On the resonance excitation of waves ...

S/057/63/033/001/013/017
B125/B186

Fig. 1 shows the disturbance in the t, x plane. The full lines denote the shock waves. For $\mu < 0$ the flow through the centered rarefied expansion waves is more complex. The irreversible change of the inner energy at the front of the magnetoacoustic wave in a strong magnetic field yields

$$T \partial S = \frac{\iota H_0}{3\pi^2 \rho_0 \mu (1+\mu)} \sqrt{\frac{2\iota}{3\pi \mu (1+\mu) H_{0,}}}$$

. For $\mu = -1$ the next higher approximation is to be considered. For Δl there is no irreversible heating through shock waves. The irreversible heating of the liquid in the shock waves does not depend on the dissipative coefficients. The frequency of maximum dissipation is slightly displaced with respect to the resonance frequency. According to these results a plasma is most conveniently heated by magnetoacoustic waves. There are 3 figures.

ASSOCIATION: Matematicheskiy institut im. V. A. Steklova AN SSSR, Moskva (Mathematical Institute imeni V. A. Steklov AS USSR, Moscow)

SUBMITTED: October 28, 1961

Card 3/4

IORDANSKIY, S.V.; KULIKOVSKIY, A.G.

Stability of higher correlation functions in a plasma. Dokl.
AN SSSR 152 no.4:849-852 O '63.   (MIRA 16:11)

1. Matematicheskiy institut im. V.A. Steklova AN SSSR. Predstavleno
akademikom L.I. Sedovym.

IORDANSKIY, S.V.

Hydrodynamics of a rotating Bose system below the condensa-
tion point. Dokl. AN SSSR 153 no.1:74-77 N '63.
                                              (MIRA 17:1)

1. Matematicheskiy institut im. V.A. Steklova AN SSSR.
Predstavleno akademikom N.N. Bogolyubovym.

ACCESSION NR: AP4019243   S/0056/64/046/002/0732/0744

AUTHORS: Iordanskiy, S. V.; Kulikovskiy, A. G.

TITLE: A quasilinear approximation and the correlation functions
for a plasma

SOURCE: Zhurnal eksper. i teor. fiz., v. 46, no. 2, 1964, 732-744

TOPIC TAGS: plasma, correlation function, Langmuir plasma wave,
plasma instability, higher correlation function, first distribution
function, nonlinear interaction, quasilinear approximation

ABSTRACT: A completely ionized spatially-homogeneous plasma without
a magnetic field is considered, when the usual expressions for the
correlation functions in the plasma are unstable against the occur-
rence of Langmuir plasma waves. The purpose is to obtain expres-
sions for the second correlation function, since it determines the
variation of the first distribution functions. A new method is

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ACCESSION NR: AP4019243

therefore used to solve the equations for the higher correlation
functions, based on a simple representation of the corresponding
Green's functions. Approximate expressions for the correlation
functions, with allowance for nonlinear interactions, are obtained
for small instability increments. It is shown that the quasilinear
approximation is odd only in the case when the instability is con-
tained in a sufficiently small region of phase velocities of the
waves. The necessary condition for the applicability of the equa-
tions of the quasilinear approximation for large time intervals is
shown to be smallness of the increments and also smallness of the
relative velocity increment. "The authors are grateful to N. N.
Bogolyubov and Yu. L. Klimontovich for a discussion of questions
connected with this work." Orig. art. has: 34 formulas.

ASSOCIATION: Matematicheskiy institut im. V. A. Steklova AN SSSR
(Mathematics Institute, AN SSSR)

Card   2/1

IORDANSKIY, S.V.; KULIKOVSKIY, A.G.

Quasi-linear approximation and the correlation functions in a plasma.
Zhur. eksp. i teor. fiz. 46 no.2:732-744 F '64.

(MIRA 17:9)

1. Matematicheskiy institut AN SSSR.

ACCESSION NR: AP4042385   S/0056/64/047/001/0167/0174

AUTHOR: Iordanskiy, S. V.

TITLE: Energy spectrum of a Bose gas with weak attraction at large
distances

SOURCE: Zh. eksper. i teor. fiz., v. 47, no. 1, 1964; 167-174

TOPIC TAGS: Bose Einstein gas, energy level, scattering amplitude,
spectral energy distribution, boson

ABSTRACT: In view of the complexity and excessive degree of approx-
imation of earlier methods, the author uses a diagram technique,
developed by S. T. Belyayev (ZhETF v. 34, 417 and 433, 1958), to cal-
culate the ground-state energy and the spectrum of elementary ex-
citations for a Bose gas with negative scattering amplitude at low
mome_ta. It is assumed that the potential energy $V = V_1 + V_2$, of
the pair interaction of the Bose particles consists of a repelling

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ACCESSION NR: AP4042385

short-range nucleus (radius a) and an attracting long-range term
(radius R >> a), the relation between the effective radii of the
two potentials being such that in the essential region we have
$V_1 a^3 \sim V_2 R^3$. It is shown that in this case the scattering amplitude
of two particles interacting via the potential V can be expressed
simply in terms of the scattering amplitude of two particles with
potential interaction energy V_1. The scattering amplitude can be
represented by a Born series, obtained by solving an integral equa-
tion for the scattering amplitude. In solving this problem, an im-
portant role is played by repulsion of small distances, which en-
sures the possibility of stable states at densities above a certain
critical value. The scattering amplitude with zero momenta is as-
sumed small, so that the gas approximation becomes valid near the
critical density. The final formulas are similar to those obtained
by K. Huang (Phys. Rev. 119, 1129, 1960), but the numerical coeffi-

2/3

ACCESSION NR: AP4042385

cients differ noticeably. The presence of even weak attraction is shown to lead to a "coalescence" of the Bose particles, so that there are no stable homogeneous states at densities below critical. "The author is grateful to N. N. Bogolyubov and S. V. Tyablikov for a discussion and interest in the work." Orig. art. has: 22 formulas.

ASSOCIATION: Matematicheskiy institut im. V. A. Steklova Akademii nauk SSSR (Mathematics Institute, Academy of Sciences SSSR)

SUBMITTED: 18Dec63   ENCL: 00

SUB CODE: NP   NR REF SOV: 004   OTHER: 002

3/3

IORDANSKIY, S.V.

Energy spectrum of a Bose gas with weak attraction at large
distances. Zhur. eksp. i teor. fiz. 47 no.1:167-174 Jl '64.

(MIRA 17:9)

1. Matematicheskiy institut imeni Steklova AN SSSR.

IORDANSKIY, S. V.; KULIKOVSKIY, A. G.

General condition for the stability of higher correlation
functions in a plasma. Dokl. AN SSSR 156 no. 1:35-37 My '64.

(MIRA 17:5)

1. Predstavleno akademikom L. I. Sedovym.

RWT(1)/EPA(sp)-2/EPA(w)-2/EEC(t)/T/EWA(m)-2   Pz-6/Po-4/Pab-10/Pi-4

AP-0

AN SSSR. Doklady, V. 630, No. 1, 1984,

plasma, electromagnetic wave attenuation, statistics, correlation function

Let us consider the equations describing the behavior of correlation functions

$$\frac{\partial N_1}{\partial t} = $$

$$\Delta V = - \sum_i \int \frac{d}{dr} \ldots$$

$$\Delta H = \sum_i \int \frac{d}{dr} \ldots$$

Card 2/8

$$\delta N_{a_m} = N_{a_1} \dots N_{a_m} - \sum_i N_{a_i} N_{a_1} \dots N_{a_{i-1}} N_{a_{i+1}} \dots N_{a_s} + \dots, \quad (4)$$

where the dots stand for terms involving more than two factors.
We consider all the arguments x_i $(i=1,\dots,s)$ to be different.

the terms involving δ-functions arising from the coincidence of
x_{i-1} with the other arguments, and we have:

$$\nabla_i \quad \overline{f}_{a_i} = F_{a_i \ a_i} + \sum_{i=1} \dots$$

express the distribution functions $F_{a_1 \dots a_s}$ in terms of irre-
correlation functions, by the

$$F_{a_1 \ a_m} = g_{a_1 \dots a_m} + \sum_{(a_1 \dots a_m)}' g_{a_1} \ g_{a_m} + \dots \qquad (6)$$

