

Concise Handbook (Cont.)

SOV/5425

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Card 8/13

L 18265-65 EWT(1)/EWG(k)/EPA(sp)-2/EPA(w)-2/EEC(t)/T/EEC(b)-2/EWA(m)-2
Pz-6/Po-4/Pab-10/Pi-4 IJP(c)/ASD(p)-3/AFWL/AFETR/RAEM(a)/SSD/SSD(b)/AEDC(b)/
ESD(gs) AT

ACCESSION NR: AP5000912

S/0020/64/159/004/0779/0781

AUTHOR: Pistunovich, V. I.; Timofeyev, A. V.

TITLE: Concerning the heating of electrons in an anisotropic plasma 21 B

SOURCE: AN ESSR. Doklady, V. 159, no. 4, 1964, 779-781

TOPIC TAGS: plasma instability, electron heating, plasma electron, plasma ion, low pressure plasma, adiabatic trap

ABSTRACT: It is shown that the instability relative to the buildup of potential oscillations, observed previously in low-pressure plasma with anisotropic distribution of ion velocity, is developed on the negative-energy oscillation branch, and that its development should be accompanied by intense absorption of energy by resonant electrons (Landau damping). The analysis is carried out for an anisotropic, collisionless, and spatially homogeneous plasma in a magnetic field. The results indicate that the anomalous heating of electrons, observed in adiabatic traps by other investigators, may be due to the buildup of this instability. In the case of a dense plasma, dissipative instability can develop as a result of collisional dissipation of energy and can lead to a similar instability. "The

Card 1/2

L 18265-65

ACCESSION NR: AP5000912

authors are grateful to B. B. Kadomtsev and A. B. Mikhaylovskiy for a discussion of the work. This report was presented by Academician M. A. Leontovich. Orig. art. has: 1 figure and 3 formulas.

ASSOCIATION: None

SUBMITTED: 16Jun64

ENCL: 00

SUB CODE: ME

NR REF BOV: 006

OTHER: 002

Card 2/2

22792

5 049/8 01 014 005 007
3078 B22

Work with the thermocouples...

the vacuum conditions. I. S. Pan'kov and E. V. Dnestrovskiy have
described a method of measuring very low temperatures (down to 10⁻⁴ K).
V. T. Kuznetsov has described a method of measuring the temperature of
a gas in a vacuum chamber. The method is based on the measurement of
the thermal conductivity of the gas. The method is described in the
paper "Measurement of the temperature of a gas in a vacuum chamber".
The method is based on the measurement of the thermal conductivity of
the gas. The method is described in the paper "Measurement of the
temperature of a gas in a vacuum chamber".

Card 4/6

22797
5 049/8 01 014 005 007
3078 B22

Work with the thermocouples...

It is possible to extend the range of the thermocouples to
temperatures above 1000 K. This is done by using a special
type of thermocouple. The method is described in the paper
"Measurement of the temperature of a gas in a vacuum chamber".
The method is based on the measurement of the thermal conductivity of
the gas. The method is described in the paper "Measurement of the
temperature of a gas in a vacuum chamber".

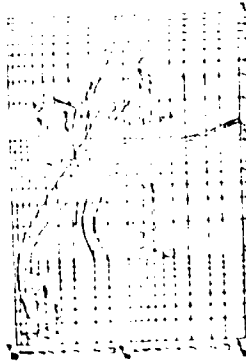
Card 5/6

22797

5 049/8 01 014 005 007
3078 B22

Work with the thermocouples...

Card 6/6



Legend to Fig. 1. The sub-
scripted letters indicate
the following: 1. The
thermocouple; 2. The
protective sheath; 3. The
vacuum chamber; 4. The
gas; 5. The thermocouple
leads; 6. The thermocouple
junction; 7. The thermocouple
leads; 8. The thermocouple
junction; 9. The thermocouple
leads; 10. The thermocouple
junction.

Card 6/6

PISTUNOVICH, V.I., T.M. PEFYEV, A.V.

Heating of electrons in an anisotropic plasma. Sov. J. AM 8058
159 no.4:770-781 1974 (NIPA 1811)

I. Predstavleno Akademikom M. S. Leningram.

5,000/63 014/001, 001 013
B102/3186

AUTHOR: Pigtunovich, V. I.

TITLE: The cyclotron instability of the "OGRA" plasma

PERIODICAL: Atomnaya energiya, v. 14, no. 1, 1964, 70-81

TEXT: Strong electric magnetic field with cyclotron frequency were observed in the plasma machine "OGRA". The anisotropy characterized by the density dependent effect, was to explain only by a heating the cyclotron oscillations of the molecular and atomic ions can be excited and their frequency of the electrons becomes equal to or larger than the Langmuir cyclotron frequency there may arise a resonance between the ion revolution and the longitudinal oscillations of the electrons, leading to a rapid increase of small density perturbations - during $\sim 300 \mu\text{sec}$ the field increases three times. The maximum increment of the instability increase

$$\text{is } (\text{Im } \omega)_{\text{max}} = \frac{1}{2} \sqrt{\frac{\pi_0}{4M}} \frac{\delta}{j(1-p^2)} J^{2/3}(t) \omega_{\text{Hi}}(11). \text{ The most unstable are}$$

Card 1/4

The cyclotron instability of ...

SI 089-10004-0000-000
R102/R100

the waves with $m=1$ and with a length of the order of ion Larmor radius. The condition for the appearance of this instability is given by

$$1 + \frac{\omega_p^2}{\omega(\omega - k_z v_{Te})} \left[\frac{1}{\omega - k_z v_{Te}} - \frac{1}{\omega} \right] \frac{1}{\omega} = \frac{1}{\omega} \left[\frac{1}{\omega - k_z v_{Te}} - \frac{1}{\omega} \right] \frac{1}{\omega} \left[\frac{1}{\omega - k_z v_{Te}} - \frac{1}{\omega} \right] \frac{1}{\omega}$$

$s^2 = \omega^2 (1 + \beta)$; $\beta = \frac{4\pi n_e e^2}{k^2 M} \left[\frac{1}{\omega - k_z v_{Te}} - \frac{1}{\omega} \right] \frac{1}{\omega} \left[\frac{1}{\omega - k_z v_{Te}} - \frac{1}{\omega} \right] \frac{1}{\omega}$. Here n_e , e , M , k , ω , k_z , v_{Te} are the charge, mass and temperature of the electrons, β is the beta parameter, ω_p are the plasma frequencies, ω is the wave frequency and ω_c is the cyclotron frequency of the electrons. The plasma is considered to consist of two parts, each half of which is a helical motion either in or opposite to the direction of H and the ions having the temperature T_i . The results given here hold for $\beta \ll 1$ and $T_e = 0$. If $\beta \gg 1$ and $T_e = T_i$ then

$$\omega^2 = \frac{2\pi n_e e^2}{M} \frac{1}{\omega^2 - (m - n)^2} \frac{1}{\omega - k_z v_{Te}} \frac{1}{\omega} \left[\frac{1}{\omega - k_z v_{Te}} - \frac{1}{\omega} \right] \frac{1}{\omega} = (m_e / 2M) J_m^2(\omega r_L); \quad x = m - (m - n)$$

Card 2/4

S. (Sov.) / ...
R100/R100

The cyclotron instability of ...

