

SHATILOV, Yu.S., aspirant

Diagnostic significance of dynamic cerebrospinal fluid tests in spinal tuberculosis complicated by late paraplegia. Probl. tub. 41 no.5:23-28 '63. (MIRA 17:1)

1. Iz kostnokhirurgicheskogo otdeleniya (zav. - doktor med. nauk Ye.N. Stanislavleva) Instituta tuberkuleza (dir. - kand. med. nauk T.P. Mochalova, zam. direktora po nauchnoy chasti - prof. D.D. Aseyev) Ministerstva zdravookhraneniya RSFSR, Moskva.

SHATILOV, Yu.S. (Moskva, A-30, ul. Mostoyevskogo, d.2)

Surgical indications in tuberculous spondylitis patients with early and late paraplegia. Ortop., travm. i protez. 25 no.9:25-29 S 1974.

(MIRA 13:14)

1. Iz kostnookirurgicheskogo otdeleniya (zav. - doktor med. nauk Ye.N. Stanislavleva) Instituta tuberkul'oz'a Ministerstva zdravookhraneniya RSFSR (dir. - kand. med. nauk T.F.Mochalova), Moskva.

SHATILOVA, A.P.

Lambliasis in younger children based on observations in a diagnostic department. Vop.okh.mat.i det. 2 no.3:40-43 My-Je '57. (MLBA 10:7)

1. Iz kafedry detskikh infektsiy (zav. - prof. S.D.Nosov) Ivanovskogo meditsinskogo instituta.
(LAMBLLIASIS)

SEATILOVA, A.P.

Effectiveness of plasma and blood transfusions in the treatment of
toxic forms of diphtheria. *Pediatrics* 40 no.1:37-40 Ja '57.

(MIRA 10:10)

1. Iz kafedry detskikh infektsionnykh bolezney (zav. - prof. S.D.
Nosev) Ivenovskogo meditsinskogo instituta
(BLOOD--TRANSFUSION) (DIPHTHERIA)

SHATILOVA, I.I.

Spore and pollen complexes in the Upper Pliocene deposits of
Guria. Trudy Inst. paleobiol. AN Gruz. SSR 8:43-62 '63.
(MIRA 17:7)

SHATILOVA, I.I.

Recent data on the palynological analysis of Chauda deposits
in western Georgia. Dokl. AN SSSR 139 no.5:1194-1196 Ag 1961.
(MIRA 14:8)

1. Institut paleobiologii AN Gruzinskoy SSR. Predstavleno
akademikom V.N. Sukachevym.
(Nagobilevi region--Palynology)

SHATILOVA, I.I.

Variations in the flora of Guria during the Kuyal'nitskiy Age according to spore-pollen analysis. Dokl. AN SSSR 145 no.4:895-898 Ag '62. (MIRA 15:7)

1. Institut paleobiologii AN SSSR. Predstavleno akademikom V.N.Sukachevym.
(Guria—Paleobotany, Stratigraphic)

№ 1111111111

Институт палеоботаники и палеоэкологии
Дальневосточного государственного университета
№ 1111111111

1. Институт палеоботаники и палеоэкологии
Представлено академиком В.Н. Сивачевым.

SHATILOVA, T. A., Doc Med Sci -- (diss) "Significance of changes in the vessels and nerves of the eye in pathogenesis of glaucoma." Ryazan', 1957. 32 pp (Ryazan' Med Inst im Academician I. P. Pavlov, State Sci Res Inst of Eye Diseases im Gel'mgol'ts), 200 copies (KL, 52-57, 110)

- 101 -

SHATILOVA, T. A.: Doc Med Sci (diss) -- "The significance of changes in the

vessels and nerves of the eye in the pathogenesis of glaucoma". Ryazan', 1956.

31 pp (Ryazan' Med Inst im Acad I. P. Pavlov, State Sci Res Inst of Eye Diseases

in Gek'mol'ts), 200 copies (KL, No 3, 1959, 137)

SIKHARULIDZE, I.A., zasl. deyatel' nauki, prof., otv. red.;
BERADZE, N.I., dots., otv. red.; ARKHANGEL'SKIY, V.N.,
prof., red.; ABULADZE, V.A., red.; ANTELAVA, D.N., kand.
med. nauk, red.; BOGOSLOVSKIY, A.I., doktor biol. nauk,
red.; BUNIN, A.Ya., kand. med. nauk, red.; VILETKINA, A.,
doktor med. nauk, red.; VISHNEVSKIY, N.A., prof., red.;
ZARUBIN, G.S., nauchn. sotr., red.; ITSIKSON, L.Ya., kand.
med. nauk, red.; KRASNOV, M.L., zasl. deyatel' nauki, prof.,
red.; MACHARASHVILI, P.D., zasl. vrach Gruz. SSR, red.;
PUCHKOVSKAYA, N.A., prof., red.; RABKIN, Ye.B., prof., red.;
RSHZHECHITSKAYA, O.V., kand. med. nauk, red.; ROGLAVTSEV,
A.V., st. nauchn. sotr., red.; TARTAKOVSKAYA, A.I., kand.
med. nauk, red.; FRADKIN, N.Ya., prof., red.; KHAYUTIN, S.M.,
prof., red.; CHERNYAKOVSKIY, G.Ya., kand. med. nauk, red.;
CHKONIYA, E.A., kand. med. nauk, red.; SHATILOVA, T.A.,
doktor med. nauk, red.; YAKOVLEV, A.A., nauchn.sotr., red.

[Materials of the Second All-Union Conference of Ophthal-
mologists] Materialy Vsesoiuznoi konferentsii oftal'molog-
gov. Tbilisi, Respublikanskoe nauchn. ob-vo oftal'mologov
Gruz.SSR, 1961. 498 p. (MIRA 18:1)

1. Vsesoyuznaya konferentsiya oftal'mologov, 2d, Tiflis, 1961.
2. Chlen-korrespondent AMN SSSR (for Arkhangel'skiy).

SHATILOVA, TAT'YANA ALEKSANDROVNA, awarded the degree of doctor of medical sciences on the basis of the defense, on 27 March 1959, in the Soviet of the Ryazan Medical Institute Academician Pavlov, of the dissertation: "Significance of Changes in Vessels and Nerves of the Eye in the Pathogenesis of Glaucoma".

SHATILOVA, TAT'YANA ALEKSANDROVNA awarded the degree of doctor of medical sciences on the basis of the defense, on 27 March 1959, in the Soviet of the Ryazan Medical Institute Academician Pavlov, of the dissertation: "Significance of Changes in Vessels and Nerves of the Eye in the Pathogenesis of Glaucoma".

Source: Spetsial'nyi Ministerstva Vneshnego i Srednego Spetsial'nogo Obrazovaniya SSSR, Issue 1961; OJAS: 027, 2 August 1961, "Unclassified"

SHATILOVA, T.A.

Transplantation of the mucous membrane of the cheek on a pedicle
into the conjunctival sac in eye burns. Vest. oft. 73 no. 1:3-6
Ja-F '60. (MIRA 14:1)
(BURNS AND SCALDS) (EYE--WOUNDS AND INJURIES)
(MUCOUS MEMBRANE--TRANSPLANTATION)

PERSHIN, G.N.; NESVAD'BA, V.V.; SHATILOVA, Z.K.

Effect of chemotherapeutic and bactericidal substances on the biological synthesis of methionine. *Biokhimiya* 18, 120-3 '53. (MLRA 6:1) (CA 47 no.15:7670 '53)

2. All-Union Chem.-Pharm. Inst., Moscow.

IVANOV, K.K.; GAVRILINA, G.V.; KOVALENKOVA, V.K.; LIROVA, S.A.;
SOKOLOVA, L.B.; Primalni uchastiye: BOYARSKAYA, R.V., inzh.;
PUGKHOROVA, T.I., inzh.; SHATILOVA, Z.K., inzh.

Aeration and respiration of actinomycetes and proactinomycetes
synthesizing antibiotics in fermentors in relation to biochemical
changes in the culture media. Antibiotiki 6 no.11:984-989 N '61.
(MIRA 15:3)

1. Institut po izyskaniyu novykh antibiotikov AMN SSSR.
(ACTINOMYCES) (ANTIBIOTICS)

SHATILOVA, S. ...

USSR/Medicine - Disinfectants

Mar/Apr 53

"The Action of Antibacterial Substances, i.e. 8-Hydroxyquinoline and Its Derivatives, on the Redox Enzymatic Activity of Bacteria," G. N. Pershin, V. V. Nesvad'ba, S. K. Shatilova, All-Union Sci-Res, Chem-Pharm Inst imeni S. Ordzhonikidze

Farmakol ii Toksikol, Vol 16, No 2, pp 25-30

Enzymes contg metals, i.e. peroxidase, indophenoxidase, and formic acid dehydrogenase, are not sensitive to 8-hydroxyquinoline (I), the N-oxide of I (II), or the alkyl derivs of I and II. The antibacterial activity of I does not depend on this comp's ability to inactivate enzymes contg heavy metals. Dehydrogenases which do not contain heavy metals have a considerable sensitivity to alkyl derivs of I and a somewhat lower one to alkyl derivs of II. I and its simplest derivs interfere with basic redox processes and for that reason cannot be used for chemotherapeutic purposes. Eighteen derivs of I synthesized at VNIKhFI were tested.