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L 33249-65

ACCESSION NR: AP4035803   O

where the second term is the sum of products of pairs of correlation
functions corresponding to all the possible partitions of the set
$a_i - a_n$ into two groups. The dots stand for terms in

arguments $a_1, \ldots, a_s$ arbitrarily into
these groups of arguments without changing the relative

$$\frac{d}{dt}\,\delta_{c_1\dots a_1} + \sum_l c_l \frac{\partial}{\partial r_l}\,\delta_{c_1\dots a_1} + \sum_l \frac{e_l}{m_{a_l}}\left(E + \frac{v}{c}\times H\right)\frac{\partial}{\partial v}\,g_{a_l\,a_1} -$$

$$- \sum_{l,l'(\neq l)} \frac{e_{a_l}}{m_{a_l}}\left[\frac{\partial}{\partial r_l}\frac{e_{a_{l'}}}{|r_l - r_{l'}|}\left(1 - \frac{v_l v_{l'}}{c^2}\right) + \frac{v_l}{c}\left(\frac{v_l}{c}\frac{\partial}{\partial r}\frac{e_{a_{l'}}}{\;}\right)\right]\times$$

$$\times \frac{\partial}{\partial v_l}\left(g_{a_1\dots a_l} + \sum_{(a_1\, a_l)} g_{a_l}\,g_{c_l}\right) - \sum_l \frac{e_{a_l}}{m_{a_l}}\sum_{a_{l+1}}\left[\frac{\partial}{\;}\frac{e_{a_{l+1}}}{\;} - 1 - \frac{v_l v_{l+1}}{c^2}\right.$$

$$\left. + \frac{v_{l+1}}{c}\left(\frac{\partial}{\partial r_l}\frac{e_{a_{l+1}}}{|r - r_{l+1}|}\right)\right]\times \frac{\partial}{\partial v_l}\left(g_{a_1\,a_{l+1}} + \right.$$

$$+ \sum_{(a_1\dots a_{l+1})}' g_{a_l}\dots g_{a_{l+1}\dots} - F_{a_{l+1}}g_{a_1\,a_l}\right)d^3 r_{l+1} = 0. \qquad (7)$$

denotes the sum of products of pairs of correlations corresponding to arbitrary partitions of the indices into two classes ... has an analogous meaning. If the
mean field and δH are disregarded, system (7) coincides with system of reference [2]. In the fourth term of equation ..., the ... involving ... is ... with respect to the last term. Assuming ..., we shall neglect

AP4039803

ies. Then the homogeneous ...

... stands for the operator ...

... additions to the electromagnetic field are computed by
... BIOT-SAVART equations ...
... Green's function ...
... of solutions of system (d) (growth or damping) is

ACCESSION NR: AP4035803

... by the properties of solutions of system (7). Let G_a
be a solution of system (7). Let us suppose that $G_a, \ldots a_s \sim \mu$, as in
the stationary case. Let us study the behavior in time of the
deviation from this solution of $\int a, \ldots a_m = \delta_a, \ldots a_m - G_a, \ldots a_m$
assuming this deviation is small. If the initial conditions for
linearization of system (7) (with respect to $\int$) are such that at
the initial moment only the 5th correlation is different from ...
... can show, (similarly ...
... $\int a, \ldots a_m$ ...
of order μ. As any initial conditions may be represented as super-
positions of initial conditions considered above, with different s,
... of the stability ...

... remains ...
... taking ...
... equation ...
... integral ...
... R_a ...
... in the last term, ...

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'?2L9-55

' '' N NR: AP4035803

$$\frac{\epsilon_1}{m_{a_1}} \frac{\partial F_1}{\partial v_l} \left\langle \delta E \cdots \right.$$

the electromagnetic field δE, δH will be computed by exact formulas
through F_a .   Orig. art. has: 9 equations.

IORDANSKIY, S.V.

Symposium on the problem of many bodies. Vest. AN SSSR 34
no.12:65 D '64   (MIRA 18 :1)

EWT(l)/EPF(n)-2/EWG(v)/EPR   Pe-5/Pe-4/Pu-4   WW/GG

ACCESSION NR: AP5006522   S/0056/65/048/002/0708/0714

AUTHOR: Iordanskiy, S. V.

TITLE: Vortex ring formation in a superfluid liquid

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 48, no. 2, 1965, 708-714

TOPIC TAGS: vortex ring, superfluid, thermal fluctuation vortex ring

ABSTRACT: The formation of vortex rings in a superfluid liquid with relative motion of the thermal and superfluid components is considered. The Fokker-Planck equation for ring formation due to thermal fluctuations is derived and a formula is obtained for the rate of vortex ring formation.

$$ J_R = \frac{2\pi k T \sqrt{kT} \, V}{v_s \, 2\pi A_f^{\,1} \sqrt{\pi} \, m} \, \rho_s R_{\kappa} \rho^1 \exp\left[\frac{F(R_{\kappa}) - kTS(R_{\kappa})}{kT} \right] $$

$$ \times \frac{\rho \rho_n b}{\rho_n^{\,1} b^2 + (1 - b^1 \rho_n / \rho)^1 \rho^1} \, \frac{\partial^2}{\partial R^2}(F - kTS) $$

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L 43740-65
ACCESSION NR: AP5006522 α

Taking

$$E'(n_\chi, \vartheta, R) = \sum_\chi \hbar\omega(\chi, R) n_\chi + p(R) v_s(1 - \overline{\cos\vartheta}),$$

$$S_L = 2R \frac{\sqrt{2mkT}}{\hbar} \left(\ln \frac{1,046\hbar}{a\sqrt{2mkT}} \right)^{-\frac{1}{2}} \Gamma\left(\frac{3}{2}\right) \zeta\left(\frac{3}{2}\right).$$

or

$$R_{\kappa p} = \frac{\hbar}{2mv_s} \left[\ln \frac{8R_{\kappa p}}{a} - \frac{2}{4} \right] - \frac{kT}{\hbar} \sqrt{2mkT} \left(\ln \frac{1,046\hbar}{a\sqrt{2mkT}} \right)^{-\frac{1}{2}} \frac{4,4m}{4\pi^2\rho_s v_s\hbar}.$$

into account, this formula permits the calculation of the number of vortex rings of
supercritical radius formed per unit time in volume V. The inverse value determines
the relaxation time to the equilibrium state with $v_s = v_n$. A pronounced rate of
vortex formation in HeII is found for $v_s > 60$ cm/sec, dropping sharply to unobservable
values of the order of e^{-1000} for speeds near 40 cm/sec. The magnitude of j_R varies
extremely fast with temperature, due to variation in ρ_g at $T > 1.4$°K. "The author
expresses gratitude to N. N. Bogolyubov for discussion of and interest in the work,
and also to L. P. Pitayevskiy, for valuable discussions." Orig. art. has: 34

Card 2/3

L   L-65
ACCESSION NR: AP5006522

formulas.

ASSOCIATION: Matematicheskiy institut imeni V. A. Steklova, Akademii nauk SSSR
(Mathematics Institute, Academy of Sciences SSSR)

25Aug64   ENCL: 00   SUB CODE: IC

003   OTHER: 004

Card 3/3

L 2195-66   EWT(1)/EWT(m)/EWP(w)/T/EWP(t)/EWP(b)   JD
ACCESSION NR: AP5019236   UR/0056/65/049/001/0225/0236

AUTHOR: Iordanskiy, S. V.

TITLE: Mutual friction force in a rotating Bose gas

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 49, no. 1, 1965,
225-236

TOPIC TAGS: phonon, friction, excitation spectrum, vortex, phonon scattering

ABSTRACT: The author obtains for the mutual friction associated with the scatter-
ing of excitations by vortex filaments a general expression which is more accurate
than that derived in earlier work (DAN SSSR v. 153, 74, 1963; AnH. Phys. v. 29, 335,
1964). He also investigates the scattering of long-wavelength excitations (phonons)
by a vortex filament within the framework of the model of a weakly nonideal Bose
gas. It is shown that the phonon part of the mutual friction force contains a large
transverse component, and that when the additional transverse terms are taken into
account the agreement with experiment is improved for the roton part of the mutual
friction force. "The author thanks N. N. Bogolyubov for a discussion and interest
in the work, and L. P. Pitayevskiy for useful discussions." Orig. art. has: 1
figure and 41 formulas.
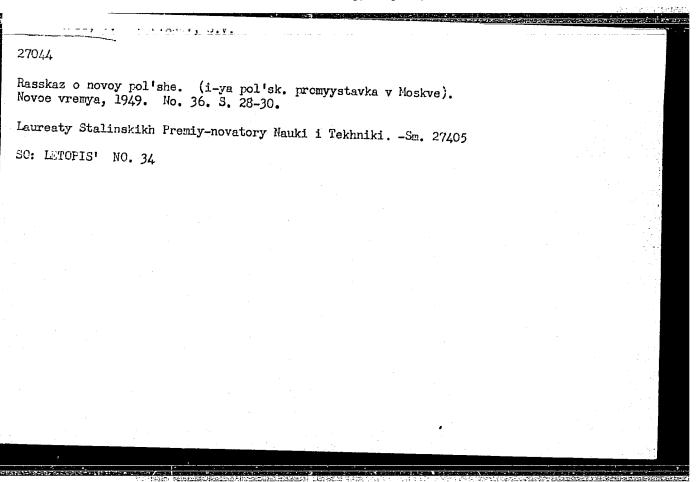
Card 1/2

L 2195-66
ACCESSION NR: AP5019236

ASSOCIATION: None

SUBMITTED: 14Jan65   ENCL: 00   SUB CODE: GP

NO REF SOV: 008   OTHER: 004

Card 2/2

L 12792-66   EWT(1)/EWP(m)/EWA(d)/T-2/EWA(m)-2/ETC(m)/EWA(1)   IJP(c)   WW

ACC NR: AP5026626   SOURCE CODE: UR/0056/65/049/004/1326/1331

AUTHORS: Iordanskiy, S. V.; Kulikovskiy, A. G.

