTHOR: Nikol'skiy, V.V.

TITLE: Double-sided evaluation of the resonant frequencies
            of hollow electromagnetic cavities with an anisotropic
            non-homogeneous medium

PERIODICAL: Radiotekhnika i elektronika, v. 7, no. 4, 1962,
            601 - 616

TEXT: The double-sided method of evaluation gives a relatively
simple way of designing irregular resonators. The accuracy of the
results in simpler form is satisfactory for most applications; in
principle, it can be extended indefinitely. In the case of the elec-
tric-mode excitation (dielectric body in the waveguide) it is rela-
tively easy to prepare a table of the resonant frequencies in terms
of the parameters q, ε and β_2/β_1, where q - a form factor, ε - di-
electric permeability of the medium, β_1 and β_2 - spectra of the cor-
responding reciprocal operators (the square of the ratio of the
first two resonant frequencies of an unfilled cavity). These values
Card 1/3

S/109/62/007/004/003/018
D230/D302

Double-sided evaluation of the ...

fully define both limits of the dominant frequency independent of
the type of irregularity. In order to use the tabulated results in
the design of a resonator of any type the value of its form factor
is required beforehand. A test function f_1 is introduced as a spe-
cial case of the normalized intrinsic field; because of its simpli-
city it is convenient to use; it has, however, no absolute advanta-
ges. It is possible, in principle, to evaluate not only the lowest,
but also other resonant frequencies. Analogous problems of wavegui-
de resonators are examined. In all complex cases considered (cer-
tain cases of non-reciprocity) the cut-off waveguide frequencies
are determined. Using this method, it is also possible to estimate
the accuracy of a great variety of approximations in the theory of
excitation. In all cases considered the maximum obtainable error of
the average result was found; as an example, tabulated data show a
comparison between the calculated and experimental results for the
case of rectangular resonator fully filled with dielectric. In the
appendix the following special cases of cavity resonator are exami-
ned: 1) Rectangular resonator with a centrally-placed dielectric
cylinder; 2) Cylindrical resonator with a cylindrical dielectric

Card 2/3

S/109/62/007/005/019/021
D230/D308

AUTHOR: Nikol'skiy, V.V.

TITLE: On the problem of two side estimation of natural
              frequencies of hollow electromagnetic resonators

PERIODICAL: Radiotekhnika i elektronika, v. 7, no. 5, 1962,
              907 - 911

TEXT: A further contribution to a previous paper (V.V. Nikol'skiy,
Radiotekhnika i elektronika, v. 7, no. 4, 1962, 601) concerning the
upper limit of the lowest natural frequency ω_1^2 of a resonator with
an inhomogeneous anisotropic medium. A special case of a cavity fil-
led with ferrite dielectric is considered. The upper limit of ω_1^2 is
determined using the eigenfunctions of an empty resonator. The case
of a cubic resonator containing a dielectric parallelepiped with
$\epsilon/\epsilon_0 = 10$ is examined. The results can also be applied to a cylin-
drical cavity with a dielectric disc at the bottom for the case of

Card 1/2

On the problem of two side ...

an E_{010}-field. Exact results are compared graphically with those obtained from a functional F. For the E_{110}-field the functional F gives excess values of cavity volume. The author also considers cylindrical cavity containing a coaxial dielectric cylinder ($\varepsilon/\varepsilon_o = 10$), whose diameter is equal to, or less than, the cavity diameter, respectively. In both cases the fundamental field is EH_{111} and the H_{111}-field of an empty cavity is taken as the test function. In both cases, when the dielectric filling exceeds 20 % of total cavity volume, the functional F gives excess values with a relatively small error. The functional F can only be used for the calculation of ω_1^2 in a quasi-static regime for which the quasi-static approximate theory of excitation applies. If the fundamental field is substituted into the functional F, the resulting ω_1^2-values are less than the exact values if the dielectric filling is 5 to 20 % of total volume. This law should be valid for different forms of cavity and dielectric filling. There are 3 figures and 1 table.

SUBMITTED: December 29, 1961
Card 2/2

NIKOL'SKII, V.V.

Concerning the "Variational equivalence" of gyrotropic wave guides and cavities. Radiotekh. i elektron 7 no.7:1249-1250 '62.

(MIRA 15:6)

(Wave guides) (Electric resonators)

NIKOL'SKIY, V.V., inzh.

Raising the height of a bench with the help of a ripper.
Shakht. stroi, 7 no.11: 26-27 N'63   (MIRA 17:7)

1. Dmitrovskiy zavod mostovykh zhelezobetonnykh konstruktsiy.

ACCESSION NR: AP4038613   S/0109/64/009/004/0625/0633

AUTHOR: Nikol'skiy, V. V.

TITLE: Fourier method for hollow shaped systems with an anisotropic heterogeneous medium

SOURCE: Radiotekhnika i elektronika, v. 9, no. 4, 1964, 625-633

TOPIC TAGS: SHF resonator, waveguide, waveguide transformer, microwaves, resonator theory

ABSTRACT: The Fourier method of determining natural frequencies, propagation constants, and admittance matrices was developed earlier by the author for resonators, waveguides, and waveguide transformers. Its limitation has been the fact that a total set of vector functions obtained from the problem of a nonfilled resonator had to be known. The present article is free from this limitation: no set of analytically specified vector functions for the region in question is needed.

Card 1/2

ACCESSION NR: AP4038613

An expansion into vector eigen-functions of the electromagnetic field of a shaped-envelope hollow system is made. The set of eigen-functions is found from a problem dealing with a region that encompasses the hollow system. The applicability of the Ritz and Galerkin methods is demonstrated in a resonator example. "The author is thankful to V. G. Feoktistov for useful discussions of the above problems." Orig. art. has: 40 formulas.