- k v / ω_p . Theoretically, a qualitative description of the observed effects can be given on condition that the ions in the plasma satisfy the inequality $T_e \gg T_i \gg 10$ where T_e is the mean kinetic energy of the transverse motion of the ions. Detailed investigations showed that in addition to the H_2^+ cyclotron frequency $f_1 = 2.2$ Mc the signal of the proton cyclotron frequency $f_2 = 4.4$ Mc was also recorded. Since for H_2^+ injection with $I=10$ ma, $T_e/T_i \approx 20$ Eq. (1) is satisfied only when $n_e > 6 \cdot 10^3$ cm⁻³. Measurements at $I=0.1$ ma and $p=10^{-7}$ mm Hg showed that with the current increasing beyond 0.1 ma, the f_1 frequency rapidly increases, followed by f_2 . f_2 increases about sixfold when the current increases from 0.2 to 0.7 ma. The existence of density waves with different velocities can lead to an increase of T_e and to the electron escape from the traps (of. Kucheryayev, Papov, J.Nucl. Energy, part C, in press). Because of cyclotron instability there can be stronger

Card 3/4

The cyclotron instability of ...

Security 14-00000
R100000

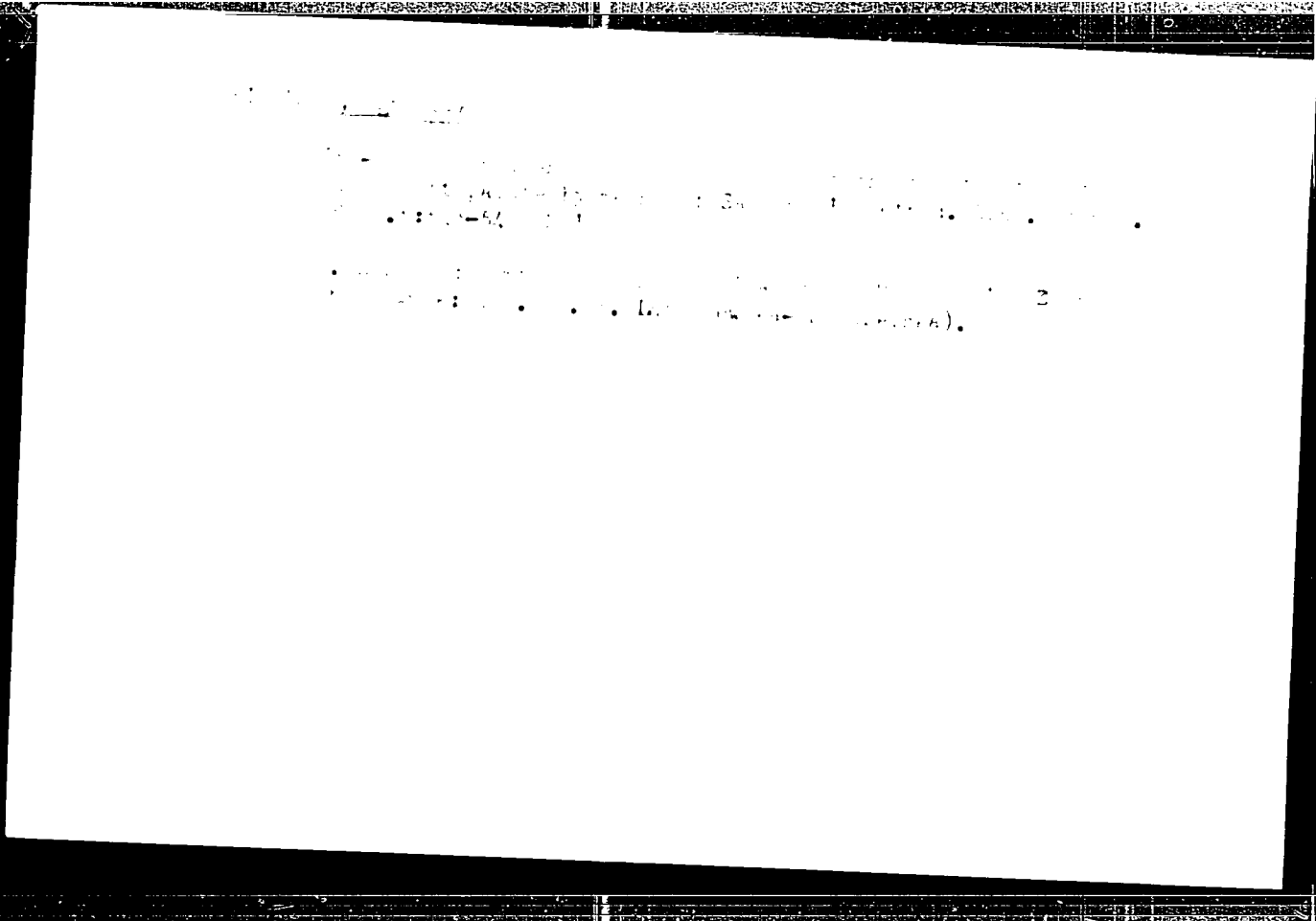
interactions between the ions and the wave as a consequence of the
nonlinear effects, and the way in which electric wave fields perpendicular
to \vec{H} can cause a radial drift if the phase velocity of the wave
approaches the ion velocity. These effects are further investigated.
There are 9 figures and 1 table.

SUBMITTED: November 11, 1961

PISULA, Feliks, mgr inz.