ORG: Mathematics Institute, Academy of Sciences SSSR (Matematicheskiy institut Akademii nauk SSSR)

TITLE: On the absolute stability of some plane parallel flows at high Reynolds numbers

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 49, no. 4, 1965, 1326-1331

TOPIC TAGS: Reynolds number, motion stability, boundary layer stability, viscous flow, viscous fluid, magnetohydrodynamics

ABSTRACT: Localized disturbances in the plane parallel flow of a viscous fluid are considered and the character of their instability is investigated. The localized disturbance is represented by a Fourier integral with respect to the wave number k and the behavior of the individual terms of the series is analyzed. It is shown that the localized disturbances attenuate in the course of time in any finite arbitrary region of the flow in question. The Reynolds numbers are assumed to be high enough so that k can be regarded as small for velocity profiles without

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L 12792-66

ACC NR: AP5026626   3

inflection points. Inflection points, if they occur, are assumed to be close to the wall, so that the instability interval lies entirely in the region of small k. Under these conditions all plane parallel flows having sufficiently small values of k on the neutral curve are absolutely stable. If the Reynolds numbers are such that k on the neutral curve becomes of the order of unity, no analytic proof of either absolute stability or absolute instability can be obtained. The result can be used in magnetohydrodynamics for plane parallel flow in a transverse magnetic field. Orig. art. has: 15 formulas.

SUB CODE: 20/ SUBM DATE: 21May65/ NR REF SOV: 003/ OTH REF: 008

Card 2/2

27044

Rasskaz o novoy pol'she. (i-ya pol'sk. promyystavka v Moskve).
Novoe vremya, 1949. No. 36. S. 28-30.

Laureaty Stalinskikh Premiy-novatory Nauki i Tekhniki. -Sm. 27405

SC: LETOPIS' NO. 34

IORDANSKIY, V. N.   Cand. Tech. Sci.

Dissertation: "Studying the Process of Centrifugal Casting of Thick-Walled Blanks."
Moscow Order of the Labor Red Banner Higher Technical School imeni N.E.Bauman, 14 Apr 47.

SO: Vechernyaya Moskva, Apr, 1947 (Project #17836)

IORDANSKIY   V. N.

18.7200
18.1210

66956

SOV/137-59-9-19733

Translation from: Referativnyy zhurnal, Metallurgiya, 1959, Nr 9, p 106 (USSR)

AUTHOR: Iordanskiy, V. N.

TITLE: Weldable Aluminum-Magnesium Alloys

PERIODICAL: V sb.: Sovrem. splavy i ikh term. obrabotka, Moscow, Mashgiz, 1958, pp 308 - 313

ABSTRACT: The author describes basic physical, mechanical and technological properties of AMg3, AMg5V and AMg6T alloys. The modules of elasticity of I and II kind are - E 7.0 . 10^3 kg/mm^2 and C 2.7 x 10^3 kg/mm^2; γ = 2.65 g/cm^3; heat resistance of the alloys is not high (up to 150°C), but their behavior is satisfactory at lower temperatures (up to -196°C). Vibration resistance is high: at 5·10^8 cycles δ_ω = 12.5 kg/mm^2; σ_b (kg/mm^2) σ_s (kg/mm^2) and δ (%) are correspondingly : 1) at 20°C : AMg5V $\geq$ 28; $\geq$ 15; $\geq$ 15; AMg6T $\geq$ 32; $\geq$ 16; $\geq$ 15; 2) at -193°C: AMg3 - 33.0, 10.1, 43.0; AMg5V - 42.0, 16.9, 41.6 : AMg6T - 44.7, 20.7, 34.3. Cold deformation up to 40% of AMg alloys raises σ_b by 13% and σ_s by 23 - 30%, but δ is reduced by 50 - 75%. Weldability of AMg3 and AMg6T alloys is good, that of AMg5V is satisfactory. Best results

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Weldable Aluminum-Magnesium Alloys

66956

SOV/137-59-9-19733

were obtained with Ar-arc welding. The strength coefficient of butt joints is 0.9 - 1.0, that of overlap joints is 0.65. Ductility of the weld-on metal is 12 - 15%, so that the work after welding can be subjected to burnishing and slight drawing. The alloys are well deformable in hot state. The forging temperature is for AMg3 - 480 to 450°C; AMg5V - 500 to 480°C; AMg6T - 480 to 460°C. The alloys have increased proneness to scale formation, which can be eliminated by heating the metal up to 280 - 300°C. The recrystallization temperature of the alloys is 280 - 250°C. AMg alloys and their weld joints are highly <u>corrosion resistant</u> and preserve their mechanical properties after extended tests in <u>aggressive media</u>.

N.G.

Card 2/2

SPIRIDONOV, V.B.; SKAKOV, Yu.A.; IORDANSKIY, V.N.

Use of the method of thin metallic foils for studying the morphology
of martensite. Zav.lab. 29 no.8:955-956 '63.   (MIRA 16:9)
    (Martensite—Metallography) (Metal foils)

IORDANSKIY, V. N.; SKAKOV, Yu. A.; SPIRIDONOV, V. B.

"Structural changes during aging of martensite in chromium-nickel steel."

report submitted for 3rd European Regional Conf, Electron Microscopy, Prague, 26 Aug-3 Sep 64.

L 22544-65   EWT(m)/EWA(d)/T/EWP(t)/EWP(k)/EWP(b)   Pf-4   HJW/JD/HW

ACCESSION NR: AP5002352   S/0126/64/018/006/0929/0930

AUTHOR: Spiridonov, V. B.; Skakov, Yu. A.; Iordanskiy, V. N.

TITLE: Morphology of martensite in Kh17N4M2D steel

SOURCE: Fizika metallov i metallovedeniye, v. 18, no. 6, 1964, 929-930

TOPIC TAGS: Kh17N4M2D steel, martensite formation, steel deformation, martensite morphology

ABSTRACT: The morphology of martensite obtained by 10-15% deformation of steel at room temperature was investigated. The martensite consisted of 1-2 micron long needles with no internal twinning; the density of dislocations was above 10^{11} cm^{-2}. The hexagonal ε-phase was not present. The strength of the martensite formed by deformation was similar to that of martensite obtained by cooling after tempering. Martensite by the latter method could not be really compared with martensite obtained at low temperatures due to the diffferences in carbon content. But comparison of the martensites formed by cold working and by deform-

Card 1/2

L 22544-65
ACCESSION NR: AP5002352

ation led to the conclusion that the morphology of martensite is determined pri-
marily by the temperature of its formation. Orig. art. has: 1 figure and 1 table

ASSOCIATION: None

SUBMITTED: 10Dec63   ENCL: 00   SUB CODE: MM

NR REF SOV: 002   OTHER: 002

Card 2/2

L 17074-65   EWT(m)/EWA(d)/EWP(t)/EWP(b)   ASD(m)-3/AFETR   MJW/JD/JW

ACCESSION NR: AP4049919   S/0020/64/159/003/0544/0547

AUTHOR: Spiridonov, V. B.; Skakov, Yu. A.; Iordanskiy, V. N.

TITLE: Changes in the structure and properties with aging of martensite in chromium nickel steels

SOURCE: AN SSSR. Doklady*, v. 159, no. 3, 1964, 544-547

TOPIC TAGS: chromium nickel steel, maraging steel, martensite, subzero treatment, straining, heat treatment, aging, property, structure

ABSTRACT: The kinetics of aging and the effect of aging on the fine structure of martensite have been investigated in three precipitation-hardenable steels: Kh15N9Yo (15.03% Cr, 8.53% Ni, 1.40% Al); Kh16N5M3 (16.20% Cr, 4.78% Ni; 3.30% Mo); and Kh17N4M2D (16.65% Cr, 4.29% Ni; 2.25% Mo, 1.35% Cu). The martensite was formed by the subzero treatment (at -70C for 2 hr), by cold working, or by annealing at 750C for 1.5 hr followed by cooling. The aging-induced change in the properties of steels of this type occurred rapidly in the initial stage and at a rate about two orders slower in the second stage. In a steel alloyed with Mo, the difference in the rate of change was still higher. The activation energy of aging which ranged from 40 to 57 kcal/g·at, depending on the steel composition and preliminary

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L 17074-65
ACCESSION NR: AP4049919

treatment, remained constant during the entire aging process. This showed that
aging is controlled by diffusion in both stages: by a "drift" of the solute atoms
toward dislocations during the first stage; and by the diffusion resulting from chem-
ical gradients in the second stage. The kinetics of aging and structural changes
occurring in martensite during aging are very similar in steels alloyed with dif-
ferent elements. The differences in the nature of alloying elements promoting the
aging and in the final structure of precitated secondary phase appear during later
stages of aging. The main changes in the martensite properties appear to occur in
the initial stage of aging and to be associated with the formation of segregations
and coherent formations. Hence, aging of martensite is a particular case of aging
when the matrix has a very high dislocation density, and strengthening takes place
during the decomposition stage which precedes the formation of particles of the
stable phase and which is different in different steels. Orig. art. has: 3 figures
and 1 table.