PA 249T72

IVANOV, K.K.; KOVALENKOVA, V.K.; DAVYDOVA, T.A.; BORISOVA, V.N. Prinsipalni
uchastnye; SOKOLOVA, L.B.; PROKHOROVA, T.G.; SHATILOVA, Z.K.;
PYL'NEVA, L.I.; SEMENOVA, V.S.

Obtaining colimycin on an enriched medium. Med.prom. 14 no.11:13-16
N '60. (MIRA 13:11)

1. Institut po izyskaniu novykh antibiotikov AMN SSSR.
(NEOMYCIN)

ADRIANOV, A.P.; SHATILOVICH, S.A., staryiy nauchnyy sotrudnik; GRIGOR'YEV,
V.I., staryiy nauchnyy sotrudnik.

New method for turning the elastic top rolls of spinning
machinery drafters. Tekst. prom. 24 no.5:23-25 My '54
(RIRA 18:2)

1. Fachel'nik pryadil'noy laboratorii Yaroslavskogo proyektno-
tehnologicheskogo i nauchno-issledovatel'skogo instituta
Verkhne-Volzhskogo sojeta narodnogo khozyaystva (for Adrianov).
2. Yaroslavskiy proyektno-tehnologicheskii i nauchno-issledo-
vatel'skiy institut Verkhne-Volzhskogo sojeta narodnogo khoz-
yaystva (for Shatilovich, Grigor'yev).

SHAPILYUK, I.P.

Significant places in the Ukraine connected with Ivan Franko's
life and work. Nauk.zap.Kiev.un. 15 no.8:133-146 '56. (MLRA 10:7)
(Franko, Ivan, 1856-1916)

SHATIN, A.M.

Boari's operation in ureteral stricture caused by a calculus.

Urologia 25 no. 5:63-64 S-0 '60.

(MIRA 14:1)

(CALCULI, URINARY)

SHATIN, A.M.

Resection of the isthmus of a horseshoe kidney with simultaneous plastic surgery of the pelvis in hydronephrosis. Urologiia 28 no.2:46-47 Mr-Apr'63. (MIRA 16:6)

1. Iz urologicheskogo otdeleniya (zav. A.M.Shatin) Kurganskoy oblastnoy bol'nitsy.
(KIDNEYS—SURGERY)

SHATIN, V.P.; KUZ'MIN, V.V.

[Reconditioning a cutting tool made from high-speed steel] Vosstanovlenie
rezhushchego instrumenta iz bystrorezhushchei stali. Moskva, Vses. koopera-
tivnoe izd-vo, 1952. 78 p.

(MLRA 6:5)

(Cutting machines)

SHATIN, V.P., inzhener.

Present condition and urgent tasks in standardizing assemblies
and in designing tools for mechanical processing. [Izd]

LONITOMASH 25:101-107 '52. (MLRA 8:2)
(Machine tools)

PHASE I BOOK EXPLOITATION

SOV/3706

Shatin, V.P., Engineer, V. V. Kuz'min, Engineer, and P.S. Denisov, Engineer
Konstruktivnyye elementy i normalizovannyye uzly krepleniya rezhushchikh
instrumentov; spravochnik (Parts and Standard Subassemblies for Mounting
Cutting Tools; Handbook) Moscow, Mashglz, 1959. 263 p. Errata slip inserted.
15,000 copies printed.

Reviewer: Yu. L. Frumin, Engineer; Ed.: V.I. Rybakova, Engineer; Tech. Ed.:
B.I. Model'; Managing Ed. for Information Literature: I. M. Monastyrskiy,
Engineer.

PURPOSE: This book is intended for tool designers and process engineers in
machine-building plants.

COVERAGE: The book deals with the standard tool holding devices for metal
cutting used in Soviet industry. Brief descriptions are given of chucks,
collets, and other holding devices for shank-type tools. Means of mount-
ing milling cutters, boring bars, and broaches to drive elements are ex-
plained and illustrated. Carbide tipping of cutting tools is also de-
scribed. No personalities are mentioned. There are 5 references:
4 Soviet, and 1 English.

TABLE OF CONTENTS:

Ch. I. Elements and Subassemblies of Cutting Tools for Drilling and Boring
Machines 3

Card ~~1/7~~

18(7), 24(6) SOV/139-59-1-23/34
AUTHORS: Shvirin O.N., Shatin V.S.
TITLE: X-Ray Study of the Softening of Plastically Deformed Steel During Temperature Relaxation (Rentgenografiches--koye izucheniye protsessa razuprochneniya plasticheski deformirovannoy stali pri temperaturnom otdykhe)
PERIODICAL: Izvestiya Vysshikh Uchebnykh Zavedeniy, Fizika, 1959, Nr 1, pp 128-135 (USSR)
ABSTRACT: Softening of plastically deformed steel St.45 during temperature relaxation has been studied by means of X-rays according to the diffuseness of interference lines. Specimens of this steel were disc shaped, 15 mm diameter and 5 mm long. After heat treatment (quenching from 850°C in oil and tempering at 700 °C for one hour) the specimens were deformed up to 50% in compression. The heavily deformed surface layer was removed by etching in a mixture of HNO₃ and HCl; it was found that the structural distortions were the same throughout each specimen. The specimens were relaxed in a tubular furnace at 300, 350, 400 and 450 °C by soaking for a period of from 10 minutes to 20 hours, depending on temperature. The specimens were X-rayed in the direction of their ends in a cylindrical chamber of

Card 1/5

SOV/139-59-1-23/34

X-Ray Study of the Softening of Plastically Deformed Steel During Temperature Relaxation

57.3 mm diameter in an Fe-irradiation with an Mn filter. In order to obtain narrower lines, a specially made slit diaphragm, 0.15 mm high, was used instead of the usual diaphragm assembly, which was placed directly on the drum of the chamber. This enabled the focusing of the line to be considerably improved and the exposure time to be shortened. The conditions of focusing assumed the form $\alpha = \psi$, where α is the angle between the surface of the section and the primary beam, and ψ is the angle of slip. Each specimen was exposed twice at $\alpha = 72^\circ$ for the focusing of the line (22). From the results obtained the magnitude of secondary distortion $\Delta d/d$ and the block size D were obtained by the Kurdyumov-Lysak method, (Refs 13 and 14). For relaxation at 450° a harmonic analysis of the line (22) was also carried out. Parallel with the X-ray study, Rockwell H_{RC} hardness tests were carried out. The dependence of D , $\Delta d/d$ and H_{RC} on the duration of relaxation for a temperature of 400°C is graphically shown in Fig 1, and for the temperatures 450 , 350 and 300°C it is shown

Card 2/5

SOV/139-59-1-23/34

X-ray Study of the Softening of Plastically Deformed Steel During Temperature Relaxation

in Tables 1, 2 and 3. In the second and third columns of the table, the magnitudes of the true widths of the lines (110) and (220) are shown, and in the fourth column the ratio β_{220}/β_{110} is given, which must lie within the limits of $\beta_{220}/\beta_{110} = 2.93$ and $\beta_{220}/\beta_{110} = 5.97$, depending on the relationship between the "block" and "micro-deformation" diffuseness of the lines; and in columns 5, 6 and 7 values for D , $\Delta d/d$ and HRC are given. The dependence of D , $\Delta d/d$ and HRC on temperature at a constant time of relaxation (one hour) is shown in Fig 2. As a result of the above investigations the authors have arrived at the following conclusions: (1) In the process of softening of plastically deformed steel St.45 a constant increase in the size of blocks D and a fall in the magnitude of distortions $\Delta d/d$ with increase in duration and temperature of relaxation is observed. (2) A similar relationship has been established for the values of D and $\frac{\sqrt{\Delta L_0^2}}{L_0}$ which have been found by harmonic

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SOV/139-59-1-23/34

X-Ray Study of the Softening of Plastically Deformed Steel During Temperature Relaxation

analysis. A comparison of these magnitudes with those of D and $\Delta d/d$, which are obtained by the Kurdyumov-Lysak method, shows satisfactory agreement. (3) the constancy of the magnitude of the "Regions of uniformity" L_0 in isothermal relaxation and the absence of any crushing of blocks both at isothermal and isochronic relaxation allows the deduction that removal of secondary distortions is not accompanied either by unbending of blocks or by plastic slipping, to be confirmed. Removal of distortions in this case can occur by increase of those regions of the metal, the lattice of which is not distorted, and hence by a decrease of the regions of distorted lattice. (4) Testing the hardness, which constantly decreases during relaxation, has enabled its linear dependence on

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$$\sqrt{\frac{\Delta d}{d} \cdot \frac{1}{D}}$$
 to be established; thus, there exists a

SOV/139-59-1-23/34
X-Ray Study of the Softening of Plastically Deformed Steel During
Temperature Relaxation

relationship between the characteristic of hardening and
the characteristics of submicro-non-uniformity of the
hardened metal.

