

L 17328-63

ACCESSION NR: AP3004900

replenishing of the cryostat with liquid hydrogen affects the resonant frequency of the primary detector is an essential drawback of the equipment. "In conclusion, the authors wish to thank A. F. Prikhot'ko for his interest in the work, and V. P. Babenko for his help in designing the cryostat." Orig. art. has: 2 figures.

ASSOCIATION: Institut fiziki AN UkrSSR (Institute of Physics, AN UkrSSR)

SUBMITTED: 21Jun62

DATE ACQ: 28Aug63

ENCL: 00

SUB CODE: NS

NO REF SOV: 000

OTHER: 002

Card 2/2

RYABCHENKO, S.N.; ALEKHINA, V.I.; LISIN, D.M.

Interrelation of petrographic ingredients and germanium in
Siberian coals. Izv. Sib. otd. AN SSSR no.2:122-124 '62.
(MIRA 16:10)

1. Khimiko-metallurgicheskiy institut Sibirskogo otdeleniya
AN SSSR, Novosibirsk.

Z/011/63/020/001/002/002
E073/E435

AUTHOR: Ryabchenko, S.N.

TITLE: Germanium from Siberia

PERIODICAL: *Chemie a chemicka technologie. Přehled technické a hospodářské literatury*, v.20, no.1, 1962, 25, abstract Ch 63-345. (In collection: *Voprosy teorii i tekhnologii koksovaniya ugley* (Problems of Theory and Technology of Coal Coking), Novosibirsk, Izdat. sibirsk otd. AN SSSR, 1961, 147-153)

TEXT: The distribution of germanium in gas coal of different specific gravities was studied. The highest germanium concentration was in fractions of 1.26 to 1.28 sp.gr. which had a low ash and high vitrain content, indicating that it was combined with the organic substance of coal. In oxidized coal the germanium content was highest in the fractions of 1.30 to 1.35 sp.gr. with a high content of mineral components. Thermo-hydrolytic cracking has shown that germanium combines primarily with the humic acid and other acidic components of the organic substance of coal. ✓

Card 1/1

[Abstractor's note: Complete translation.]

RYABCHENKO, V.; NEPOMNYASHCHIY, L.

Power vibration roller. Na stroi. Ros. no.3:19-22 D '60.
(MIRA 14:6)

(Vibrators)
(Concrete)

L 5367-66 EWT(1)/EWA(1)/EWT(m)/EWA(b)-2 DIAAP JK

ACC NR: AP5026261

SOURCE CODE: UR/0240/65/000/008/0026/0029

AUTHOR: Ryabchenko, V.A.; Lovtsevich, Ye. L.

ORG: Academy of Communal Economy im. K. D. Pamfilova (Akademiya kommunal'nogo khozyaystva); Institute of Poliomyelitis and Viral Encephalitis, AMN SSSR, Moscow (Institut poliomyelita i virusnykh entsefalitov AMN SSSR)

TITLE: Comparative stability of enteroviruses and Escherichia coli during decontamination of water with gamma radiation

SOURCE: Gigiyena i sanitariya, no. 8, 1965, 26-29

TOPIC TAGS: gamma irradiation, biologic decontamination, virus, bacteria

ABSTRACT: The object of this work was to study the dynamics of inactivation of enteroviruses in water by gamma radiation and to determine the relative stability of enteroviruses and Escherichia coli to this radiation. The specimens studied were type I poliomyelitis virus (Mahoney strain), ECHO-7 virus (Wallace strain), and Escherichia coli (strain 734). The decontamination doses for all three specimens were determined. Judging from the inactivation dynamics, Escherichia coli is less resistant to gamma irradiation than the enteroviruses, and hence cannot be used as a reliable index for the decontamination of water containing enteroviruses. In order to inactivate the enteroviruses, the irradiation dose must be two to three times greater than that necessary for the decontamination of water containing Escherichia coli. Orig. art. has: 1 figure and 1 table.

Card 1/2

UDC: 576.858.23+576.858].097.22 : 614.777-084.487

L 5367-66

ACC NR: AP5026261

SUB CODE: LS, CB / SUBM DATE: 20Jan65 / ORIG REF: 002 / OTH REF: 005

OC

Card 2/2

RYBCHENKO, V. F.; Nazarov, I. M. and Kakhniashvili, A. I.

Derivatives of Acetylene. 158. Isomerization of Diene Dichlorides in Interchange Reactions and Synthesis of Chlorodiene Alcohols, page 913
Sbornik statey po obshchey khimii (Collection of Papers on General Chemistry), Vol II, Moscow-Leningrad, 1953, pages 1680-1686.

Inst of Organic Chemistry, Acad Sci USSR

RYABCHENKO, V. F.

Acetylene derivatives. CLX. Condensation of aldehydes and ketones with acetylene under pressure. New method of synthesis of acetylenic alcohols. I. N. Nazarov, I. L. Kotlyarevskii, and V. F. Ryabchenko (Inst. Org. Chem., Acad. Sci. U.S.S.R., Moscow). *Zhur. Obshchei Khim.* 23, 1900-1(1953); cf. U.S. 2,163,770, C.A. 33, 7815; C.A. 48, 12689a.—A new method of prepn. of acetylenic alcs. consists of satn. with C_2H_2 of a mixt. of powd. KOH in Et_2O in a metallic reactor at 5-10 atm., after which an aldehyde or ketone is added and the stirring continued for 0.5 hr. after which the pressure is released and the product is treated with H_2O (1-2 parts in respect to KOH used), neutralized with CO_2 and extd. with Et_2O . If the KOH- Et_2O mixt. contains small amts. of aliphatic alcs. the yields of acetylenic alcs. rise by 10-20%. Thus 65 g. KOH in 250 ml. Et_2O satd. with C_2H_2 at 0° at 10 atm., treated over 50 min. with 29 g. AcH , stirred 20 min. at 0° at 10 atm. C_2H_2 gave 20.2% 1-butyn-3-ol, b. 107-8°; addn. of 3 ml. 95% EtOH to original mixt. gave 43% yield. $EtCHO$ similarly gave 45.2% 1-pentyn-3-ol, b. 124°, n_D^{20} 1.4332, with 5 ml. EtOH being added to the original mixt. $PrCHO$ gave 51.5% 1-hexyn-3-ol, b. 143.5°, n_D^{20} 1.4350; iso- $PrCHO$ gave 47.5% 4-methyl-1-pentyn-3-ol, b. 133°, n_D^{20} 1.4353. Hydrocinnamaldehyde gave 54.5% 5-phenyl-1-pentyn-3-ol, b. 125-6°, n_D^{20} 1.5350, when a little EtOH was added to the original mixt. Similarly were prepd.: 74.5% 4-methyl-1-hexyn-3-ol, b. 154-4.5°, n_D^{20} 1.4378; 1-nonyn-3-ol, b. 83-81°, n_D^{20} 1.4444; dimethylethynylcarbinol, 93%, b. 103.5°, n_D^{20} 1.4211; 3-methyl-1-pentyn-3-ol, b. 121.5°, n_D^{20} 1.4304; 93% 3-ethyl-1-pentyn-3-ol, b. 137-8.4°, n_D^{20} 1.4384; 3-propyl-1-hexyn-3-ol, b. 173-4°, n_D^{20} 1.4575; 65% 4-methyl-3-isopropyl-1-pentyn-3-ol, b. 165.5°, n_D^{20} 1.4600; 1-ethynyl-1-cyclopentanol, b. 157°, m. 27°; 96.7% 1-ethynyl-1-cyclohexanol, b. 179°, m. 31-2°; 70% 3-phenyl-1-butyn-3-ol, b. 82-3°, m. 49°; 5.2% 3,5-dimethyl-4-hexen-1-yn-3-ol, b. 65-6°, n_D^{20} 1.46-20, from mesityl oxide. G. M. K.

RYADCHENK , V. S.

"Condensation of Acetylene With Aldehydes and Ketones Under Pressure." Cand
Chem Sci, Moscow Inst of Fine Chemical Technology, Moscow, 1955. (KL, No 11, Mar 55)

So: Sum. No 670 , 29 Sept 55 - Survey of Scientific and Technical Dissertations
Defended at USSR Higher Educational Institutions (15)

Ryabchenko, V.F.

USSR/Organic Chemistry. Synthetic Organic Chemistry. E-2

Abs Jour : Ref Zhur - Khimiya, No. 8, 1957, 26693.