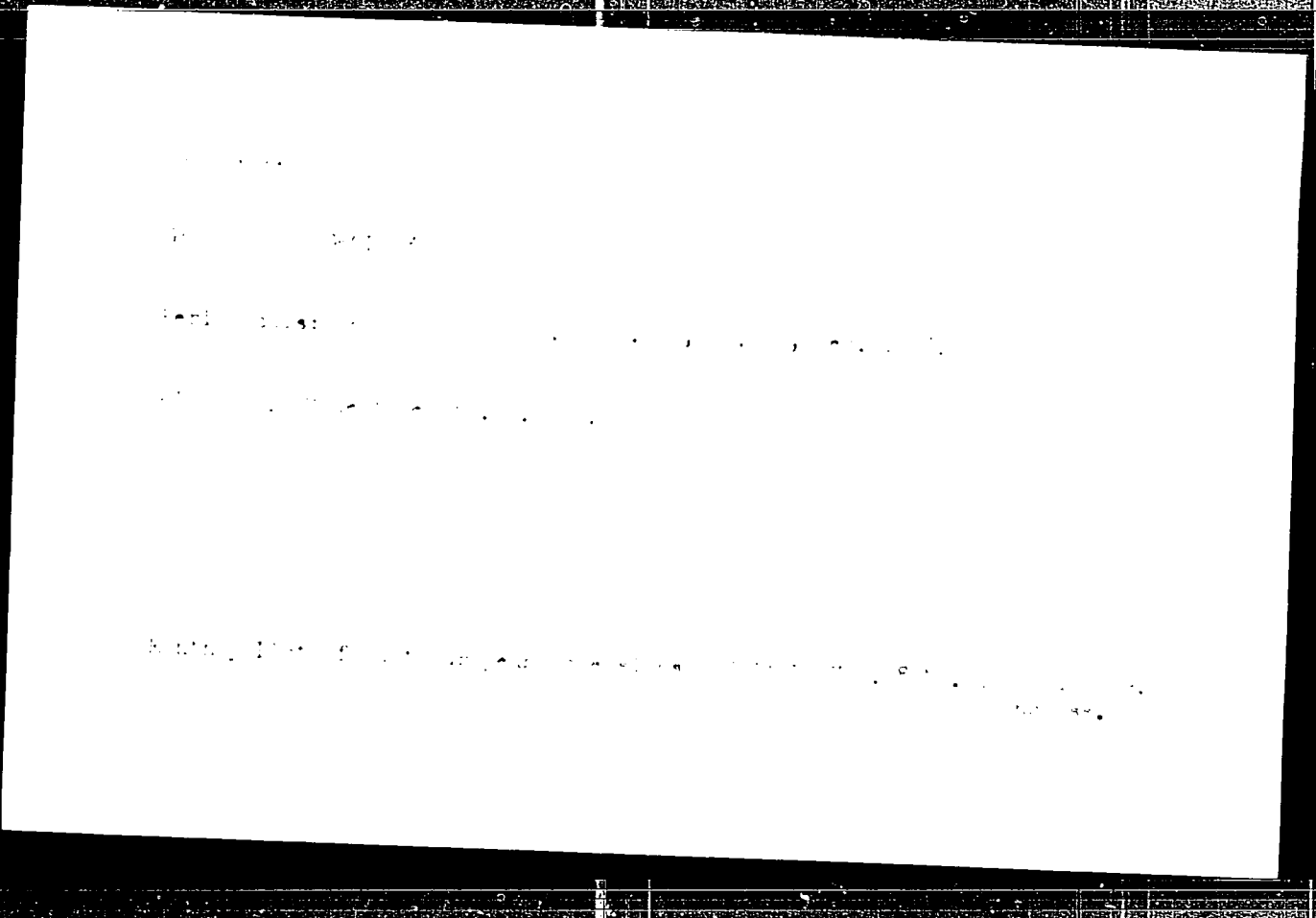
Major problems of water and sewage management in the food industry.
1985. Wroclaw. 34 p. (1985). Agricultural.

Ministry of Food Industry and Commerce, WARSAW.



LABORATORY

• Z 30-41 (S) •
(X) • • • • • (ka-1000)



Country: Czechoslovakia

Country: Czechoslovakia

Academic Degrees: not given

Affiliation: Slovak Museum (Slovenské múzeum), Bratislava

Source: Bratislava, Praca Veda, Vol VIII, No 10, 1961; pp 800-805

Data: "Lichens and the Lichens."

GPO 98.043

CZECHOSLOVAKIA

PISUT, Ivan and OPOLD, Ladislav; National Museum of Slovakia (Slovenske narodne muzeum,) Bratislava.

Incidence of Some Lichens of the Cladonia Genus in the Vicinity of Nitra.
Bratislava, Biologia, Vol 18, No 7, 1963; pp 530-532.

Abstract: Detailed description of 3 heretofore rare lichens found by the junior author in 1961-62: Cladonia magyarica Vain., C. furcata subsp. subrangiformis and C. foliacea (Muds.) Prege. Habitats and taxonomic synonymy and history. Photograph, 7 Czech references.

1/1

PISUT, Ivan

A find of a species of *Juniperus sabina* L. in the Slovak part of
the Pieniny Mountains. *Biologia* 15 no 12:926-127 1960

(EEAI 10 8)

(CZECHOSLOVAKIA--JUNIPER)

ELIŠKA, V.; FIALKOVÁ, L.; LANIER, J.

Malignant thymoma as a cause of hydropericardium. Bratisl. lek.
listy 43 (1) no. 9:548-554, 1962.

1. I Interná klinika Lek. fak. Univ. Komenského v Bratislave,
vedúci prof. MUDr. M. Ondrejčík, Ústav patologickej anatomie
Lek. fak. Univ. Komenského v Bratislave, vedúci doc. MUDr.
M. Brozman.

(THYMOMA) (PERICARDITIS)
(EXUDATES AND TRANSUDATES)
(HEART FAILURE, CONGESTIVE)
(ELECTROCARDIOGRAPHY)

FIS 1, V. 1; DOLLY, ...; D. ... S, 1.

... ..
... ..

... ..
... ..

BRATISLAVA

PISET, V; POLO OVA, L; LAJNER, J.

1. First Internal Medicine Clinic of the Medical Faculty of Komensky University (I. interna klinika lek. fak. Univ. Komenského), Bratislava; 2. Institute of Pathological Anatomy of the Medical Faculty of Komensky University (Ústav patologickej anatomie lek. fak. Univ. Komenského), Bratislava (for all)

Bratislava, Bratislavské lekárske listy, No. 1, 1953, p. 103

"Malignant Tumor of the Liver of a Tropophilic..."

PISUT, VI., JENCA, O.

Clinical & x-ray findings using morphine & dolantin in intravenous
cholangiography. Cesk. rentg. 12 no.3:165-170 Sept 58.

