"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000617520001-9

GURVICH, L.G.

Current-voltage characteristic of the p-n junction for an alternating signal. Izv.AN UzSSR.Ser.fiz.-mat.nauk no.5: 43-54 '58. (MIRA 11:12)

1. Fiziko-tekhnicheskiy institut AN UzSSR.
(Semiconductors)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000617520001-9"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000617520001-9

GURVICH, L.G., otv. za vypusk; GAYSINSKAYA, I.G., red.izd-va; BARTSEVA, V.P., tekhn.red.

[Abstracts of reports at the Conference on Peaceful Uses of Atomic Energy] Tezisy dokladov. Tashkent, Izd-vo Akad.nauk UzSSR, 1959. 229 p. (MIRA 13:2)

1. Konferentsiya po mirnomu ispol'zovaniyu atomnoy energii, Tashkent.
(Atomic energy--Congresses)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000617520001-9"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000617520001-9

24(3)

AUTHOR: Gurvich L.G. SOV/166-59-2-7/11

TITLE: Contact of Two Semiconductors With the Same Type of Conductance (Kontakt dvukh poluprovodnikov s odnim tipom provodimosti)

PERIODICAL: Izvestiya Akademii nauk Uzbekskoy SSR, Seriya fiziko-matematicheskikh nauk, 1959, Nr 2, pp 51-57 (USSR)

ABSTRACT: The author investigates theoretically the phenomena appearing during the passage of electrical current through two semiconductors. The semiconductors are separated by a small space with a given specific inductive capacity. The author announces a detailed consideration of the questions combined with the problem.

There is 1 figure, and 3 Soviet references.

ASSOCIATION: Institut yadernoy fiziki AN Uz SSR, Sredneaziatskiy gosuniversitet imeni V.L.Lenina (Institute of Nuclear Physics AS Uz. SSR SOV.Centr. Asian State University imeni V.I.Lenin)

SUBMITTED: January 2, 1959

Card 1/1

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000617520001-9"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000617520001-9

Gurvich, L. G.

82165

S/048/60/024/06/10/017
B019/B067

9.3100

AUTHORS: Vapnik, V. N., Gurvich, L. G., Zinov'yev, N. V.

TITLE: On the Theory of Scattering of Ions on a Metal Surface

PERIODICAL: Izvestiya Akademii nauk SSSR. Seriya fizicheskaya, 1960, Vol. 24, No. 6, pp. 685-688

TEXT: This is the reproduction of a lecture delivered at the 9th All-Union Conference on Cathode Electronics from October 21 to 28, 1959 in Moscow. In the introduction, the theory suggested by O. Roos (Ref. 1) of secondary ion-induced ion emission is dealt with. Furthermore, the method developed by the Akademiya nauk UzSSR (Academy of Sciences. UzSSR) which allows a simultaneous observation and recording of all secondary processes taking place in the interaction of ions with the atoms of solids. To calculate the ion-induced ion emission of Roos, the Boltzmann equation was used. The use of Born's approximation to calculate the interaction cross section of ions and atoms in energy ranges where this is inadmissible is shown to be an essential shortcoming. Proceeding from solution (1) of the kinetic Boltzmann equation, the coefficient (8) of ion-induced ion emission

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On the Theory of Scattering of Ions on a Metal Surface

82165
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B019/B067

is calculated on the basis of data on the interaction cross section. It is concluded from the discussion of properties of this coefficient that either the cross section depends on the energy or the model for the motion of ions in a solid like in a gas cannot be used. It is found that the gas model cannot be used for energies in the range of bonding energies of atoms in the solid. For higher energy, however, the scattering cross section is bound to depend on the energy. It is found that the experimental data on the ion-induced ion emission do not allow to draw conclusions on the symmetry or the dependence on the energy of the interaction cross section. There are 2 figures, 1 table, and 7 references: 4 Soviet, 2 German, and 1 American.

Card 2/2

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000617520001-9"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000617520001-9

ARIFOV, Ubay Arifovich, doktor fiziko-matem. nauk, akademik.
Prinimali uchastiye: PARALIS, E.S.; GURVICH, L.G., st. nauchnyy sotr.; STARODUBTSEV, S.V., akademik, otv. red.; MIL'MAN, Z.A., red.; PAVLOVA, M.I., red.; SHPEL'KOV, A.T., tekhn.red.

[Interaction of atomic particles with a metal surface] Vzaimodeistviu atomnykh chastits s poverkhnost'iu metalla. Tashkent, Izd-vo Akad. nauk Uzbekskoi SSR, 1961. 323 p. (MIRA 15:3)

1. Akademiya nauk Uzbekskoy SSR (for Arifov, Starodubtsev).
2. Zaveduyushchiy teoreticheskim sektorom otdela elektroniki Instituta yadernoy fiziki (for Paralis). Otdel elektroniki Instituta yadernoy fiziki (for Gurvich).
(Collisions (Nuclear physics))
(Metals, Effect of radiation on)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000617520001-9"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000617520001-9

GURVICH, L.G.

Tensile strength of polymer fibers as a function of the shape of the molecular weight distribution. Vysokom.soed. 3 no.7:1062-1064 Jl '61.

(MIRA 14:6)

1. Institut yadernoy fiziki AN UzbSSR.
(Polymers) (Molecular weights)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000617520001-9"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000617520001-9

S/048/62/026/011/015/021
B125/B102

AUTHOR: Gurvich, L. G.

TITLE: The scattering of slow ions and atoms from the atoms of a solid

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Seriya fizicheskaya, v. 26, no. 11, 1962, 1418-1421

TEXT: The scattering problem is considered under various simplifying assumptions such as charge independence of scattering, negligible inelastic processes and atomic binding in the solid. The problem is thus reduced to a two-body problem. The scattering of the incident particle 1 from the atoms 2 of the solid. If $U(|\vec{r}_1 - \vec{r}_2|) \gg U(|\vec{r}_1 - \vec{r}_k|)$ the Lagrangian $L = (m\dot{r}^2/2) - U(r,\alpha_{12}) - U(r,\alpha_{2i})$ accounts for the motion of both particles; $U(r,\alpha_{12})$ is the energy of their interaction and $U(r,\alpha_{2i})$ the energy of the interaction between the particle of the solid and the remaining particles. With these simplifications there holds

$$E_{\text{эф}} = E\left(1 + \frac{U(r,\alpha_{2i})}{E}\right), \qquad (11),$$

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"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000617520001-9

$$\rho_{\text{эф}} = \frac{\rho}{\left(1 + \frac{U(r, \alpha_{2i})}{E}\right)^{1/2}}, \qquad (12),$$

where $\chi = |\pi - 2\varphi_{10}|$ is the scattering angle, ρ_{eff} is the effective impact parameter and $E_{eff} = E(1+U(r,\alpha_{2i})/E))$ is the effective kinetic energy. The binding of the scattering center with the remaining atoms of the solid is thus taken into account by the effective mass of the scattering center. This effective mass increases with decreasing energy E_o of the incident particle and in the laboratory system it takes the form

$$m_{2\,\text{эф}} = \frac{m_2 + (m_1 + m_2)\frac{U(r, \alpha_{2i})}{E_0}}{1 - \frac{m_1 + m_2}{m_1} \cdot \frac{U(r, \alpha_{2i})}{E_0}}. \qquad (14).$$

The increase in effective mass of the scattering center is one of the causes for the increase of the interaction cross section with decreasing

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"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000617520001-9

energy. For spherically symmetric scattering (collision of two elastic impermeable spheres) may be written

$$\varphi_0 = \arccos\frac{\rho}{a} + \int_{r_{\min}}^{a} \frac{\rho\frac{dr}{r^2}}{\sqrt{1-\frac{\rho^2}{r^2}-\frac{U(r)+\mathcal{E}}{\mathcal{E}}}} \qquad (16)$$

and

$$m_{2_{\text{эф}}} = \frac{m_2 + (m_1+m_2)\frac{\mathcal{E}}{E_0}}{1-\frac{m_1+m_2}{m_1}\cdot\frac{\mathcal{E}}{E_0}} \qquad (20).$$

The particle in the solid is assumed to be situated in a potential well. The depth $\mathcal{E}$ of this well allows for the whole energy required to displace this particle from its site into an interstitical place.