Author : Nazarov, I.N., Kotlyarevskiy, I.L.,
Ryabchenko, V.F.Inst : Academy of Sciences of USSR.
Title : Derivatives of Acetylene. Report 174. Con-
densation of Aldehydes and Ketones with
Acetylene under Pressure.Orig Pub : Izv. AN SSSR, Otd. khim. n., 1956, No. 8,
960 - 966.Abstract : The application of pressure to the condensa-
tion of aliphatic, alicyclic, heterocyclic,
aromatic and aliphatic-aromatic ketones with
acetylene in presence of KOH increases the
reaction speed several times and rises the
yield considerably. Aliphatic aldehydes can

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APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001446220011-0"

USSR/Organic Chemistry. Synthetic Organic Chemistry. E-2
Abs Jour : Ref Zhur - Khimiya, No. 8, 1957, 26693.

condense with acetylene under the same con-
ditions producing secondary acetylene alcohols
(I) at a large yield. Addition of a small
amount of aliphatic alcohol increases the yield
very much. C_2H_2 is saturated with a mixture of
KOH powder, ether and, sometimes, aliphatic
alcohol (C_2H_5OH - C_4H_9OH) by stirring it vigor-
ously in an apparatus (see RZhKhim, 1955,
28826), the carbonyl compound (II) is intro-
duced gradually, stirred, decomposed by water
and the acetylene alcohols are obtained by dis-
tilling the neutralized layer of ether (the
amounts of KOH, ether, ethanol, the reaction
temperature, the C_2H_2 pressure, the duration
of feeding and the amount of II, the duration
of stirring, the products of the reaction,

Card 2/7

USSR/Organic Chemistry. Synthetic Organic Chemistry. E-2

Abs Jour : Ref Zhur - Khimiya, No. 8, 1957, 26693.

98 g, 350 mlit, 4 mlit, -5° , 15 gage atm., 45 min., 95 g of mesityl oxide, 2 hours, 3,5-dimethylhexene-4-ine-1-ol-3, 11%, 65 to 66 $^{\circ}$ /17 mm, 1.4629; 75 g, 450 mlit, - , -8° , 15 gage atm. 60 min., 100 g of 1,2,5-trimethylpiperidene-4, 45 min., 1,2,5-trimethyl-4-ethinylpiperidol-4, α form, 19.7 g, melt. p. 110 to 111 $^{\circ}$, β form 81.5 g, melt. p. 177 to 178 $^{\circ}$; 80 g, 350 mlit, 1 mlit, 13° , 10 gage atm, 65 min., 100 g of 2-methylcyclohexanone, 60 min., 2-methyl-1-ethinylcyclohexanol-1, 96%, 72 $^{\circ}$ /8 mm, 1.4720; 120 g, 350 mlit, - , 8° , 6 gage atm, 60 min., 100 g of 2,2-dimethyltetrahydropyrone-4, 3 hours, 2,2-dimethyl-4-ethinyltetrahydropyrone-4, 82%, 77 $^{\circ}$ /3 mm, melt. p. 87 $^{\circ}$; 81 gr, 350 mlit, - , 7° , 5 gage atm, 50 min.,

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"APPROVED FOR RELEASE: 06/20/2000" Organic Chemistry. E-2 CIA-RDP86-00513R001446220011-0"

Abs Jour : Ref Zhur - Khimiya, No. 8, 1957, 26693.

76 g of cis- β -decalone, 3 hours, cis-2-ethinyl-decalol-2, 94%, 92 to 93 $^{\circ}$ /3 mm, 1.5112; 80 g, 400 mlit, - , 15° , 10 gage atm, 90 min., 90 g of trans- α -decalone, 3 hours, trans-1-ethinyl-decalol-1, 90%, 98 to 99 $^{\circ}$ /2 mm, 1.5060; 450 g, 2.5 lit, 10 mlit, 10° , 7 gage atm, 90 min., 465 g of cyclopentanone, 90 min., 1-ethinylcyclopentanol-1, 458.8 g, 157 $^{\circ}$, melt. p. 27 $^{\circ}$; 130 g, 350 mlit, - , 5° , 8 gage atm, 35 min., 102 g of β -acetopropanol, 2 hours, 3-methylhexine-1-diol-3,6 (III), 57%, 110 to 113 $^{\circ}$ /5 mm, 1.4680; 65 g, 350 mlit, 1 mlit, 0° , 10 gage atm, 70 min., 51 g of dimethylacetylcarbinol, 60 min., 2,3-dimethylpentine-4-diol-2,3, 84%, 79 to 80 $^{\circ}$ /10 mm. 9.2 g of 3-methylhexanediol-3,6, boil. p. 102 $^{\circ}$ /4 mm, $n_D^{20} = 1.4575$, was

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"APPROVED FOR RELEASE: 06/20/2000

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Dist. 4/13/82 (3) *mm*

APPROVED FOR RELEASE: 06/20/2000

CIA-RDP86-00513R001446220011-0"

NYABUCHENKO, V.I.; AGABABYANTS, F.G.

Ion exchange and structure formation in suspensions, Ukr. khim.
zhurn. 30 no. 8:872-876 '64. (Ukr. 1964)

ZHUKHOVITSKIY, S.Yu.; RYABCHENKO, V.I.

Relationship among the conditional viscosity, static shearing
stress, and hydraulic constants of clay muds. Trudy KF VNII
no.9:38-49 '62. (MIRA 15:9)
(Oil well drilling fluids)

ZHUKHOVITSKIY, S.Yu.; RYABCHENKO, V.I.

It is necessary to replace the SPV-5 viscosimeter by the
SPV-4 viscosimeter; a topic for discussion. Neft. khoz. 38
no.9:47-52 S '60. (MIRA 13:9)

(Viscosimeter)

RYABCHENKO, V.T., kand. tekhn. nauk (Dnepropetrovsk); ZHUREBISOV, I.V., inzh.
(Dnepropetrovsk)

Maintenance of curves based on least marks is a simpler and more
convenient method. Fiz' i mat. khim. 9 no. 2:25-26 '55.

(HIRA 18:5)

PETRUKOVICH, A.A., dotn.; RYABCHENKO, V.S., dots. (Gomel')

Stability of a track with reinforced concrete ties. Put' 1
put.khoz. no.10:15 0 '59. (MIRA 13:2)

(Railroads--Ties, Concrete)

RYABCHENKO, V.S., kand.tekhn.nauk (Dnepropetrovsk)

Transition curves on high-speed traffic sections. Put' i put.khoz.
9 no.8:37-39 '65. (MIRA 18:8)

s/080/60/033/04/15/045

AUTHORS: Kazimirovskaya, Ye.L., Ryabchenkov, A.V.TITLE: On the Transformation of Uniform Corrosion Into Ulcerous Corrosion Under the Conditions of High-Temperature Oxidation of Periodically Strained Metal

PERIODICAL: Zhurnal prikladnoy khimii, 1960, Vol 33, Nr 4, pp 841 - 845

TEXT, For the study of the processes of high-temperature oxidation and their effect on the mechanical properties of alloys the investigation of the structure, the composition and the properties of protective films is very important. The problem was studied on EI612¹⁶ grade steel samples of 8 mm in diameter which were subjected to symmetrical bending with a frequency of 2,800 cycles per minute. It has been established that the intensity of ulcerous corrosion depends on the magnitude of the stresses, the concentration of sulfur dioxide in the atmosphere, and on its humidity and temperature. Below a certain stress level uniform corrosion does not pass into the ulcerous type. Under the conditions of the action of a dry mixture of air with 0.3% sulfur dioxide and a temperature of 650°C this level for EI612 steel is 90 - 95% of the nominal resistance limit. The introduction of 6% of water steam prevents ulcerous corrosion. In the oxidation of steel in pure air oxides of the spinel type are formed. There are also

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S/080/60/033/04/15/045

On the Transformation of Uniform Corrosion Into Ulcerous Corrosion Under the Conditions of High-Temperature Oxidation of Periodically Strained Metal

lines of the hexagonal lattice of iron and nickel sulfides on the electronograms and also lines similar to FeS_2 . The content of iron and nickel sulfide in the scale is lower than in a sample kept in a mixture of dry air and SO_2 . The films formed in moist gases are more strongly recrystallized than in dry gases. The action of alternating stresses destroys the protective films and facilitates the formation of sulfide compounds. In the case of transition from dry air mixtures to moist ones, the total corrosion increases. This is not connected with the formation of sulfide compounds, but with an increase in the rate of oxide formation.

There are: 2 photographs, 1 table, 1 graph and 3 references, 2 of which are Soviet and 1 English.

SUBMITTED: July 23, 1959

Card 2/2

RYABCHENKO, V. I.

RYABCHENKO, V. I.