I. I. interná klinika FN v Bratislave, predn. prof. M. Ondrejicka
VL. P. Štepanova 8, Bratislava.

(CHOLANGIOGRAPHY,

adjuvant morphine & morphine in intravenous cholangiography (Cz))

(MORPHINE, ther. use

adjuvant in intravenous cholangiography (Cz))

(MORPHINE, ther. use

(same)

L 57446-65 EWP(1) Po-4/Pq-4/Pq-4/Pae-2/Pk-4/Pl-4 IJP(c) EC
ACCESSION NR: AP5019303 CZ/0026/64/009/005/0385/0385

AUTHOR: Plsutova, N. 43
B

TITLE: Conversion program from the pseudocode of the LGP-30 computer to the code of the ZRA-1 computer

SOURCE: Aplikace matematiky, v. 9, no. 5, 1964, 385

TOPIC TAGS: computer, computer program/ LGP-30 computer, ZRA-1 computer

ABSTRACT: A brief report on two conversion programs (an interpretation program and a compilation program) prepared at the Institute of Automation and Mechanization (Ustav automatizacie a mechaniky), Slovak Academy of Sciences, in Bratislava.

ASSOCIATION: none

SUBMITTED: 00 ENCL: 00 SUB CODES: DP
NR REF SOV: 000 OTHER: 000 JPRS

llc
1/1
Card

NAME, Vladimir Sergeevich; ILLYAN, ...
M.P.T. EVICH, Fu.H., ref.

[New types of printed and packed vehicles, from the
practices of the consumer associations of the M.P.T. ...]
Novye vidy selerykt i kvazherykt avtomobeli, izopyta na-
bity potentsializiv. Ed. Moskva, Eksteren, 1961. 50 p.
M.P.T. ...

PIS'YAUKOVA, V.V.

Notes on the genus *Swertia* L. Bot. mat. Gerb. 21:292-313
'61. (MIRA 14:10)
(*Swertia*)

PIS'YAUKOVA, V.V.

Notes on the genus *Stertia* L. Report No. 2. Bot. Mat. Serb. 22: 202-
215 '63. (MIRA 17:2)

PIS'YANKOVA, V. V.

Dissertation defended in the Botanical Institute imeni V. L.
Komarov for the academic degree of Doctor of Biological Sciences:

"Review of *Swertia* Z. Species of the USSR (Material for a Monograph
on the Genus)."

Vest ik Akad Nauk No. 4, 1963, pp. 119-145

PIS'YAUKCHA, V.V.

Description of the aquatic vegetation of the lower Amur River.
Uch. zap. Ped. inst. Gerts. 178:37-47 '59. (MIRA 14:7)
(Amur River--Aquatic plants)

BRONIEW, V.

The influence of the curvature of an originally curved bar on the resonance periods of plane form of bending. p. 105.
(ARCHIWUM MECHANIKI STOSOWANEJ. Vol 9, no. 2, 1960, Warsaw, Poland)

SC: Monthly List of East European Accessions (OEAL) 14, Vol. 6, No. 9, Sept. 1960, incl.

Piszczek, K.

26
3
The Influence of the Curvature of an Originally Curved Bar on the Resonance Regions of Plane Form of Bending. *Karl Piszczek, Arch. Mech. Sopot 1951, No. 2, 1951, pp. 165-189.* Analysis to determine the resonance regions of the plane form of bending of a beam subjected to moments acting at the ends and having, in the undeformed state, a constant curvature $1/R$ to the plane of maximum rigidity. Results are obtained for simply supported and built-in ends for several values of the radius R .

12.000

PISYANVA, N. M.

"Observations on the Penetration of Solar Radiation Through Ice," pp. 1-6 (no page #)
(Meteorologiya i Klimatologiya, No. 3 Nov/Dec 1967)

SC: U-3210, 3 Apr 1963

PISYAROVA, N. M.

"Observations on the Penetration of Solar Radiation Through Ice," No. 6, pp. 4-11.
(Meteorologiya i Klimatologiya, No. 6, Nov/Dec 1947)

So: 1-301, 3 Apr 1953

PISYAKOVA, N. N.

Solar Radiation

Observation of the concentration of light through ice. M. N. P. I. 1947

Monthly List of Russian Accessions, Abstracts of Congress, Reported 1947-1948

AVRORIN, N.A.; KUZNEVA, O.I.; ORLOVA, N.I.; PIS'YUKOVA, V.V.; POYARKOVA,
A.I.; ZEMKOVA-TYAN-SHANSKAYA, N.Z.; CHERNOV, Ye.G.; SHLYAKOV, R.N.;
TVERITINOVA, K.S., tekhnicheskiy redaktor

[Flora of Murmansk Province] Flora Murmanskoi oblasti. Moskva, Izd-vo
Akademii nauk SSSR. No.3. 1956. 449 p. (MLRA 9:11)
(Murmansk Province--Botany)

GORDEYEVA, Tamara Nikolayevna; ZAVALISHINA, Sofiya Fedorovna; KRUBERO,
Yuliy Karlovich; PIS'YAUKOVA, Vera Vasil'yevna; STRELKOVA, Ol'ga
Stepanovna; GURDENIYEVA, A.M., Tekhnicheskiy redaktor

[Summer field work in botany; manual for pedagogical institutes]
Letniaya polevaya praktika po botanike; posobie dlia pedagogiche-
skikh institutov. Leningrad, Gos. uchebno-pedagog. izd-vo Minister-
stva prosveshcheniia RSPSR, Leningradskoe otd-nie, 1954. 285 p.
(Botany--Field work) (MLRA 8:7)

PIS'YAUKOVA, V.V.

New species of Central Asiatic violet. Bot.mat.Gerb. 15:177-181 1961
(MIRA 7 ?)

(Asia, Central--Violets) (Violets--Asia, Central)

PIS'YAUKOVA, V.V.

Genus *Ajuga*. Flora SSSR 20:20-39 '54. (MLRA 7:7)
(Labiatae)

GORDEYEVA, T.N.; KRUBERO, Yu.K.; PIS'YUKOVA, V.V.; SHISHKIN, B.K.,
professor, redaktor.

[Practical course in plant classification; textbook for pedagogical institutes] Prakticheski kurs sistematiki rastenii; posobie dlia pedagogicheskikh institutov. Pod red. B.K.Shishkina. Moskva, Gos. uchebno-pedagog. izd-vo, 1953. 379 p. (MLA 7:7)

1. Chlen-korrespondent Akademii nauk SSSR (for Shishkin)
(Botany--Classification)

PISZ, Z.; FRONEK, A.; with the technical assistance of A. Steidlova

The influence of occlusion of a coronary artery on the contraction of heart muscle. *Physiol. bohém.* 5 no.2:224-233 1956.