ASSOCIATION: none

SUBMITTED: 13Feb63   DATE ACQ: 05Jun64   ENCL: 00

SUB CODE: EC,MA   NO REF SOV: 007   OTHER: 000

Card 2/2

ACCESSION NR: AP4043666

S/0109/64/009/006/1345/1356

AUTHOR: Nikol'skiy, V. V.; Sukhov, V. G.; Korniyenko, D. I.; Orlov, V. P.

TITLE: Calculation of a rectangular waveguide containing a longitudinally-magnetized ferrite by the eigenfunction method

SOURCE: Radiotekhnika i elektronika, v. 9, no. 6, 1964, 1345-1356

TOPIC TAGS: waveguide, ferrite, longitudinally magnetized ferrite, ferrite containing waveguide

ABSTRACT: Based on the Galerkin-Ritz theory, a method for calculating the propagation constants of and fields in a rectangular waveguide partially filled with a longitudinally-magnetized ferrite is developed. The problem is solved as a boundary problem for the waveguide cross-section; Maxwell's equations are used. Phase shift and attenuation are calculated for a wide range of ferrite characteristics, sizes and configurations of the system. Programing time and

Card 1/2

ACCESSION NR: AP4043668

techniques are discussed as well as the accuracy of calculation. Fundamental characteristics of the system are clarified by isolating various modes and by analyzing their spectral composition. A few numerical examples are calculated and data presented in graphical form. Orig. art. has: 15 figures, 9 formulas, and 1 table.

ASSOCIATION: none

SUBMITTED: 22May63

ENCL: 00

SUB CODE: EC   NO REF SOV: 005   OTHER: 005

Card 2/2

NIKOL'SKIY, V.V.; SUGIOV, V.G.; KORNIYENKO, D.I.; ORLOV, V.P.

Calculation of a rectangular waveguide with a longitudinally magnetized
ferrite using an eigenfunction method. Radiotekh. i elektron. 9 no.8:
1345-1356 Ag '64.   (MIRA 17:10)

NIKOL'SKIY, V.V., doktor med. nauk; BURLIK, A.R., kand. med. nauk; CHETNOVA, G.V.

Excretion of silicon dioxide and buffer properties of the urine. Bor'ba s sil. 6:287-290 '64.   (MIRA 18:2)

1. Rostovskiy meditsinskiy institut.

NIKOL'SKIY, YA. B.

NIKOL'SKIY, YA. L. and LYAKOV, V. R. (Uzbek Scientific Research Veterinary Experimental Station). Treatment of animals ill with 'sullivk'.

So: Veterinariya; 23; (12); December 1946; incl.
TASCON

Medicine - Veterinary Medicine   May 1947
Medicine - Epizootic Diseases

...Feed as a Source of 'SUILIUS' and the
Prophylaxis of this Disease," Ya. D. Nikol'skiy
and S. P. Belyakov, Uzbek Scientific Research
Veterinary Experimental Station, 2 pp

"Veterinariya" No 5

...c - Infectious disease carried by noxious feed
...found in the foothill regions of Central Asia.
It is mycotic in its nature. Green grass does not
carry the fungus. Disease manifests itself in horse...

Also - R-604, 23 Jun 1948

NIKOL'SKIY, YA. D.

BIRKSER, G. V. and NIKOL'SKIY, YA. D. Suilluk [trypanosomiasis] of horses and of other agricultural animals and the struggle against it. Tashkent, Uzbek SSR Publishing House, 1953. 30 pages with illustrations; free; 7,000 copies. In Uzbekian

So: Veterinariya; 30; 11; November 1953; incl.
TABCON

USSR / Diseases of Farm Animals. Diseases Caused   R-2
          by Helminths.

Abs Jour: Ref Zhur-Biol., No 2, 1958, 7370

Author   : N. V. Badanin, Ya. D. Nikol'skiy
Inst   : Not Given
Title   : Pecularities of the Measures For Fighting Helminthi-
           sis of Farm Animals in Uzbekistan.

Orig Pub: Nauchn. tr. Uzb. s-kh. in-ta 1956, 10, 63-73.

Abstract: Measures in the tight against the basic helminths
          of sheep are examined.

Card 1/1

NIKOL'SKIY, Ye.D., kand.veterinarynkh nauk

Methods of clinical imaginal diagnosis of Moniesia, Thysaniesia and Avitellina infections of sheep and goats under field conditions. Trudy Uz.nauch.-issl.inst.vet. 14:161-164 '61.

(MIRA 16:2)

(Uzbekistan—Cestoda)   (Sheep—Parasites—Sheep)
                (Goats—Parasites—Goats)

NIKOL'SKIY, Ya.D., kand.veterinarnykh nauk

Simplified method of microscopic diagnosis of Moniezia infection in sheep and goats. Trudy Uz.nauch.-issl.inst.vet. 14:165-168 '61.
(MIRA 16:2)
(Uzbekistan—Cestoda)   (Parasites—Sheep)   (Parasites—Goats)

SARYBAKOV, F.S.; NIKOL'SKIY, Ya.D.

Invasion of sheep by Bunostomum trigonocephalum in the barn.
Trudy Uz.nauch.-issl.inst.vet. 14:169-175 '61.   (MIRA 16:2)
        (Uzbekistan—Hookworms)   (Parasites—Sheep)

NIKOL'SKIY, YA. D.   (Candidate of Veterinary Sciences,)

"Diagnosis of avitellinosis in sheep."

Veterinariya, Vol. 38, No.5, 1961

Nikol'skiy, Ya. D. - Scientific-Research Institute of Veterinary Medicine of
Uzbek Academy of Agricultural Sciences.