RYABCHENKO, V. I. -- "Design and Balancing of a Polygonometric Course of an Arbitrary Form on the Basis of the Principle of Similar Effects and Angular Effects." Sub 25 Dec 52, Moscow Inst of Engineers for the Organization of Land Exploitation. (Dissertation for the Degree of Candidate in Technical Sciences)

SO: Vechernaya Moskva, January-December 1952

: RYABCHENKO, V. I.

51-4-21/25

AUTHORS: Krinchik, G.S. and Ryabchenko, V.I.

TITLE: A resonance amplifier of very low frequency (used together with a photomultiplier) FEOU-15 to measure signals of 10^{-8} - 10^{-9} v. (Rezonansnyy usilitel' infranizkoy chastoty s FEOU-15 dlya izmereniya signalov 10^{-8} - 10^{-9} v.)

PERIODICAL: "Optika i Spektroskopiya" (Optics and Spectroscopy) 1957, Vol.2, No.4, pp.537-538 (U.S.S.R.)

ABSTRACT: This note describes an amplifying assembly which works at a resonance frequency of 1 c/s and whose intrinsic noise is below 10^{-9} v. This assembly is intended for use with an infrared spectrograph or other instruments in which a photo-electric multiplier FEOU-15 is used. A light signal from a thermo-element magnified by the multiplier FEOU-15, is modulated by causing periodic oscillations of a mirror galvanometer G_3 . The light reflected by G_3 falls through a rectangular slit on to a photo-resistance FS-K1. Displacement of the light-darkness boundary on FS-K1 causes changes in resistance of FS-K1 and of current via a load resistance. By using FS-K1 a high-resistance input into a voltage amplifier (one pentode, three double triodes, one diode) is achieved. This amplifier is of the high-stability, narrow-band resonance type with a double T-bridge tuned to 1 c/s. This low frequency was chosen because of inertia of the thermo-element,

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51-4-21/25

A resonance amplifier of very low frequency (used together with a photomultiplier) FEOU-15 to measure signals of 10^{-8} - 10^{-9} V. (Cont.)

the multiplier FEOU-15 and the photo-resistance FS-K1. The apparatus was used to measure the effect of direction of magnetization of a ferro-electric (iron), with respect to the plane of incidence of light, on the reflection and absorption of light by the specimen. Reliable results were obtained in contrast to a "static" method (no modulation) when noise effects very seriously disturbed the measurements. Still better results might possibly be obtained by mechanical interruption of the light-beam. There are 2 figures (including a circuit diagram of the amplifying assembly) and 3 references, all Slavic.

ASSOCIATION: Physics Department, Moscow State University.
(Moskovskiy Gosudarstvennyy Universitet, Fizicheskiy Fakultet).

SUBMITTED: October 22, 1956.

AVAILABLE: Library of Congress

Card 2/2

RYABCHENKO, V. I.

"The Use of Relief Images on Maps of State Surveys in Compilation of Land-Survey Projects".
Tr. Mosk. in-ta inzh. zemleustroystva, No. 1, pp 41-55, 1954.

Various methods of transference of horizontals from topographic survey maps on horizontal projection maps are described. An optical mechanical method is also suggested. The design of an enlarger for horizontal transference and its operation is described. (RZhAstr, No. 1, 1956)

SO: Sum No 884, 9 Apr 1956

RYABCHENKO, V. I.

RYABCHENKO, V. I.

"Utilization of the Representation of Relief on Plans of State Surveys in the Drawing Up of Earth Construction Projects," Tr. Mosk. In-ta Inzh. Zemleustroystva, No 1, 41-55, 1954

[No abstract given] (RZhGeol, No 1, 1955)

SO: Sum.No. 536, 10 Jun 55

L 07589-67 EWT(d)/EWT(m)/EWP(w)/EWP(v)/EWP(k) IJP(c) WW/EM

ACC NR: AP6030430

SOURCE CODE: UR/0420/66/000/006/0050/0055

AUTHOR: Ryabchenko, V. M. 22

ORG: None

TITLE: Shell design in synthesizing optimum thin-walled systems

SOURCE: ⁷⁴Samoletostroyeniye i tekhnika vozdušnogo flota, no. 6, 1966, 50-55

TOPIC TAGS: shell theory, thin shell structure, *REINFORCED SHELL STRUCTURE*

ABSTRACT: This article is a continuation of previous work by the author on optimum design of thin-walled systems (L. A. Kolesnikov, V. M. Ryabchenko, "On the Problem of Automating Design Calculations of Thin-Walled Systems", *Sb. "Samoletostroyeniye i tekhnika vozdušnogo flota"*, No. 5, Izd-vo Khar'kovsk. un-ta. 1966; V. M. Ryabchenko, "Algorithm for Selecting Optimum Parameters of of Thin-Walled Systems", *Sb. "Samoletostroyeniye i tekhnika vozdušnogo flota"*, No. 5, Izd-vo Khar'kovsk. un-ta. 1966). The problem is solved on the basis of hypotheses formulated in the previous article except that the shell design is not assumed and must be determined. Structures are considered in which the shell is regular so that a system of coordinates u and v may be selected on the given surface F formed by the outside of the covering where the line u is directed along the longitudinal reinforcing members and the line v is directed along the transverse reinforcing members. It is assumed that the longitudinal

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ACC NR: AP6030430

and transverse ribs may be divided into two groups in which the elements are identical and equidistant. It is further assumed that the geometric characteristics of the cross sections for the supporting elements may be represented by polynomials in low powers of u and v . The distribution of the material in this type of supporting structure is fully described by the thickness of the covering at each point, the location of the longitudinal and transverse ribs on the surface F and the geometry of the cross sections. It is shown that the methods proposed in the previous articles may be applied to this problem and a program for automation of the solution is given. Orig. art. has: 2 figures, 24 formulas.

SUB CODE: 20/ SUBM DATE: None/ ORIG REF: 004

Card 2/2

RYANOVSKOYE

RYANOVSKOYE, G.S.; RYANOVSKOYE, V.I.

A resonance amplifier of infra-low frequency with F2OU-15 for the measurement of signals 10^{-8} to 10^{-9} v. Opt. i spektr. 2 no. 4: 537-538 Ap '57. (MLRA 10:6)

I. Moskovskiy gosudarstvennyy universitet, fizicheskiy fakul'tet.
(Electronic Instruments) (Spectrograph)
(Amplifiers, Electron-tube)

RYABCHENKO, V.S., kandidat tekhnicheskikh nauk (Dnepropetrovsk)

Removing disturbances in easement curves. Zhel.dor.transp. 37
no.6:80 Je '56. (MIRA 9:8)
(Railroads--Curves and turnouts)

RYABCHENKO, V.S., kand. tekhn. nauk

Advantages of replacing linear easement curves with nonlinear ones. Vest. TSNIIMPS [17] no.7:52-54 N '58. (MIRA 11:12)

1. Dnepropetrovskiy institut inzhenerov zheleznodorozhnogo transporta.
(Railroads--Curves and turnouts)

RYABCHENKO, V.S.kandidat tekhnicheskikh nauk (g. Dnepropetrovsk)

New book on railroading ("Principles of railroad engineering."
A.E. Vicherevin and others. Reviewed by V.S. Ryabchenko).
Zhel.dor.transp. 37 no.7:93-95 J1 '56. (MLRA 9:8)
(Railroad engineering)
(Vicherevina, A.E.)

L 51539-65 EWT(l)/EWT(m)/EWP(e)/EWP(i)/EPT(n)-2/EPR/ENG(m)/T/EWP(t)/EWP(b)/
 ENA(c)/EEC(b)-2 Ps-h/Pu-h IJP(c) JD/JG/CG/NT/NH UR 0181/65/007/004/1150/1156
 ACCESSION NR: AP5010726

53
51
6

AUTHOR: Gorbatty, N. A.; Ryabchenko, Ye. M.

TITLE: Behavior of cesium on single-crystal points of tantalum and tantalum carbide

SOURCE: Fizika tverdogo tela, v. 7, no. 4, 1965, 1150-1156

TOPIC TAGS: single crystal, tantalum, tantalum carbide, cesium activation, work function, heat of evaporation

ABSTRACT: The purpose of the investigation was to determine in greater detail the behavior of adsorption cesium films on the surface of pure tantalum and its carbide, and to determine quantitatively the change in the work function when these substances are treated in cesium vapor. An ordinary spherical autoelectronic projector was used in all experiments. Tantalum points were made of wire 150 μ in diameter by etching in melted KOH. The final points were smooth and sufficiently thin (~ 0.1 μ). The cesium vapor introduced into the projector was doubly distilled. The tantalum carbide point was prepared from the tantalum point by exposing the latter to benzene vapor. The work functions of the Ta--Cs and Ta₂C--Cs systems, with optimal coating, were 1.6 and 1.4 eV, respectively. The average heat of

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L 51539-65

ACCESSION NR: AP5010726

evaporation of Cs from Ta₂C was found to be 2.8 eV; the heat of evaporation of Cs from Ta is estimated at 2.5 eV. "The authors thank Professor G. N. Shuppe for valuable advice and a discussion of the results." Orig. art. has: 8 figures.