ASSOCIATION: none

SUBMITTED: 10Jul64   ENCL: 00   SUB CODE: MM, IE

NO REF SOV: 008   OTHER: 004   ATD PRESS: 3149

Card 2/2

L 19478-65   EWT(m)/EWA(d)/T/EWP(t)/EWP(b)   ASD(m)-3   MJW/JD

CESSION NR: AP4047511   S/0129/64/000/010/0049/0051

AUTHOR: Spiridonov, V. B.; Skakov, Yu. A.; Iordanskiy, V. N.

TITLE: Microstructure of martensite in chromium-nickel steel

SOURCE: Metallovedeniye i termicheskaya obrabotka metallov, no. 10, 1964, 49-51

TOPIC TAGS: chromium nickel steel, Kh17N4M2D steel, austenitic martensitic steel, precipitation hardenable steel, steel martensite, martensite structure, martensite strength

ABSTRACT: The structure of martensite in Kh17N4M2D precipitationhardenable steel (0.09%C, 16.65% Cr, 4.29% Ni, 2.25% Mo, 1.34% Cu) has been studied with a transmission electron microscope. It was found that the structure of martensite depends upon the conditions of formation. Subzero treatment at -70C for 2 hr transformed 80—85% of the austenite into martensite consisting of a mixture of needles and lamellos with twin crystals 100—2000 Å wide. In wider twins, some dislocations were observed. Needles contained no twins, but a considerable number of dislocations. High tempering at 750C for 1.5 hr and

Card   1/2

L 19478-65
ACCESSION NR: AP4047511   /

subsequent cooling to room temperature transformed practically all
the austenite into acicular martensite without twins but with a sig-
nificant number of dislocations. The tensile and yield strengths of
martensite obtained by subzero treatment were 140—150 kg/mm^2 and
100 kg/mm^2. Those of martensite obtained by tempering were lower:
1 5—110 kg/mm^2 and 80 kg/mm^2. Individual crystals of martensite
observed in residual austenite containing stacking faults confirmed
the assumption about the nucleation action of stacking faults which
otherwise appear to limit the growth of martensite crystals. Orig.
art. has: 3 figures.

ASSOCIATION: Moskovskiy institut stali i splavov (Moscow Institute of
Steel and Alloys)

SUBMITTED: 00   ENCL: 00   SUB CODE: MM

NO REF SOV: 002   OTHER: 003   ATD PRESS: 3159

Card 2/2

L 15025-65   EWT(m)/EMA(d)/EWP(t)/~WP(b) ` ASD(m)-3/AFETR   JD
ACCESSION NR: AP4049106   S/0129/64/000/011/0019/0024

AUTHOR: Spiridonov, V. B.; Skakov, Yu. A.; Iordanskiy, V. N.

TITLE: Changes with aging in the properties of martensite of chromium-nickel steels

SOURCE: Metallovedeniye i termicheskaya obrabotka metallov, no. 11, 1964, 19-24

TOPIC TAGS: chromium nickel steel, cold treatment, straining, heat treatment,
martensite, aging

ABSTRACT: The dependence of the aging effect on the structure of martensite, i.e.,
on the method of obtaining martensite, in stainless, austenitic-ferritic, Cr-Ni
steels has been investigated. In four semiaustenitic stainless steels containing
0.07—0.09% C, 15.03—16.65% Cr, and 4.29—9.53% Ni alloyed with Al, Mo, Mo and Cu,
or Mo and Al, martensite was formed by subzero treatment at -70C for 2 hr, by cold
rolling with a 15—17% reduction, or by cooling after tempering for 1.5 hr at 750C.
Changes in the mechanical properties and electrical resistivity were studied in the
steels aged for up to 3 hr at temperatures ranging from 400 to 550C. Rapid and
slow stages in the changes caused by aging in the properties of Cr-Ni steels with
a martensitic structure were observed. The two stages were particularly noticeable
in steels alloyed with Cu or Al. In steels alloyed with Mo, the main change in

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L 15025-65
ACCESSION NR: AP4049106

properties occured in the first minutes of aging. In both stages, aging is deter-
mined by diffusion. In the first stage of aging, the diffusion consists mainly in
a "drift" of dissolved atoms toward dislocations under the action of the stress
field, while in the second stage, a normal diffusion caused by chemical gradients
takes place. The strengthening with aging probably occurs in the initial stage of
martensite decomposition when the dislocations are pinned. The nature and con-
centration of the structure defects affect the kinetics of strengthening and weaken-
ing with aging. The structure defects of martensite formed by cold treatment are
more stable than the defects of martensite formed by straining or heat treatment.
As a result, cold-treated steels get higher mechanical properties with aging, and
are less susceptible to weakening with overaging than the steels with a martensitic
structure formed by straining or heat treatment. Orig. art. has: 3 figures and
2 tables.

ASSOCIATION: none

SUBMITTED: 00   ENCL: 00   SUB CODE: MM

NO REF SOV: 007   OTHER: 001   ATD PRESS: 3143

Card 2/2

EWT(m)/EWP(w)/EWA(d)/EPR/T/EWP(t)/EWP(k)/EWP(z)/EWP(b)/EWA(c)   Pf-4/Ps-4

ACC NR: AP5007008   S/0129/65/000/003/0047/0049

Spiridonov, V. B.; Skakov, Yu. A.; Iordanskiy, V. N.

TITLE: Electron microscopic study of Kh21N5T steel

SOURCE: Metallovedeniye i termicheskaya obrabotka metallov, no. 3, 1965, 47-49

TOPIC TAGS: brittleness, steel hardening, metal mechanical property, heat treatment, metal foil

ABSTRACT: The authors report the results of an electron microscopic study of Kh21N5T steel foil subjected to heat treatment used for massive samples. Mechanical tests of laboratory samples in the hardened state (quenched from 1050°C, 30-min aging, cooling in water) and after additional heating indicate that the steel has a tendency toward embrittlement in the presence of titanium (in excess of amounts necessary for fixing carbon) and aluminum. The embrittlement after tempering at about 500°C is due to separation processes. The tendency toward separation at dislocation-type defects is particularly noticeable at higher aging temperatures (600°C for 8 hr, cooling in air). Diffraction patterns of the same character were

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L 45380-65

ACCESSION NR: AP5007008   3

obtained at 550 and 600°C; this shows that heating to 600-650°C causes solidifica-
tion of the segregations and an accompanying increase in impact strength. To
prevent the embrittlement of Kh21N5T steel, it is necessary to restrict the content
of chromium, titanium, and possibly silicon. Orig. art. has 4 figures and 3
tables.

ASSOCIATION: none

SUBMITTED: 00   ENCL: 00   SUB CODE: MM

NR REF SOV: 001   OTHER: 000

Card 2/2

L 04199-57   EWT(m)/EWP(w)/T/EWP(t)/ETI   IJP(c)   JD/WW/JG/WB

ACC NR: AP6028582   SOURCE CODE: UR/0129/66/000/008/0006/0011

AUTHOR: Spiridonov, V. B.; Vlasova, T. A.; Iordanskiy, V. N.