NIKOL'SKIY, Ya.D., kand. veter. nauk

Therapeutic effectiveness of calcium arsenate in ascariasis
of hens and chicks. Sbor. nauch. rab. Sar. NIVS 6:173-184
'63.   (MIRA 18:11)

BORISOVICH, Yu.F.; YEPIFANOV, G.F.; MEL'NIKOV, P.; SERGIYENKO, Ye.S.;
    SHEVCHENKO, R.; FROLOV, L.; LODYANOV, V.; NIKOL'SKIY, Ya.D.;
    LUZYANIN, D.; AZIMOV, D.

Information and brief news. Veterinariia 40 no.2:91-96   F '63.
                                                  (MIRA 17:2)

NIKOL'SKIY, Ya.D., kand. veter. nauk; PISKUNOV, I.S., veterinarnyy vrach

Nematodirus infestation in lambs. Veterinariia 41 no.6:60-
61 Ja '64.   (MIRA 18:6)

1. Saratovskaya nauchno-issledovatel'skaya veterinarnaya
stantsiya (for Nikol'skiy). 2. Balakovskaya rayonnaya
veterinarnaya laboratoriya (for Piskunov).

YAUSHEV, P.M.; NIKOL'SKIY, Ye.K.

Calculation of systematic errors for levels with self-adjusting
sight lines. Geod.i kart. no.1:18-22 Ja '63.   (MIRA 16:2)
          (Level (Surveying instrument))

124-57-2-2458

Translation from: Referativnyy zhurnal, Mekhanika, 1957, Nr 2, p 133 (USSR)

AUTHOR: Nikol'skiy, Ye. N.

TITLE: Calculation of the Body Shell of an All-metal Passenger Car for
          Torsion (Raschet kuzova tsel'nometallicheskogo passazhirskogo
          vagona na krucheniye)

PERIODICAL: Tr. Bezhitsk. in-ta transp. mashinostr., 1955, Nr 13, pp 125-
              149

ABSTRACT: Description of an approximate calculation method, relative to
          torsion, for the body shell of a passenger car which is considered
          as a closed shell with cut-outs. The theory of thin-walled beams
          with open profile is employed. The schematic calculation model
          consists of two thin-walled, trough-shaped beams, connected to
          one another by means of elastic partitions stressed by shear.
          The contour of the cross section of the stringers is considered
          nondeformable. The rigidity of the stringers under pure torsion
          is assumed to be negligibly small in comparison to the sectorial
          rigidity of the stringers. The terminal-walls are assumed to
          remain undeformed within their plane. The calculation is per-
Card 1/1   formed by means of a combined method.   D. V. Bychkov
          1. Passenger vehicles--Torque   2. Mathematics

NIMJL SKII, E. N.

One equation of compatibility for the membrane and the ribs, and three equations of force equilibrium for an infinitesimal membrane element are derived. Three additional equations are obtained by considering the equilibrium of a finite portion of the membrane.

For the stresses a function of the Airy type is employed; this satisfying two conditions of equilibrium of the mem-

1-FW

NIKOLSSKII, E. N.

An experiment is described, and it is shown that measured stresses agree well with those predicted by the theory.

H. V. Hahas (Palo Alto, Calif.).

1-PW

NIKOL'SKIY, Ye.N., dots., kand.tekhn.nauk

Using P.F.Papkovich's method in analyzing the stressed state
in the lower section of the body of a closed-shell type of
passenger car. Trudy BITM no.17:13-31 '57.   (MIRA 11:10)
          (Railroads--Passenger cars)

NIKOL'SKIY, Ye.N., dots., kand.tekhn.nauk

Stressed state of Π -shaped shells; applicable to the lower
section of the body of a closed-shell type of passenger car.
Trudy BITM no.17:33-53 '57.   (MIRA 11:10)
            (Railroads--Passenger cars)

VERSHINSKIY, Sergey Vasil'yevich, doktor tekhn.nauk; NIKOL'SKIY, Yevgeniy
    Nikolayevich, prof., doktor tekhn.nauk; NIKOL'SKIY, Lev Nikola-
    yevich, prof., doktor tekhn.nauk; POPOV, Aleksey Aleksandrovich,
    prof., doktor tekhn.nauk; SHADUR, Leonid Abramovich, prof., doktor
    tekhn.nauk; MARANTSEV, Yu.S., red.; DOBROVA, Ye.N., tekhn.red.

[Design of railroad cars for strength] Raschet vagonov na proch-
    nost'. Pod red. A.A.Popova. Moskva, Vses.izdatel'sko-poligr.
    ob"edinenie M-va putei soobshchemiia, 1960. 359 p.
                                                        (MIRA 14:1)
            (Railroads--Cars--Construction)

86032

S/020/60/135/003/011/039
B019/B077

16.7300

AUTHOR: Nikol'skiy, Ye. N.

TITLE: The Schwarz Algorithm in the Problem of the Theory of Elasticity of Stresses

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol. 135, No. 3, pp. 549 - 552

TEXT: S. L. Sobolev (Ref. 1) proved the convergence of the Schwarz algorithm using the displacement problem of the theory of elasticity. Here the application of the Schwarz algorithm is investigated for the stresses in the region D_{12}' which can be represented as the sum of the two partially overlapping regions D_1 and D_2. The existence of the limit of a function and its agreement with the solutions of the theory of elasticity in the region D_{12}' is proved with the Schwarz algorithm and the exclusion principle. In the stress problem the freedom of choice of the original vectorial stress function in the region D_2 located within D_1 is limited

Card 1/2

NIKOL'SKIY, Ye.N., prof., doktor tekhn.nauk; VEKSHINSKIY,S.V., doktor
tekhn. nauk, retsenzent; GALANOVA, M.S., insh., red.
DEMKINA, N.F., tekhn.red.; TIKHANOV, A.Ye., tekhn.red.