ASSOCIATION: Tashkentkiy gosudarstvennyy universitet im. V. I. Lenina (Tashkent State University)

SUBMITTED: 17Aug64

ENCL: 00

SUB CODE: 88

NI: REF SOV: 006

OTHER: 000

Card 2/2

DUBYNIN, N.G.; RYABCHENKO, Ye.P.

Systems of working the Gornaya Shoriya iron ore deposits and ways
for improving them. Trudy Inst. gor. dela Sib. otd. AN SSSR
no.3:115-154 '60. (MIRA 14:4)
(Gornaya Shoriya---Iron mines and mining)

ILIVITSKIY, A. A.; NIKOLIN, V. I.; DUBYNIN, N. G.; GAN'SHIN, L. P.;
RYABCHENKO, Ye. P.; SVAROVSKIY, B. M.; TREGUBOV, B. G.;
TRUFAKIN, N. Ye.

"Determining the properties of rocks" by L. I. Baron, B. M.
Loguntsov, and E. Z. Pozin. Reviewed by A. A. Ilivitskii and
others. Ger. zhur. no.10:77-78 0 '62. (MIRA 15:10)

1. Institut gornogo dela Ural'skogo filiala AN SSSR, Sverdlovsk
(for Ilivitskiy, Nikolin). 2. Institut gornogo dela Sibirskogo
otdeleniya AN SSSR, Novosibirsk (for Dubynin, Gan'shin,
Ryabchanko, Svarovskiy, Tregubov, Trufakin).

(Rocks—Testing) (Baron, L. I.)
(Loguntsov, B. M.) (Pozin, E. Z.)

L 08421-67 EWT(m)/EWP(k)/EWP(t)/ETI LJP(c) ID/IG/WB/GD
ACC NR: AT6034465 (N) SOURCE CODE: UR/0000/66/000/000/0276/0280

AUTHOR: Prokoshkin, D. A.; Arzamasov, B. N.; Ryabchenko, Ye. V.

ORG: none

TITLE: Investigation of molybdenum siliconizing in a glow discharge

SOURCE: AN SSSR. Institut metallurgii. Svoystva i primeneniye zharoprochnykh splavov (Properties and application of heat resistant alloys). Moscow, Izd-vo Nauka, 1966, 276-280

TOPIC TAGS: molybdenum, silicon, ~~glow discharge~~, ~~oxidation~~, ~~resistance~~, ~~metal surface impregnation~~, ~~metal~~, ~~metal coating~~, ~~coating composition~~, ~~molybdenum-silicon coating~~, ~~metal surface impregnation~~

ABSTRACT: The schematic and operation of a unit for siliconizing metals with glow-discharge heating are described. The experiments were made on pure molybdenum wire, 0.3 mm in diameter, in a mixture of silicon tetrachloride vapor and dry commercial-grade hydrogen. The design of the unit also permitted electric resistance heating of the wire. The partial pressure of silicon tetrachloride vapor and hydrogen was 30 and 10 mm Hg respectively. The temperature of siliconizing with glow-discharge heating was 1100C and with resistance heating--1300C. In both cases, heating the wire to the siliconizing temperature lasted 0.5 min, the holding

Card 1/2

L 08421-67

ACC NR: AT6034465

2

time at this temperature was 5 min, and the time of cooling to 200C was about 1 min. Regardless of the method of heating, no molybdenum siliconizing was observed in the absence of hydrogen in the ambient medium, but a silicide coating was readily formed on the wire surface when a mixture of silicon tetrachloride vapor and hydrogen was used. The weight and size of the test specimens also increased. The silicide coating consisted of an outer $MoSi_2$ phase, an inner Mo_3Si phase, and a thin layer, probably of the Mo_5Si_3 phase, between them. In siliconizing with glow-discharge heating, the silicon impregnation proceeded much more rapidly than with other methods, particularly at lower temperatures. Thus, siliconizing at 800C with glow-discharge heating and at 1200C with resistance heating produced silicide coatings of the same thickness. Regardless of the method of heating, the reaction products were the same as was also the oxidation resistance of the formed coatings, continuously or cyclically heated in air at 1500C. The maximum number of heating cycles sustained by coatings 40- μ thick was 330. Tungsten, niobium, tantalum and a number of other metals were also successfully siliconized with glow-discharge heating. Orig. art. has: 3 figures.

SUB CODE: 11/13/ SUBM DATE: 10Jun66/ OTH REF: 002/ ATDPPRESS: 5103

Card 2/2 1s

AKULINICHEV, I.T.; ANDREYEV, L.F.; BAYEVSKIY, R.M.; BAYKOV, A.Ye.; BUYLOV, G.G.
GAZENKO, O.G.; GRYUNTAL', R.G.; ZAZYKIN, K.P.; KLIMENTOV, Yu.F.;
MAKSIMOV, D.G.; MERKUSHKIN, Yu.G.; MONAKHOV, A.V.; PETROV, A.P.;
RYABCHEKOV, A.D.; SAZONOV, N.P.; UTYAMYSHEV, R.I.; FREYDEL', V.R.;
KHIL'KEVICH, B.G.; SHADRINTSEV, I.S.; SHEVANDINA, S.B.; ESAULOV,
N.G.; YAZDOVSKIY, V.I.

Method and means of medical and biological studies in a space
flight. Probl. kosm. biol. 3:130-144 '64. (MIRA 17:6)

RYABCHENKOV, A.S.

Origin of saucer-shaped depressions in central chernozem regions (author's
summary). *Biul.MOIP. Otd.geol.* 28 no.1:92-93 '53. (MLRA 6:11)
(Steppes)

RYABCHENKOV, A.S.; OBRUCHEV, V.A., akademik.

Characteristics and nature of the moraines of the Don glacial tongue. Dokl.
AN SSSR 92 no.3:659-661 S '53. (MLRA 6:9)

1. Akademiya nauk SSSR (for Obruchev).
(Don valley--Moraines) (Moraines--Don valley)

RYABCHENKOV, A.S.

Conditions of the occurrence, and the age of Krivobor'ye lignite
along the Don. Biul. MOIP. Otd.geol. 29 no.4:93-97 JI-Ag '54.
(Don Valley--Lignite) (Lignite--Don Valley) (MLRA 7:9)

RYABCHENKOV, A. S.

USSR/Geology - Loess

Card 1/1 : Pub. 22 - 34/49

Authors : Ryabchenkov, A. S.

Title : ~~USSR/Geology - Loess~~
New data about the origin of loess in the Ukraine

Periodical : Dok. AN SSSR 98/4, 633-636, Oct. 1, 1954

Abstract : New geological data on the origin of loess (wind blown silt) in the Ukraine are presented. The basic minerals found in loess are: quartz, field spar and some other light fraction minerals (muscovite, glauconite, biotite and green mica). Seventeen references (1899-1953).

Institution : Ministry of Geology, USSR, All-Union Hydrogeological Trust

Presented by : Academician V. A. Obruchev, August 10, 1954

RYABCHENKOV, A.S.

RYABCHENKOV, A.S.

Origin of loess in the Ukraine in view of mineralogical data. Biul.
Kom.chetv.per. no.20:45-59 '55. (MLRA 8:11)
(Ukraine--Loess)

RYABCHENKOV, A.S.

Engineering geological research for small scale irrigation sites
in the central chernozem areas. Sov.geol. no.44:21-33 '55.

(MLRA 8:11)

(Water resources development) (Irrigation)

RYABCHENKOV, A.S.

The characteristics and nature of moraines of the Don glacial
tongue. Izv.AN SSSR Ser.geog.no.1:69-71 Ja-P '56.(MIRA 9:7)
(Don Valley--Moraines)

Ryabchenkov, A.S.

5-2-26/35

SUBJECT: USSR/Geology

AUTHOR: Ryabchenkov A.S.

TITLE: On the Origin of Loess and Loess-Like Rocks of the Russian Plain from the Viewpoint of Mineralogical Data (O preiskhozhdenii lessa i lessovidnykh porod Russkoy ravniny v svete mineralogicheskikh dannykh)

PERIODICAL: Byulleten' Moskovskogo Obshchestva Ispytateley Prirody, Otdel Geologicheskii, 1957, # 2, p 159 (USSR)

ABSTRACT: Peculiarities of the mineralogical composition of loess and loess-like rocks of various geomorphological steps and some other characteristic features furnish grounds to distinguish between several genetic types of loess: eolian, aqueous, and eolian-aqueous.