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"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000617520001-9

$$U[r, \alpha_{2i}] = \begin{cases} 0 & r > a \\ -\mathcal{E} & r \leqslant a, \end{cases} \qquad (15)$$

Here a is a fixed distance at which the potential of atomic binding becomes superimposed on the ordinary interaction potential. The effective mass of the incident particle increases with decreasing energy E_o and tends to ∞ with $E_o \rightarrow (m_1+m_2)\mathcal{E}/m_1$. The effective mass m_{2eff} suffers a jump from $+\infty$ to $-\infty$ at $E = (m_1+m_2)\mathcal{E}/m_1$, then increases again with decreasing E_o and tends to $-m_1$ for $E_o \rightarrow 0$. The present calculations prove that the model of the solid spheres on solids is inapplicable.

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"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000617520001-9

S/844/62/000/000/088/129
D234/D307

AUTHOR: Gurvich, L. G.

TITLE: Theory of destruction of linear polymers by radiation

SOURCE: Trudy II Vsesoyuznogo soveshchaniya po radiatsionnoy khimii. Ed. by L. S. Polak. Moscow, Izd-vo AN SSSR, 1962, 516-520

TEXT: It is assumed that the initial molecular weight distribution is arbitrary. The problem is to find the distribution f(M, D) where M is the molecular weight and D the dose. M is treated as continuous, which leads to appreciable errors only if M is much smaller than 10. The kinetic equation for f has been solved with the aid of Laplace transformation. f is computed for the case of all chains having initially the same length, for the most probable distribution and for a Gaussian distribution. It follows that the relation established by W. Kun applies only to the most probable distribution. The strength of a polymer fiber is

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D234/D307

$$F = \bar{f}\left(\frac{\bar{M}_{20}}{2\bar{M}_{n_o}} - \frac{1}{6}\ KD\ \frac{\bar{M}_{30}}{\bar{M}_{n_o}}\right) +$$

$$+\left[\bar{F} - \bar{f}\left(\frac{\bar{M}_{20}}{2\bar{M}_{n_o}} - \frac{1}{6}\ KD\ \frac{\bar{M}_{30}}{\bar{M}_{n_o}}\right)\right]\ \delta\left[\bar{F} - \bar{f} - \left(\frac{\bar{M}_{n_o}}{2\bar{M}_{n_o}} - \frac{1}{6}\ KD\ \frac{M_{30}}{\bar{M}_{n_o}}\right)\right] \quad (23)$$

For relatively small D, F decreases linearly, which agrees with experimental results.

ASSOCIATION: Institut yadernoy fiziki AN UzbSSR (Institute of Nuclear Physics, AS UzSSR)

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"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000617520001-9

S/058/63/000/002/019/070
A062/A101

AUTHOR: Gurvich, L. G.

TITLE: About the scattering of slow ions and atoms on atoms of a solid

PERIODICAL: Referativnyy zhurnal, Fizika, no. 2, 1963, 4, abstract 2D21 ("Dokl. AN UzSSR", 1962, no. 4, 12 - 15, summary in Uzbek language)

TEXT: It is known that at low energies the gas model of motion of atomic particles in a solid cannot be utilized because in this case the influence of the binding energy of the atoms in the solid may show up. Thus in the calculations it is necessary to take into account not only the pair interaction of the incident particle with an atom of the solid, but also the collective interaction of the particles with all the atoms of the solid through the atom which participates in the collision. In the article it is assumed that all the interactions with the remaining particles of the solid occur for the incident particle through one particle which is the center of scattering. In such a case the Lagrange function in the system of the center of inertia takes on the form

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$$L = \frac{mr^2}{2} - u(r) - u_1,$$

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wherein u (r) is the energy of a pair interaction, u_1 - the energy of collective interaction, m - the reduced mass of the colliding particles of masses m_1 and m_2. It is shown in the article that the problem of scattering with such a Lagrangian can be reduced to the problem of scattering on a free particle of effective mass.

$$m_{2eff} = \frac{m_2 + (m_1 + m_2)\frac{u_1}{E_o}}{1 - \frac{m_1 + m_2}{m_1}\frac{u_1}{E_o}}.$$

In the author's opinion, the dependence of the effective mass on the energy E permits a qualitative explanation of the regularities found experimentally (RZhFiz, 1961, 4Zh39).

A. Osipov

[Abstracter's note: Complete translation]

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"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000617520001-9

GURVICH, L.G.

Scattering of light ions and atoms on atoms of a solid body.
Izv.AN SSSR. Ser.fiz. 26 no.11:1418-1421 N '62. (MIRA 15:12)
(Ions—Scattering) (Atoms)

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"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000617520001-9

L 36237-65 EWT(1)/EEC(b)-2/T IJP(c) DM

ACCESSION NR: AP5010248

UR/0089/65/018/001/0076/0077

AUTHOR: Gurvich, L. G.; Begunova, N. S.

TITLE: Role of thermal peaks in formation of lattice defects

SOURCE: Atomnaya energiya, v. 18, no. 1, 1965, 76-77

TOPIC TAGS: particle physics, heat effect, heat theory, thermal excitation, nuclear energy, crystal defect

ABSTRACT: The concept of thermal and shift peaks appearing with thermal excitations during fast particle energy transmission was introduced by F. Seitz et al. (Displacement of Atoms during Irradiation in Solid State Physics, 1956). Calculations showed that this energy is sufficient for heating to thousands of degrees an area with a radius of tens of angstroms containing not more than one thousand atoms. The thermal and shift peak models are used for resolving the general thermal conductivity. Orig. art. has: 1 table, 9 formulas.

ASSOCIATION: none

SUBMITTED: 13Feb64

NO REF SOV: 000

ENCL: 00

SUB CODE: TD, NP

Card 1/1

OTHER: 001

NA

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000617520001-9"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000617520001-9

GURVICH, L. G., Cand Phys-Math Sci -- (diss) "The Effect of Surface Charges on the Properties of the Contact Between Metal and Semiconductors," Tashkent, 1960, 10 pp, 150 copies (Physico-technical Institute and Institute of Nuclear Physics of the Academy of Sciences Uzbek SSR) (KL, 46/60, 123)

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15.5500

25269

S/190/61/003/007/013/021
B101/B220

AUTHOR: Gurvich, L. G.

TITLE: The problem of the dependence of the tensile strength of polymer fibers on the nature of molecular weight distribution

PERIODICAL: Vysokomolekulyarnyye soyedineniya, v. 3, no. 7, 1961, 1062-1064

TEXT: Two mechanisms are indicated for the breaking of fibers: 1) gliding of the polymer chains against one another; 2) breaking of these chains. Process 1 is studied in this paper. It is assumed, that the molecular chains of the fiber are linear and oriented equally. They are described in total by the normed function f(l) (l = length of the molecular chain). The molecular weight of each chain is proportional to its length: M = ml (1). The gliding of the chain is dependent on its cohesion with the neighboring chains. The cohesion per unit of the chain length is termed q_o. For linear parallel chains q_o is not dependent on the chain length: $q_o = q_o(T,p)$; (T = temperature, p = specific tension). In this

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case, the tensile strength per unit area of a cross section equals the sum of the cohesion of all chains passing through this cross section and is proportional to the sum of the lengths of these molecules. If n is the number of molecules per 1 cm^2 cross section, $f_b(l)$ the distribution according to the length of the chain sections touching the cross section, the following holds for the cohesion

$$Q = \frac{1}{2} n q_0(T, p) \int_0^{l_m} l f_b(l)\, dl, \qquad (2)$$

l_m is the maximum chain length. Between $f_b(l)$ and $f(l)$, the relation $f_b(l) = lf(l)/\bar{l}$ (3) exists where $\bar{l} = \int_0^{l_m} lf(l)dl$ (4) is the mean chain length. Using eqs. (3) and (4) one obtains from (2): $Q = \frac{1}{2} nq_0(T,p)\frac{\bar{l}_2}{\bar{l}}$, (5) where $\bar{l}_2 = \int_0^{l_m} l^2 f(l)dl$. (6). If one takes into account that the chain

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length is proportional to the molecular weight, putting $nq_0 = Q_0$, a direct relation between tensile strength and molecular weight distribution can be derived from (5):

$$Q = \frac{Q_0}{2}\frac{\overline{M}_2}{\overline{M}_1}, \qquad (7)$$

where

$$\overline{M}_1 = \int_0^{M_m} M f(M)\,dM; \quad \overline{M}_2 = \int_0^{M_m} M^2 f(M)\,dM.$$