[Railroad-car-type shells with openings; theoretical bases
for stress investigation] Obolochki s vyrezami tipa vagon-
nykh kusovov; teoreticheskie osnovy issledovaniia napriashenii.
Moskva, Mashgiz, 1963. 311 p.   (MIRA 16:9)
       (Elastic plates and shells) (Railroads--Cars)

NIKOL'SKIY, Ye.N., doktor takhn.nauk, prof.; PAVLUSHIN, G.I., kand.; SHIL'KOV,
V.I., inzh.

Longitudinal load test of a model of the body of ER-10 electr.
train cars. Trudy BITM no.21:10-18 '64.
(MIRA 18.8)

ACC NR: AM6004820   (A)   Monograph   UR/

Shadur, Leonid Abramovich (Doctor of Technical Sciences, Professor); Chelnikov, Ivan Ivanovich (Doctor of Technical Sciences, Professor); Nikol'skiy, Lev Nikolayevich (Doctor of Technical Sciences, Professor), Nikol'skiy, YEvgeniy Nikolayevich (Doctor of Technical Sciences, Professor); Proskurnev, Petr Grigor'yevich (Candidate of Technical Sciences, Docent); Kazanskiy, Georgiy Alekseyevich (Candidate of Technical Sciences); Devyatkov, Vladimir Fedorovich (Candidate of Technical Sciences)

Railroad cars; construction, theory, and design (Vagony; konstruktsiya, teoriya i raschet) Moscow, Izd-vo "Transport", 1965. 459 p. illus., biblio. 8,000 copies printed. Textbook for railroad transportation institutes.

TOPIC TAGS: railway equipment, railway rolling stock, railway transportation, railway vehicle data

PURPOSE AND COVERAGE: The book deals with the construction, strength calculations, dynamics, choice of technical-economic parameters, and sizes of railroad cars. It is intended for courses on "Railroad Cars" (construction, theory, calculation) for those specializing in "Railroad Car Construction and Railroad Car Management" of higher technical institutes for railway transport. It is designed to be a basic course for further specialization in special-purpose cars such as refrigerator cars, electric equipment of railroad cars, technology of construction and repair of railroad cars, and other specialties. It is designed for students who have some elementary information on car construction and car strength.

UDC: 625/23/.24

Card   1/2

ACC NR: AP6004820

TABLE OF CONTENTS [abridged]:

SUB CODE: 13/   SUBM DATE: 21Jul65/   ORIG REF: 218/   OTH REF: 010

Card   2/2

NIKOL'SKIY, Yu. (Leningrad)

With future submarine officers. Voen. znan. 39 no.1:11 Ja '63.
(MIRA 16:1)

(Submarine warfare)

NIKOL'SKIY, Yu. (Tula)

Volunteer beginnings in the club for water sports. Voen. snan.
39 no.3:27-28 Mr '63.
(Aquatic sports)
(MIRA 16:7)

AKULAEV, V.S.; NIKOL'SKIY, Yu.A.; SMOLOVICH, A.K.

Coefficients of the dynamics of the ship hull. Sudostroenie
no.7:10-12 Jl '65.   (MIRA 18:8)

I NIS56-67   ENT(m)/ENT(w)   IJP(c)   WW/EW/GG

ACC NR: AT6029373   (N)   SOURCE CODE: UR/0000/66/000/000/0293/0302

AUTHOR: Akulayev, V. S. (Leningrad); Nikol'skiy, Yu. A. (Leningrad); Sbotovskiy, A. K.
(Leningrad)

ORG: none

TITLE: Damping of forced vibrations in the hull of a ship

SOURCE: AN UkrSSR. Institut problem materialovedeniya. Rasseyaniye energii pri
kolebaniyakh uprugikh sistem (Energy dissipation during vibrations of elastic systems).
Kiev, Naukova dumka, 1966, 293-302

TOPIC TAGS: vibration analysis, marine engineering

ABSTRACT: Calculations of forced vibrations using data from previously published
literature yield calculated values of the amplitudes which, as a rule, are considerably
lower than experimental values, that is, there is an error on the side of danger. The
experiments described in the present article were conducted under deep water conditions,
which eliminated the effect of factors such as shallow water, mooring walls and other
ships. Measurements were made of the forced vibrations of the hull of a ship at
different values of the eccentricity, in the presence of vertically directed and
undirected forces. Based on the experimental data, curves were plotted of the change
in the amplitude of the forced vibrations as a function of their frequency. In
working up the data, the decrements in the free damped vibrations were determined from

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L 07569-67

ACC NR: AT6029373

the resonance curves by the known formula

$$\delta = \frac{\pi}{\sqrt{3}} b(1 - b^2).$$ (1)

where $b = (N_2 - N_1)/N \rho$ is the relative width of the resonance peak, found with the amplitude of the forced vibrations equal to half the maximum value. In the presence of resonance, the value of the dynamic coefficient is connected with the decrement δ by the following relationship

$$\beta = \frac{\pi}{\delta}.$$ (2)

A figure shows values of β for ships of various configurations. After an extended mathematical development, the article arrives at the following formula for determination of the dynamic coefficient:

$$\beta = \frac{10000}{N}.$$ (15)

Orig. art. has: 15 formulas, 4 figures and 2 tables.

SUB CODE: 13, 20/ SUBM DATE: 22Feb66/ ORIG REF: 007/ SOV REF: 002/ OTH REF: 002

NIKOL'SKIY, Yu.I.

Some problems in the method of interpreting gravity anomalies in geologically closed areas of the western part of Central Asia.
Trudy VSEGEI 42:70-84 '60.   (MIRA 14:9)
                    (Kara Kum--Gravity prospecting)

BERLYAND, N.G.; NIKOL'SKIY, Yu.I.