1. Institute for Cardiovascular Diseases, Prague.

(HEART, blood supply,

eff. of occlusion of coronary artery on contractions of heart musc.)

PISZAK, Jur; PODRECKI, Dzeslaw

Professor Dzeslaw Kacuta, his scientific, teaching, and professional activities. Przegląd 15 n. 1: 1-64. Mr 1965.

PISZAN, J.

Influence of the mode of resinizing and taking strength samples on
the certainty of acceptance of mineral wools. p. 35

MINERAL WOOL. vol. 5, no. 2, 1955 (published 1956)

Poland

SO. EAST. EUR. REAN. MINERAL WOL. vol. 5, no. 10 Oct. 1956

FISZAR, J.

"Development of the Department of Education and Training of the Ministry of Education,"
(Wzrost), In: Prace Komisji Wniosków i Propozycji, t. 1, 1978, s. 10-11.

*: Eastern European Accession List, 1978, No. 1, p. 150, 151.

FISZAK, J.

Properties of Modified Cast Iron J. Fiszak. (*Prevalid*
Collection, 1952, 2, Mar., 79-87. 11: Polish) A definition
for modified cast iron is proposed. The influence of the
structure of this iron on its mechanical and technological pro-
perties is outlined, and the results of the investigation of the
mechanical and casting properties are tabulated. v. 0.

Properties of Iron

Properties of Modified Cast Iron. J. Puzak (*Wzrostek*
Metallurgii, 1952, 8, Mar. 79-87) [In Polish]. A definition
for modified cast iron is proposed. The influence of the
structure of this iron on its mechanical and technological pro-
perties is outlined, and the results of the investigation of the
mechanical and casting properties are tabulated. v u

Secondary Practice

Centrifugal Castings of Sewage Pipes. J. Paznok. *Prace Techniczne* 1952, 2, 1-10. In Polish. The equipment for centrifugal casting of sewage pipes and the results of this method are described.

BP

101-2
Ferrous
Metallurgy

Centrifugal casting of sewage pipes. J. Frank (Waglan, Idaho).
1962. S. No. 1. 16-18. *J. Iron Steel Inst.* 1962. 171. 324. -The
necessary equipment is described and the advantages of the tech-
nique are discussed. H. H. CLARK

PISZCZAK, Stanislaw; PITSCHEK, Czeslaw

Psychological aspects of labor studies. Wlad naft 10 no. 1:
1961 Ja '64.

PISZCZEK, Antoni, mgr inż.

After ten years and in ten years. Przegl techn 84 no.48:6
1 D '63.

STARZYK, J.; DUTKIEWICZ, J.; PISZCZ, K.

A test of the vitality of the protozoon *Toxoplasma gondii* by means of the safranine test. *Wiadomosci parazyt.* 7 no.2:431-432 '61.

1. Zaklad Mikrobiologii Wydz. Farm. A.M., Krakow.

(TOXOPLASMA pharmacol) (DYES pharmacol)

P. 100, 101, 102, 103, 104
A222/A026

AUTHOR Piszczek, Kazimierz
TITLE Parametric Combination Resonance in Non Linear Systems
PERIODICAL Rozprawy Inżynierskie, 1960, Vol 8, No 2, pp 211-229

TEXT The problem of combination resonance (of the second kind) is considered for a model constituting a homogeneous beam with constant double tee cross-section whose vibration is excited parametrically by a concentrated force in its center point and in the plane of maximum rigidity, perpendicular to the beam axis. The geometric non-linearity is accounted for by assuming that the ends do not approach each other. The axial reaction force is assumed to be due to both the transverse displacement of the points of the axis and the rotation of the cross-sections. For the shaking force it is assumed that (1) it does not change direction, (2) it rotates together with the cross-section, the relative position not being changed. It is found that the parametric resonance appears in the neighborhood of the shaking frequency equal to the sum of free frequency in the case where the force preserves its direction during the process of vibration. In the case of rotating load, parametric re

Card 1/2

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A222/A02c

Parametric Combination Resonance in Non-Linear Systems

sonance is possible in the neighborhood of the angular rotating frequency ω or the difference of the angular frequencies of free vibration. From the considerations it also follows that with the same value of P_1 the width of the resonance region, in case of the "rotating" load, is less than the width of the resonance region for a load preserving its direction during the vibrational process. In the case of "rotating" load, amplitude increases with increasing frequency. There are 3 figures and 4 references (2 Soviet and 2 German

ASSOCIATION Zaklad Badania Drgan (PPT PAN (Department of Vibration Research, Institute of Fundamental Engineering Problems, Polish Academy of Sciences)

SUBMITTED October 20, 1969

Card 2 of 2

Piszczek, K.

5
1

Some particular cases of boundary curves are discussed:
(1) The cross section has two axes of symmetry and the force is
attached to the centroid of the cross section or to an arbitrary
point of the symmetry axis. (2) The cross section has one axis
of symmetry and the force acts at the center of transversal force.

2/2

The influence on the magnitude of the resonance regions of the
position of the force (dynamic constraints) and that of some
cross section parameters (geometrical constraints) are discussed
on a numerical example.

M. Piszczek, Poland

PISZCZEK, KAZIMIERZ

Wpływ Włazów Geometrycznych i Dynamicznych na Obszary Rezonansowe w Zależności od Stężeń Dynamicznej Prędkości Ciężkiego Profila Otwartym Przekrojeniu. *Rozprawy Inżynierskie*, No. 3, 1957, pp. 207-225. In Polish, with summaries in English and Russian. Analysis of the geometrical and dynamical constituents of resonance regions in the problem of dynamic stability of a thin-walled bar with open cross section.

2

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PISZCZEK KAZIMIERZ

V DRGANIA PODRUŻNE I POPRZECZNE PRĘTA
 POD DZIAŁANIEM PULSUJĄCEJ SIŁY OSIOWEJ
 JAKO ZAGADNIENIE NIELINIOWE (LONGITUDINAL
 AND TRANSVERSAL VIBRATIONS OF A ROD SUB-
 JECTED TO AXIAL PULSATING FORCE, TAK-
 ING NONLINEAR MEMBERS INTO CONSIDERA-
 TION), Kazimierz Piśczek, Arch. Mech. Sto-
 sowania (Warsaw), No. 3, 1953, pp. 343--363, 10
 refs. In Polish, with summaries in English and
 Russian. Study of the problem of dynamic stability
 of a rod of constant cross-section with both ends
 fixed under axial loading, applying the Hamilton
 principle to deduce the basic system of equations
 under the assumption of a simplified model in the
 form of a one-degree-of-freedom system for longi-
 tudinal and transverse vibrations and of a further
 simplifying assumption to eliminate the effects of
 these vibrations, taking into account the influence
 of transverse deflections on axial displacements
 and of the physical nonlinearity represented by
 stress-strain relations in the form of a third degree
 polynomial with two material constants.