Eolian loess and loess-like rocks occur in the highest geomorphological steps - flat elevations (at the Volga River, the Middle-Russian one, the Volyn'-Podol'sk one and at the Donets River). The loesses of the Black Sea lowland belong also to the eolian ones.

Card 1/2

Method for general hydrogeological investigations in closed and
semi-closed territories. Paper. 1965. No. 1. P. 140-144
1965. (MIRA 18:3)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut (inzhenerii i
inzhenernyy geologii).

RYABCHENKOV, A.S.

Mineralogic and petrographic approach to a study of the genesis
of cover formations of the East European Plain. Zemlevedenie
5:99-108 '60. (MIRA 15:8)
(East European Plain—Loam soils)

RYABCHENKOV, A.S.; ANTONENKO, K.I.; TITOV, N.A.; CHAPOVSKIY, Ye.G.;
CHURINOV, M.V.; KONOPIYANTSEV, A.Z.; VIKTOROV, S.V.; VOSTOKOVAYA,
Ye.A.; SADOVSKIY, N.D.; KUDELIN, B.I.; OGIL'VI, N.A.;
LUNGERSGAUZEN, G.F.; BRODSKIY, A.A.; SHCHERBAKOV, A.V.; POPOV,
V.N.; YEMEL'YANOVA, S.P.; SOKOLOV, S.S.; BERSENEV, I.I.; GROSHIN,
S.I.; MAKAVEYEV, A.A.; MARINOV, N.A.; YEFIMOV, A.I.; ASSOVSKIY,
G.N.; VLADIMIROV, A.G. [deceased]; PROKHOROV, S.P.; FILIPFOVA,
B.S., red. izd-va; BYKOVA, V.V., tekhn. red.

[Methodological manual on hydrogeological surveying at the scales
of 1:1,000,000 - 1:500,000 and 1:200,000 - 1:100,000] Metodiche-
skoe rukovodstvo po gidrogeologicheskoi s"emke masshtabov
1:1000 000 - 1:500 000 i 1:200 000 - 1:100000. Pod obshchei
red. A.A. Makaveeva i A.S. Ryabchenkova. Moskva, Gos. nauchno-
tekhn. izd-vo lit-ry po geol. i okhrane neдр, 1961. 318 p.

(MIRA 15:3)

1. Russia (1923- U.S.S.R.) Ministerstvo geologii i okhrany neдр.
(Water, Underground) (Geological surveys)

RYABCHENKOV, A.S.

Permafrost traces of the glacial period in the upper Don Basin.
Vop. gidrogeol. i inzh. geol. no. 18:146-153 '59. (MIRA 14:5)
(Don Valley—Glacial epoch)

RYABCHENKOV, A.S.

Origin of loess and loesslike sediments in the East European Plain
in the light of mineralogical data. *Biul.MOIP.Otd.geol.* 35 no.2;
62-79 Mr-Ap '60. (MIRA 14:4)
(East European Plain--Loess)

RYABCHENKOV, A.S.

Principles of hydrogeological stratification. Sov.geol. 2
no.3:101-113 Mr '59. (MIRA 12:6)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut gidrogeologii
i inzhenernoy geologii (VSEGINGEO).
(Geology, Stratigraphic) (Water, Underground)

История Кавказа

AUTHOR: None given 5-3-14/37

TITLE: Chronicle of the Hydrogeological Section (Khronika gidrogeologicheskoy sektsii)

PERIODICAL: Byulleten' Moskovskogo Obshchestva Ispytateley Prirody, Otdel Geologicheskiiy, 1957, No 3, pp 159-160 (USSR)

ABSTRACT: The following reports were delivered at the meeting of the Hydrogeological Section, Moscow Society of Naturalists, from 14 February to 21 March 1957: I.G. Glukhov on "Loesses of Water Origin in Some Regions of Central Asia"; Yu.V. Mukhin on the "Influence of Natural Fluctuations of the Underground Water Level on the Discharge of Wells and Other Water Collectors"; V.A. Shemshurin on "Hydrogeological Calculation of the Underground Discharge of the Yakh-Su River (Central Asia) by Electric Survey Data"; V.V. Ivanov on "Vertical Hydrochemical Zonation in Regions of Active Volcanos"; B.P. Bulavin on "Problen of Loessial Soil Sagging in Connection with Observations on the Lower-Don Canal", and A.S. Ryabchenkov on the "Mineralogical and Petrographic Composition and Origin of Loessial Rocks of the Donets Ridge".

AVAILABLE: Library of Congress
Card 1/1

RYABCHENKOV, A.V.; PONGIL'SKIY, N.F.; ZAYTSEV, E.G.; GERASIMOV, V.I.

Apparatus for corrosion tests under strain at high temperature
and pressure. Zav.lab. 31 no.10:1265-1268 '65. (MIRA 19:1)

1. Tsentral'nyy nauchno-issledovatel'skiy institut tekhnologii
i mashinostroyeniya.

RYASHENKOV, A. V. and YAKHINA, V. D.

"Anticorrosive Nitriding," Sbornik Trudov TsNIITMASH, Moscow, No. 11, 1948.

RYAECHEKOV, A. V.

25588. RYAECHEKOV, A. V.
Apparat dlya ispytaniya metallov na korroziyu pri periodicheskom pogruzhenii
v zhidko tb. v sb: Korroziya, zashchita ot korrozii i elektroliz. L., 1948,
s. 173-78.

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

RYAECHEKOV, A. V.

25583. RYAECHEKOV, A. V.

Azotirovaniye stali v solyanykh vannakh. V sb: Korroziya,
zashchita ot korrozii i elektroliz M., 1948, s 58-76 -
Bibliogr: 7 Nazv.

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

RYAECHEKOV, A. V.

25587. RYAECHEKOV, A.V.
Eletrokhimicheskaya zashita stali ot korrozii i obezvelerozhivaniya v solyarykh
vannakh. 7 sb: Korroziya, zashchita ot korrozii i elektroliz. M. 1948, s.48-57,
--Bibliogr: 10 nazv.

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

RYABCHENKOV, A. V.

Inst. Tech. Econ. Phys.

"Methods of Protecting Metals From Corrosion Fatigue," ITEIN, 1948.

RYABCHENKOV, A. V. and NOVIKOV, V. N.

"Corrosion-Fatigue-Strength of Surface-Hardened Steel," Mashgiz, Moscow, 1950.

RYABCHENKOV, A. V.

"Investigation of Methods for Protection of Steel Against Corrosion Fatigue in Sea Water," p. 137 of Problems of Sea Corrosion, 1951.

Cand. Tech. Sci.

Book W-22365, 14 Apr 52

RYABCHENKOV, A.V., kandidat tekhnicheskikh nauk.

Investigating methods of steel protection from corrosion
fatigue in sea water. Trudy kom. po bor'. s korr.met. no.1:
137-157 '51.

(MLRA 10:8)

(Steel--Corrosion)

USSR/Chemistry - Corrosion

Apr 52

"Electrochemical Mechanism of Corrosion Fatigue of Steel in Electrolyte Solutions," A. V. Ryabchenkov, Moscow

"Zhur Fiz Khim" Vol XXVI, No 4, pp 542-554

Cyclically repeated alternating stresses noticeably lower the electrode potential of steel. With increase of the stress, the rate of displacement of the potential to lower values is increased. The greatest reduction of electrode potential is brought about by changing stresses that produce

217728

tension. Using microelectrochem procedures, established the fact that a corrosion element is generated when stresses resulting from loads applied at 2 neighboring regions of the metal surface differ in magnitude. Studied the work of a 2-electrode ($Fe_{\sigma} - Fe_{\rho}$) corrosion element as was a function of the stresses. Showed that the potential difference and the current of this element increase sharply with the stress. On the basis of the investigation described, the mechanism of corrosion fatigue of steel in electrolyte solutions was formulated.

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RYABCHENKOV, A. V.

KYACHENKOV, A. V.

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2

Electrochemical Mechanism of Corrosion Fatigue of Steel in the Solutions of Electrolytes. A. V. Kyachenkov. (*Zhurnal Fizicheskoi Khimii*, 1952, 26, 4, 524-534). [In Russian]. A systematic investigation of the dependence of electrode potentials on the magnitude and character of stresses, and the difference in potential and current intensity of a corrosion cell under the influence of cyclic stresses, was made. The conclusions were: (1) Cyclic stresses markedly reduce the electrode potential of steel; (2) with increasing stress the rate of displacement of the electrode potential towards lower values increases. The largest displacement of the electrode potential is caused by cyclic tensile stresses.—V. O.