It follows from eq. (7) that the tensile strength for the mechanism of gliding increases with increasing degree of polymerization. This holds, however, only until $Q=F$, wh[illegible]y F expresses the tensile strength for the breaking mechanism of the chains. The maximum degree of polymerization up to which Q increases results from $\overline{M}_1 = 2F/Q\overline{M}_2$ (8). Thus,

$$P = \frac{Q_0}{2}\frac{\overline{M}_2}{\overline{M}_1} + \left(F - \frac{Q_0}{2}\frac{\overline{M}_2}{\overline{M}_1}\right)\delta\left(F \geqslant \frac{Q_0}{2}\frac{\overline{M}_2}{\overline{M}_1}\right),$$

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The problem of the dependence ... S/190/61/003/007/013/021
B101/B220

where

$$\delta\left(F > \frac{Q_0}{2}\frac{\overline{M}_2}{\overline{M}_1}\right) = \begin{cases} 0 \text{ при } F > \frac{Q_0}{2}\frac{\overline{M}_2}{\overline{M}_1} \\ 1 \text{ при } F < \frac{Q_0}{2}\frac{\overline{M}_2}{\overline{M}_1}. \end{cases} \quad (10)$$

holds for the total tensile strength. There are 5 references: 3 Soviet-bloc and 2 non-Soviet-bloc. The reference to English-language publication reads as follows: R. Cumberbirch, W. Harland, J.Text.Instr., 50, 311, 1958.

ASSOCIATION: Institut yadernoy fiziki AN UzbSSR (Institute of Nuclear Physics, AS Uzbekskaya SSR)

SUBMITTED: October 17, 1960

Card 4/4

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000617520001-9"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000617520001-9

DANILOVA, L.I. (Moskva); GURVICH, L.L. (Moskva)

The TTM device developed by the Central Scientific Research Institute of the Cotton Industry for thickness measurement of elastic fabrics. Shvein. prom. no.6:24-27 N-D '63. (MIRA 17:2)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000617520001-9"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000617520001-9

GURVICH, Leopol'd Il'ich [deceased]; BORISOVA, Ye., red.; SIMAKINA, I., mladshiy red.; MOSKVINA, R., tekhn. red.

[Role of natural resources in the development of productive capacities]Rol' prirodnykh bogatstv v razvitii proizvoditel'nykh sil. Moskva, Izd-vo sotsial'no-ekon. lit-ry, 1961. 252 p. (MIRA 14:8)

(Natural resources) (Economic history)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000617520001-9"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000617520001-9

GURVICH, L.I., inzh.

AChV-V carding and knitting machine unit for the manufacture of cotton bat interlining. Tekst.prom. 21 no.6:74-76 Je '61. (MIRA 15:2)

(Nonwoven fabrics)
(Textile machinery)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000617520001-9"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000617520001-9

MASHKILEYSON, A.I.; GURVICH, L.I., starshiy inzh.

Performance characteristics of the "Kokett" warp knitting machine. Tekst.prom. 22 no.2:59-63 F '62. (MIRA 15:3)

1. Nachal'nik spetsial'nogo konstruktorskogo byuro po proyektirovaniyu trikotazhnyk mashin (for Mashkileyson).
2. Spetsial'noye konstruktorskoye byuro po proyektirovaniyu trikotazhnykh mashin (for Gurvich).
(Germany, East—Knitting machines)

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"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000617520001-9

GURVICH, Lev Mendelevich; IMBOVITS, Ye.N., red.; AVDEYEVA, V.A., tekhn. red.

[Wide-open spaces; tourist routes] Shirokie prostory; turistskie marshruty. Moskva, Izd-vo "Sovetskaia Rossiia," 1963. 179 p. (MIRA 16:7)

(Tourism)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000617520001-9"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000617520001-9

GURVICH, L. S.

"Problems of Communal Hygiene Discussed at Conferences of Naturalists and Physicians in Russia," Gig. i San., No.11, 1948

Communal Hygiene Inst., Moscow Order of Lenin Med. Inst.

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"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000617520001-9

Name: GURVICH, Lev Solomonovich

Dissertation: Problems of Communal Hygiene in the Works of Russian hygienicists and health workers (the 1860's to 1917) -

Degree: Doc Med Sci

Affiliation: Krasnoyarsk Med Inst

Defense Date, Place: 14 Dec 55, Council of Tomsk State Med Inst

Certification Date: 1 Jun 57

Source: BMVO 16/57

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"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000617520001-9

GURVICH, L.S.

Case of water supply pollution by filamentous bacteria. Gig. i san. 21 no.9:68 S '56. (MLRA 9:10)

1. Iz Krasnoyarskogo meditsinskogo instituta.
(KRASNOYARSK TERRITORY--WATER--POLLUTION)
(SCHIZOMYCETES)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000617520001-9"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000617520001-9

GURVICH, L.S., dotsent (Krasnoyarsk)

Views of S.G. Zybelin on public health. Vrach.delo no.3:323 Mr'58 (MIRA 11:5)

(ZYBELIN, SEMEN GERASIMOVICH, 1735-1802)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000617520001-9"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000617520001-9

GURVICH, L.S.

A.V. Mol'kov; on his 90th birthday. Gig. i san. no. 10:5-7 O '60. (MIRA 13:12)

1. Iz Moskovskogo nauchno-issledovatel'skogo instituta sanitarii i gigiyeny imeni F.F. Erismana Ministerstva zdravookhraneniya RSFSR.

(MOL'KOV, ALFRED VLADISLAVOVICH, 1870-)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000617520001-9"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000617520001-9

GURVICH, L.S., kand.med.nauk; KUPER, A.I., kand.biologicheskikh nauk

Presence of phenols in sewage from oil refineries. Gig. i san. 25 no.3:105-106 Mr '60. (MIRA 14:5)

1. Iz Moskovskogo nauchno-issledovatel'skogo instituta sanitarii i gigiyeny imeni F.F. Erismana Ministerstva zdravookhraneniya RSFSR.
(SEWAGE) (PHENOLS)

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BERYUSHEV, K.G., dotsent; GALANIN, N.F., prof.; GURVICH, L.S., doktor med. nauk; NOVIKOV, Yu.V., kand. med. nauk; RYAZANOV, V.A., prof.; CHERKINSKIY, S.N., prof.; KROTKOV, F.G., prof., otv. red.; GOROMOSOV, M.S., doktor med. nauk, red.; BUSHTUYEVA, K.A., red.; ZUYEVA, N.K., tekhn. red.

[Manual on communal hygiene] Rukovodstvo po kommunal'noi gigiene. Otv.red.F.G.Krotkov. Moskva, Medgiz. Vol.1. [Communal hygiene] Kommunal'naia gigiena. Red.V.A.Riazanov. 1961. 707 p. (MIRA 15:1)

1. Chlen-korrespondent Akademii meditsinskikh nauk SSSR (for Galanin, Cherkinskiy). 2. Deystvitel'nyy chlen Akademii meditsinskikh nauk SSSR (for Krotkov).

(CLIMATOLOGY, MEDICAL) (AIR—POLLUTION)
(CITY PLANNING—HYGIENIC ASPECTS)

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GURVICH, L.S., doktor med.nauk; ZUYEVA, V.I.; KIBAL'CHICH, I.A., kand.med. nauk (Moskva)

Sanitary conditions of the Volga River and measures for its purification. Sov.med. 25 no.1:142-145 Ja '61. (MIRA 14:3)
(VOLGA RIVER--WATER--POLLUTION)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000617520001-9"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000617520001-9

GURVICH, L.S., doktor med.nauk; KIBAL'CHICH, I.A., kand.med.nauk

Data on sanitary conditions of the water supply in the R.S.F.S.R.
Gig.i san. 26 no.3:15-22 Mr '61. (MIRA 14:7)

1. Iz Moskovskogo nauchno-issledovatel'skogo instituta gigiyeny imeni F.F.Erismana Ministerstva zdravookhraneniya RSFSR.
(WATER SUPPLY)

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"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000617520001-9

GURVICH, L.S., doktor med. nauk

"Manual on communal hygiene," vol. 2 by S.N. Cherkinskii. Reviewed by L.S. Gurovich. Gig. i san. 28 no.7:108-110 Jl '63. (MIRA 17:1)

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"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000617520001-9

GUSVICH, L.S.