3

Piszczek, Kazimierz

Piszczek, Kazimierz. Longitudinal and transversal vibrations of a rod subjected to axially pulsating force, taking nonlinear members into consideration. I. Arch Mech. Stos. 7 (1955), 345-362. (Polish. Russian and English summaries)

Series I
Math 1 - F/W

The author investigates a problem of dynamic stability of a straight vertical rod of constant cross-section hinged at the upper and lower ends and under an axial load of the form $P = P_0 + P_1 \cos \omega t$. His main considerations are longitudinal vibrations but the influence of the transverse deflection is taken into account. The physical non-linearity of the system consists of the non-linear stress-strain relation. The stress is not a linear function of the strain but is a third-degree polynomial of the strain.

The system of equations controlling vibrations of such a rod is obtained from Hamilton's principle. To solve this system the author introduces the following simplifying assumptions: (i) the model has only one degree of freedom for longitudinal and transverse vibrations, and (ii) the longitudinal vibrations do not influence the transverse

1/2

Piszczek, Kazimierz

vibrations. Using these assumptions and applying Galerkin's method he reduces the system to the well known Mathieu differential equation whose solutions are sine and cosine type Mathieu functions. The author makes a detailed analysis of the eigenvalues (related to the frequencies of the forced vibrations) for which the system is stable or unstable.

T. Leser (Aberdeen, Md.)

3/2

VMH

Piszczek, K.

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Longitudinal and Transversal Vibrations of a Rod Subjected to Axially Pulsating Force, taking Non-linear Members into Consideration

K. Piszczek

The basic system of equations, deduced from Hamilton's principle, is solved with some additional assumptions. A simplified model is taken, in the form of a system with one degree of freedom for longitudinal and transversal vibrations. The necessary assumption is made to eliminate the influence of longitudinal vibration on transversal vibration. (Bibl. 10)

Arch. Mech. Stosow.
7(3), 345-362
1955

Poland

1111

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~~KNEZMERE~~, I.
PISZCZEK, Kaj.

V
Lipinski, Feliks i Poproszka, Przemysław (and
and Edmunda Polow) (Sily Golowa) (Longitudi-
nal and Transverse) (Shooting of a Red
Subjected to Active Policing Force,
Taking Nonlinear Members into Con-
sideration). I. Karolowa Piszczak.
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1965, pp. 245-262. 10 refs. In Polish,
with summaries in English and Russian.

[Handwritten signature]

1969:

Piszczek, Kazimierz. Dynamical stability of plane form of bending with various boundary conditions. Rozprawy Inz. 4 (1956), 175-225. (Polish. Russian and English summaries)

2
I-F/W

The paper deals with the boundary problem for the equation $(d^2y/dt^2) + (\lambda + \gamma_1 \cos t + \gamma_2 \cos 2t)y = 0$. Using a method analogous to that used for Mathieu's equation, the eigenvalues $\lambda = \lambda(\gamma_1, \gamma_2)$ and some first coefficients of the corresponding eigenfunctions are found. Using Haupt's theorem the "body of dynamical stability" obtained is divided into stable and unstable regions. It is shown that with a suitable choice of the parameters γ_1 , the second resonance region does not appear. The tables of Klotter and Kotowski are completed.

The second part of the paper treats the problem of the stability of a bar of narrow rectangular cross-section loaded at the extremities with a moment $M(t)$ and an axial force $P(t)$, of the same angular frequency. Boundary conditions of simple support and other types are considered. K. Klotter's method is used in a modified form.

D. P. Rasković (Belgrade)

STASZEWSKI, Jozef; PISZCZEK, Maria [translator]

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Przeegl geogr 35 no.1:77-81 '63.

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Selected problems of industrial psychology. [unclear] [unclear]
no. 7/8:196-181. [unclear] [unclear] '63.

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Existence of periodic motions in the n mathematical pendulums
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ИИДЛ, Анатолий Александрович; Яковлев, Владимир Александрович;
Коркин, Александр Николаевич.

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AKIMENKO, N.M.; SEMERGEYEVA, Ye.A.; KUCHER, V.N.; TAKHTUYEV, G.V.;
KALYAYEV, G.I.; ZARUBA, V.M.; NAZAROV, P.P.; MAKSIMOVICH, V.L.;
STRUYEVA, G.M.; KARSHENBAUM, A.P.; SKARZHINSKAYA, T.A.;
CHEREDNICHENKO, A.I.; GERSHOYG, Yu.G.; PITADE, A.A.; RADUTSKAYA,
P.D.; ZHILKINSKIY, S.I.; KAZAK, V.M.; KACHAN, V.G.; POLOVKO, N.I.,
red.; LADIYEVA, V.D., red.; ZHUKOV, G.V., red.; YEPATKO, Yu.M.,
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GUSKINA, N.N.; DZHEDZALOV, A.T.; ZHILKINSKIY, S.I., prof.;
ZALATA, L.F.; KAZAK, V.M.; MALYUTIN, Ye.I.; MUROMTSEVA, Z.G.;
NATAROV, V.D., doktor geol.-miner. nauk; PANASENKO, V.N.;
PITADE, A.A.; RADUTSKAYA, P.D.; SLEKTOR, S.M.; SMIRNOV, D.I.;
TOKHTUYEV, G.V., kand. geol.-min. nauk; FOMENKO, V.Yu.;
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PITADE, A.A.

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FITADE, A.A.; YAROSHENK, V.A.; BOR'KIN, A.I.; NEMANOVA, I.I.,
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(Vibrators)

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GRECHISHNIKOV, N.P.; KALYAYEV, G.I.; KARSHENBAUM, A.F.;
KRAVCHENKO, V.M.; KULICHOV, M.P.; MAKSDONICH, V.L.; MEL'NIK,
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ARCHAROV, V. I.; KISELEV, S. T.; PITAEV, N. A.

The Conditions for the Evolution of Lethoidal Fracture in Steel

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"Structure of Overheated Steel"

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kand.tekhn.nauk, red.; YEREMAKOV, N.P., tekhn.red.

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(Machinery industry--Quality control)

Handwritten: MILITARY
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Faint, illegible text, possibly a header or classification marking.

PITAEWA
ARSHANOV, T. I. PITAEWA, S. A.