ORG: none

TITLE: An electron-microscopic study of the Al-Zn-Mg alloy system. [Delivered at the Seminar on Advanced Technology for Heat Treatment of Light Alloys, Leningrad, December 1963]

SOURCE: Metallovedeniye i termicheskaya obrabotka metallov, no. 8, 1966, 6-11

TOPIC TAGS: aluminum alloy, zinc, magnesium, heat treatment, precipitation hardening, electron microscopy, phase structure, crystal lattice parameter, mechanical property, stress corrosion, grain boundary stability

ABSTRACT: An electron-microscopic study was made of the Al-Zn-Mg alloy system. Fifteen alloys were used having the following composition ranges: 3.25-4.90% Zn, 1.30--4.32% Mg, trace--0.65% Mn, trace--0.22% Fe, trace--0.10% Si, trace--0.12% Cr, trace---0.22% Zr, trace--0.05% Cu, and trace--0.17% Ag. Foils of 0.10-0.15 mm thickness were quenched in air or water from 450°C and aged at 20-275°C. The aging mechanism of the alloys were related to stress corrosion behavior. Electron micrographs of ATsM and V92 alloys showed G-P zones 30-50 Å in diameter after room temperature aging. Aging at 100°C for 100 hr (maximum strength condition) resulted in $MgZn_2$ formation on

Card 1/3   UDC: 669.15'72:620.187

L 04199-67

ACC NR: AP6028582   9

{111} matrix planes. Strain fields due to coherency were observed around the $MgZn_2$ particles after aging at 130-140°C, while higher aging temperatures merely changed the dimensions of the $MgZn_2$ particles. At 200-250°C, $Al_2Mg_3Zn_3$ (T-phase) precipitated. Lattice parameters and plane spacings for the precipitates and mechanical properties for different aging conditions are presented. The relation between grain boundary precipitation and stress corrosion was established for these alloys. After quenching from 450°C and aging to different conditions, the relative amount of both grain boundary and adjacent boundary zone precipitation was obtained. Zones adjacent to grain boundaries were relatively free of precipitation and widened as a function of aging temperature, corresponding to an increase in grain boundary precipitation. Particle dimensions were 1500-2500 Å on grain boundaries, 1000-2000 Å on adjacent zones, and 250-400 Å within grains. Manganese and chromium did not affect the size or distribution of precipitates, although they improved the stress corrosion properties. The addition of 0.16-0.22% Zr resulted in a more uniform distribution and finer size of precipitate; the particle size did not exceed 250 Å. Titanium and scandium had the same effect as zirconium. The greatest structural changes were caused by copper and silver additions; particle size did not exceed 150 Å and the precipitate-free zone diminished to a width of 400-500 Å. Explanations based on increased vacancy concentrations as a result of alloying are presented. Two methods are recommended for decreasing the stress corrosion tendencies of these alloys: 1) decreasing the vacancy concentration before aging by lowering the cooling rate during quenching; or raising the

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L 04199-67
ACC NR: AP6028582

4

aging temperature but necessarily adding Cr, Mn, Fe, Si, Ti, or Zr; 2) raising the
vacancy concentration for a more disperse and uniform structure by adding Zr, Ti, Sc,
Cu, or Ag to increase the vacancy solubility. Orig. art. has: 5 figures, 5 tables.

SUB CODE: 11,20/ SUBM DATE: none/   ORIG REF: 005/   OTH REF: 006

1/3 LC

IORDANSKIY, Ye. N.

"The Duration of Muscular Tension and Its Dependence on the Manner of Irritation." Sub 13 Nov 51, Acad Med Sci USSR.

Dissertations presented for science and engineering degrees in Moscow during 1951.

SO: Sum, No. 480, 9 May 55.

SHTERNSHTEYN, Yakov Mironovich; IORDATIY, N., red.; MOLCHANOVA, T.,
        tekhn.red.

        [Seaports of the Ukraine] Morskie vorota Ukrainy.   Odessa,
        Odesskoe obl.izd-vo, 1958.   243 p.   (MIRA 13:1)
                        (Ukraine--Harbors)

SHODKHIN, Vladimir Sholomovich; IORDATIY, N., red.; MOLCHANOVA, T.,
    tekhn. red.

[Economics seminar in a plant] Ekonomicheskii seminar na zavode.
Odessa, Odesskoe oblastnoe izd-vo, 1958. 19 p.   (MIRA 15:6)

1. Rukovoditel' seminara po izucheniyu konkretnoy ekonomiki na
Odesskom staleprovolochno-kanatnom zavode (for Shodkhin).
    (Odessa—Iron and steel workers—Education and training)
        (Industrial management—Study and teaching)

PANKRAT'YEV, Ivan Matveyevich; IORDATIY, N., red.; MOLCHANOVA, R.,
    tekhn. red.

    [How we conduct economic conferences] Kak my provodim ekonomiche-
    skie konferentsii. Odessa, Odesskoe oblastnoe izd-vo, 1958. 21 p.
                                                    (MIRA 15:6)
    1. Sekretar' Kiliyskogo raykoma Kommunisticheskoy partii Ukrainy,
    predsedatel' rayonnogo ekonomicheskogo soveta (for Pankrat'yev).
        (Kiliya District—Farm.management—Congresses)

IORDOVICH

COUNTRY   : Yugoslavia

          : Cultivated Plants. Fruits. Berries. Nuts. Tea.

ABS. JOUR.: Ref Zhur-Biologiya, No.5 , 1959, No.20 466

Author   : Iordovich

INST.   :

TITLE   : Cultivating Plum Saplings Uninfected with
            Virus Diseases.

ORIG. PUB.: Poljoprivreda, 1957, 5, No.1, 59-64

ABSTRACT : A method of selecting maternal plum trees
            which are not infected by virus mosaic is
            recommended to guarantee the Yugoslavian
            nurseries with healthy cuttings.

CARD :   1/1

167

POP, Gr.; IORGA, I.

Synthesis of o-phthalodinitrile through the catalytic condensation of phthalic anhydride with ammonia in vapor phase. Studii chim Timisoara 7 no.3/4:317-319 Jl-D '60.   (EEAI 10:9/10)

(Phthalonitrile)   (Catalysis)   (Phthalic anhydride)
                   (Ammonia)

PIIAT, L.; IORGA, M.; MOSCOVICI, B.

Clinical aspects of mercury poisoning. Med. int., Bucur. 10 no.4:
621-627 Apr 58.

1. Institutul de Igiena munci si boli profesionale R.P.R.
    (MERCURY, poisoning
        subacute, by mercury vapors, clin. aspects, case reports &
        ther.)
    (DIMERCAPROL, ther. use
        mercury pois., case reports)
    (EDATHAMIL, ther. use
        mercury pois., case reports)

IORGA, N.

A micromethod for the determination of cobalt and copper with sodium p-aminosalicylate. Radu Rulea and Neculai Iorga. *Analele siinf. univ. "Al. I. Cuza" Iasi, Sect. I.* (N.S.) 2, 211-20(1950).—For Co: Into a 25-ml. flask, the following are needed in the given order: a few ml. of a soln. contg. 0.003-0.3 mg. Co; 5 ml. of 4M Na p-aminosalicylate (I); 10 ml. of 4M NaOH; and a few grains of Na$_2$O$_2$. After 10 min. add 0.75 ml. of 1M Na$_2$SO$_4$ and water to the mark. The brown color obtained is stable for 30 min. and can be read through a green filter. The calibration curve has an inflection point at 0.0021 mg./ml. Co. The Co can be detd. in the presence of Fe 1:40; Pb, Sn, V 1:1000; Mn 1:60; Cr 1:600; and Ni 1:70. Cu ions interfere. For Cu: Into a 25-ml. flask add the following in the given order: 0.009-0.8 mg. Cu; 5 ml. I; 10 ml. NaOH; 0.15-0.20 g. Na$_2$O$_2$ and after 20 min. 1.25 ml. Na$_2$SO$_4$ and water to the mark. The brown color is stable for 30 min. and can be read through a green filter. Co and As ions interfere but Fe 1:40; Cu 1:60; and Pb, Sn 1:100 do not.

Martin Linewik

PONI, Margareta; IORGA, N.; BOSTAN, Marcel

Thermogravimetric and X-ray diffraction study of some
5-nitrobarbituric acid complexes. Studii chim Iasi 14 no.1:
19-32 '63.

1. Filiala Iasi a Academiei R.P.R., Institutul de chimie "P.Poni",
sectia de chimia combinatiilor coordinative.

IDRICEANU, T.; IORGA, N.; ERHAN, V.

Mineralogical research on some Sarmatian clays in the Moldavian
Plateau. Pt. 2. Studii chim Iasi 14 no.1:103-111 '63.

1. Universitatea "Al. I. Cuza" Laboratorul de Mineralogie.

MODRYANU, Florin; IORGA, Nikolae, Yassy (Rumyniya)

Photometric determination of cobalt as cobaltinitrite [with
summary in English]. Zhur. anal. khim. 13 no.5:617-618
S-O '58.   (MIRA 11:10)
              (Cobalt)   (Colorimetry)

IORGA, N.