[Joint scientific work experience of hygienists and public health physicians in water hygiene and the sanitary protection of bodies of water] Opyt sovmestnoi nauchnoi raboty gigienistov i sanitarnykh vrachei po gigiene vody i sanitarnoi okhrane vodoemov. Moskva, Meditsina, 1961. [illegible] p. (MIRA 18:7)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000617520001-9"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000617520001-9

MATVEYEV, M.A.; RABUKHIN, A.I.; GURVICH, L.V.

Ceramic lining for vibration mills. Stek. i ker. 15 no.2:10-13 F '58. (MIRA 11:3)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut novykh problem stroitel'nykh materialov na baze tonkogo izmel'cheniya.
(Ceramics) (Crushing machinery)

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"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000617520001-9

GURVICH, L. Ya.

"Comparative Capability of Stainless Steels and Their Components to Passivation in H_2O_2 Solutions," Iz. Ak. Nauk SSSR, Otdel. Tekh. Nauk, No.5, 1945.

Lab. of Physics of Metals, All-Union Sci.Res. Inst. Aircraft Materials

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000617520001-9"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000617520001-9

CA

Electrochemical behavior of iron in solutions of oxidants

I. Electrode potentials of iron in solutions of oxidants

L. Ya. Gurevich and G. V. Akimov (Inst. Phys. Chem., Acad. Sci. U.S.S.R., Moscow). *Izvest. Akad. Nauk S.S.S.R., Otdel. Khim. Nauk* 1950, 457-64.—Stable electrode potentials E (on the H scale) of pure Fe (impurities C 0.05, Mn 0.01, Si 0.01, P 0.016%), measured after 15 min., in solns of HNO_3 + KNO_3 at const. total $[NO_3^-] = 0.1$ N, decrease linearly with the pH in the acid region. E has values of about −275 to −300 mv. between pH = 1 and 1.2, then increase to about −180 mv. at pH = 4, and increase very slowly with further increasing pH from 4 to 7. Extrapolated to pH = 0, E = −250 mv., whereas in 1 N HNO_3 the measured E = −150 mv. The change in E of the Fe electrode in the acid region per pH unit is 30 mv., as against 58 mv. for the H electrode. The effect of the total NO_3^- concn. on E is slight. In neutral 0.1 N KNO_3 soln., Fe^{+++} ions (0.01 N, in the form of $Fe(NO_3)_3$) lower E from ~ −150 to ~ 375 mv., the reverse effect is observed in 0.1 N HNO_3 soln. In sulfate solns., addn. of Fe^{+++} ions raises E in both neutral K_2SO_4 and in H_2SO_4 soln., more strongly in the former. Consequently, the lowering of E observed in neutral nitrate solns. by Fe^{+++} ions is linked with the NO_3^- anion. The expt'l. change of pH as a function of the concn. of $Fe(NO_3)_3$ is approx. $\Delta pH/\Delta \log c$ = 0.5. The change of E is $\Delta E/\Delta \log c$ = 40 mv., whereas $\Delta E/\Delta pH$ = 30 mv. Consequently, the part of the change of E with c owing to change of pH is 0.5 × 30 = 15 mv., which leaves for the part of the change of E actually due to the change of the concn. of the Fe^{+++} ions, −40-15 = 25 mv. In other words, the change of E of Fe with changing concn. of Fe^{+++} ions is detd. mainly by the direct effect of that concn., and only secondarily by the concomitant change of the pH. Stirring of the soln. raises E in both neutral NO_3^- and in 0.01 N HNO_3 soln., owing to the intensified supply of depolarizer and removal of reaction products. The same effect is observed in sulfate solns. The fact that addn. of urea, which should destroy the NO_2^- ions formed, is practically without effect, proves that the NO_2^- ions play no appreciable role in the depolarization, the rise in E through stirring is due essentially to increased supply of dissolved O_2. Addn. of KNO_2 raises E by ~ 110 mv. in acid and by ~ 40 mv. in neutral soln. The NO_2^- ions have no catalytic effect on the cathodic depolarization by NO_3^-, but rather act as an independent oxidant, through the cathodic process $HNO_2 + H^+ + e^- \rightarrow NO + H_2O$. In a pure 0.1 N KNO_3 soln., E (after 30 min.) = −76 mv., without significant change by either stirring or addn. of KNO_2. Higher concn. of KNO_3 shifts E to more pos. values. In solns. of $KMnO_4$, $K_2Cr_2O_7$, or $(NH_4)_2S_2O_8$, E is highest in $KMnO_4$, lowest in $(NH_4)_2S_2O_8$. The latter oxidant, with its high oxidation-reduction potential (+ 2.05 v.), produces no passivation, but enhances the cathodic process and the corrosion. The observed E is detd. by the anodic portions developed through removal of the massive corrosion products. Thus

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Electrochemical behavior of iron in solutions of oxidants. II. Anodic polarization of iron in solutions of oxidants. L. Ya. Gurvich and G. V. Akimov (Acad. Sci. U.S.S.R., Moscow). *Izvest. Akad. Nauk S.S.S.R., Otdel. Khim. Nauk* 1950, 505-72; cf. C.A. 45, 3291e.—Anodic polarization was investigated on com. iron with C 0.05, Mn 0.04, Si 0.01, P 0.016%. (1) In KNO_3 + HNO_3, at const. total $[NO_3^-]$ = 0.1 *N*, increase of the acidity increases the crit. anodic c.d.; i.e. H ions have an activating effect. In a 0.1 *N* HNO_3 soln., no passivation occurs mostly up to 0.02 amp./sq. cm., but occasionally there is passivation at that c.d., which indicates an unstable condition of the Fe. In KNO_3 0.1, HNO_3 0.0001 *N*, the potential of the Fe becomes more neg. on interruption of the polarizing current. In 0.001, 0.01, and 0.05 *N* HNO_3, the final electrode potential is more pos., which may indicate stability of the anodic film from 0.001 *N* HNO_3 upwards. (2) Fe^{+++} ions activate the Fe electrode, as evidenced by the increase of the crit. anodic c.d. from 2.2×10^{-4} amp./sq. cm. in 0.1 *N* KNO_3 to 1.8×10^{-3} in the presence of $Fe(NO_3)_3$, 0.01 *N*. In the latter instance, the passivity is less stable, as evidenced by its decrease on decrease of the c.d. to 9×10^{-4} amp./sq. cm., as against 2×10^{-4} amp./sq. cm. in 0.1 *N* KNO_3 without Fe^{+++}. (3) Variation of the concn. of KNO_3 between 0.1 and 1.0 *N* has little effect on the anodic polarization. (4) In 0.1 *N* solns. of $KMnO_4$ and $K_2Cr_2O_7$, the crit. anodic c.d. amounted to only 2.0×10^{-6} and 1.3×10^{-6} amp./sq. cm., resp., and the passivity persists after interruption of the anodic current; in 0.1 *N* $KMnO_4$, the stable anodic potential is +1.3 v. In 0.1 *N* $(NH_4)_2S_2O_8$, no passivation occurred up to 0.02 amp./sq. cm., and addn. of NH_4OH does not alter the anodic polarization curve. The electrode is strongly corroded with pptn. of $Fe(OH)_3$. (5) The oxidants investigated fall into 3 categories, (*a*) those in which Fe is not passivated but is dissolved (0.1 *N* HNO_3, 0.1 *N* $(NH_4)_2S_2O_8$), (*b*) those in which Fe is passivated at a sufficiently high c.d., from 0.0002 to 0.01 amp./sq. cm. (KNO_3 + HNO_3 up to 0.05 *N*), (*c*) those in which Fe is passivated even at low c.d. of the order of 10^{-6} amp./sq. cm. (0.1 *N* $KMnO_4$ or $K_2Cr_2O_7$).

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GURVICH, L. Ya.