Card 5/5 There are 3 figures, 3 tables and 22 references, 18 of
which are Soviet and 4 English.

ASSOCIATION: Petrozavodskiy Gosuniversitet
(Petrozavodsk State University)

SUBMITTED: April 21, 1958

ACCESSION NR: AP4029143

S/0105/64/000/004/0038/0045

AUTHOR: Dolginov, A. I. (Doctor of technical sciences, Professor, Moscow);
Shatin, V. S. (Engineer, Moscow); Motusko, F. Ya. (Engineer, Moscow)

TITLE: Wave method of calculating transients in electrical systems by digital computers

SOURCE: Elektrichestvo, no. 4, 1964, 38-45

TOPIC TAGS: electric power system, power system transients, transients calculation wave method, computer transients calculation, wave represented transients

ABSTRACT: By representing a transient wave as a series of numbers and by substituting segments of a distributed-parameter line for all apparatus (machines, transformers, reactors, etc.), many problems in electric-power supply systems (short-circuit, recovery-voltage, switching-surge, atmospheric-surge

Card 1/2

ACCESSION NR: AP4029143

calculations) can be solved on a digital computer. The concept of "digital waves" is introduced, and simple operations therewith are explained. The application of the method to single-phase and 3-phase systems having overhead and underground transmission lines is considered. Formulas for handling transformers, reactors, shunt capacitors, resistors, and valve-type lightning arresters are supplied. Programing hints covering the voltages across branch points, refraction indices, and wave delays in machinery are given. Orig. art. has: 7 figures, 20 formulas, and 1 table.

ASSOCIATION: VNIE (All-Union Scientific Research Institute of Electric Power Engineering); VZEI (All-Union Correspondence Electrotechnical Institute)

SUBMITTED: 27Nov63

DATE ACQ: 01May64

ENCL: 00

SUB CODE: EE, IE

NO REF SOV: 004

OTHER: 001

Card 2/2

... ..

... ..

SHATIN, V.S., inzh.

Program for calculating a wave process in a network with
distributed constants using the "Ural-1" digital computer.
Trudy VZEI no.25:26-33 '64.

(MIRA 18:12)

L 35006-65

ACCESSION NR: AP5003325

S/0143/65/000/001/0021/0027

AUTHOR: Shatin, V. S. (Engineer)

16
B

TITLE: Using the "Ural-2" digital computer for analyzing the lightning protection of substations

SOURCE: IVUZ. Energetika, no. 1, 1965, 21-27

TOPIC TAGS: lightning protection, digital computer

ABSTRACT: A standard computer program for calculating lightning surges in power systems by the wave method is described; the latter is based on the length and characteristic impedance of power-transmission lines. A simplified power-network diagram is used, and the input capacitance of equipment is neglected. At

each node of the diagram, the voltage $U_x^k = \sum_{i=1}^n A_{ix} U_{ix}^k$ (where A_{ix} are the coefficients of refraction) and the reflected waves $U_{xi}^k = U_x^k - U_{ix}^k$ are computed. A block

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L 35006-65

ACCESSION NR: AP5003325

diagram of the developed algorithm (the computer program) suitable for a "Ural-2" computer is shown. The maximum number of nodes is 96; number of lines, 112; total length of real lines, 4000 m with a step of 0.05 μ sec; average speed, 0.02 sec/step per node. The volt-second and volt-ampere characteristics are each approximated by four straight-line segments. The system working voltage can be taken into account. Orig. art. has: 5 figures, 2 formulas, and 1 table.

ASSOCIATION: Vsesoyuznyy zaochnyy energeticheskiy institut (All-Union Correspondence Power-Engineering Institute)

SUBMITTED: 30May64

ENCL: 00

SUB CODE: DP

NO REF SOV: 003

OTHER: 001

Card 2/2

НАПИШКИН, В., инженер.

Temporary storage of grain out of doors. Muk.-elev.prom. 23
no.7.2-13 J1 '57. (MIRA 10:9)

.. Upravleniya elektrovatorno-skladskogo khozyaystva Ministerstva
zhelezнодорожных перевозок СССР.

(Grain--Storage)

ACCESSION NR: AT4023774

S/2723/63/000/002/0024/0039.

AUTHOR: Chayevskiy, M. I.; Shatinskiy, V. F.

TITLE: Fatigue strength of 20Kh steel in a nitrate-nitrite melt

SOURCE: AN UkrRSR. Insty*tut mashy*noznavstva i avtomaty*ky*, L'viv. Vlivaniye rabochikh sred na svoystva materialov (Effect of active media on the properties of materials), no. 2, 1963, 24-39

TOPIC TAGS: steel, 20Kh steel, steel physical property, fatigue, steel fatigue strength, nitrate nitrite melt, anode polarization, cathode polarization

ABSTRACT: Using techniques and apparatus described previously (M. I. Chayevskiy, Izd. Instituta tekhniko-ekonomicheskikh informatsiy, Tema 32, No. 11 - 58 -3/2, 1958; Mashiny* i pribory* dlya ispy*taniya metallov, vy*p. 1, Izd-vo AN USSR, 1962), the authors investigated the fatigue strength (cyclic bending) of 20Kh steel in a nitrate-nitrite melt (50% KNO₃, 40% NaNO₃, 7% NaNO₂) at 400-600C, either in the absence of a current or with anode or cathode polarization, in order to determine the interaction between the deformed metal and the melt under varying conditions of stress. Corrosion was also studied under conditions varying from static to stirring of the melt, alone or combined with cyclic bending stress and/or cathode polarization. As shown in Fig. 1 of the Enclosure,

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ACCESSION NR: AT4023774

fatigue strength at 400C was practically the same in the melt as in air and there was no significant corrosion, due to the formation of a protective oxide film. At 500C, the fatigue strength was increased 30% in the melt and there was some corrosion, which was increased by bending stress; this is explained by the formation of microanodes at the Cr components of the steel. At 600C, fatigue strength was higher in the melt only up to 2.6×10^6 cycles, after which rapid failure ensued. As shown in Figure 2 of the Enclosure, the fatigue strength in the nitrate-nitrite melt was considerably reduced by cathode polarization, even at 400C. The interaction between the melt and the deformed metal thus results in processes of adsorption, diffusion, and corrosion which are controlled, to some extent, by the electrical potential. It is concluded that 20Kh steel may be used for machine parts in contact with nitrate-nitrite melts up to 500-550C, after which corrosion becomes too intense. Cathode processes resulting in the deposition of metal salts from the melt which interact with the steel to form an intermetallic protective layer can be recommended as a means of increasing the working capacity of steel parts. Orig. art. has: 6 figures.

ASSOCIATION: Insty*tut mashy*nozhavstva i avtomaty*ly* AN UkrRSR, Lvov
(Institute of Mechanical Technology and Automation, AN UkrRSR)

SUBMITTED: 00

DATE ACQ: 10Apr64

ENCL: 02

SUB CODE: MM

NO REF SOV: 017

OTHER: 004

Card 2/4

0

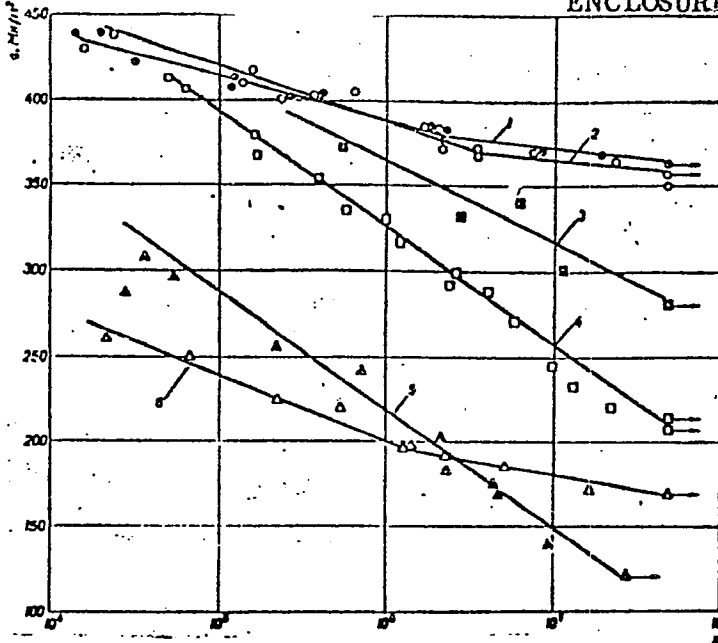
ACCESSION NR: AT4023774

ENCLOSURE:01

Fig. 1 - Fatigue strength of samples of 20Kh steel:

2, 4, 6 - in air at temperatures of 400, 500, 600C, resp.;

1, 3, 5, - in a nitrate-nitrite melt at the same temperatures.