Structure of ...

... ..

ARKHAROV, V. I. PITADE, N. A.

Possible Mechanics of the Evolution of Stable Large Granularity in
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the Uralmashsavad, no 4-5, 27, 1944.

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red.; PITADE, N.A., red.; SHKLYAR, R.Sh., red.; SHUR, B.L.,
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DZIALOSZYNSKI, I.E.; LIFSZYC, E.M.; PITAJEWSKI, L.P.; WOJCIECHOWSKI, Kazimierz
[translator]

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'63.

CHUNKO... [unclear] ...

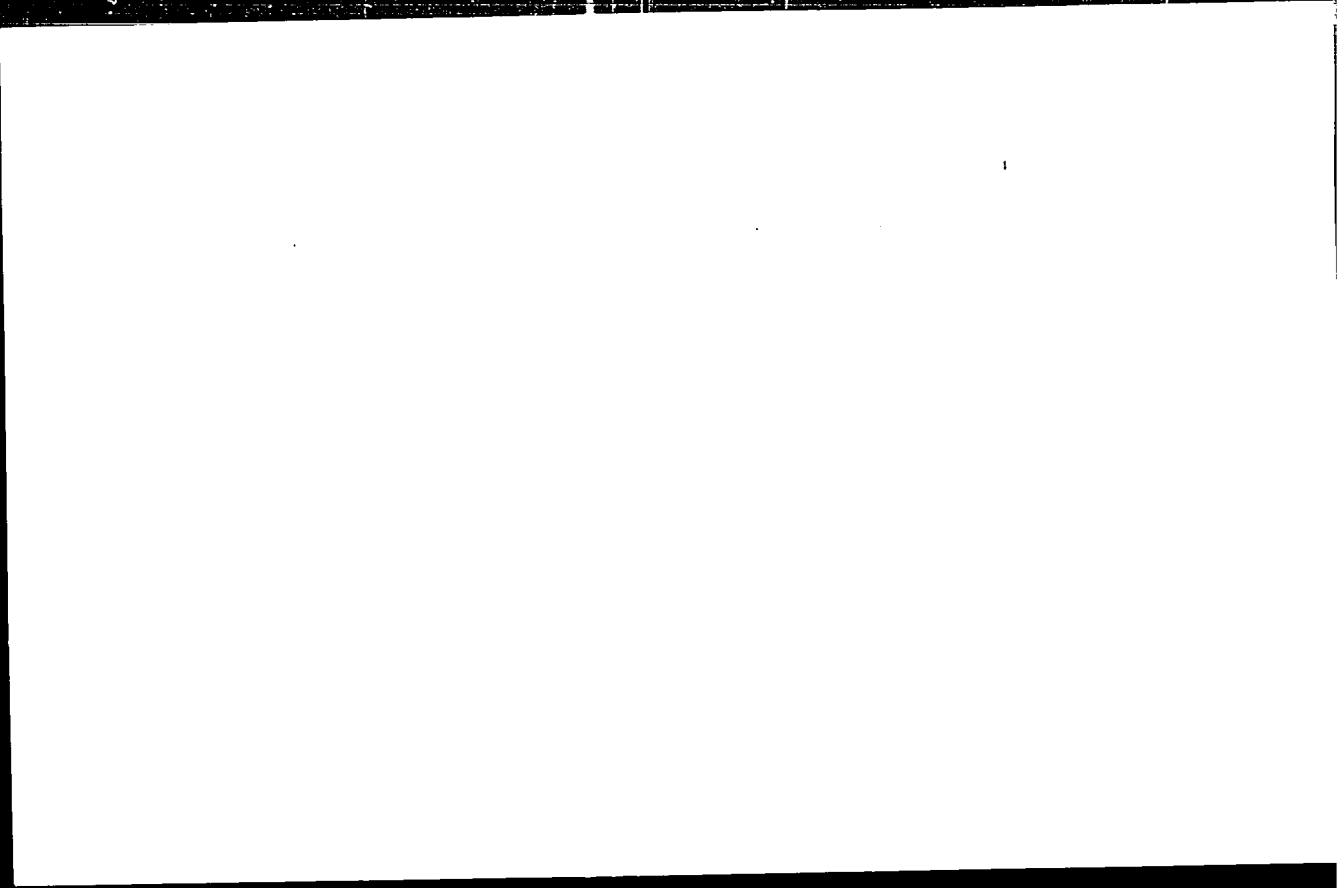
... [unclear] ... for the production of
carbon black. [unclear] ... MIRA [unclear]

... [unclear] ...
[unclear] ...
[unclear] ...

STRELETS, V.M.; BITAK, N.V.; KULIK, A.I.; LOGASHEV, M.S.; Irinimova
uchastiyе VYSOTSKAYA-KNITIK, I.M.

Service of zircon nozzles in the continuous casting of steel.
(Gneupory 28 no.4:63-64) 1963.

1. Ukrainskiy nauchno-issledovatel'skiy institut Gneupory
for Strelets, Bitak . . . Masov-Yarskiy kombinat' gneupory-
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STRELETS, V.M.; PITAK, N.V.

Testing the use of nozzles for continuous steel pouring. Ogneupory
25 no.1:30-32 '60. (MIRA 13:6)

1. Ukrainskiy nauchno-issledovatel'skiy institut ogneuporov.
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GLAZOV, F.G., inzh.; SLADKOSHTEYEV, V.P., kand.tekhn.nauk; TEFESY, V.G.,
inzh.; OFENGENDEN, A.M., inzh.; STANILETS, V.P., kand.tekhn.nauk;
MURZOV, K.P., inzh.; Priznaniye uchastiya KALAFIL, A.Y.; DUBININ, A.
I.I.; YEMICH, A.V.; YEVUSHEV, V.P.; SIBIR, V.V.; BAKHAROV,
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(Continuous casting--equipment and supplies)

PITAK, N.V.; KONONOV, B.Z.; KOLPAKOV, A.I.; D'YACHENKO, A.I.

Service of refractories in a semicontinuous steel casting
plant. Ogneupory 27 no.7:314-323 '62. (MIRA 15:8)

1. Ukrainskiy nauchno-issledovatel'skiy institut ogneuporov (for Pitak).
2. Volgogradskiy metallurgicheskiy zavod "Krasnyy Okt'yabr" (for Kononov, Kolpakov, D'yachenko).
(Refractory materials) (Continuous casting)

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ACCESSION NR: AR5014268

SOURCE: Ref. zh. Khimiya, Abs. 7M51

AUTHOR: Pitak, N.V.