Evaluation of the methods of quantitative interpretation of gravitational anomalies above a vertical shelf. Izv. AN Turk. SSR.Ser. fiz.-tekh., khim. i geol. nauk no.4:57-65 '63.   (MIRA 17:2)

1. Otdel razvedochnoy geofiziki i seysmologii AN Turkmenskoy SSR.

YANOV, E.N.; PREDTECHENSKIY, N.N.; POLEVAYA, N.I.; MURINA, G.A.;
MINKINA, S.L.; ISKANDEROVA, A.D.; YEFIMOV, K.P.;
CHEN' YUY-VEY [Ch'ên Yü-wei]; TITOV, N.Ye.; PANTELEYEV, A.I.;
KOCHEGURA, V.V.; GIRFANOVA, O.M.; ZUYEV, A.V.; NIKOL'SKIY, Yu.I.;
BUNE, G.N.

Problems of the methods of geological investigations. [Trudy]
VSEGEI   92:91-98   '63.   (MIRA 17:4)

ACCESSION NR: AR4044263   S/0160/64/000/008/D012/D012

SOURCE: Ref. zh. Geofizika, Abs. 5D71   44

AUTHOR: Nikol'skiy, Yu. I., Bure, G. N.

The use of specialized computers in geophysics (Instrument S-1)

CITED SOURCE: Tr. Vses. n-i geol. in-ta, v. 92, 1963, 100

TOPIC TAGS: geophysics, potential field, regional component, local component/ S-1 simulating computer

TRANSLATION: Reports on the S-1 simulating computer developed in 1959-1960 at the All-Union Scientific-Research Geological Institute; this computer is based on the electropotentiometric principle and is designed for the transformation of potential fields, including three-dimensional problems on the breakdown of the gravity field into local and regional components, for converting the initial field to a new level, etc. The instrument was approved and recommended for serial production in 1961.
Card 1/?

ACCESSION NR: AR4044283

CODE: ES, DP   ENCL   00

NIKOL'SKIY, Yu.I.

Methods to allow for the zero creep in "G" gravimeters. Trudy
VSEGEI 104:74-82 '64.   (MIRA 18:2)

ZHEBRAK, A.R.; NIKOL'SKIY, Yu.K.; KAZUSHCHIK, V.G.

Characteristics of 56-chromosome amphidiploid wheat forms.
Biul. Inst. biol. AN BSSR no.5:280-286 '60.   (MIRA 14:7)

(WHEAT BREEDING)

ZHEBRAK, A.R.; NIKOL'SKIY, Yu.K.; DEMENOK, A.M.

Results of the study of productive lines of the amphidiploid
hybrid Triticum durum X. Tr. vulgare. Biul. Inst. biol.
AN BSSR no.5:289-296 '60.   (MIRA 14:7)
                        (WHEAT BREEDING)

NIKOL'SKIY, Yu.K.; KAZUSHCHIK, V.G.

Materials on the study of the inheritance of quantitative
characters in amphidiploid lines. Biul. Inst. biol. AN BSSR
no.5:299-309 '60.   (MIRA 14:7)
                        (   )

NIKOL'SKIY, Yu.K.; MARKEVICH, O.I.

Calculation of the heridity of quantitative features of wheat amphidiplotds by dispersion analysis. Biul. Inst. biol. AN BSSR no.6:239-244 '61.
(MIRA 15:3)
(WHEAT BREEDING)

NIKOL'SKIY, Yu.S.

Theory of the weight classes of differentiable functions of several variables and its applications to boundary value problems for elliptic equations. Dokl. AN SSSR 162 no.3:510-512 My '65.   (MIRA 18:5)

1. Moskovskiy fiziko-tekhnicheskiy institut. Submitted December 8, 1964.

NIKOL'SKIY, Yu.S.

Boundary values of functions from weight classes. Dokl. AN
SSSR 164 no.3:503-506 8 '65.   (MIRA 18:9)

1. Moskovskiy fiziko-tekhnicheskiy institut. Submitted May 27,
1965.

ZVEREVA, V.A.; NIKOL'SKIY, Yu.V., inzh.; SATTANIDI, L.D., tekhn.red.

[Improvement of swamps and mineral swampy soils; bibliography]
Melioratsiia bolot i mineral'nykh zabolochennykh zemel'; biblio-
graficheskii ukazatel'. Moskva, Izd-vo M-va sel'.khoz.RSFSR.
Pt.1. 1959. 130 p. Pt.2. 1959. 155 p.   (MIRA 12:12)

1. Moscow. Gosudarstvennaya nauchnaya biblioteka. 2. Gosudarst-
vennaya nauchnaya biblioteka (for Zvereva). 3. Respublikanskiy
gosudarstvennyy institut po proyektirovaniyu vodnkhozyaystvennogo
i meliorativnogo stroitel'stva "Rosgiprovodkhoz" (for Nikol'skiy).
               (Bibliography--Drainage)
               (Bibliography--Swamps)

NIKOL'SKIY, Yu. V.

Method of measuring the fast-neutron multiplication fac-
tor in uranium-water lattices. G. A. Stolyarov, L. V.
Komissarov, V. P. Katkov, and Yu. V. Nikol'skiy. *Izvest.*
Akad. Nauk S.S.S.R. po Hinenii Fiz.-Matematiya Atomnoi
Energii, Zasedaniya Otdel. Fiz.-Mat. Nauk 1955, 217-21
(English summary, 225).—Measurements for μ are given
for a U-H$_2$O lattice $34 \times 34 \times 60$ cc. (cylindric blocks
of U, ordinary H$_2$O) in a U-graphite reactor and for experi-
mental U-H$_2$O reactors. The measurements agree well with
each other. The following formula is valid $\mu = 1 + [N_{28}$
$\cdot [r_{28} - 1 - (\Sigma_c/\Sigma_f)]/N_{25} r_{25}]$, where N_{28}/N_{25} is the ratio of
the fission nos. for the nuclei U^{238} and U^{235} and r_{25} and r_{28} are
the nos. of fast neutrons arising in the fission of the nuclei
U^{235} and U^{238}, resp. Σ_c/Σ_f is the mean ratio of radiation
capture and fission cross sections for U^{238}. Two methods
for detg. N_{28}/N_{25} are presented. In one method fragments
are collected on paper disks. In the other method an ioniza-
tion chamber is used for counting of the fragments. In
both methods layers of natural U and U low in U^{238} are
used, which are placed in a slot of the U of the lattice, and
the β activities are compared.   Werner Jacobson