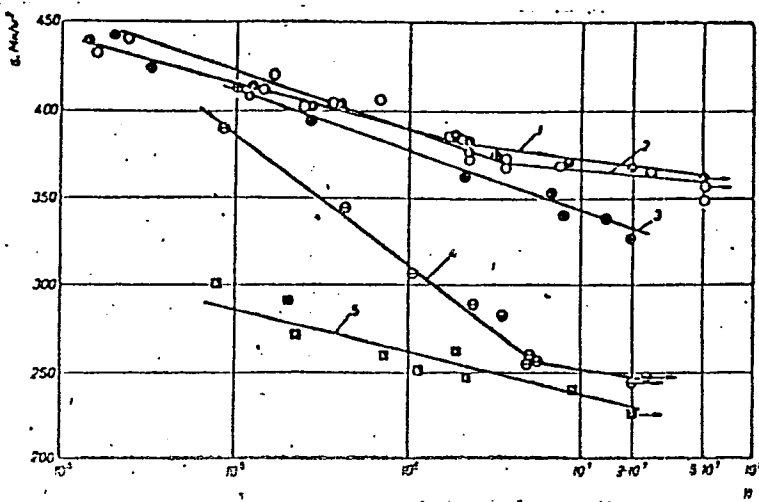
Card 3/4

ACCESSION NR: AT4023774

ENCLOSURE: 02

Fig. 2 - Fatigue strength of samples of 20Kh steel at 400C:

- 1 - in nitrate-nitrite melt;
- 2 - in air;
- 3 - in nitrate-nitrite melt with an anode potential of $D = 0.15 \text{ a/cm}^2$;
- 4 - in nitrate-nitrite melt with a cathode potential of $D = 0.15 \text{ a/cm}^2$;
- 5 - in a sodium melt.



Card 4/4

ACCESSION NR: AT4023775

S/2723/63/000/002/0040/0047

AUTHOR: Chayevskiy, M. I.; Shatinskiy, V. E.

TITLE: Variations in strength of 20 Kh steel samples under the influence of Al-Sn-Pb melts

SOURCE: AN UkrRSR. Insty*tut mashy*noznavstva i avtomaty*ky*, L'viv. Vliyaniye rabochikh sred na svoystva materialov (Effect of active media on the properties of materials), no. 2, 1963, 40-47

TOPIC TAGS: steel, 20 Kh steel, steel strength, aluminum melt, tin melt, lead melt, metal bath

ABSTRACT: When using melts of low temperature metals as working media it is advisable to employ alloying elements which form heat resistant intermetallic layers on the steel, thus lowering the dissolving rate, strengthening the grain boundaries and increasing the cyclic heat resistance. In the present study, 3.8% Al was added to a eutectic melt of Pb and Sn and samples of 20 Kh steel were tested for rupture strength (deformation rate of 0.9 - 160 μ /sec.) and fatigue resistance (cyclic bending at 40 cps) in either air or the melt at 400-600C.

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ACCESSION NR: AT4023775

These studies confirmed previous findings on the durability of 20 Kh steel in such melts, due to the formation of an intermetallic protective layer. The formation of this layer, which increased the fatigue resistance 28 x at 400C and 9 x at 600C, was confirmed by metallography; the thickness of the layer varied from 0.002-0.05 mm. This layer eliminates surface defects, causes compression at the metal surface, leads to a more uniform distribution of dislocations at the surface, and lowers the solubility of the steel in the melt, increasing the durability of the sample. The authors say that it is still too early to recommend aluminum alloying elements for liquid metal heat carriers. However, the results of these tests show it is possible to increase the durability of steel parts working under such conditions. Orig. art. has: 3 figures.

ASSOCIATION: Insty*tut mashy*noznavstva i avtomaty*ky, AN UkrRSR Lvov
(Institute of Mechanical Technology and Automation, AN UkrRSR)

SUBMITTED: 00

DATE ACQ: 10Apr64

ENCL: 00

SUB CODE: MM

NO REF SOV: 012

OTHER: 001

Card 2/2

CHAYEVSKIY, M.I.; SHATINSKIY, V.F.

Effect of polarization on the fatigue strength of steel in a fused nitrate and nitrite mixture. Fiz. met. i metalloved. 15 no.5:697-702 My '63. (MIRA 16:8)

1. Institut mashinovedeniya i avtomatiki AN UkrSSR, L'vov.
(Steel--Fatigue) (Fused salts)

CHAYEVSKIY, N.I., SHATINSKIY, V.F., POPOVICH, V.V.

Thermomechanical treatment of machine parts to protect them from
the weakening effects of surface-active media. Dokl. AN SSSR 152
no.5:1096-1099 0 '63. (MIRA 16:12)

1. Institut mashinovedeniya i avtomatiki AN UkrSSR. Predstavleno
akademikom P.A.Rebinderom.

L 32059-65 EWT(m)/EWP(w)/EWA(d)/T/EWP(t)/EWP(b) MJW/JD/WB

ACCESSION NR: AT4049938

S/2723/64/000/003/0013/0018

AUTHOR: Shatinskiy, V. F.

24
B+1

TITLE: Effect of molten salts and alkalies on construction metals

SOURCE: AN UkrSSR, Fiziko-mekhanicheskiy institut, Vliyanie rabochikh sred na svoystva materialov, no. 3, 1964, 13-18

TOPIC TAGS: metal corrosion, steel corrosion, molten salt corrosion, steel strength, cyclic stress, molten alkali corrosion, nitrate melt, aluminizing, aluminized steel / steel 20Kh, steel 30KhGSA

ABSTRACT: The author discusses the interaction of molten salts with metals in the solid phase and the possibility of preventing corrosion of steel by cathodic protection together with the formation of an intermetallic phase on the steel surface. This problem arises in connection with the use of molten salts as lubricants and heat exchangers. Most of the present paper is a review of the literature, in which the author points out that corrosion in KOH melts is due to the liberation of hydrogen, so that the best corrosion resistance is shown by Ni-Cr steels, while corrosion in nitrate-nitrite melts is due to liberation of oxygen, so that Ni

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ACCESSION NR: AT4049938

steels are satisfactory and Cr steels suffer from the leaching out of Cr. Original experiments with 30KhGSA steel in a melt containing 50% KNO_3 , 43% NaNO_3 and 7% NaNO_2 at 600C showed that thermomechanical treatment significantly reduced the corrosion rate. Corrosion under cyclic stress was studied with 20Kh steel in the same melt at 600C, showing that stress significantly increased the corrosion rate. Preliminary studies showed that diffusion aluminizing of carbon steel increases its corrosion resistance in a nitrate-nitrite melt. It is also pointed out that the fatigue strength of 20Kh steel in this melt is increased if the tests are carried out in nitrogen instead of air. Orig. art. has 2 figures.

ASSOCIATION: None

SUBMITTED: 06Jun63

ENCL: 00

SUB CODE: MM

NO REF SOV: 023

OTHER: 004

Card 2/2

L 32058-65 ENT(m)/ENP(w)/EWA(d)/T/ENP(t)/ENP(k)/ENP(b) Pf-4 MJW/JD/HW

ACCESSION NR: AT4049942

S/2723/64/000/003/0075/0084

AUTHOR: Chayevskiy, M.I. (Candidate of technical sciences); Shatinskiy, V.F.; Popovich, V.V. 36
35
B+1

TITLE: Thermomechanical treatment of stress concentrators by rolling with rollers

SOURCE: AN UkrSSR. Fiziko-mekhanicheskiy institut. Vliyanie rabochikh sred na svoystva materialov, no. 3, 1964, 75-84

TOPIC TAGS: thermomechanical treatment, strain hardening, stress concentrator, rolling, steel strength, steel rolling, torsional deformation, steel 2Kh13, steel 40Kh

ABSTRACT: A method is suggested for strengthening steel at the stress concentrators by thermomechanical treatment consisting of heat treatment, in-rolling of material at the stress concentrators and partial strain hardening of the test piece (e.g. by overall torsional deformation). The main aspect studied in the present paper is the strengthening of steel at the stress concentrators by rolling under optimum conditions. Tests were carried out on cylindrical specimens of steel 2Kh13 and steel 40Kh, in the middle of which there was a stress-concentrating groove with a depth of 1 mm, a bottom radius of 0.2 mm and an angle of 46°. During thermomechanical treatment, the depth of the groove was increased to 1.5 mm by in-rolling with a 20 mm diameter roller that left

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L 32058-65

ACCESSION NR: AT4049942

the bottom radius and groove angle unchanged. The rolling temperature was 500-600C, depending on the type of steel, and some samples were also subjected to torsional deformation. Samples were tested in air and also after coating by immersion into a molten eutectic alloy of lead and tin. Optimum thermomechanical treatment resulted in marked increases in strength at the stress concentrators, as evidenced by failures of the samples through the unnotched diameters. Rolling-in at room temperature, however, had no significant effect. The authors conclude that optimum thermomechanical treatment of parts with stress concentrators, which may be semi-finished products, yields parts with increased uniform strength without excessive deformation. For some steels, corrosion resistance is also improved, but if the plasticity of the steel is too low, there may be no beneficial effect. As shown by the results with steel 2Kh13, not all steels can be strengthened by thermomechanical treatment, even if the deformation is carried out in the high stability region of the austenite.