USSR/Chemistry - Electrochemistry May/Jun 52

"The Electrochemical Behavior of Iron in Oxidants. Part III. Cathodic Polarization of Iron in Oxidants," L. Ya. Gurvich, G. V. Akimov, Lab of Phys of Metals, All-Union Order of Lenin Inst of Avn Materials

"Iz Ak Nauk SSSR, Otdel Khim Nauk" No 3, pp 385-391

Investigated the cathodic polarization of iron in KNO_3, HNO_3, $Fe(NO_3)_3$, $K_2Cr_2O_7$, $KMnO_4$, $(NH_4)_2S_2O_8$ and NH_4OH at different concns and current densities. Gives results in tables and graphs.

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"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000617520001-9

GURVICH, L. YA.

The book Aciers Inoxydables. Aciers Refractaires (Stainless and Heat-Resistant Steels) by L. Colombier and J. Hochmann, Dunod, Paris, 1955, is reviewed by L. Ya. Gurvich. The reviewer states that USSR books are steeped in a 10-year antiquity, whereas "this book is based on contemporary knowledge ... If translated it would undoubtedly be valuable to and well received by many specialists."

SUM. 1305

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PHASE I BOOK EXPLOITATION 935

Korroziya i zashchita metallov (Corrosion and Protection of Metals) Moscow, Oborongiz, 1957. 366 p. 3,000 copies printed.

Ed. (title page): Ambartsumyan, R. S., Doctor of Technical Sciences, Professor; Ed. (inside book): Lagovskaya, M. S.; Tech. Ed.: Rozhin, V. P.; Managing Ed. : Latynin, Ye. V.

PURPOSE: This book is intended for engineering, technical, and scientific personnel at industrial plants, research institutes, and design offices working in the field of corrosion-protection of stainless steel, high-strength structural steel, and light alloys.

COVERAGE: The book contains a collection of articles which deal with the corrosion and passivity of metals in various oxidizing media, corrosion of high-strength steels under tension, corrosive cracking, intergranular corrosion and pitting of aluminum alloys, and with certain questions of the anodic oxidation of these alloys. Articles on the corrosive cracking of magnesium alloys and means of protection against it are also included.

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Corrosion and Protection of Metals

935

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Corrosion and Protection of Metals

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SOV/137-58-9-19508

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 9, p 196 (USSR)

AUTHORS: Gurvich, L.Ya., Khvoshchevskaya, K.A.

TITLE: Rapid Method for the Establishment of the Tendency of Stainless Steel Towards Intercrystalline Corrosion (Uskorennyy metod opredeleniya sklonnosti nerzhaveyushchey stali k mezhkristallitnoy korrozii)

PERIODICAL: V sb.: Korroziya i zashchita metallov. Moscow, Oborongiz, 1957, pp 74-97

ABSTRACT: The manifestation of the tendency of stainless steel towards intercrystalline corrosion (IC) in solutions of HNO_3 and NaF at various concentrations of components, temperature, and duration of stay in the solution was investigated. The concentration ranges of the components of the mixture: HNO_3 10-30% at 5% intervals and NaF 0.5, 0.75, 1.2, and 3%, temperatures of 20, 40, 60°C, and the boiling temperature, and test durations of 20, 40, 60 min, and 2 hours were investigated. Grade 1Kh18N9 sheet steel previously annealed for 2 hours at 650° was tested. The degree of IC was determined by the sound made by falling specimens and by the state of the surface after bending around

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Rapid Method for the Establishment of the Tendency (cont.)

a mandrel having a radius equal to twice the thickness of the specimen. It was found that an increase in the concentration of the solution of NaF has a varying effect on the corrosion in relation to the concentration of HNO_3; At a low concentration of HNO_3, for example in a 10% HNO_3 solution, an increase in the concentration of NaF intensifies the general corrosion to a greater degree than IC; at higher concentrations of HNO_3, for example at 20-25% HNO_3, it usually increases IC; in a 30% solution of HNO_3 IC is negligible. This means that in all the concentrations of NaF solutions investigated the 10% solution of HNO_3 is insufficient for the passivation of the grains; solutions with 20-25% concentrations of HNO_3 ensure the passivation of the grains, at the same time not disrupting the state of the borders of the grain, and bring about IC; the 30% solution of HNO_3 ensures the passivation of the grain as well as to a considerable degree of its borders. It was found that an increase in temperature in all cases weakens IC. From the comparison of the data obtained a method was selected for testing in a solution of 20% HNO_3 + 1% NaF composition which showed the greatest IC after two hours at room temperature for material of 0.5-30 mm cross section. The process is recommended as a rapid control method. Testing of the method in parallel tests according to the USSR GOST 6032-51 standard, conducted at several plants, yielded affirmative results.

Card 2/2 1. Stainless steel--Corrosion 2. Nitric acid--Metallurgical 3. Sodium fluorides--Metallurgical effects 4. Corrosion--Testing equipment 5. Corrosion--Test results

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GURVICH, L.Ya.

Operating route-relay central control systems. Avtom., telem.i sviaz' no.5:28-30 My '57. (MIRA 10:7)

1. Zamestitel' nachal'nika Kurskoy distantsii signalizatsii i svyazi Moskovsko-Kursko-Donbasskoy dorogi.
(Railroads--Automatic train control)

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"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000617520001-9

SOV/129-59-4-7/17

AUTHORS: Andreyeva, A.G. (Engineer) and Gurvich, L.Ya. (Candidate of Technical Sciences)

TITLE: Influence of Nitriding on the Resistance to Corrosion of Stainless Steels (Vliyaniye azotirovaniya na korrozionnuyu stoykost' nerzhaveyushchikh staley)

PERIODICAL: Metallovedeniye i Termicheskaya Obrabotka Metallov, 1959, Nr 4, pp 34-40 (USSR)

ABSTRACT: Materials used for a number of components subjected to abrasion wear in a medium containing water must possess a high surface hardness, a high wear resistance, a tough core and a high stability against corrosion. If they are used in conjunction with aluminium alloys, such components must also have a high coefficient of linear expansion. Furthermore the surface hardness must be maintained at temperatures up to 300 - 400°C. Nitrided stainless steel possesses this required combination of properties. However, the stability against corrosion of the surface layer of stainless steel decreases as a result of the nitriding. In the work described in this paper optimum regimes of nitriding were determined for the steel 4Kh14N14V2M, which ensured that the depth of nitriding and the hardness of the nitrided layer were

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SOV/129-59-4-7/17

Influence of Nitriding on the Resistance to Corrosion of Stainless Steels

adequate and there was only a very slight reduction in the stability of the material against corrosion. The nitriding is effected at 560°C for a duration of 48 - 60 hours; the degree of dissociation is 25 to 40%. As a result a 0.09 - 0.11 mm thick nitrided layer is obtained with a hardness H_V = 800 - 900, with a minimum brittleness and a satisfactory resistance to corrosion. The corrosion resistance of the layer is influenced particularly by the degree of dissociation of the ammonia. Data on the corrosion stability obtained for nitrided specimens which were ground to a depth of 0.03 mm are entered in Table 1, p 34. In the here-described work the authors investigated the electrode potentials of the steels 4Kh14N2V2 and 4Kh14N14V2M in a 0.01 N solution of sodium chloride. The compositions of these steels were as follows: 4Kh14N14V2M, 0.42% C, 13.75% Cr, 12.6% Ni, 1.5% W, 0.5% Mo, 0.4% Si, 0.7% Mn; 4Kh14N2V2, 0.4% C, 13.5% Cr, 2.68% Ni, 2% W, 0.55% Si, 0.55% Mn. The electrode potentials were measured for the entire depth of the nitrided layer and this layer was successively ground to various depths from 0.015 to 2.2 mm. On the basis of the obtained results, which are tabulated and graphed, the following conclusions are

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Influence of Nitriding on the Resistance to Corrosion of Stainless Steels

arrived at: 1) the change in the resistance to corrosion of nitrided steels as a function of the depth of the ground-off layer, corresponds to the change in the magnitude of the electrode potential. 2) The presence was established of four zones along the depth of the nitrided layers of stainless steels which are characterised by specific corrosion properties and corresponding magnitudes of the electrode potentials. 3) The author assumes that the layers with reduced corrosion stability and reduced electrode potentials which were detected at a certain depth of the nitrided layers of stainless steels, consist of chromium nitrides and of a solid solution which is impoverished in chromium and nitrogen. 4) When manufacturing components of nitrided stainless steels it is necessary to take into consideration the extent of the zones with high and

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SOV/129-59-4-7/17

Influence of Nitriding on the Resistance to Corrosion of Stainless Steels

with low corrosion stability after grinding or other types of machining.
There are 5 figures, 4 tables and 6 references, 3 of which are Soviet, 3 English.