(3)

Category : USSR/Nuclear Physics - Nuclear Reactions   C-5

Abs Jour : Ref Zhur - Fizika, No 1, 1957, No 558

Author   : Katkov, V.P., Nikol'skiy, Yu.V., and Stolyarov, G.A.
Title   : Determination of the Ratio of the Average Fission Cross Sections of
           Pu239 and U235 in Uranium-Water Lattice Blocks

Orig Pub : Atom. energiya, 1956, No 3, 61-64

Abstract : The ratio of the average fission cross sections of Pu^{239} and U^{235} was
           determined in uranium-water lattices of natural uranium and ordinary water.
           For the sake of comparison, this ratio was measured for a uranium-graphite
           reactor. It is established that the ratio $\sigma_{Pu}^{f}/\sigma_u^{f}$ for uranium-water lattices
           with a spacing of 45, 50, 55, and 60 mm, and for uranium-graphite reactor
           with a lattice spacing of 200 mm are equal to 2.24, 1.99, 1.88 and 1.79
           respectively.

Card   : 1/1

NIKOL'SKIY,YU. V.

"Problems of Fuel Burning in Light Water Cooled and Moderated
Power Reactors" (a paper to be presented at 1958 UN "Atoms-for-Peace"
Conference, Geneva,Switzerland.).

21(7)

AUTHORS: Berezin, A. A., Stolyarov, G. A.,   SOV/89-5-6-16/25
Nikol'skiy, Yu. V., Chelnokov, I. Ye.

TITLE: Fission Cross Section of U^{235} and Th^{232} for Neutrons With an
Energy of 14.6 MeV (Secheniye deleniya U^{235} i Th^{232} neytronami
s energiyey 14.6 Mev)

PERIODICAL: Atomnaya energiya, 1958, Vol 5, Nr 6, pp 659-660 (USSR)

ABSTRACT: The fission cross section of U^{235} was measured from the ratio

$$\frac{\sigma_f(U^{235})}{\sigma_f(U^{238})}$$

for neutrons of equal energy. The ionization chambers, which
contained U^{235} and U^{238}, were, one after another, subjected
to irradiation by neutrons (d-t-reaction; ion acceleration
tube. E_d = 140 keV. Angle between ionization chamber and
deuteron beam $0°$). Both chambers were connected with the same
linear amplifier with constant impulse threshold value. The
ionization chambers had thin walls. The external cylindrical
electrode (diameter 2.5 cm) consisted of a platinum foil.

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Fission Cross Section of U^{235} and Th^{232} for Neutrons   SOV/89-5-6-16/25
With an Energy of 14.6 MeV

On to the inner surface of the foil an uranium layer was electrolytically applied (the layer in the first chamber was of natural uranium, that in the second chamber contained 97 % enriched U^{235}). Length of the layer: 6.5 cm; surface density: natural uranium $\sim$ 2 mg/cm^2, $U^{235} \sim$ 0.5 mg/cm^2.

The chambers were housed in a graphite prism (60.60.70 cm^3). There was also a Po-Be-neutron source which was surrounded by 4 cm of paraffin. In connection with other measurements, a tritium target (ion accelerator tube) was used as a neutron source. As monitor, a proportionality counter was used, which counted the α-particles of the reaction $T(d,n)He^4$. In order to suppress the scattered neutrons, the chamber was surrounded by a Cd-sheet of 1 mm thickness and by boron carbide of 10 cm thickness.

After carrying out some minor corrections

Card 2/3

$$\frac{\sigma_f(U^{235})}{\sigma_f(U^{238})} = 2.03 \pm 0.09$$

. Fission Cross Section of U^{235} and Th^{232} for Neutrons   SOV/89-5-6-16/25
With an Energy of 14.6 MeV

was obtained.
By using $\sigma_f(U^{238})$ for 14.6 MeV neutrons (according to reference 2), $\sigma_f(U^{235})$ = 2.30 ± 0.15 b was obtained.

The fission cross section for Th^{232} was measured by means of an ionization chamber (for the arrangement of the apparatus see reference 2). The thorium layer precipitated on platinum (Ref 1) had a surface density of ~0.5 mg/cm^2 and contained 16.6 ± 0.5 mg Th. $\sigma_f(Th^{232})$ was measured as amounting to 0.37 ± 0.02 b. This result agrees well with the data of reference 3.
The results were discussed with N. N. Flerov. There are 3 references, 2 of which are Soviet.

SUBMITTED: August 7, 1958

Card 3/3

ZHEIRAK, A.R.; NIKOL'SKIY, Iu.K.

Behavior of amphidiploid wheat after late fall sowing. Bot.;
isal. Bel. ... VEO no.5:31-44 '63.   (MIRA 17:5)

BELYAKIN, F.P.; PANSHIN, B.I.; LUK'YANCHIKOV, I.K.; POPOV, G.G.;
ASHKENAZI, Ye.K.; NIKOL'SKOY, A.M.; KAMAVETS, I.F.