18

ASSOCIATION: none

SUBMITTED: 06Jun63

ENCL: 00

SUB CODE: MM

NO REF SOV: 015

OTHER: 001

Card 2/2

L-23445-65 EPA(s)-2/EWT(m)/EWF(w)/EPF(n)-2/EWA(d)/T/EWP(t)/EPA(bb)-2/EWP(b)
Pt-10/P-4 JD/WW/JW/JG

ACCESSION NR: AT4049944

S/2723/64/000/003/0092/0099

AUTHOR: Chayevskiy, M.I. (Candidate of technical sciences); Shatinskiy, V.F.

TITLE: Cyclic twisting of steel in low-melting metallic smelts

B+1

SOURCE: AN UkrSSR. Fiziko-mekhanicheskiy institut. Vliyaniye rabochikh sred na svoystva materialov, no. 3, 1964, 92-99

TOPIC TAGS: steel fatigue, steel strength, cyclic twisting, torsion stress, low melting alloy, aluminum alloy, tin alloy, lead alloy, intermetallic compound/steel 50

ABSTRACT: The appearance of large local stresses during cyclic twisting could be the reason for the difficulties encountered during attempts to strengthen steel parts operating under the mentioned conditions. Consequently, it seemed advisable to improve the structure of the surface layer by continuously repairing the defects generated during the cyclic twisting deformations. Since the resistance to fatigue seemed to improve only insignificantly during the cyclic twisting of samples in a Pb-Sn smelt at 400C, the authors proposed (DAN URSR, no. 11, 1962) to stabilize the Pb-Sn action (creating intermetallides) by adding Al to the alloy (Al = 3.8%, Sn = 59.5%, Pb = 36.7%). Tests using normalized steel 50 showed that in the 400-600C interval the alloy improved the durability of the samples, as can be seen on Fig. 1 of the Enclosure. Some authors had established

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L 23445-65

ACCESSION NR: AT4049944

earlier (see, e.g., S.N. Zhurkov, FTT, vol. 4, no. 11, 1962) that the lifetime of metals during dilation may be described by

$$\tau = \tau_0 \cdot e^{\frac{U}{kT}} \quad (1)$$

where τ_0 = a constant independent of the experimental conditions, and the activation energy of disruption U is given by

$$U = U_0 \cdot \gamma \cdot \sigma \quad (2)$$

(γ characterizes the composition of the material, σ = stress). The torsion tests under discussion showed that here 1. the coefficient τ_0 is not a constant and 2. the activation energy does not depend on stresses (this last result may be due to the smallness of the stresses involved). Orig. art. has: 6 formulas and 7 figures.

ASSOCIATION: none

SUBMITTED: 06Jun63

ENCL: 01

SUB CODE: MM

NO REF SOV: 010

OTHER: 002

Card 2/3

L 01120-66 EWT(m)/EWP(w)/EPF(c)/EWP(i)/EWA(d)/T/EWP(t)/EWP(z)/EWP(b) IJP(o)

MT JD/WB

ACCESSION NR: AP5019659

UR/0369/65/001/003/0330/0338 46

AUTHOR: Shatinskiy, V. F.

TITLE: Corrosion-fatigue strength of 1Kh18N9T steel

SOURCE: Fiziko-khimicheskaya mekhanika materialov, v. 1, no. 3, 1965, 330-338

TOPIC TAGS: corrosion fatigue strength, sulfuric acid, nitric acid, steel corrosion, thermomechanical treatment, heat treatment, stress concentrator, anodic protection, passivating agent, hydrogen fatigue/1Kh18N9T steel

ABSTRACT: 1Kh18N9T steel is widely used in the equipment for the production of sulfuric and nitric acids in chemical industry. But while the corrosion-fatigue strength of many steels has previously been investigated in detail in 3% NaCl solutions, little is known about their corrosion-fatigue strength in sulfuric and nitric acid solutions. Therefore, the authors investigated the effect of different types of heat treatment and structural state before and after thermomechanical treatment on the corrosion-fatigue strength of 1Kh18N9T steel in aqueous H₂SO₄ and HNO₃ solutions. Specimens of this steel, with V-shaped and neck-shaped stress concentrators were tested for corrosion fatigue in bending machines. The highest

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L 01120-66

ACCESSION NR: AP5019659

6

rate of corrosion was observed for specimens in 20-60% H₂SO₄. Various kinds of heat treatment before and after peening do not affect the corrosion-fatigue strength in NaCl and HNO₃ solutions. On the other hand, thermomechanical treatment can increase corrosion-fatigue strength of 1Kh18N9T steel in H₂SO₄ by as much as 240% but only if this treatment is combined with anodic protection or the addition of a passivating agent (e.g. 3% HNO₃). In thermomechanical treatment of stress concentrators the factor responsible for the decrease in corrosion-fatigue strength in H₂SO₄ is the cathodic process (hydrogen fatigue), whereas in the case of concentrators which did not undergo this treatment, the factor responsible is the anodic process (corrosion). The recommended regime of thermomechanical treatment is: quenching from 1100°C in water, production of stress concentrators by means of rolling pressure or grinding, and stabilization at 400°C for 1-3 hr. The recommended regime of anodic protection is: $D_a = 3-5 \mu\text{a./cm}^2$. Orig. art. has: 6 figures.

ASSOCIATION: Fiziko-mekhanicheskiy institut AN UkrSSR; L'vov (Physico-Mechanical Institute, An UkrSSR)

44,55

Card 2/3

L 01120-88

ACCESSION NR: AP5019659

SUBMITTED: 10Feb65

NO REF SOV: 016

ENCL: 00

OTHER: 004

SUB CODE: MM

Card 3/3 *SP*

Author: V. I. SHCHERBA, V.P.; KURBATOV, A.L.; CHAYNIN, M.I.

Remodelling the IP-30 type machine for the purpose of conducting mechanical testing in vacuum or in an atmosphere of gases. Fiz.-khim. mekh. mat. 1 no.5:596-600 '69. (MIRA 19:1)

1. Fiziko-mekhanicheskiy Institut AN UkrSSR, Lvov. Submitted April 10, 1968.

14427-66 EWT(m)/EWP(w)/EPP(n)-2/EWA(d)/T/EWP(t)/EWP(z)/EWP(b) IJP(c)
ACC NR: AP6002111 MJW/JD/WW/SOURCE CODE: UR/0369/65/001/006/0654/0658

87
26

AUTHOR: Chayevskiy, M.I.; Shatinskiy, V.F.; Popovich, V.V.
JG

ORG: Physicomechanical Institute, AN Ukr SSR, L'vov (Fiziko-mekhanicheskiy institut AN Ukr SSR)

TITLE: Role of oxygen in the adsorptive decrease of the strength of steel samples in contact with melts 21

SOURCE: Fiziko-khimicheskaya mekhanika materialov, v. 1, no. 6, 1965, 654-658

TOPIC TAGS: oxygen, steel, adsorption, fatigue strength, lead, bismuth, tin, nonferrous liquid metal

ABSTRACT: Cyclic deformation of steels in melts considerably intensifies the diffusion processes involved in the penetration of the melt or impurities into the steel. The role of oxygen in these processes was studied on 40Kh and 1Kh18N9T steels. The fatigue strength of temper-hardened 40Kh steel in the melt of the lead-bismuth eutectic in contact with air exhibited a substantial drop, whereas in the presence of argon and absence of air this drop did not occur. In melts of the Pb-Sn and Pb-Bi eutectics, the dissolved

27 27 16

Card 1/2

L 14427-66

ACC NR: AP6002111

oxygen had no effect on the fatigue strength of this steel. In the Pb-Bi melt, steel 1Kh18N9T, which has a greater affinity for oxygen than this melt, becomes saturated with oxygen coming from the melt, which in turn absorbs oxygen from the air. In the presence of a purified argon atmosphere, the oxygenation ceases, and the fatigue strength of the samples increases. Hence, both the melt and the oxygen dissolved in it participate in the adsorptive decrease of the strength of 1Kh18N9T steel in the Pb-Bi melt, which is in contact with air. In the Pb-Sn eutectic melt, intermetallic films formed on the surface of the steel act as a barrier protecting the steel from oxygen. It is concluded that in order to prevent the negative role of oxygen in reducing the strength of steels by adsorption, it is necessary either to use melts which form surface intermetallic films with the steel, or to alloy the melt with additional components which increase the affinity of the melt for oxygen, or to protect the melt from the action of oxygen. Orig. art. has: 5 figures.