Polarographic investigations of the complexes formed by zinc in the solutions: seignette salt + NH_4OH + NH_4Cl + gelatin (A), and NH_4OH + NH_4Cl + gelatin (B). R. Cernătescu, I. Popescu, A. Crăciun, M. Bostan, and N. Iorga. Acad. rep. populare Romîne, Filiala Iaşi, Studii cercetări ştiinţ., Chim. 9, 1-10(1958).—The De Ford-Hume equation (C.A. 46, 1008a) for the stepwise formation of complexes is discussed. It is shown that, when the stability consts. differed by a power of 10, linear segments appeared on the curve $E_{1/2}$(log C_s). The slopes of the linear segments allowed for the calcn. of the coordination index "p," in agreement with the conclusions of Adamovich and Novakov-skii (C.A. 50, 721c). The reversible nature of Zn reduction, and the diffusion current on reducing Zn(II) in basic solns. of A and B, resp., were detd. The charge on the Zn ion being reduced at the dropping electrode was detd. The $E_{1/2}$ values were established for various concns. of the NH_4OH complexing agent. The max. coordination index of the Zn complexes with A and B was detd.: $p = 4$ for B, corresponding to the complex $[Zn(NH_3)_4]^{++}$, and $p = 6$ for A, corresponding to the complex $[Zn(NH_3)_6]^{++}$. The above indicates that the presence of the tartrate ion in am-moniacal solns. favors the formation of the higher complexes. The normal oxidn.-redn. potential of Zn(II) in a closed circuit at 20° was detd.: $E_{(t)}^\circ = -1003$ mv. The instability const. of the complex $[Zn(NH_3)_4]^{++}$ at 20°C was detd.: $K^P = 3.08 \times 10^{-11}$, in accord with the value given by Lefebvre; 3.03×10^{-10} at 25°; also for the complex $[Zn(NH_3)_6]^{++}$ at 25°, $K^P = 5.6 \times 10^{-11}$. R. A. S.

FISEL, Simon; IORGA, Nicolae

Complex salts of the higher fatty acids (VIII): chromatographic study of the lauric acids of Co ^{2}, Ni ^{2} and Cu ^{2}. Studii chemie Iasi 10 no.2:185-194 '59.   (EEAI 10:1)

1. Academia Republicii Populare Romine, Filiala Iasi; Institutul de Chimie "Petru Poni." Universitatea "Alex. I. Cuza" Iasi, Catedra de Chimie anorganica.

(Salts)   (Zinc)   (Cobalt)   (Nickel)   (Copper)
(Fatty acids)   (Chromatography)   (Lauric acid)
(Cadmium)   (Mercury)   (Cations)

PONI, Margareta ?.; BOSTAN, Marcel; IORGA, Nicolae; GABE, Iulian

Salt complexes with 5-nitrobarbituric acid. Rev chimie Roum 9
no.10:575-584 O '64.

1. "Petru Poni" Institute of Chemistry of the Rumanian Academy, Iasi
Branch, 41 A Aleea Grigore Ghica Veda.

PONI, Margareta P.; BOSTAN, Marcel; IORGA, Nicolae; GABE, Iulian

    Complex salts of the 5-nitrobarbituric acid. Pt.2. Studii
    cerc chim 13 no.10:619-628 O '64.

    1. "Petru Poni" Institute of Chemistry, Rumanian Academy,
    Iasi Branch, 41 A Aleea Grigore Ghica Voda.

BULGARIA/Farm Animals. Horses   Q-2

Abr Jour : Ref Zhur - Biol., No 11, 1958, No 49972

Author   : Popov, V., Peliyov, Kh., Iorgov I.
Inst   : Ministry of Agriculture
Title   : Substituting a Part of Concentrated Foods and Hay by Corn
           Silage in the Diet of Colts.

Orig Pub : Nauchn. tr. M-vo zemed. i gorito, Sr. zhinotnovodstvo i vet.
           dolo, 1957, 2, No 1, 1-14

Abstract : In the diet of $1\frac{1}{2}$-2 year old colts of the draft brood, 1 kg
           of concentrate and 2 kg of hay were substituted by 10-12
           kg of corn silage. Also, in the dietof weaned foals, 0.4-0.8
           kg of oats and 1 kg of hay were substituted by 5-7 kg of
           silage. The resulting weight gains were higher than the
           weight gains in control animels.

Card   : 1/1

IORGOV, V.

5,011 kg. of milk per cow. p. 17.
(cooperativno Zemedelie Vol. 10, no. 8, Aug. 1955, Sofiya)

SO: Monthly List of East European Accessions, (EEAL). LC,   Vol. 4, No. 11,
    Nov. 1955, Uncl.

IORGU, G.

"Electromagnetic theory" by I.A. Stratton. Reviewed by G. Iorgu.
Electrotehnica 11 no.4:150 Ap '63.

IORGU, Nikula. Cand Tech Sci -- (diss) "Experimental studies in the field
of ~~the use~~ of nonmetal reinforcement for concrete." Mos, 1959. 18 pp

including cover (Min of Higher and Secondary Specialized Education USSR.

-Mos Order of Labor Red Banner Construction Engineering Inst im V. V. Kuybyshev),

200 copies (KL, 49-59, 140)

-41-

IORGULESCU, A.

Determining the radon atmospheric concentration through the measurment
of catabatic solids by filtration tests. Studii cerc fiz 11 no.1:
232-235 '60.   (EEAI 10:1)
        (Radon)   (Radioactive fallout)   (Filters and filtration)

ONCESCU, M.; IORGULESCU, A.

Organism irradiation due to atmospheric fallout. Studii cerc
fiz 14 no.6:769-773 '63.

1. Institutul de fizica atomica, Bucuresti.

IORGULESCU, Florin, conf. ing. (Bucuresti); DIACON, Alexandru, conf.
(Bucuresti)

Considerations on the use of the Rumanian water power resources
during the 1961-1980 period. Energetica Rum 10 no. 11:457-463
N '62.

1. Director tehnic al Institutului de studii si proiectarii
    energetice (for Iorgulescu).
2. Inginer specialist la Institutul de studii si proiectari
    energetice (for Diacon).

BUTESCU, E. dr.: IORGULESCU, M., dr.; CALOTA, St., dr.; TATARU, N., dr.;
    CIOBANU, I., dr.; CUMPANAS, M., dr.; CANCICVIC., M., dr.

Clinical aspects of poisoning with insecticides and fungicides
and our therapeutic experiences. Microbiologia (Bucur) 9 no.5:
453-456 S-0 '64

1. Lucrare efectuata in Spitalul nr.3, Craiova.

RUMANIA   616.981.551:618.39

BUTTESCU, E., Dr, IORGULESCU, M., Dr, TATARU, N., Dr, CIÓBANU, I.,
Dr, and CALCTA, Stefania, Dr. Work performed at the Hospital
No 3 (Spitalul Nr 3), Craiova.

"Clinical and Epidemiological Considerations in 45 Cases of
Uterine Tetanus."

Abstract [Authors' English summary modified]: After a review of
the data in Rumanian and world   literature regarding uterine
tetanus, the authors discuss 45 cases of the infection seen at
the Department for Infectious Diseases of the Craiova Hospital.
Attention is called to the great diversity of forms which may
occur and to the severity of the disease, which showed a death
rate of 84.6 percent. While timely serum therapy and curettage
gave the highest recovery rate of the treatments tried, the
authors stress that the only effective prophylaxis consists of
specific prophylactic measures coupled with a general rise of
educational and sanitary standards.
     Includes 10 references, of which 2 Rumanian, 2 English-
language and 6 French-language. -- Manuscript submitted 1 October
1964.

1/1

MILKU, Sh.M. [Milcu,S.A.]; ANDZHELESKU, Ye. [Angelescu, E]; DAMIAN, A.
    [DAMIAN, A.]; STOYENESKU,D. [Stoenescu, D.]; OPRAN, Kh.[Opran,H.]
    OPROYU, A. [Oproiu,A.]; IORGULESKU, G. [Iorgulescu, G].

    Virilizing malignant tumor of the adrenal gland. 14a Probl.endok.
    i gorm 8 no.2:98-103 Mr-Ap'62.   (MIRA 16:7)
        (ADRENAL GLAND—CANCER)   (VIRILISM)

GROSZ, I., ing.; IORGUIESCU, Gr., ing.

Crack defectoscopy by fluorescence. Energetica Rum 9 no.9:
381-384 S '61.

1. Intreprinderea pentru rationalizari si modernizari energetice
(for Grosz). 2. I.E.C. Bucuresti (for Iorgulescu).

RUMANIA

BUTTESCU, E., Dr, IORGULESCU, M., Dr, and TATARU, N., Dr. Work performed at Hospital No 3 (Spitalul Nr 3), Craiova.

"Staphylococcal Scarlet Fever."

Bucharest, Microbiologia, Parazitologia, Epidemiologia, Vol 8, No 5, Sep-Oct 63, pp 433-436.

Abstract [Authors' English summary modified]: A report on four cases of the disease treated at the Craiova Hospital for Contagious Diseases. Clinical aspects are described, as are the positive laboratory tests that confirmed the diagnoses. It is pointed out that staphylococcal infections are on the increase.
     Includes 2 English-language and 3 Rumanian references.

1/1   2

BUTTESCU,E., dr.; IORGULESCU,M., dr.; TATARU,N., dr.