Discussion of the methods for investigating and testing
physicomechanical properties of plastics. Replies to an
inquiry published in issue no.1 of "Zavodskaia laboratoriia",
1960. Zav.lab. 26 no.6:655-678 '60. (MIRA 13:7)

1. Institut stroitel'noy mekhaniki Akademii nauk USSR
(for Belyankin). 2. Vsesoyuznyy institut aviatsionnykh
materialov (for Panshin, Nikol'skoy). 3. Tsentral'nyy nauchno-
issledovatel'skiy institut zheleznodoroshnogo transporta
(for Luk'yanchikov & Popov). 4. Leningradskaya lesotekhni-
cheskaya akademiya im. S.M.Kirova (for Ashkenazi). 5. Nauchno-
issledovatel'skiy institut plasticheskikh mass (for Kamavets).
(Plastics)

S/032/60/026/06/05/044
B010/B126

15.8040

AUTHOR: Nikol'skoy, A. M.

TITLE: Discussion of Methods of Examining and Testing the Physico-
             mechanical Properties of Plastics. Answers to the Inquiry,
             Published in No. 1 of the Periodical "Zavodskaya
             laboratoriya" of 1960

PERIODICAL: Zavodskaya laboratoriya, 1960, Vol. 26, No. 6, pp. 673 - 676

TEXT: To begin with the author points out that at the moment mainly com-
parative tests of plastics are carried out, and methods must be devised
which fully explain the physicomechanical properties of polymers. In spite
of the fact that high polymers are externally very different, they have
some typical properties. Thus standardized methods of testing are possible,
and absolutely necessary. Ultimate strength and endurance tests, as well
as the drawing of thermomechanical curves come into this category. The
former elucidate the molecular structure and the network of the polymers.
The fatigue limit (in the case of fatigue strength) characterizes the load
carrying capacity of the material on static load. The material's resistance

Card 1/2

Discussion of Methods of Examining and Testing the S/032/60/026/06/05/044
Physicomechanical Properties of Plastics. Answers B010/B126
to the Enquiry, Published in No. 1 of the Periodical "Zavodskaya
laboratoriya" of 1960

to impact is closely related to its fatigue strength and durability on the
one hand, and with creeping on the other. Comparative tests are to be
carried out in such cases if the deviation of the material from a set con-
dition is to be tested. Acoustic testing methods are useful in determining
elasticity. The best test of heat resistance is to draw the thermomechanical
curves. The rate of rise in load has a special importance in ultimate
strength- and endurance tests. There are 2 Soviet references.

ASSOCIATION: Vsesoyuznyy institut aviatsionnykh Materialov (All-Union
         Institute for Aviation Materials)

X

Card 2/2

NIKOL'SKOY, A.M.

Possibility of reducing the duration for creep test during
the stretching of organic glasses. Plast. massy no.11:50-
54 '63.   (MIRA 16:12)

L 23654-65   ENT(d)/ENT(m)/EWP(w)/EPF(o)/EWD(v)/EWP(e)/EWP(v)/EWP(j)/T/EWP(k)/
EESTT   Po-4/Pe-5/Pf-1/PA-4;   EM/RM/RH-2   S/0191/65/000/001/0052/0057
ACCESSION NR: AP5002830

AUTHOR: Nikol'skoy, A. M.; Kuznetsova, I. B.; Tatevos'yan, G. O.

TITLE: The problem of following the aging of plastic by non-destructive mechanical
tests

SOURCE: Plasticheskiye massy, no. 1, 1965, 52-57

TOPIC TAGS: polymer aging, polymer mechanical property, hardness measurement,
non-destructive testing, creep test, weatherometer

ABSTRACT: A special creep test is proposed for improving the repeatability and selec-
tivity of non-destructive testing of aged synthetic resins, and the introduction of a
new parameter is suggested to describe the effects of shape and surface geometry on
aging and mechanical behavior of polymers. Polyamide films, cord capron (nylon - 6),
sheet (mold-polymerized caprolactam) of various shapes, extruded RNP, polystyrene-
acrylonitrile polymer with nitrile rubber) polyethylene, polystyrene, polyvinyl chloride,
and also various commercial resins were aged on a weatherometer under irradiation from
lamps under standardized conditions or in various bench tests. Statistical analysis
of the test results showed that conventional tests for tensile strength, impact toughness,
elasticity modulus, etc., do not satisfactorily describe the process of aging, whereas

Card 1/2

_ 3654-65
ACCESSION NR: AP7002830

the proposed creep tests permit valid conclusions with respect to aging. For these tests,
a steel ball 5 or 2.5 mm in diameter is impressed under continuous and variable load
for a predetermined time into the test specimen. The Super-Rockwell KhP-230
hardness meter manufactured by WPM (East Germany) and the Karavета hardness meter
were used. The results define hardness and a special elasticity modulus, the slope
of the logarithmic deformation-time plot at a given load, and the change in this slope
indicating the change of creep under various loads, as shown in Figs. 1 and 2 of the
enclosure. Generally, the increase of the proposed creep parameter (the change in the
slope with load) indicates destructive processes related to aging, and its decrease
a structure formation, e.g. by polymerization or crosslinking during the aging
process. Orig. art. has: 2 tables and 7 figures.

ASSOCIATION: none

SUBMITTED: 00   ENCL: 02   SUB CODE: MT

NR REF SOV: 008   OTHER: 002

NIKOL'SKIY, Mikhail Nikolayevich; GULEVICH, I.D., red.; CHAPAYEVA,
R.I., tekhn. red.

[With a spoon bait against predatory fishes] S blesnoi na
khishchnrkh ryb.   2. izd., perer. i dop.   Moskva, Voenizdat,
1963.   126 p.   (MIRA 17:2)

NIKOLYAKIN, N. I.

25426   NIKOLYAKIN, N. I. Mezhvidovye gibridy kostisykh ryb, ikh morfologiya i
znachenie dlya sistematiki. Zool. Zhurnal, 1948, vyp. 4, s 343 - 53.
- Bibliogr: S. 353.

SO: Letopis' Zhurnal Statey, No. 30, Moscow, 1948

NIKOLYUK, F., inzh.; NAUMOV, Yu., inzh.; YANKIV, I., inzh.