TITLE: Zircon refractories in units for continuous steel casting

CITED SOURCE: Sb. nauchn. tr. Ukr. n.-i. in-t ogneporov, vyp. 7(54), 1963, 270-281

TOPIC TAGS: steel casting, continuous casting, zircon refractory, zircon powder, iron free zircon, pressed zircon, batcher manufacture

TRANSLATION: The results of a study of the possible use of zircon refractories in units for continuous steel casting are presented. To prepare the refractories, use was made of deironed zircon powder with a 1-2% residue on a mesh of 4900 openings/cm². The powder was moistened to 4%, and briquets were pressed in the shape of a standard brick, fired at 1670C, and soaked for 6 hr. at this temperature. The fire shrinkage was 10%, and the apparent porosity after annealing was 0.3-3%. After being ground by milling, the material was passed through a magnetic separator. Laboratory experiments showed that in order to improve the compactability and increase the density of the green compact, a small amount of clay (5.0, 7.5, or 10%) should be added to the composition of the

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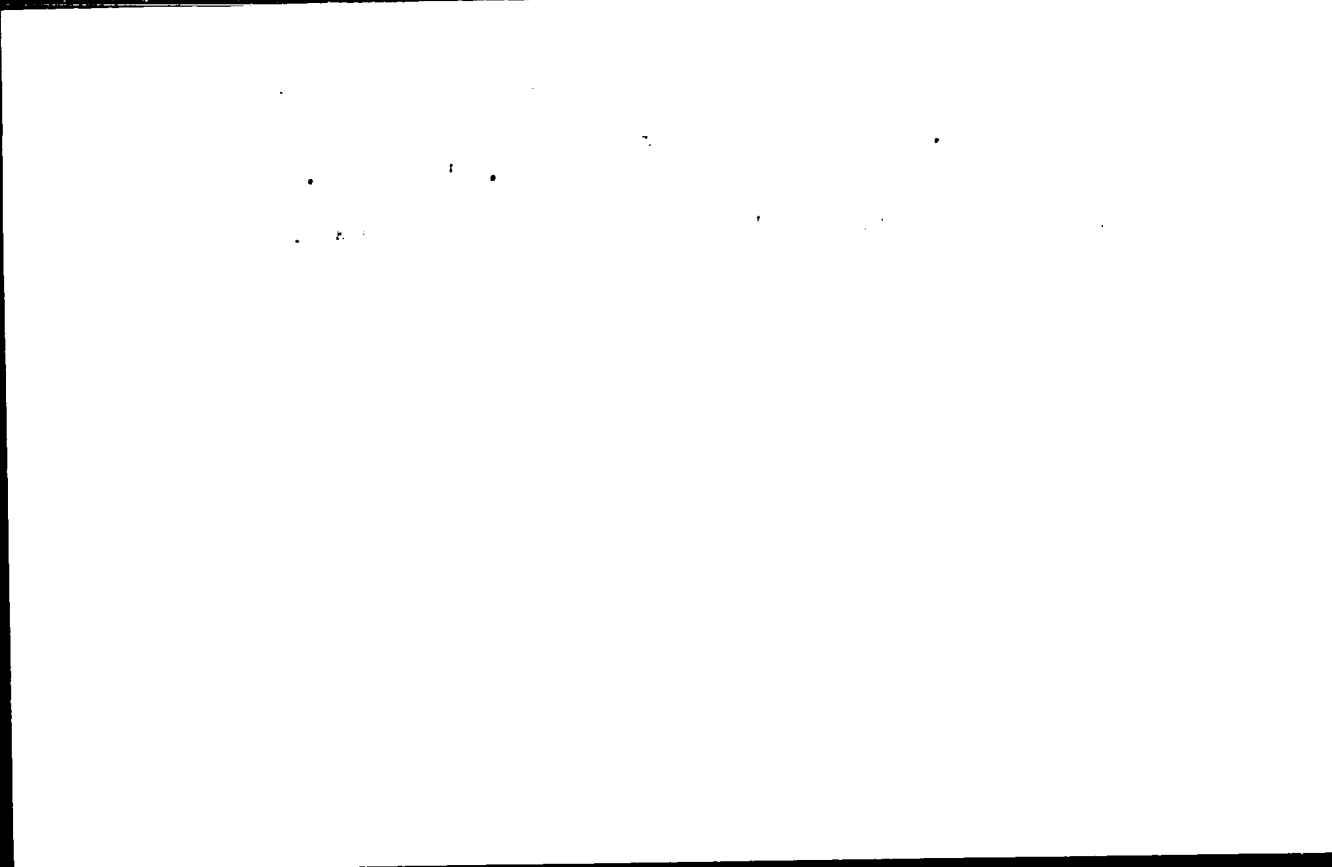
ACCESSION NR: AR5014286

zircon mass. The firing temperature of the green compact is thus lowered by 100-150C, and its apparent porosity decreased. In the manufacture of batchers, a fraction of fired zircon can be replaced with an equivalent fraction of raw zircon or zircon concentrate. It was shown that zircon vessels possess a high wear resistance in the casting of killed, rimmed, and stainless steels, and the wear in this case ranges from 0 to 4 mm of vessel diameter per hour of hot operation. Bibl. with 9 refs. V. Reznik

SUB CODE: MM, MT

ENCL: 00

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С ИТАК N V

15(2)
AUTHORS:

Kukolev, G. V., Professor, Doctor of Technical Sciences, Pitak, N. V. SOV/72-59-7-3/19

TITLE:

The Influence of Peptizers on the Efficiency of a Plodder in Manufacturing Faience Materials and Kaolin-bentonite-suspensions (Vliyaniye peptizatorov na proizvoditel'nost' lentochnogo pressa pri pererabotke fayansovykh mass i kaolino-bentonitovykh suspenziy)

PERIODICAL:

Steklo i keramika, 1959, Nr 7, pp 7 - 11 (USSR)

ABSTRACT:

As it results from the investigations of L. A. Abduragimova, P. A. Rebinder, N. N. Serb-Serbina and I. A. Uskov (Footnote 2) the bentonite-clay types are very sensitive to the effect of electrolytes. The authors of this paper investigate the influence of the peptizers on the kaolin-bentonite-suspensions and faience materials in their processing by means of a plodder. The chemical composition of the clayey materials which were used for these studies is given in table 1. The absorption capacity, the specific surface and the amount of the bound water are taken from the studies of F. D. Ovcharenko (Footnote 3). The compositions of the faience materials are given in table 2. As peptizers soda and soda extracts from peat and straw were used which were found in former studies. The investigations were carried through on a laboratory

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