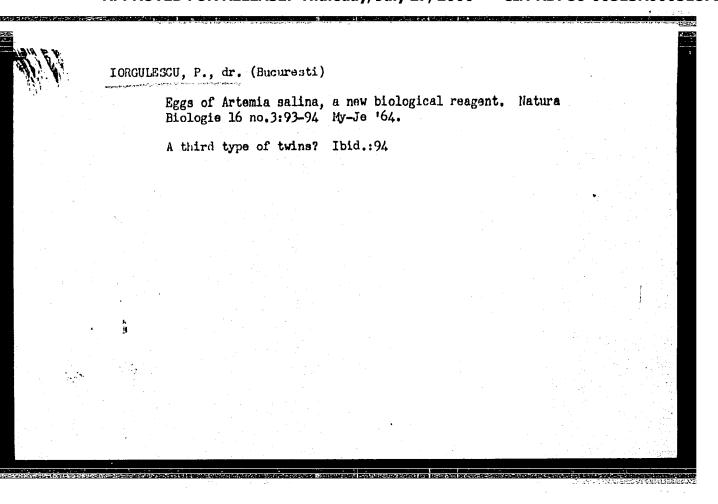Staphylococcal scarlatina. Microbiologia (Bucur) 8 no.5:433436
S-O'63.

1. Lucrare efectuata in Spitalul nr.3, Craiova.

IORGULESCU, P.

Sterility in animals. p. 71. NATURA. Bucuresti. Vol. 7, no. 3,
May/June 1955.

SOURCE: East European Accessions List (EEAL) Library of Congress
Vol. 5, No. 7, July 1956.

IORGULESCU, P., dr. (Bucuresti)

Eggs of Artemia salina, a new biological reagent. Natura Biologie 16 no.3:93-94 My-Je '64.

A third type of twins? Ibid.:94

BALLY, D.; BENES, L.; ILIESCU, N.; IORGULESCU, St.; OLTEANU, I.

Characteristics of a universal X-ray tube. Studii cerc fiz 12
no.2:461-467 '61.

1. Institutul de fizica atomica Bucuresti.

(X-ray tubes)

BALLY, D.; BENES, L.; ILIESCU, N.; IORGULESCU, St.

The absorption spectrum K of the elements such as zinc, arsenic,
selenium zirconium, and molybdenum, irradiated with neutrons.
Studii cerc fiz   13   no.3:443-448   '62.

1. Institutul de fizica atomica, Bucuresti.

BENES, L.; ILIESCU, N.; IORGULESCU, St.; OLTEANU, I.

X-ray spectrometer with a 2m arm. Studii cerc fiz 14 no.1:73-78 '63.

1. Institutul de fizica atomica Bucuresti.

IORGULESCU, St.

Problems and prospects of X-ray microscopy. Studii cerc
fiz 14 no.5:647-670 '63.

1. Institutul de fizica atomica, Bucuresti.

IORGULESCU, Th., and others

Geologic and micro-paleontologic considerations on some salt deposits of Rumania. P 127

REVISTA MINELOR. (Ministerul Minelor, Ministerur Industriei Petrolului si Chimiei, Directia Exploatarilor Miniere si Asociatia Stinitifica a Inginerilor si Tehnicienilor din Rominia) Bucuresti, Rumania. Vol. 10, no. 4, Apr. 1959.

Monthly List of East European Accessions (FEAI) LC. Vol. 8, no. 9, Sept. 1959.

Uncl.

IORISH, A.L.

25194   Iorish, A.L.   Issledovanie Zagryazneniya Atmosfernogo Vodukha Odnogo Iz
        Raynnov Leningrada, Trudy Leningr. San,-Gigien, Med. In-ta. T.I., 1949
        s. 49-62

SO: Letåpis' No. 33, 1949

/ K I SH, A. L.

AID P - 3645

Subject   : USSR/Medicine

Card 1/1   Pub. 37 - 9/18

Author   : Iorish, A. L., Kand. Med. Sci.

Title   : Some data on eye contamination in the streets

Periodical : Gig. i. san., 10, 40, 0 1955

Abstract   : Deals with air conditions in the vicinity of electric
              power plants or railroads, and recommends the installation
              in the streets of cinder-catching devices to prevent cases
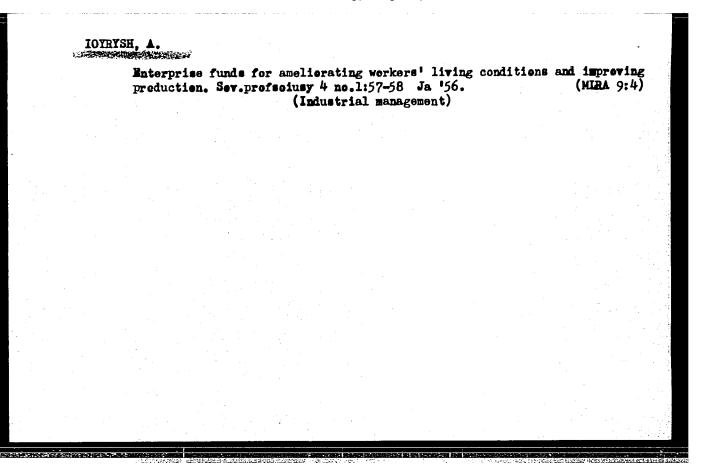   of eye contamination by coal, cinder or dust particles.
              Table.

Institution : Leningrad Medical Institute of Sanitation and Hygiene

Submitted   : Ap 19, 1955

IOYRYSH, A.

Enterprise funds for ameliorating workers' living conditions and improving production. Sev.profsoiusy 4 no.1:57-58   Ja '56.   (MIRA 9:4)
(Industrial management)
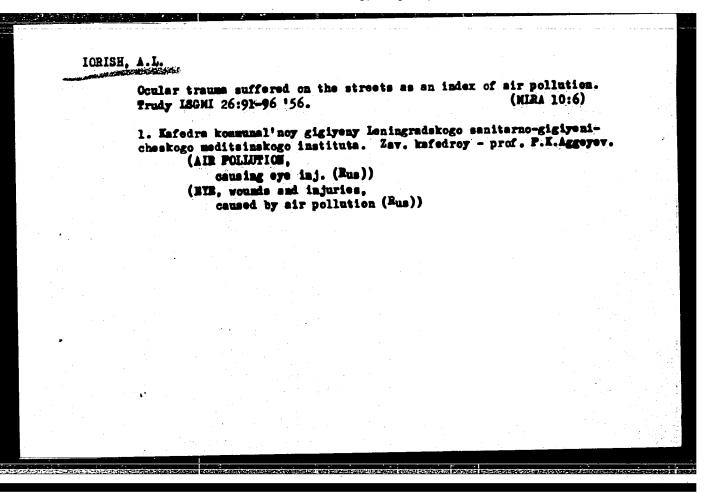
IQRISH, A.L.

Effectiveness of measures for air purification in the Leningrad
area. Trudy ISGMI 26:86-90 '56.   (MLRA 10:6)

1. Kafedra kommunal'noy gigiyeny Leningradskogo sanitarno-
gigiyenicheskogo meditsinskogo instituta. Zav. kafedroy - prof.
F.K.Aggeyev.
          (AIR POLLUTION, prevention and control,
              in Russia ('us))

IORISH, A.L.

Ocular trauma suffered on the streets as an index of air pollution.
Trudy LSGMI 26:91-96 '56.   (MIRA 10:6)

1. Kafedra kommunal'noy gigiyeny Leningradskogo sanitarno-gigiyeni-
cheskogo meditsinskogo instituta. Zav. kafedroy - prof. P.K.Aggeyev.
        (AIR POLLUTION,
             causing eye inj. (Rus))
        (EYE, wounds and injuries,
             caused by air pollution (Rus))

IORISH, Aleksandr Yevgen'yevich; KATSMAN, Yakov Abramovich; PTITSYN,
Sergey Vladimirovich; OBOLENSKIY, S.A., red.; ZHITNIKOVA,
O.S., tekhn. red.

[Ptinciples of the manufacturing technology of electric
vacuum devices] Osnovy tekhnologii proizvodstva elektrova-
kuumnykh priborov. Moskva, Gos. energ. izd-vo, 1961. 515 p.
(MIRA 15:2)

(Electron tubes)

S/109/63/008/002/010/028
D413/D308

AUTHORS: Iorish, A.Ye., Krasin'kova, M.V., Moyzhes, B.Ya.,
and Sorokin, O.V.