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"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000617520001-9

S/081/61/000/005/006/024
B110/B205

AUTHORS: Gurvich, L. Ya., Khvoshchevskaya, K. A.

TITLE: Rapid method of determining the tendency of stainless steel to intercrystallite corrosion

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 5, 1961, 348, abstract 5И285 (5I285) ("Mezhkristallitn. korroziya i korroziya metallov v napryazh. sostoyanii." (Intercrystallite Corrosion and Corrosion of Metals in Stressed State) M., Mashgiz, 1960, 162-177)

TEXT: A rapid method is suggested for testing stainless steel for tendencies to intercrystallite corrosion in a solution of 20 % HNO_3 + 1% NaF at about 20°C. [Abstracter's note: Complete translation.]

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"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000617520001-9

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SOV/129-60-1-3/22

AUTHORS: Gurvich, L. Ya. (Candidate of Technical Sciences), Andreyeva, A. G. (Engineer)

TITLE: Protection of Nitrided Stainless Steel Parts Against Corrosion in Water

PERIODICAL: Metallovedeniye i termicheskaya obrabotka metallov, 1960, Nr 1, pp 10-13 (USSR)

ABSTRACT: Since the corrosion resistance of nitrided stainless steels under the action of water is not uniform throughout the nitrided layer, the authors divide the latter into various zones according to corrosion resistance. Only few data are available on the behavior of nitrided stainless steels toward corrosion during the processes of bluing, passivating in natrium bichromate (Sidney, L., "Steel," Nr 8, 1951) and lapping (Anderson, K., "Nitrided Steels for High-Temperature Water Service," 1954). Nitrided specimens of 25Kh18NB2-steel (composition not given) ground to the unstable (noncorrosion

Card 1/2

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"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000617520001-9

Protection of Nitrided Stainless Steel Parts Against Corrosion in Water

77155
SOV/129-60-1-3/22

resistant) zone were affected by corrosion within 25 to 30 min after immersion in water. The authors tested specimens of that steel and found that: (1) potassium and sodium bichromate are effective inhibitors, particularly in combination with nitric acid. Corrosion is prevented by boiling in a 10% potassium bichromate solution for 1 hr or by placing the specimens in the same solution and for the same length of time at 70° C; (2) cold phosphate coating and treatment in phosphorous acid with CrO_3 additions somewhat improves corrosion resistance of nitrided austenitic steel specimens; (3) boiling in a 10 to 15% solution of hydrophobic organic silicon liquid GKZh-94 in benzene endows specimens with good corrosion resistance; (4) hot kerosene treatment in an autoclave at 100 and 250° C for 50 hours revealed that corrosion resistance was achieved at 100° C, boiling in 10% potassium bichromate solution and subsequent immersion in 10 to 50% GKZh-94 solution. There are 1 figure; 3 tables; and 4 references, 2 Soviet, 2 U.S. as given in the text.

Card 2/2

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"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000617520001-9

S/790/62/000/000/004/005

AUTHORS: Andreyeva, A. G., Gurvich, L. Ya.

TITLE: Corrosional and electrochemical properties of and protective methods for nitrided stainless steels.

SOURCE: Korroziya i zashchita metallov; sbornik statey. Ed. by V. P. Batrakov. Moscow, Oborongiz, 1962, 118-137.

TEXT: The primary objective of this experimental investigation is the determination of the effect of the degree of dissociation of NH_3 (range: 20-80%) in the surface layer of nitrided specimens of 4X14H14B2M (4Kh14N14V2M) steel, the so-called ЭИ69 (EI69) steel, on its corrosion characteristics. 2 tables summarize the findings. All specimens were uniformly ground down to a 0.03-mm depth for comparative tests; grinding to different depths revealed the existence of four different layers: (1) An exterior zone with low corrosion resistance (CR) in water and a relatively negative electrode potential; (2) beginning at a 0.01-mm depth, a zone with elevated CR in water and relatively high positive electrode potentials; (3) beginning at depths ranging from 0.03 to 0.16 mm in various steels, a zone with low CR and low electrode-potential values; (4) the core material with an elevated CR and relatively high positive potential. The technique and results of the potential

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measurements are described, tabulated, and graphed. The optimal nitriding procedure (T 560-600°C, NH_3 dissociation 20-40%), which affords a maximal absorption of N, minimizes the thickness of the unstable zone, but does not eliminate it entirely. The ratio of the thickness of the unstable zone to the total thickness of the nitrided layer varies with the structure of the steel and the nitriding procedure: In martensitic and ferritic steels it amounts to 50-80%, in transitional steels to 35-45%, and in austenitic steels to 20-30%. The stable zone (in a steel of the X18H8B2 - Kh18N8V2 - type) consists of a γ solid solution with a low 2% concentration of Cr and a high (up to 4%) concentration of N and ε phase, which comprises complex nitrides with a hexagonal lattice. The unstable zone consists of a γ solid solution with a reduced concentration of Cr (less than 12%) and N (less than 1%) and no ε phase at all. For corrosion protection of nitrided parts made of the stainless steel 25X18H8B2 (25Kh18N18V2) in water or in moist air at T up to 120°C, a treatment was applied consisting of 1-3-hr boiling in a 10% $K_2Cr_2O_7$ solution, which resulted in a protective film with a golden hue, and immersion in a water-repelling silocon-organic liquid (ГКЖ -94; GKZh-94) in benzene for 2-3 min, preheat.. to 90° in 15 min, and 1-5-hr holding at 115-160°. For parts intended for operation at 200°, a like autoclave treatment at temperatures not less than the operational T is recommended. For nitrided parts of the less highly alloyed stainless steels of the type X10C2M (Kh10S2M) and 2X13 (2Kh13)

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Corrosional and electrochemical properties ... S/790/62/000/000/004/005

protection against water and moist-air corrosion can be obtained by treatment in a boiling solution composed of 10% $K_2Cr_2O_7$; 0.5% NaCl; 0.3% Na_3PO_4. There are 6 figures, 9 tables, and 10 references (6 Russian-language Soviet, 4 English-language USA). The participation in the work of V. M. Agafonova, V. A. Mashin, and L. N. Platova is acknowledged.

ASSOCIATION: None given.

Card 3/3

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000617520001-9"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000617520001-9

BYKOV, N.N., inzh.; GURVICH, L.Yu., inzh.

The LKV-4T flax harvesting machinery. Trakt. i sel'khozmash. no.5:33-34 My '65. (MIRA 18:6)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut l'na.

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000617520001-9"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000617520001-9

NIKONOVA, Ye.A.; SOKOLOVA, A.P.; GURVICH, L.Z.

Determination of the average degree of polymerization of cellulose in the complex solution iron - tartaric acid - sodium hydroxide. Khim.volok. no.3:43-44 '62. (MIRA 16:2)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut steklyanogo volokna.

(Cellulose) (Polymerization)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000617520001-9"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000617520001-9

16(1)

AUTHOR: Gurvich, M.A. SOV/140-59-1-6/25

TITLE: On the Continuation of the Solutions of Nonlinear Integral Equations of the Type of Hammerstein (O prodolzhenii resheniy nelineynykh integral'nykh uravneniy tipa Gammershteyna)

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Matematika, 1959, Nr 1, pp 45-54 (USSR)

ABSTRACT: While in the earlier investigations of A.M.Lyapunov, A.I.Nekrasov, N.N.Nazarov etc. the question of the continuability of the solution of

$$(1) \qquad u(x) = \int_B K(x,y)g(u(y),y)dy$$

was investigated under the assumption that $g(u,x)$ is analytic, M.M.Vaynberg [Ref 1] considered the case of a function $g(u,x)$ not analytic in u. He developed the method of implicit operators and thereby he solved the problem of continuation. Here it was assumed that the kernel $K(x,y)$ is continuous and symmetrical. In the present paper the author shows that the method proposed

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"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000617520001-9

On the Continuation of the Solutions of Nonlinear Integral Equations of the Type of Hammerstein SOV/140-59-1-6/25

in [Ref 1] can be used for the investigation of (1) in the L^2 also without the assumptions of symmetry and continuity. The author uses results of W.L.Hart [Ref 2].
There are 6 references, 2 of which are Soviet, 2 French, and 2 American.