Рыabenkov, A. V.

2

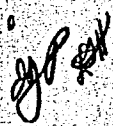
Electrochemical mechanism of corrosion failure of steel in electrolyte solutions. A. V. Ryabenkov. *Zhur. Fiz. Khim.* 25, 542-54 (1952). ~~Stressing stresses~~ Tensile stress exerts a greater effect than compressive stress, probably by destroying the protective film and by opening microcryst. pores, cracks, etc. Under exptl. conditions, the initial lowering of electrode potential under steady load is very rapid but reaches a steady state after 15-20 min. Under alternating stress, lowering continues throughout the expt. and reaches lower values than under steady stress. In an electrolytic cell with 2 steel electrodes, the electrode under alternating stress acts initially as the cathode. Its electrode potential drops with time. After 1-4 hrs. it becomes an anode. The p.d. of the cell increases with the load on the stressed sample, the values being 15, 28, and 50 mv., corresponding to ± 10.3 , ± 16.0 , and ± 23.3 kg./sq. mm., resp. The same p.d. is reached on aerating the electrolyte, but the current increases from 42 microamp. to 123 microamp. In another expt. a grooved steel specimen under alternating stress shows anodic behavior at the bottom of the groove and cathodic at the edges and on the rest of the surface. Under simultaneous action of alternating stress and corrosive medium, corrosion cells are formed in pores, cracks, and other zones of weakness. These develop into large intergranular cracks and lead to mesh failure of the metal. E. M. Etkin

RYABCHENKOV, A.Y.

U S S R .

Effect of atmospheric corrosion on fatigue strength of structural steel. A. V. Ryabchenkov and B. L. Kazimirovskaya. *Izvestiya Akademiya Nauk SSSR pod Napryazheniyem, Sbornik (Mashgiz) 1953, 5-12; Referat. Zhur., Khim. 1954, No. 80029.*—Methods and results of testing the corrosion resistance of metal specimens in moist atm. in the presence of SO₂ and in the absence of it are described. The steel tested was steel 45 normalized at 840-80°. During the test specimens were flexed at a rate of 2500 cycles/min. while exposed to approx. 100% moist atm., either free of SO₂ or contg. 0.37% of it. Atm. corrosion, particularly in the presence of SO₂, greatly lowered the strength of steel 45.

M. Hosh

7


RYABCHENKOV, A. V.

PHASE I TREASURE ISLAND BIBLIOGRAPHICAL REPORT AID 592 - I

Call No.: TA473.R5

BOOK

Author: RYABCHENKOV, A. V.

Full Title: CORROSION FATIGUE STRENGTH OF STEEL

Transliterated Title: Korrozionno-ustalostnaya prochnost' stali

PUBLISHING DATA

Originating Agency: None

Publishing House: State Scientific and Technical Publishing House of

Machine-Building Literature

Date: 1953

No. pp.: 180

No. of copies: 5,000

Editorial Staff

Editor: Akimov, G. V., Corr. Mem., Academy of Sciences, USSR

Editor-in-Chief: Golovin, S. Ya., Eng.

Appraiser: Vedenkin, S. G., Prof.

PURPOSE: This book is intended for workers in factory laboratories, constructors, technologists and scientific personnel working in the field of corrosion and strength of metals.

TEXT DATA

Coverage: The book claims to be the first monograph in world literature dedicated exclusively to the problem of corrosion fatigue of steel. The author bases this work on his own research conducted in the Central Scientific Research Institute of Heavy Machine Building (TsNIITMASH).

Korrozionno-ustalostnaya prochnost' stali

AID 592 - I

The phenomenon of corrosion fatigue of steel in electrolytic solutions is considered in the light of present results in the development of the electrochemical theory of corrosion. Using refined electrochemical methods of research, the author shows the great role of electrochemical factors in the development of corrosion fatigue cracks and claims to be the first to prove experimentally the hypothesis of the electrochemical mechanism of corrosion fatigue. A great part of the book is devoted to research in methods of increasing the corrosion fatigue resistance of steel and many suggestions on how to apply those methods.

No. of References: Russian 94, 1915-1952, non-Russian 12, 1932-1950.

Facilities: The names of some research workers in this field are mentioned in the text.

2/2

RYABCHENKOV, A. V.

Defended his Dissertation for Doctor of Chemical Sciences in the Institute of Physical Chemistry, Academy of Sciences, USSR, Moscow, 1953

Dissertation: "Investigation of the Phenomenon of Corrosion Fatigue in Steels and Ways of Preventing It"

SO: Referativnyy Zhurnal Khimiy, No. 1, Oct. 1953 (W/29955, 25 Apr 54)

RYABCHENKOV, A.V.

The Committee on Stalin Prizes of the Council of Ministers (CSM) in the fields of science and inventions announced that the following scientific works, popular science books, and textbooks have been submitted for competition for Stalin Prizes for the years 1952 and 1953. (Sovetskaya Kultura, Moscow, No. 22-40, 20 Feb - 3 Apr 1954)

<u>Name</u>	<u>Title of Work</u>	<u>Nominated By</u>
Kudryavtsev, I.V. Saverin, M.M. <u>Ryabchenkov, A.V.</u>	"Studies in the Field of Substantiating the Technology of Machine Building"	Ministry of Transport and Heavy Machine Building

Суд. № 100004. 7 July 1954

RYABCHENKOV, A.V., doktor khimicheskikh nauk, professor; ABRAMOVA, V.F.,
inzhener.

Combined methods for increasing the corrosion resistance of steel.
[Trudy] TSNIITMASH no.77:32-40 '55. (MIRA 9:7)
(Steel alloys--Corrosion)

RYABCHENKOV, A.V., doktor khimicheskikh nauk, professor; NIKIFOROVA, V.M.,
Kandidat tekhnicheskikh nauk.

Mechanics of corrosion cracking of austenitic steels. Metalloved. i
obr.met. no.8:2-11 Ag '56. (MIRA 9:10)

1, Tsentral'nyy Nauchno-issledovatel'skiy institut tekhnologii i
mashinostroyeniya. (Steel--Corrosion)

RYABCHENKOV, A.V., doktor khimicheskikh nauk, professor; MURAVKIN, O.N.,
kandidat tekhnicheskikh nauk.

Corrosion-abrasion wear of waste-gas heater water-pipes. [Trudy]
TSNIITMASH no.77:165-182 '55. (MIRA 9:7)
(Pipe, Steel--Corrosion)

RYABCHENKOV, A.V., doktor khimicheskikh nauk, professor; MURAVKIN, O.N.,
kandidat tekhnicheskikh nauk.

Effect of gaseous corrosion on the abrasive wear of steel. [Trudy]
TSNIITMASH no.77:169-164 '55. (MIRA 9:7)
(Steel alloys--Corrosion)

RYABCHENKOV, A.V., doktor khimicheskikh nauk; NIKIFOROVA, V.M., kandidat
tekhnicheskikh nauk.

Testing machines for and methods of testing the long-term corrosion
resistance of steel. [Trudy] TSNIITMASH no.77:41-49 '55.(MLRA 9:7)
(Steel alloys--Testing)

RYABCHENKOV, A.V.

✓ Methods of Testing for Corrosion Fatigue. A. V. Ryab-
 chenko and E. L. Kazimirova. (Zavodskaya Laboratoriya,
 1959, 31, (3), 345-349). [In Russian]. After a discussion of
 some corrosion-fatigue testing methods and machines used
 in the U.S.S.R., two series of such tests, at ordinary tempera-
 tures and at 700° C, are described. It is concluded that, to be
 reliable, laboratory corrosion-fatigue tests must reproduce
 closely the composition of the medium in which the steel is
 to work and the conditions of their interaction. — S. K.

Metall

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RYABCHENKOV, A.V., doktor khimicheskikh nauk, professor.

"Corrosion and mechanical strength of metals." L.A. Glikman.

Reviewed by A.V. Riabchenkov. Metalloved. i obr.met. no.6:57-58
(MLBA 9:3)

D '55.

(Metals--Testing) (Glikman, L.A.)

Ryabchenkov, A. V.