SUB CODE: 07, 11 / SUBM DATE: 20Jun65 / ORIG REF: 008

Card 2/2

L 14425-66 EWT(m)/EPF(n)-2/EWA(d)/EWP(t)/EWP(k)/EWP(z)/EWP(b) MJW/JD/WH/HW/JG

ACC NR: AP6002113

SOURCE CODE: UR/0369/65/001/006/0664/0669

62
59
B

AUTHOR: Chayevskiy, M.I.; Shatinskiy, V.F.

ORG: Physicomechanical Institute, AN Ukr SSR, L'vov (Fiziko-mekhanicheskiy institut AN Ukr SSR)

TITLE: Improving the performance of steels in melts of low-melting metals by methods of hardening technology ₁₆

SOURCE: Fiziko-khimicheskaya mekhanika materialov, v. 1, no. 6, 1965, 664-669

TOPIC TAGS: steel, nonferrous liquid metal, metal property, lead, tin, bismuth

ABSTRACT: The effect of mechanical-thermal treatment (MTT) and high-temperature mechanical treatment (HTMT) of stress concentrators on the fatigue strength of 1Kh18N9T steel in Pb-Sn and Pb-Bi eutectic melts was studied. Tests showed that in air at room temperature the fatigue strength of samples with stress concentrators applied with rollers during MTT increased by 220% as compared to the fatigue strength of samples with ground concentrators. Samples subjected to temperature stabilization after deformation for 100 hr at 400, 500, and 600C did not show any appreciable change in fatigue strength, indicating that the factors determining the increase in strength arise
Card 1/2

2

L 14125-66

ACC NR: AP6002113

3

primarily in the course of deformation. ^{44, 55, 14} ~~Mechanical-thermal treatment~~ was found to be an effective means of improving the performance of 1Kh18N9T steel in Pb-Sn and Pb-Bi eutectics under cyclic loads, particularly around 500C. It is concluded that methods of hardening technology can be used to improve the performance of steel parts operating in contact with melts of low-melting metals despite the increase in the free energy of the steel as a result of work hardening. Orig. art. has: 3 figures.

SUB CODE: 11 / SUBM DATE: 05Jul65 / ORIG REF: 010

²¹¹
Card 2/2

L 40303-66 (N) /T/ENP(t)/III/PP(P) IJP(c) DJ/ID/WT

ACC NR: AP6009615 (N)

SOURCE CODE: UR/0369/66/002/001/0111/0118

AUTHOR: Shatinskiy, V. F.ORG: Physico-mechanics Institute, AN UkrSSR, L'vov (Fiziko-mekhanicheskiy institut AN UkrSSR)TITLE: Thermomechanical surface treatment (steel 40Kh as an example)

SOURCE: Fiziko-khimicheskaya mekhanika materialov, v. 2, no. 1, 1966, 111-118

TOPIC TAGS: surface hardening, thermomechanical treatment, fatigue strength, metallurgic process, steel / 40Kh steel

ABSTRACT: Thermomechanical surface treatment (TST) as a method of increasing the fatigue strength without affecting metal strength was investigated. Steel 40Kh specimens (with stress concentrators) were surface treated according to the schedules shown in Fig. 1 where the deformation consisted of rolling (3--9% deformation). Fatigue curves were obtained at room temperature (in air) and at 500C (in air and in low-melting-point metal baths) and these are presented. It was found that TST as per schedule d (see Fig. 1) was most effective at room temperature, increasing fatigue strength by 365% to 69 kg/mm². The effects of TST were less dramatic at higher temperatures: schedules c, e, and f (Fig. 1) increased fatigue strength by 60% at 500C and 75% at 600C (in air); in a Pb--Sn bath fatigue strength of the steel specimens was increased by 40% by schedules d and b. It is concluded that TST is effective in

Card 1/2

L 40302-66

ACC NR: AP6009615

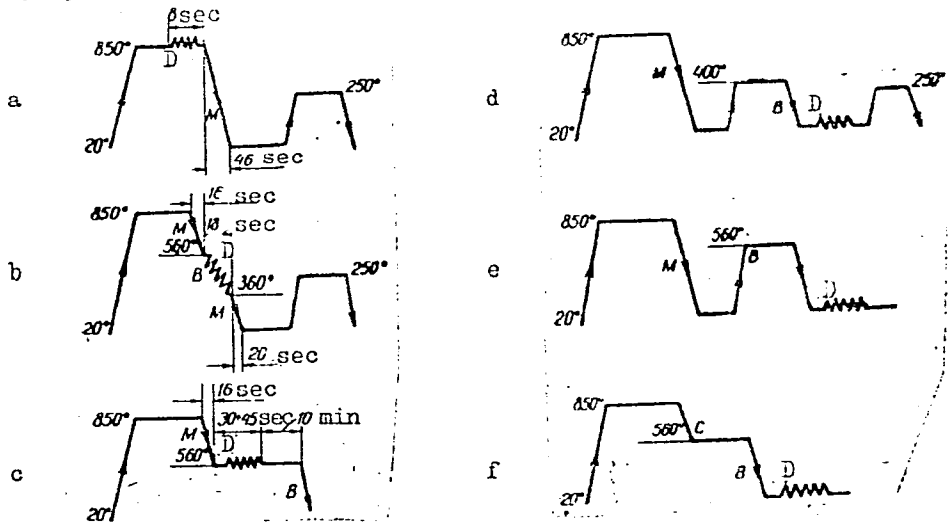


Fig. 1. Thermomechanical surface treatment schedules. D - deformation, M - oil, B - air, C - lead.

improving the fatigue properties of 40Kh steel at normal as well as elevated temperatures. Orig. art. has: 6 figures.

SUB CODE: 11,13,2C/ SUBM DATE: 20Aug65/ ORIG REF: 006/ OTH REF: 004

Card 2/2 mel

L 26039-66 EWT(m)/EWP(w)/EWA(d)/T/EWP(t) IJP(c) JD

ACC NR: AP6013898

SOURCE CODE: UR/0020/66/167/006/1287/1290

AUTHOR: Chayevskiy, M. I.; Shatinskiy, V. F.; Popovich, V. V.

41
37
8

ORG: Institute of Physics and Mechanics, Academy of Sciences, UkrSSR (Fiziko-mekhanicheskiy institut Akademii nauk UkrSSR)

TITLE: Adsorption reduction in the work capacity of steel specimens in contact with a melt, and the effect of gaseous impurities

SOURCE: AN SSSR. Doklady, v. 167, no. 6, 1966, 1287-1290

TOPIC TAGS: steel, fatigue strength, steel impurity, *metal test, material deformation*

ABSTRACT: The authors consider the long-term strength of various types of steel in lead-tin and lead-bismuth melts as contrasted with their strength in air and in a vacuum. Tests show that the long-term strength of Armco iron specimens is higher in air than in a vacuum. Tests in vacuum show less scatter in experimental data since the development of microscopic cracks in a vacuum is more uniform than this process in air. The durability of specimens in a melt is lower than in a vacuum since reliable wetting of the specimens by the melt before the tests is prevented by the formation of an oxide film on the surface of the specimens. For this reason, the oxygen from the melt penetrates easily into the steel. However, when the tests are conducted in a vacuum, the long-term strength of steel specimens in the melt is nearly the same as that of

18
2

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UDC: 669.1.539.(431+434)

L 26039-66

ACC NR: AP6013898

2

specimens in a vacuum up to a certain stress level. Above this critical stress, the melt penetrates into the metal causing embrittlement and a reduction in the short-term strength. The effect of oxygen in cyclic deformation of steel in melts is considered. It is found that the intermetallic films formed on the surface of steel by contact with the melt makes an effective barrier which protects the specimen from oxygenation. Orig. art. has: 4 figures.

SUB CODE: 11/

SUBM DATE: 27Jul65/

ORIG REF: 007/

OTH REF: 000

Card 2/2

S/056/62/043/003/010/063
B125/B102

AUTHORS: Baranov, S. A., Kulakov, V. M., Zelenkov, A. G.,
Shatinskiy, V. M.

TITLE: Investigation of α -decay of Am^{241}

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 43,
no. 3(9), 1962, 795 - 799

TEXT: Alpha decay of Am^{241} was studied with a double focusing α -spectro-
graph. At 4000 - 5560 keV more than 18 fine structure α -ray groups of Am^{241}
were ascertained, most of them for the first time. The sources were made
by sputtering americium nitrate onto a thin film of aluminum oxide. Their
effective areas were 0.25; 0.5 and 1.5 cm^2 with $\leq 2\mu g/cm^2$. Most of the
lines are of a complex character. In α -decay of Am^{241} all known levels of
 Np^{237} are excited with significant probability. What are called favorable
 α -transitions produce the most strongly developed level band 5/2 - [523].
The α -transitions to Np^{237} levels with the energies 327, 369 and 372 keV

Card 1/2

Investigation of α -decay of Am^{241}

S/056/62/043/003/010/063
B125/B102

were observed for the first time. The rotational band is more or less, certainly to be identified with $k = 1/2$. There are 2 figures and 1 table.