ASSOCIATION: Moskovskiy institut inzhenerov vodnogo khozyaystva imeni V.R. Vil'yamsa (Moscow Institute for Engineers of Water Economy imeni V.R.Vil'yams)

SUBMITTED: February 19, 1958

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000617520001-9"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000617520001-9

GURVICH, M.A.; IOFFE, Z.M.

Labor productivity and production costs in Krivoy Rog Basin mines. Gor. zhur. no.7:6-10 Jl '57. (MLRA 10:8)

1. Nachal'nik planovo-proizvodstvennogo otdela instituta Krivbassproyekt (for Gurvich). 2. Nachal'nik planovogo otdela tresta Dzerzhinskruda (for Ioffe).
(Krivoy Rog--Iron mines and mining--Costs)
(Labor productivity)

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"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000617520001-9

GURVICH, Mikhail Abramovich; IOFFE, Zinoviy Moiseyevich; OSMOLOVSKIY, Valentin Vasil'yevich; BERGAUZ, L.A., red.; BRUSHTEYN, A.I., red.izd-va; MIKHAYLOVA, V.V., tekhn.red.

[Economics, organization and planning in enterprises of the mining industry; collection of examples and problems] Ekonomika, organizatsiia i planirovanie predpriiatii gornorudnoi promyshlennosti; sbornik primerov i zadach. Moskva, Gos.nauchno-tekhn.izd-vo lit-ry po chernoi i tsvetnoi metallurgii, 1958. 232 p. (MIRA 12:4)
(Mining industry and finance)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000617520001-9"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000617520001-9

14(5) SOV/127-59-3-18/22

AUTHORS: Skorubskiy, N.I. (Moscow), Gurvich, M.A., Economist (Krivoy Rog)

TITLE: Problems of Calculating Net Costs in the Mining Industry. (Voprosy uchëta sebestoimosti v gornorudnoy promyshlennosti).

PERIODICAL: Gornyy zhurnal, 1959, Nr 3, pp 60-65 (USSR)

ABSTRACT: Engineer N.N. Patrikeyev published in Nr 8 (1958) of "Gornyy zhurnal" the article under the above title for discussion purposes. In answering him, N.I. Skorubskiy, flatly rejects the proposition of calculating net costs by separate production processes. He says that this method was already used for a short time in the Krivoy Rog iron ore basin, and in the Nikopol' manganese basin. In 1940 the Glavruda of the former Ministry of the Ferrous Industry tried to introduce the method in all mines, only to scrap it the very next year. The method has been found to be

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SOV/127-59-3-18/22

Problems of Calculating Net Costs in the Mining Industry.

extremely complicated and clumsy. M.A. Gurvich also disagrees with Patrikeyev, though he says some of his propositions can be considered. He also thinks that the whole problem of cost calculation must be thrashed out at a conference of representatives of all interested enterprises and scientific-research organizations.

ASSOCIATION: Krivbassproyekt.

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"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000617520001-9

GURVICH, Mark Arkad'yevich, prof.; ZUBOV, P.V., red.; LEBEDEVA, V.I., tekhn. red.

[Suspension of the statute of limitations in Soviet civil law] Presekatel'nye sroki v sovetskom grazhdanskom prave. Moskva, Vses.iurid.zaochnyi in-t, 1961. 78 p. (MIRA 15:1)
(Limitation of actions)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000617520001-9"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000617520001-9

OSMOLOVSKIY, Valentin Vasil'yevich; IOFFE, Zinoviy Moiseyevich; GURVICH, Mikhail Abramovich; BOCHKOVSKAYA, Irina Vladimirovna; PINEGIN, I.I., otv. red.; OSVAL'D, E.Ya., red.izd-va; IL'INSKAYA, G.M., tekhn. red.

[Industrial organization and planning in the ore mining industry] Organizatsiia proizvodstva i planirovanie v gornorudnoi promyshlennosti. [By] V.V.Osmolovskii i dr. Moskva, Gosgortekhizdat, 1963. 351 p. (MIRA 16:11)
(Mine management)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000617520001-9"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000617520001-9

AKSMAN, N.M.; VILENSKIY, L.I.; GORBUNOV, N.G.; GUBSKIY, V.N.; GURVICH, M.D.; LATYSHEV, Yu.M.; LEVONTIN, L.I.; LIVSHITS, T.G.; LOGINOVA, M.K.; LUR'YE, D.A.; LYANDRES, G.D.; MIROSHNICHENKO, G.K.; MOGILEVSKIY, B.Ya.; NEMKOVSKIY, M.I.; ORLEANSKIY, Ya.P.; SAVITSKIY, A.N.; SIMMA, S.F.; SURKOV, G.Z.; SHMYGUL', B.P.; SHUBIN, V.P.; DONSKOY, Ye.Ye., red.izd-va; KAL'NITSKIY, R.Ya., red.izd-va; ZAMAKHOVSKIY, L.S., tekhn.red.

[Mechanization and automation in the machinery industry] Mekhanizatsiia i avtomatizatsiia v stankostroenii. Khar'kov, Khar'kovskoe obl.izd-vo, 1958. 119 p. (MIRA 13:2)

1. Kharkov. Institut "Giprostanok." 2. Direktor instituta "Giprostanok" (for Orleanskiy).
(Machinery industry--Technological innovations)
(Automation)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000617520001-9"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000617520001-9

37988
S/089/62/013/001/003/012
B102/B104

21.4200

AUTHORS: Reshetnikov, F. G., Gurvich, M. G.

TITLE: Mechanism whereby oxygen-containing uranium compounds exert a negative influence on the process and results of reducing uranium tetrafluoride by metallothermal means

PERIODICAL: Atomnaya energiya, v. 13, no. 1, 1962, 54-58

TEXT: An attempt is made to discover why oxygen-containing uranium compounds UO_2 and UO_2F_2, if included in the mixture, exert a negative effect on uranium reduction by the use of magnesium or calcium. According to the initial composition and the method of UF_4 production, the final product contains more or less of UO_2 or uranyl fluoride, the latter being formed according to the equation $UF_4 + H_2O + \frac{1}{2}O_2 = UO_2F_2 + 2HF$. The presence of these oxides considerably reduces the uranium yield and favors the formation of heavy slags. This effect is shown to be related to the formation of "secondary" UO_2 during the reduction process. For the reduction with CaO

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the course of reduction is assumed to be given by

$$UF_4 + CaO = UOF_2 + CaF_2 \quad (2)$$

$$UOF_2 + CaO = UO_2 + CaF_2 \quad (3)$$

$$UF_4 + 2CaO = UO_2 + 2CaF_2 \quad (4)$$

(the same holds for MgO). The oxyfluoride UOF_2 which is formed has hitherto been unknown and the existence of this new phase was proved by X-ray study of the reaction product from (2). There are 5 figures.

SUBMITTED: November 23, 1961

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000617520001-9"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000617520001-9

YADULLAYEV, N.N.; SHARUTIN, A.S.; RUSTAMBEKOV, A.F.; OGLOBLINA, G.P.; ALIYEV, T.A.; VANYAVKIN, B.P.; GURVICH, M.L.

Oil well drilling in the Kyureangya area. Burenie no.3:7-10 '65. (MIRA 18:5)

1. "AzNIIburneft'" i trest "Azneftepazvedka".

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000617520001-9"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000617520001-9

CA

26

GURVICH, M.M.

Drying-oil substitute. M. M. Gurvich. Russ. 26,303, May 31, 1928. Calcium soaps of naphthenic acids obtained from petroleum alkali sludge are used together with the oil which seps. from the sludge on settling.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000617520001-9"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000617520001-9

GURVICH, M.M.

CA

22

The structure of acid sludge. M. M. Gurvich. *Trudy Khim. Inst. Azerbaidzhan. Filial Akad. Nauk*, No. 1, 3-14(1940); *Khim. Referat. Zhur.* 4, No. 9, 121(1941).—The complex-emulsion nature of acid sludge was detd. experimentally. The emulsion is formed by 2 dispersed phases (acid and oil phases) included in the org. dispersion medium. The individual complexes of this emulsion are surrounded by an acid film (outside acid phase). The formation of a film on contact of sludge with water and some properties of this film (diffusion of SO_2 and H_2SO_4 through the film) are described. The formation of the film is the reason for the inability of sludge to be dtd. by water. Some facts appearing to be contradictory to the emulsion theory of acid sludge are presented and explained.