197 Combination method for increasing corrosion fatigue resistance of steel. A. V. Ryabchenkov and V. P. Abramova. *Vestnik Mashinostroyeniya*, No. 7, 54-7(1955); cf. *J.A.* 49, 8251c.—Specimens of 0.44% C, 0.80% Mn, 0.28% Si, 0.020% S, and 0.027% P steel were normalized and then cold-worked on the surface by shot blasting, rolling with a 10-mm. ball on a lathe with 0.24-mm. feed and 60 kg. pressure, and surface hardened with a high-frequency current to a depth of 1.8 mm. Samples so treated were chromium-plated, provided with a protective ring of Zn, or electrically galvanized and then tested for fatigue corrosion on a cantilever-type machine in a 3% NaCl soln. Normalized alone test bars showed a continuous decrease of resistance up to 40×10^6 cycles. Taking the resistance of normalized samples as 100, the authors obtained on Cr-plated normalized bars a resistance of 87, but the same plating increased the resistance of shot-blasted specimens to 172, of ball rolled to 185, and of those thermally treated to 500 based on a 7×10^6 cycle test. Tested with and without electrodeposited Zn protecting ring, the same specimens as before but not Cr-plated had corrosion strength of 8, 13.6, 11.5, 28.4 kg./sq. mm., resp., when no ring was used and 26.6, 23.0, 27.0, and 42.0 kg./sq. mm. when the ring was employed. Electrolytic galvanizing was applied to thermally treated samples alone, and after 10×10^6 cycles showed a fatigue strength of 44 kg./sq. mm. for galvanized and 38 kg./sq. mm. for the bare ones.

J. D. Cat

Handwritten initials and signatures: J, D, Cat, and others.

RYABCHENKOV, A.V., doktor khimicheskikh nauk, professor; KAZIMIROVSKAYA,
Ye.L., inzhener.

Effect of heat treatment on the fatigue strength of steel exposed
to atmospheric corrosion. Vest.mash.35 no.1:69-72 Ja'55.
(Steel--Metallurgy) (MLRA 8:3)

BYARCHENYOV, A. V. Cand. Tech. Sci. and KAZIMIROVSKAYA, Ye. I. Engineer

"Effect of Atmospheric Corrosion on Fatigue Strength of Structural Steel",
one of eight articles appearing in the book: "Investigation of the Stress
Corrosion of Metals," edited by G.V. Akimov, Mashgiz, Moscow, 1953

Central Scientific Research Inst. of Technology and Machine Building

V-31586, 15 Dec 55

A second article in this book by the same authors:

"Surface Hardening as a Means of Increasing Corrosion-Fatigue
Strength Under Atmospheric Corrosion Conditions,"

RYABCHENKOV, A.V.

✓ 1381t. Combination of Methods for Increasing Corrosion-Fatigue Resistance of Steel. Kombinirovannye sposoby povysheniya korrozionno-ustalostnoi prochnosti stali. (Russian.) A. V. Ryabchenkov and V. F. Abramova. Vestnik Mashinostroeniya, v. 35, no. 7, July 1955, p. 54-57. Investigation of surface hardening followed by electrolytic Cr or Zn coating, and surface hardening in combination with cathodic protection. Tables, graphs, diagram, photograph, 9 ref.

62

RYABCHENKOV, A.V., doktor khimicheskikh nauk, professor; KAZIMIROVSKAYA, Ye.L.
inzhener.

High temperature studies of the corrosion-fatigue resistance of the EI 395
and EI434 steels. [Trudy] TSNIITMASH no.77:5-23 '55. (MLRA 9:7)
(Steel alloys--Corrosion) (Metals at high temperatures)

RYABCHENKOV, A.V., doktor khimicheskikh nauk, professor; KAZIMIROVSKAYA, Ye.L.,
inzhener.

Effect of heat treatment on the fatigue resistance of steel subjected to
atmospheric corrosion. [Truly] TSNIITMASH no.77:24-31 '55. (MLRA 9:7)
(Steel--Fatigue)

RYABCHENKO, A. V.

USSR/ Engineering - Heat treating

Card 1/1 : Pub. 128 - 15/25

Authors : Ryabchenko, A. V., and Kazimirovskaya, E. L.

Title : The influence of heat treating on the fatigue resistance of steel during atmospheric corrosion

Periodical : Vest. mash. 1, 69-72, Jan 1955

Abstract : A description is presented of tests conducted by the Central Scientific Research Institute of Machine Building and Metal Working, on atmospheric corrosion of type 45 steel, and the influence of heat treating on steel fatigue resistance. The chemical composition of specimens used for the above mentioned tests is as follows: 0.44% C; 0.28% Si; 0.68% Mn; 0.017% S; and 0.023% P. Six USSR references (1949-1953). Table; illustrations; graphs.

Institution :

Submitted :

RYABCHENKOV, A.V., KAZIMIROVSKAYA, Ye.L.

Methods for testing corrosion fatigue. Zav.lab. 21 no.3:345-349
'55. (MIRA 8:6)

1. Tsentral'nyy nauchno-issledovatel'skiy institut tekhnologii i
mashinostroyeniya.
(Corrosion and anticorrosives) (Metals--Fatigue)

NIKIFOROVA, V.M., kandidat tekhnicheskikh nauk; RYABCHENKO, A.V., doktor
khimicheskikh nauk; RESHETKINA, N.A., inzhener.

Investigating the resistance of steel to corrosion cracking in
saturated hydrogen sulfide solutions. [Trudy] TSNIITMASH no.77:
58-78 '55. (MIRA 9:7)
(Steel alloys--Corrosion)

RYABCHENKOV, A.V., professor, doktor khimicheskikh nauk; ABRAMOVA, V.F.,
Inzhener

Combined methods for increasing the corrosion fatigue resistance
of steel. Vest.mash.35 no.7:54-57 J1'55. (MIRA 8:10)
(Steel--Corrosion)

Ryabchenkov, A. V.

18
 Resistance of steels to corrosion cracking in a saturated solution of hydrogen sulfide. V. M. Nikiforova, A. V. Ryabchenkov, and N. A. Reshetkina. *Vysokaya Korrozion. Steel in Prochnost* (Moscow: Gosstatizst. Nauch.-Tekh. Izdat. Mashinostroitel. Lit) *Sbornik* 1955, 58-78; *Referat. Zhur. Mel.* 1956, Abstr. No. 9389. —The tendency toward corrosion cracking in H₂S depends on chem. compn., structure, and applied stress. Forged steels contg. Mo and Ti are very resistant to corrosion cracking. Stabilized Cr-Ni-Cr-Ni-Mo and Cr-Ni-Mo-W steels have a strong tendency toward corrosion cracking in H₂S. If the α-phase is situated at the grain boundary, the corrosion cracking is intercryst; if it is dispersed along the gliding planes, corrosion cracking is intracryst. A. N. Pestov

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MURAVKIN, O.N.; RYABCHENKO, A.V.

Investigating corrosion-abrasive wear of the steel used for water
economizer boiler tubes. Tren. i. izn. mash. no. 11; 81-107 '56.
(Pipe, Steel--Corrosion) (Mechanical wear) (MIRA 9:9)

RYABOCHENKOV, H. V.

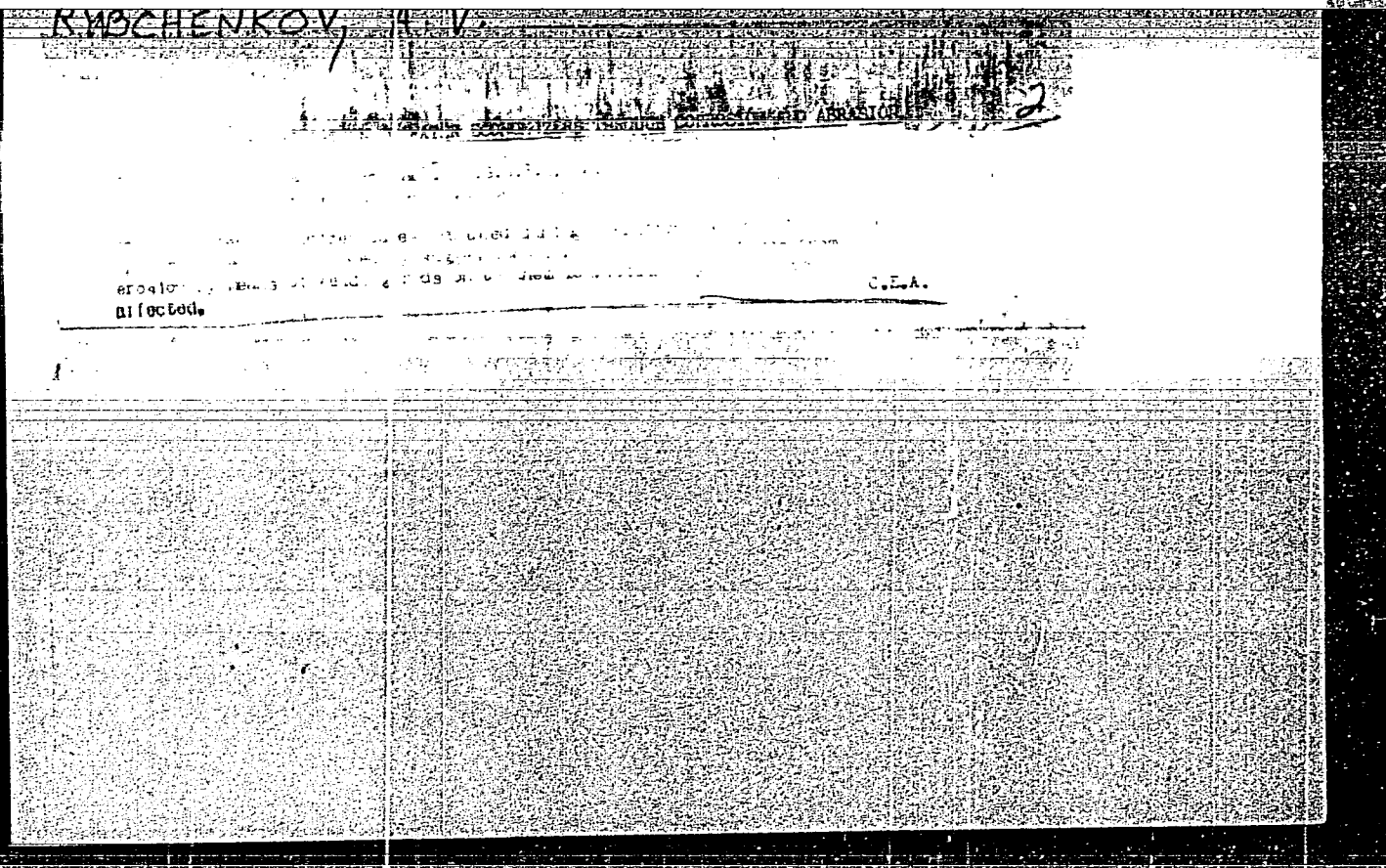
17 18 18
Corrosion fatigue strength of steels E1395 and E1434 at