SUBMITTED: April 6, 1962

Table. Fine structure of the α -spectrum of Am^{241} .

Legend: (1) α -group; (2) energy of the α -particles in kev; (3) intensity; (4) coefficient of forbiddenness; (5) level energy in kev.

	(1)	(2)	(3)	(4)	(5)	(1)	(2)	(3)	(4)	(5)
α_0	5543	0.25	910	0	α_1	5212	$2.4 \cdot 10^{-3}$	170	390	
α_1	5510	0.12	1300	32.5	α_2	5222	$1.3 \cdot 10^{-3}$	210	327	
α_2	5584	86.0	1.3	59.5	α_3	5192	$6 \cdot 10^{-4}$	330	357	
α_3	5468	< 0.04	—	76.5	α_4	5180	$9 \cdot 10^{-4}$	180	309	
α_4	5442	12.7	—	102.5	α_5	5176	$3 \cdot 10^{-4}$	500	372	
$\alpha_4^?$	5416	$\sim 10^{-2}$	—	129?	α_6	5155	$7 \cdot 10^{-4}$	170	305	
α_5	5387	1.33	21	158	$\alpha_6^?$	5137	$3 \cdot 10^{-4}$	280	413?	
α_6	5320	$1.5 \cdot 10^{-1}$	790	226	α_7	5113	$4 \cdot 10^{-4}$	160	437	
$\alpha_6^?$	5291	$1 \cdot 10^{-1}$	8000	256?	α_8	5099	$7 \cdot 10^{-4}$	70	452	
α_7	5277	$5 \cdot 10^{-1}$	1300	270	α_9	5093	$3 \cdot 10^{-4}$	160	453	
$\alpha_7^?$	5272	$3 \cdot 10^{-1}$	—	275?	α_{10}	5086	$3 \cdot 10^{-4}$	150	463	

Card 2/2

ACCESSION NR: AP4009099

S/0056/63/045/006/1811/1818

AUTHORS: Baranov, S. A.; Kulakov, V. M.; Shatinskiy, V. M.

TITLE: New data on Alpha decay of americium isotopes

SOURCE: Zhurnal eksper. i teoret. fiziki, v. 45, no. 6, 1963, 1811-1818

TOPIC TAGS: americium, americium 241, americium 243, americium alpha decay, americium 241 fine structure, americium 243 fine structure, americium alpha spectrum, neptunium level scheme, rotational band, octopole level, odd even nucleus

ABSTRACT: Continuing earlier studies of the energy levels of Np^{239} through investigations of the alpha decay of Am^{243} (ZhETF v. 43, 795, 1962), the authors effected a considerable reduction in the scattered particle background and also measured the low energy Am^{241} alpha spectrum (~4650-5150 keV) with an energy resolution improved by a factor 1.5. New α groups, some belonging to Am^{243} , were discovered by analyzing the α spectra. Possible identifications of newly dis-

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ACCESSION NR: AP4009099

covered Np^{239} and Np^{237} energy levels are discussed. The existence of new $3/2^-$ [521] and $3/2^+$ [651] rotational bands are suggested, and some levels are assigned to the octopole class in the schemes of these odd-even nuclei. "In conclusion we wish to thank N. I. Aleshin, A. A. Arutyunov, Yu. N. Dmitriyev, and K. I. Merkulova, who assisted with the measurements, A. P. Smirnov-Averin for furnishing the Am^{243} sample, and L. V. Chistyakov and G. I. Khlebnikov for the careful supplementary removal of the impurities from the americium samples." Orig. art. has: 2 figures and 3 tables.

ASSOCIATION: None

SUBMITTED: 13Jun63

DATE ACQ: 02Feb64

ENCL: 00

SUB CODE: PH

NO REF SOV: 003

OTHER: 007

Card 2/2

BARANOV, S. A.; GADZHIYEV, M. K.; KULAKOV, V. M.; SHATINSKIY, V. M.

"The investigation of Pu²⁴¹ alpha decay."

report submitted for Intl Conf on Low & Medium Energies Nuclear Physics,
Paris, 2-8 Jul 64.

Kurchatov Inst, Moscow.

BARANOV, B. I.; GARDINER, I. K.; KHLAKOV, V.M.; SHAFIRSKIY, V.M.

Alpha spectrum of ^{214}Po and the levels of the ^{214}Pb nucleus.
Izv. Akad. Nauk SSSR Ser. Fiz. Mat. Nauk (1965) (MIRA 12:5)

S/123/61/000/013/024/025
A052/A101

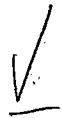
AUTHOR: Shatirishvili, A. G.

TITLE: Automation of a unit for the catalytic conversion of methane

PERIODICAL: Referativnyy zhurnal, Mashinostroyeniye, no. 13, 1961, 1, abstract
13Kh2 ("Vestn. tekhn. i ekon. inform. N.-i. in-t tekhn.-ekon. issled.
Gos. kom-ta Sov. Min. SSSR po khimii", 1959, no. 5(17), 35-38)

TEXT: A technique for the continuous production of nitrogen-hydrogen mixture (necessary for the production of synthetic ammonia) is described. The technique is realized at the Rustavi Nitrogen Fertilizer Plant and is based on catalytic conversion of methane and unsaturated hydrocarbons contained in the coke oven gas. An experimental technique of automatic control in the process has been introduced on one of the methane conversion units. The technique has been worked out by the Central Scientific-Research Institute (TsNII) of over- all automation and the Rustavi Design and Planning Institute together with the Rustavi Plant. The technique makes it possible to control automatically the ratios: coke oven gas-steam; coke oven gas - oxygen-air mixture, with the temperature correction in the reaction zone of the converter; air-oxygen. The

Card 1/2



Automation of a unit for the catalytic ...

S/123/61/000/013/024/025

A052/A101

automation technique of the process of methane conversion is described. The introduction of the automation technique made it possible to stabilize completely the ratios of the components supplied to the unit and the temperature conditions. As a result the possibility of gas inflammation in the converter is practically excluded, and the life times of the converter and catalyzer are extended. There are 4 figures.

G. Blagovo

[Abstracter's note. Complete translation]

Card 2/2

RELIKOV, Yu.V.; KHELIJE, M.A.; KRASNYKH, I.P.; SIGIDEE, G.Ya.; KNITRIK,
S.I.; SHATIRISHVILI, G.A.; SHIRER, G.B.

Making silicon-manganese alloys from sintered 31 and 3d-grade
concentrates of the Nikopol' deposit. Stal' 24 no.2:140-143 F '64.
(MIRA 17:9)

Def. at
Tbilisi State U.

911. Чубинишвили Кетевана сбрана верховия р. Копети в Абхазии
 Георгиевска. К петрографии верховия р. Копети. геол. мест. т. 36, 1, 1936
 (Брасселска) 913. Шатришвили Тамара
 мощища отаждени Южной Кавкази (Брасселска ССР), 300 с., 47 рис. (Ил.
 мест. геогр. прим. СССР). Магистрска. Петрография верховия
 р. Копети. 1953. (Глазго-
 уикс) 912. Чоротва Георгий Рафаелович
 иадротелобина УИИА треста Груз-
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SHATIRISHVILI, T.M.

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SHATKHAN A. S.

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Razvitiye pivovarennoy promyshlennosti SSSR
(Development of the beer brewing industry of the USSR, by)
I. Ya. Veselov (I) A. S. Shatkhan.
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189, (3) p. illus., diagrs., tables.
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SIVOLAP, Ivan Kuz'mich; SHATKHAN, A.S., spetsredaktor; PRITYKINA, L.A.,
redaktor; KISINA, Ye.I., tekhnicheskiy redaktor

[Food industries of Italy] Na pishchevykh predpriatiakh Italii.
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Reviewed by V. Donskov, A. Shatkhan. Vop. ekon. no. 6:101-105
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VESELOV, I.Ya., doktor biol.nauk; SHATKHAN, A.S., kand.ekon.nauk;
DONSKOV, V.Ye., kand.ekon.nauk, retsenzent; KRUCHININ, V.F.,
inzh., retsenzent; PRITYKINA, L.A., red.; KISINA, Ye.I.,
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[Brewing industry of the U.S.S.R. and prospects for its
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SHATSKII, F.A. (Moskva)

Application of the maximum principle to problems of optimization
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Mar '64. (MIRA 17:6)

SHATKHAN, F.A.

Optimum temperature conditions for oxygen induced polymerization
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(MIRA 18:6)

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Optimum temperature conditions for initiated radical polymerization.
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(MIRA 18:7)

1. Tsentral'nyy nauchno-issledovatel'skiy institut kompleksnoy
avtomatizatsii.

L 23455-66 EWT(m)/T/RWP(j) RM

ACC NR: AP6010116

(A)

SOURCE CODE: UR/0190/66/008/003/0503/0508

AUTHOR: Shatkhan, F. A.; Gil'man, I. M.