Manufacture of standard prestressed beams with an 18
span and electrothermally stressed reinforcement. Prom. stroi.
i inzh. soor. 5 no.5:41-44 S-O '63.   (MIRA 16:12)

NIKOLYUK, Fedor Galaktionovich; SLIN'KO, B.I., red.; LEUSHCHENKO, N.L., tekhn. red.

[Equipment for the manufacture of prestressed concrete]
Oborudovanie dlia proizvodstva prednapriazhennogo zhelezo-
betona. Kiev, Gosstroiizdat USSR, 1962. 65 p.
(MIRA 15:8)

(Prestressed concrete)

NIKOLYUK, I.D., inzh.; GOL'DFEL'D, I.Ye., inzh.; ROZENMAN, M.B., inzh.

Machine for making panels of shed roofs. Stroi. i der. machinostr.
5 no.8:59-31 Ag '60.   (MIRA 13:8)
                (Concrete slabs)   (Roofs, Shell)

DUBINSKIY, A., kand.tekhn.nauk; NIKOLYUK, N., insh. (Kiyev)

Machine for continuous molding of reinforced concrete products.
Gor.i sel'.stroi. no.10:27 O '57.   (MIRA 10:12)
                    (Molding machines)   (Precast concrete)

L 09302-67   EWT(m)/EWP(t)/ETI   IJP(c)   JD

ACC NR: AR6033773   SOURCE CODE: UR/0058/66/000/007/A050/A050 25

AUTHOR: Dovgoshey, N. I.; Chepur, D. V.; Gryadil', I. A.; Nikolyuk, R. G.; Yatskovich, I. I.

TITLE: Microrelief and structure of thin films of cadmium sulfide and cadmium selenide

SOURCE: Ref. zh. Fizika, Abs. 7A426

REF SOURCE: Sb. Tezisy dokl. k XIX Nauchn. konferentsii. Uzhgorodsk. un-t, 1965. Ser. fiz. Uzhgorod, 1965, 25-29

TOPIC TAGS: cadmium selenide, cadmium sulfide, thermal spraying, cadmium film

ABSTRACT: CdS_x and $CdSe_{1-x}$ films were obtained by thermal spraying under vacuum (10^{-4} mm) on cold glass backings and glass backings heated to 120, 200, 250, and 300C. Cadmium sulfide and cadmium selenide powders mixed in a specific ratio served as the source material. The films consisted of small crystals of fine crystals of a substitutional solid solution of $CdS_x \cdot CdSe_{1-x}$. It was found that the films have a hexagonal grain orientation with an axis [0001] perpendicular to the backing. The non-correspondence of the source material composition and the

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films was shown. P. Agalaradze, abstracter. [Translation of abstract]

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Card 2/2 mla

ACC NR: AR6033781   SOURCE CODE: UR/0058/66/000/007/D089/D089

AUTHOR: Dovgoshey, N. I.; Chepur, D. V.; Nikolyuk, R. G.

TITLE: Some optical properties of thin $CdS_x \cdot CdSe_{1-x}$ films

SOURCE: Ref. zh. Fizika, Abs. 7D717

REF SOURCE: Sb. tezisy dokl. k XIX Nauchn. konferentsii. Uzhgorodsk. un-t, 1965. Ser. fiz. Uzhgorod, 1965, 34-39

TOPIC TAGS: absorption spectrum, cadmium selenide film, reflection spectrum, cadmium sulfide film, metal film, reflection coefficient, mirror reflection, diffuse reflection, reflection, optics, optical property, solid solution, substitutional solid-- solution

ABSTRACT: A study was made of reflection and absorption spectra in the 400—700-mμ range, of thin $CdS_{0.25} \cdot CdSe_{0.75}$ films, 0.4—0.8-μ thick (the indices indicating the weights of the initial components), obtained on cold and heated (up to 300C) backings. All the films showed an inverse dependence of the effective coefficient of reflection R on the thickness of the film at all temperatures. This is explained by the fact that R is determined both by the mirror and diffuse reflection.

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A lower R value in films deposited on cold backings is explained by the smoothing out of the microrelief surface when a layer is deposited on a heated backing. The absorption spectrum of films deposited on hot backings is shifted toward the long-wave region, which is due to the somewhat larger amount of CdSe in the films than in those formed on cold backings. The conclusion is reached that CdS_x. $CdSe_{1-x}$ films represent a substitutional solid solution. S. Bureyko. [Translation of abstract]

SUB CODE: 20/

Card 2/2

NIKOLYUK, V.F.; KOROVIN, E.P., deyatvitel'ayy chlen.

Effect of the root system of cotton on protozoa in soil. Dokl.AN Uz.SSR no.4:22-24 '49. (MLRA 6:5)

1. Institut botaniki i zoologii AN Uz.SSR (for Nikolyuk). 2. Akademiya Nauk Uzbekskoy SSR (for Korovin).   (Cotton)   (Soil microorganisms)

NIKOLYUK, V.F.

NIKOLYUK, V.F., ISAROV, Aray, chlen-korrespondent

Causes of antagonistic action of cultures of infusorians from the genus Colpoda, on fungus Verticillium dahlie Kleb., the producer of the cotton wilt. Dokl.AN Uz.SSR no.12:14-16 '49.   (MLRA 6:5)

1. Institut botaniki i zoologii AN Uz.SSR (for Nikolyuk).

2. Akademiya Nauk Uzbekskoy SSR (for Korovin). (Infusoria) (Cotton wilt)

Korovin, Ye.P. — deystvitel'nyy chlen.

1. NIKOLYUK, V. F.

2. USSR (600)

7. "Concerning the Problem.with Regard to the Activity of Frotozoa in Irrigated
   Soils", Doklady Akad. Nauk UzSSR (Papers of the Acad Sci Uzbek SSR), No 6,
   1951, pp 33-36.

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