E1395; it decreased the strength of steels E1395 and E1434. The added gases did not produce a noticeable effect on the microstructure of the steels. On heating for 300-500 hr, SO₂ increases the rate of oxidation of E1434 by 14.7 times. The oxide film in the presence of SO₂ does not have any protective properties. Addn. of H₂O considerably decreases the rate of gaseous corrosion. The higher strength of E1395 in the medium with SO₂ is attributed to the formation of a film of the type of FeO·Cr₂O₃, which is more stable than is the film of α-Fe₂O₃ produced on E1434. The beneficial effect of water vapor is attributed to more even distribution of corrosion along the surface of the sample. A. N. P.

RYABCHENKOV, A. V.

18 19 *HERC*
The effect of gas corrosion upon the abrasion of steel.
A. V. Ryabchenkov and O. N. Minrankin. *Vysokoe*
Korrosion und Verschleiß (Moscow: Mashinist
Giz., 1964, No. 10, 10 pp.)

There is a certain amount of corrosive substances in the abra-
sive medium beyond which abrasion is not increased.
Alexis N. Pestoff



SOV/124-58-1-1359

Translation from: Referativnyy zhurnal, Mekhanika, 1958, Nr 1, p 168 (USSR)

AUTHOR: Ryabchenkov, A. V.

TITLE: Methods for the Improvement of the Corrosion-fatigue Strength of Steel (Sposoby povysheniya korrozionno-ustalostnoy prochnosti stali)

PERIODICAL: V sb. : Povysheniye dolgovechnosti mashin. Moscow, Mashgiz, 1956, pp 41-49

ABSTRACT: Tests of specimens in a 3-percent NaCl solution have shown that a combination of surface hardening and electrochemical protective methods improves the corrosion-fatigue strength of steel. A combination of electrolytical galvanizing and surface hardening also improves the stability of the steel in neutral solutions of electrolytes.
A. V. Bobylev

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RYABCHENKOV, A. V.

✓ 905* (Russian.) The Mechanism of Corrosion Cracking in Austenitic Steels. O mekhanizme korrozionnoy rastreki-
vaniya avstennitskikh staley. A. V. Ryabchenkov and V. M. Nikiforova. *Metallovedeniye i Obrabotka Metallov*, 1956, no. 8, Aug. 1956, p. 2-11.
Electrochemical factors are very important in initiating and developing corrosion cracking. Claims: a potential difference is the basic cause of failure.

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AVRASIN, Ya.D., kandidat tekhnicheskikh nauk; BERG, P.P., professor, doktor tekhnicheskikh nauk, BERNSHTEYN, M.L., kandidat tekhnicheskikh nauk; GENEROZOV, P.A., starshiy nauchnyy sotrudnik; GLINER, B.M., inzhener; DAVIDOVSKAYA, Ye.A., kandidat tekhnicheskikh nauk; YELCHIN, P.M., inzhener; YEREMIN, N.I., kandidat fiziko-matematicheskikh nauk; IVANOV, D.P., kandidat tekhnicheskikh nauk; MNOROV, L.I., inzhener; KOBRIN, M.M., kandidat tekhnicheskikh nauk; KOBITSKIY, V.G., dotsent; KROTKOV, D.V., inzhener; KUDRYAVTSEV, I.V., professor, doktor tekhnicheskikh nauk; KULIKOV, I.V., kandidat tekhnicheskikh nauk; LEPETOV, V.A., kandidat tekhnicheskikh nauk; LIKINA, A.F., inzhener; MATVEYEV, A.S., kandidat tekhnicheskikh nauk; MIL'MAN, B.S., kandidat tekhnicheskikh nauk; PAVLUSHKIN, N.M., kandidat tekhnicheskikh nauk; PITSYN, V.I., inzhener [deceased]; RAKOVSKIY, V.S., kandidat tekhnicheskikh nauk, RAKHSHTADT, A.G., kandidat tekhnicheskikh nauk; RYABCHENKOV, A.V., professor, doktor khimicheskikh nauk; SIGOLAYEV, S.Ya., kandidat tekhnicheskikh nauk; SMIRYAGIN, A.P., kandidat tekhnicheskikh nauk, SUL'KIN, A.G., inzhener; TUTOV, I.Ye., kandidat tekhnicheskikh nauk, KHRUSHCHOV, M.M., professor, doktor tekhnicheskikh nauk; TSYPIN, I.O., kandidat tekhnicheskikh nauk; SHAROV, M.Ya., inzhener; SHERMAN, Ya.I., dotsent; SHMELEV, B.A., kandidat tekhnicheskikh nauk; YUGANOVA, S.A., kandidat fiziko-matematicheskikh nauk; SATEL', E.A., doktor tekhnicheskikh nauk, redaktor; SOKOLOVA, T.F., tekhnicheskiy redaktor

[Machine builder's reference book] Spravochnik mashinostroitelia; v shesti tomakh. izd-vo mashinostroit. lit-ry. Vol.6. (Glav. red.toma E.A.Satel'. Izd. 2-oe, ispr. i dop.) 1956. 500 p. (MLRA 9:8)
(Machinery--Construction)

RYABCHENKOV, A.V., doktor khimicheskikh nauk, professor; MURAVKIN, O.N.,
kandidat tekhnicheskikh nauk.

Corrosive and abrasive wear of economizers and its control. *Energomashinostroenie* no.3:19-23 Mr '56. (MIRA 9:7)
(Corrosion and anticorrosives) (Boilers)

RYABCHENKOV, A.V.

9142* Corrosion-Abrasion Wear in Water Economizers and a Method of Protecting Them. Korrozionno-abrazivnoe iznashivanie vodnykh ekonomajzerov i sposob ikh zashchity. (Russian.) A. V. Ryabchenkov and O. N. Muravkin. *Energomashinostroenie*, 1956, no. 3, Mar. 1956, p. 19-23. Relation between wear of boiler pipes and the angle of attack and speed of flow of hot gases. Longitudinal rods welded on outside of pipe considerably lessen wear and increase service life. Diagrams, graphs, micrographs, photographs.

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RYABCHENKOV, A.V., doktor khim. nauk, prof.; NIKIFOROVA, V.M., kand. tekhn.
nauk; ABRAMOVA, V.F., inzh.

Methods of microelectrochemical analysis of corrosion of
stressed metals. Trudy TSNIITMASH 92:5-18 '59. (MIRA 12:8)
(Microchemistry) (Corrosion and anticorrosives)

~~RYABCHENKOV, A.V., doktor khim. nauk, prof.;~~ NIKIFOROVA, V.M., kand. tekhn.
nauk

Role of electrochemical factors in corrosion cracking of
austenitic steels. Trudy TSNIITMASH 92:19-41 '59.

(MIRA 12:8)

(Steel--Corrosion)