34
13

ORG: Central Scientific-Research Institute for Large-Scale Automation (Tsentral'nyy nauchno-issledovatel'skiy institut Komplekskoy avtomatizatsii); Kuskovo Chemical Plant (Kuskovskiy khimicheskiy zavod)

TITLE: Optimum temperature conditions for the block polymerization of styrene 1

SOURCE: Vysokomolekulyarnyye soyedineniya, v. 8, no. 3, 1966, 503-508

TOPIC TAGS: polymer, polymerization rate, styrene, molecular weight

ABSTRACT: Proceeding from the principle that selection of optimum temperature conditions is governed by two factors, namely, 1) minimum preparation time and, 2) a polymer with optimum properties, the author proposes a method for calculating temperature conditions for the block polymerization of styrene using kinetic equations for the reaction time and an equation for the molecular weight of the polymer obtained, making it possible to produce polymers efficiently with a predetermined molecular weight. Graphs are given to show 1) both the initial rate of polymerization and molecular weight as a function of temperature; 2) the effect of styrene conversion on the polymerization rate at temperatures ranging from 90 to 140C; 3) optimum temperature conditions as a function of styrene conversion and reaction time; 4) and, finally, an experimental polymerization of styrene with variable

Card 1/2

UDC: 66.095.25+678.746

ACC NR: AP6010116

temperatures and time, indicating good agreement between calculations and actual data obtained. Orig. art. has: 4 figures. [LD]

SUB. CODE: 11, 07/ SUBM DATE: 08Apr65/ ORIG REF: 007/ OTH REF: 009

Card 2/2

uCR

L 23133-66 EWA(h)/FCC/EWT(1) GW
ACC NR: AP6006670 SOURCE CODE: UR/0203/66/006/001/0143/0146

AUTHORS: Chavdarov, S. S.; Chernysheva, S. P.; Shatkhin, Kh. Z.

ORG: Rostov-on-Don State University (Rostovskiy-na-Donu gosudarstvennyy universitet)

TITLE: Stability of reflections from the sporadic E layer and solar activity

SOURCE: Geomagnetizm i aeronomiya, v. 6, no. 1, 1966, 143-146

TOPIC TAGS: solar activity, E layer, sunspot, solar cycle, electromagnetic wave reflection

ABSTRACT: The authors point out the contradictions in the literature concerning the dependence of E-layer reflections on phases of the solar cycle. They consider the following parameters characterizing stability of reflection from E_s (parameters that they previously introduced into the literature): τ - duration of continuous reflections, $(pE_s) \tau \gg \tau_0$ - probability of the appearance of E_s during certain hours of the day with a given duration of uninterrupted reflections (hereafter called P), θ - the stability coefficient, characterizing the rate of decrease in

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UDC: 550.388.2:523.745

L 23133-66
ACC NR: AP6006670

probability P with increase in τ . A number of observational data are examined, particularly ionospheric data from Rostov-on-Don for 1960--64 in conjunction with 1958--59 data. Graphs of probability for these periods have been plotted. From an examination of the results it appears that P and θ are the best parameters for detailed definition of the E_s layer. The normal probability of the E_s layer has no detectable connection with the cycle of solar activity. The probability of the layer with a given duration as τ increases shows a notable reciprocal correlation with the sunspot number. A reciprocal dependence on phase of the solar cycle is clearly manifested in changes in duration of reflections and in the stability coefficient. The reciprocal dependence of P and θ on the sunspot number may be explained to some extent by the fact that in a year of maximal solar activity the processes at work in the ionosphere are more sharply manifested, and these lead to an increase in amount of reflection of short duration. Orig. art. has: 3 figures.

SUB CODE: 04, 03 SUBM DATE: 24 May 65/ ORIG REF: 007/ OTH REF: 003

Card 2/2

SHATKIN, A.A.; TERSKIKH, I.I.

Etiology of trachoma. Vop.virus. 4 no.6:643-647 N-D '59.

(MIRA 13:3)

1. Institut virusologii imeni D.I. Ivanovskogo AMN SSSR, Moskva.
(TRACHOMA etiol.)

TERSKIKH, I.I.; SHATKIN, A.A.; GHERVONSKIY, V.I.; MARTYNOVA, V.R.

Study of the etiology of trachoma. Report No.1: Isolation in
white mice of virus agents from trachoma patients. Vest. AM SSSR
14 no.10:23-28 '59. (MIRA 13:6)

1. Institut virusologii imeni D.I. Ivanovskogo AMN SSSR.
(CONJUNCTIVITIS, GRANULAR)

SHATKIN, A. A.

Cand Med Sci - (diss) "Study of biological properties of virus isolated from patients ill with trachoma." Moscow, 1961. 15 pp; (Academy of Medical Sciences USSR); 250 copies; price not given; (KL, 5-61 sup, 208)

SHATKIN, A.A.

Development of a laboratory culture of trachoma virus pathogenic
for man. Vop. virus. 6 no.5:532-538 3-0 '61. (MIRA 15:1)

1. Institut virusologii imeni D.I.Ivanovskogo AMN SSSR, Moskva.
(CONJUNCTIVITIS, GRANULAR)

SHATKIN, A.A.

Experimental study of a virus isolated from trachoma patients.
Zhur.mikrobiol. epid. i immun. 32 no.4:98-102 Ap '61.

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1. Iz Instituta virusologii imeni Ivanovskogo AMN SSSR.
(TRACHOMA)

SHATKIN, A.A.

Sensitivity of viruses isolated from trachoma patients to some anti-
biotics under experimental conditions. Vop. virus. 7 no.2:247-248
Mr-Apr '62. (MIRA 15:5)

1. Institut virusologii imeni D.I.Ivanovskogo AMN SSSR, Moskva.
(CONJUNCTIVITIS, GRANULAR) (ANTIBIOTICS)

SHATKIN, A.A.

"Study on etiology of trachoma."

Report submitted to the Intl. Congress for Microbiology
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SHATKIN, A.A.; BESKINA, S.R.; MARTYNOVA, V.P.

Cultivation of the pathogens of trachoma and paratrachoma in developing chick embryos. Report no.1: Pathogenicity and dynamics of the accumulation of agents. Vop. virus no.6:724.. 728 N-D '63. (MIRA 17:6)

1. Institut virusologii imeni D.I. Ivanovskogo AMN SSSR, Moskva.

SHATKIN, A.A.; GOL'DENBERG, A.Z.

Isolation of the pathogen of inclusion blennorrhoea in newborn infants. Vop. virus. 8 no.1 :72-76 Ja-F'63.

(MIRA 16:6)

1. Institut virusologii imeni D.I. Ivanovskogo AMN SSSR, Institut glaznykh bolezney imeni Gel'mgol'tsa Ministerstva zdravookhraneniya RSFSR, Moskva.

(VIRUS DISEASES) (CONJUNCTIVITIS)
(INFANTS (NEWBORN) --DISEASES)

W. L. ...

Experimental ... by a laboratory ...
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SHATEIN, Anatoliy Al'bertovich; SHAYDER, B.Ye., red.

[Trachoma; its etiology and etiologic treatment] Trachoma etiologiya i etiologicheskoe lechenie. Leningrad, Meditsina, 1965. 185 p. (MIRA 19:1)

GRANOV, B.; MILUSHIN, V.I.; SHATKIN, A.S.; GURVICH, G.;
TAKSTAL'SKAYA, I. Ya.

Aid to virologist. Vop. virus. 10 no. 6:734-743 S-E 165
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1. Moskovskiy naučno-issledovatel'skiy institut virusovkh preparatov (for Gurvich, Milushin). Submitted August 23, 1964.
2. Institut virusologii imeni D.I. Ivanovskogo AN SSSR, Moskva. (for Shatkin). Submitted November 29, 1964.
3. Institut virusologii imeni D.I. Ivanovskogo AN SSSR, Moskva. (for Guralakhodzhaev, Takstal'skaya). Submitted January 13, 1964.

REF ID: A66001

SOURCE CODE: UR/0143/66/1000001/11/0123

AUTHOR: Borodnov, A. G. (Candidate of Technical Sciences; Docent);
Shackin, A. N. (engineer)

ORG: Saratov Polytechnical Institute (Saratovskiy politekhnicheskiy
institut)

TITLE: Smooth, contactless control of voltage by transformer with
inductive-capacitive link

SOURCE: IVUZ. Energetika, no. 12, 1966, 23-28

TOPIC TAGS: electric transformer, electronic circuit

SUB CODE: 09

ABSTRACT: A transformer with an inductive-capacitive link allows smooth,
contactless control of voltage at consumer locations. The introduction of
an inductive-capacitive link to the circuit allows the range of control to be
expanded both during idle and under load. A practically linear law of change
of $I_d=f(I_L)$ is produced, allowing automation of the control of the magnetizing
current from the load current. The transformer described in this article can
be used for control of voltages in electrical supply systems in industrial
enterprises, as well as for laboratory and other purposes. Orig. art. has:
4 figures and 11 formulas. [JPRS: 40,102]

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UDC: 621.316.722.9

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