W. R. Henn

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000617520001-9"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000617520001-9

28231

Katalichyeskaya akativnostb i usyelbnaya povyerkhnostb. khromovykh katalizatorov bisulbfitnog. myetoda. Prigotovlyeniya. trudy in-ta. khimii (akad. nauk. Azyervaidzh SSR), T. V11, 1949, s. 91-97 - Ryezyumye na azyerbaidzh. yaz.

SO. LETOPIS NO. 34

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000617520001-9"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000617520001-9

GURVICH, N. N. I. BYELYENIKHI, M. S.

28230

Bisulbfitnyy myetod poluchyeniya gyelyey iz khromatov. trudy in-ta khimii (akad. nauk Azyerbaydzh. SSR.) T. V11, 1949, s. 98-106 - Ryezyumye na azyerbaidzh. yaz.

SO. LETOPIS. NO. 34

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000617520001-9"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000617520001-9

GURVICH, M. M.

(1)

Pyrite ash as a weighting agent for clay suspensions. A. K. Miskarli, M. M. Gurvich, and R. G. Gadzhieva. *Trudy Inst. Khim., Akad. Nauk Azerbaidzhan. S.S.R.* 9, 59-87(1952)(in Russian).—Pyrite ash can be used to obtain a stable clay suspension of d. 1.7 if boiled starch or spent gumbrin, together with a soln. contg. 25% anhyd. vinasse and 5% NaOH (I), or 10% lignite and 2% NaOH (II), are added as protective colloids. The most stable suspension resulted when 5 parts by wt. of starch and 25 parts of I were mixed and added to 100 parts of clay in suspension. Then 400 parts of pyrite ash was added with water to give the desired viscosity. Spent gumbrin, a bentonitic clay, also gives stable suspensions when used with a 1:1 mixt. of I and II. Spent gumbrin loses its effectiveness when adsorbed matter is removed by extn. with benzene.

Ronald G. Menzel

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000617520001-9"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000617520001-9

GURVICH, M. M.

Replacement of caustic soda by sodium sulfide in the chemical treatment of clay mortar. I. L. Bagbanly, M. M. Gurvich, and A. K. Mskarli. *Trudy Inst. Khim., Akad. Nauk Azerbaidzhan.S.S.R.* 13, 114-23(1954)(in Russian).—Na_2S solns. have been used to ext. humic substances from brown coal. Their use for extn. of humic substance from clay mortar is proposed. Causticization of Na_2S by lime is negligible, but hydrated Fe oxide can give solns. whose $NaOH/Na_2S$ ratio is 91.5/8.5, although with loss of sulfide amounting to as much as 43%. The residual sulfide in the thus obtained soln. is oxidizable by air; after such oxidation the soln. loses its odor and no longer attacks Cu surfaces.

G. M. Kosolapoff

(2)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000617520001-9"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000617520001-9

Gurvich, M. M.

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000617520001-9"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000617520001-9

GURVICH, M. M.

Types of clay solutions. M. M. Gurvich. *Doklady Akad. Nauk Azerbaidzhan. S.S.R.* 12, 97-101(1956)(in Russian).—Two types of clay solns. are recognized as differing in the behavior in a rotating viscometer. One type is normal, thixotropic clay, the other is nonthixotropic. The seizure of boring app. in well drilling is probably assocd. with the presence of the 1st type of clay in the ground. Typical mech. curves are shown (cf. Serb-Serbina and Rebinder, *C.A.* 43, 5257i). G. M. Kosolapoff

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000617520001-9"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000617520001-9

GURVICH, M.M.; YEGIYEVA, R.Sh.

Increasing the efficiency of techniques used in the production of coal-alkali additives from seawater. Trudy Inst. khim. AN Azerb. SSR. 16:118-130 '57. (MIRA 12:9)
(Drilling fluids)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000617520001-9"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000617520001-9

GURVICH, M.M.; DZHALILZADE, T.A.

Simplification of the analysis method of humic substances in coal-alkali additives. Trudy Inst. khim. AN Azerb. SSR 16:131-136 '57. (MIRA 12:9)

(Drilling fluids)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000617520001-9"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000617520001-9

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"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000617520001-9

GURVICH, M.M.

Using the SNS apparatus for determining static shear stress during the application of stresses at various speeds. Zav.lab.22 no.11: 1357 '56. (MLRA 10:2)

1. Institut khimii Akademii nauk Azerbaydzhanskoy SSR.
(Strains and stresses) (Testing machines)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000617520001-9"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000617520001-9

GURVICH, M.M.; ZEYNALOV, B.K.

Petroleum hydroxy acids as reagents in chemical treatment of clayey solutions. Dokl. AN Azerb. SSR 13 no.8:859-864 '57. (MLRA 10:9)

1. Institut khimii Azerbaydzhanskoy SSR. Predstavleno akademikom AN Azerbaydzhanskoy SSR M.F.Nagiyevym.
(Colloids) (Oil well drilling) (Petroleum industry--By-products)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000617520001-9"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000617520001-9

GURVICH, M.M.; YEGIYEVA, R.Sh.

Investigation of the effect of alkali on structure formation in clay suspensions. Izv. AN Azerb. SSR. Ser.fiz-tekh. i khim.nauk no.6:109-121 '58. (MIRA 12:2)
(Clay) (Sodium hydroxide)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000617520001-9"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000617520001-9

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SOV/69-21-2-7/22

AUTHOR: Gurvich, M.M.

TITLE: On the Use of the Rotary Viscosimeter RV-4 for the Rheological Investigations of Systems with Quickly-Changing Structural Qualities (O primenenii rotatsionnogo viskozimetra RV-4 dlya reologicheskikh issledovaniy sistem s bystro menyayushchimisya strukturnymi svoystvami)

PERIODICAL: Kolloidnyy zhurnal, 1959, Nr 2, pp 164-169 (USSR)

ABSTRACT: The present work was undertaken to examine, whether the viscosimeter RV-4 of the system of M.P. Volarovich can be used for the investigation of the rheological qualities of argillaceous solutions, which are needed for oil well drilling. These solutions are either thixotropic or athixotropic. The solutions of the first group tend to rapid structure formation, in particular immediately after their preparation. The solutions of the second group are characterized by a condensed-coagulated structure. The curves illustrating their solidity are of various forms, and often they testify a reduction in solidity of the struct-

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SOV/69-21-2-7/22

On the Use of the Rotary Viscosimeter RV-4 for the Rheological Investigations of Systems with Quickly-Changing Structural Qualities

ure after a certain time, and an increase in solidity if the solution is stirred. These changes occur sufficiently fast. The author therefore, had to take care that the solutions remained in a quiet, unchanged state, until the required tension was applied. The experiments lead to the following results. It is possible to obtain rheological curves of thixotropic argillaceous solutions with the aid of the viscosimeter RV-4. It is impossible however, to measure more than a limited section of the curve, even if the solution is energetically stirred. Athixotropic solutions cannot be rheologically investigated in viscosimeter RV-4 in view of the extreme unsteadiness of these systems in a dynamic state. There are 3 graphs, 4 tables and 19 Soviet references.

ASSOCIATION: Institut khimii AN AzerbSSR Baku (Institute of Chemistry of the AS of the Azerbaydzhan SSR, Baku)

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MISKARLI, A.K.; GURVICH, M.M.; RUSTAMOV, N.R.

Weighting agents and their weighting capacity. Azerb. neft. khoz. 38 no.3:11-13 Mr '59. (MIRA 12:6)
(Oil well drilling fluids)

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GURVICH, M.M.; MISKARLI, A.K., doktor tekhn. nauk, prof., red.;KOSTYUKOVSKAYA, Ye., red. izd-va; ISMAILOV, T., tekhn. red.

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Colloidochemical method of preventing water filtration through porous (sandy) soils of irrigating systems. Azerb.khim.zhur. no.2:103-106 '60. (MIRA 14:8)

(Irrigation)

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Petroleum oxyacids as reagents for the chemical treating of clay solutions. Report No.4: Oxyproducts from unrefined paraffinic distillates as reagents for the chemical treatment of clay solutions. Azerb. khim.zhur. no.3:91-98 '61. (MIRA 14:11)
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