TITLE: The thermal emf, electric conductance and resistance
variation in a magnetic field of barium-strontium
oxide

PERIODICAL: Radiotekhnika i elektronika, v. 8, no. 2, 1963,
269-278

TEXT: Although a number of papers have dealt with measure-
ments of thermal emf, $\Delta\rho/\rho$ in a magnetic field, and electrical con-
ductance of cathode oxide coatings, these data have been considered
in isolation. Here they are all examined together in the light of
the accepted theory that conduction in oxide coatings occurs through
the pores, which are filled with electron gas by thermionic emission
from their walls. First a theoretical treatment is given for the val-
ues of thermal emf, conductance and $\Delta\rho/\rho$ for the electron gas in
the pores, and then experimental results for barium-strontium oxide

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S/109/63/008/002/010/028
D413/D308

The thermal emf, ...

are presented and discussed. The linear relation of $\Delta\rho/\rho$ to H in weak magnetic fields is explained: the work function relative to the bottom of the conduction zone is evaluated: the dimensions of the pores for maximum conductance are calculated with allowance for the space-charge in the pores. There are 8 figures.

SUBMITTED: April 26, 1962

Card 2/2

ACCESSION NR: AP4017600   S/0109/64/009/002/0300/0307

AUTHOR: Dubova, T. A.; Iorish, A. Ye.; Krasin'kova, M. V.;
Moyzhes, B. Ya.; Petrov, I. N.; Sorokin, O. V.; Chudnovskiy, F. A.

TITLE: Electrical conductivity and thermo-emf of a barium-strontium oxide in
a magnetic field

SOURCE: Radiotekhnika i elektronika, v. 9, no. 2, 1964, 300-307

TOPIC TAGS: electrical conductivity, thermo emf, oxide coated cathode,
barium strontium oxide, barium strontium oxide thermo emf, barium strontium
oxide conductivity

ABSTRACT: Measurements were taken of factory specimens of Ba-Sr oxide,
100-200-microns thick, placed between two cylindrical nickel bases (see
Enclosure 1) and subjected to a transverse magnetic field. One of the tubes was
equipped with a ring anode and served to measure the thermo-emission from the

Card 1/2

ACCESSION NR: AP4017600

side surface of the oxide. The effect of temperature and the magnetic field on the resistivity and thermo-emf of the Ba-Sr oxide was investigated. Estimated from experimental results, the free-path length of an electron in the cathode pores is 4-30 microns and the electron mobility is from 3.5×10^4 to 2×10^5 cm^2/v sec for the various specimens. The thermodynamic work function, electron concentration, and conductivity are also estimated. It is inferred that the pores in the oxide cathode must be open and intercommunicating and, there-fore, that under total thermionic-current conditions, the electrons must be emitted by the entire near-surface layer of the oxide; this fact may, in part, explain the abnormally high Schottky effect in oxide cathodes. Orig. art. has: 7 figures, 13 formulas, and 1 table.

ASSOCIATION: none

SUBMITTED: 30Dec62   DATE ACQ: 18Mar64   ENCL: 01

SUB CODE: GE   NO REF SOV: 001   OTHER: 003

Card 2/3

ACCESSION NR: AP4043679   S/0109/64/009/008/1447/1457

AUTHOR: Iorish, A. Ye.; Moyzhes, B. Ya.; Sorokin, O. V.;
Chudnovskiy, F. A.

TITLE: Temperature distribution in a cathode oxide coating

SOURCE: Radiotekhnika i elektronika, v. 9, no. 8, 1964, 1447-1457

TOPIC TAGS: oxide cathode, electron tube, electron tube cathode,
$(BaSrCa)CO_3$ cathode, $(BaSr)CO_3$ cathode

ABSTRACT: The theoretical and experimental investigation of the temperature
distribution in an oxide-coated cathode is reported. The theoretical part differs
from the well-known work of H. C. Hamaker (Philips Res. Repts., 1947, 2, 55-
67, 103-111, 112-125) in that the temperature drop in the oxide is not assumed
small, and an allowance is made for the Joule heat in the oxide, for the refractive
index of the oxide, and for the radiation reflected by the anode. The experimen-
tal part includes measuring the thermal conductivity (10^{-5} — 3×10^{-6} w/cm-
degree) of oxide-coating grains at temperatures ranging from room temperature

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ACCESSION NR: AP4043679

down to liquid-nitrogen temperature. It is estimated that the temperature of the oxide may be higher than that of the cathode base by hundreds of degrees when heavy emission currents are involved; a still higher difference is possible under pulsed operating conditions of the tube. The anode reflection has an essential effect on the temperature distribution. Hot spots on the cathode due to low thermal conductivity at heavy emission or due to an insufficient rate of heat removal from an underheated cathode may result in sparking; a formula giving a criterion of the cathode thermal instability is offered. The heat radiation capacity of a Ni-base oxide cathode was measured; the radiation dissipation factor, which corresponds to a photon free-path length of 30-50 microns at 800-900C, is estimated. Orig. art. has: 5 figures, 31 formulas, and 2 tables.

ASSOCIATION: none

SUBMITTED: 15Jun63

SUB CODE: EC
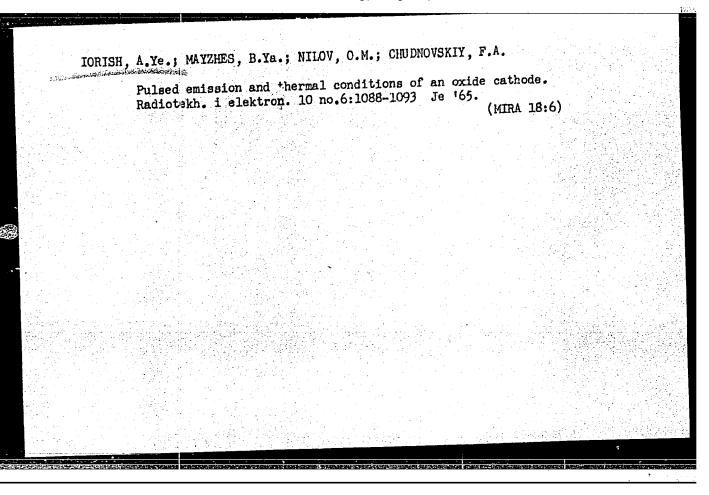
NO REF SOV: 005

ENCL: 00

OTHER: 011

Card 2/2

IORISH, A.Ye.; MAYZHES, B.Ya.; NILOV, O.M.; CHUDNOVSKIY, F.A.

Pulsed emission and thermal conditions of an oxide cathode.
Radiotekh. i elektron. 10 no.6:1088-1093 Je '65.
(MIRA 18:6)

L 00862-66   EWT(m)/EWG(m)/T   DS

ACCESSION NR: AP5015811   UR/0109/65/010/006/1088/1093
                                                 621.385.735

AUTHOR: Iorish, A. Ye; Moyzhes, B. Ya.; Nilov, O. M.; Chudnovskiy, F. A.

TITLE: Pulse emission and thermal conditions of the oxide-coated cathode

SOURCE: Radiotekhnika i elektronika, v. 10, no. 6, 1965, 1088-1093

TOPIC TAGS: oxide coated cathode

ABSTRACT: Pulse current-voltage characteristics of the triode section of a
GF1P oxide-cathode tube were measured; 5-μsec pulses singly and at repetition
rates of 50, 100, 300, and 100 cps were applied. It was found that, with single
pulses, the characteristics are close to the normal Schottky law; thus, the
hypotheses explaining the high pulse emission by curving the zones at the surface,
by secondary emission, and by surface inhomogeneity have been disproved. The
emission monotonously increased with the repetition rate. This can be explained
by the heating up of the oxide surface if the very little thermal conduction of
the oxide coating is taken into account. It was also found that the cathode
heat exchange through radiation is comparable to that through thermal conduction.
Orig. art. has: 3 figures, 6 formulas, and 2 tables.

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L 00862-66

ACCESSION NR: AP5015811

ASSOCIATION: none

SUBMITTED: 29Dec63   ENCL: 00   SUB CODE: EC

NO REF SOV: 006   OTHER: 004

Card 2/2

IORISH, L. S.

"Some Facts About the Condition of the Blood Circulation in Hypertonic Disease." Sub 26 Mar 51, Second Moscow State Medical Inst imeni I. V. Stalin.

Dissertations presented for science and engineering degrees in Moscow during 1951.

SO: Sum. No. 480, 9 May 55.

IORISH, L. S.

1. FOGEL'SON, L. I.; IORISH, L. S.

2. USSR (600)

4. Heart—Infarction

7. Regional diagnosis of myocardial infarcts from electrocardiographic data; first communication. Vop. pat. serd. sos. sist. 2 no. 1 1953.

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

IORISH, N. P.

SHTANCHAYEV, S.Ts., pomoshchnik epidemiologa (Kokchetav)

"Therapeutic qualities of honey and bee venom." N.P.Iorish. Reviewed by S.Ts.Shtanchaev. Fel'd.i akush. no.5:62-63 My '55.
       (IORISH, N.P.)
       (HONEY)
       (VENOM)
                      (MIRA 8:7)

IOIRISH, Naum Petrovich

[Useful beverage] Poleznyi napitok. Tbilisi, Sabchota Sakartvelo,
1958. 20 p.   (MIRA 14:11)
                        (BOTANY, MEDICAL)