

L 3237-66 EWT(m)/T/EWP(t)/EWP(b)/EWA(h)/EWA(c) JD

ACCESSION NR: AP5021978

UR/0286/65/000/014/0041/0041
621.787

AUTHOR: Ivanova, V. G.; Terent'yev, V. F.; Sabitov, N. S.

TITLE: Method of increasing the service life of steels and alloys. Class 18,
No. 172865 14

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 14, 1965, 41

TOPIC TAGS: steel, alloy, steel service life, alloy service life, steel training,
alloy training, cyclic training*

ABSTRACT: This Author Certificate introduces a method of increasing the service life of steel and alloy parts by training*. To obtain a higher strengthening effect of training*, the cyclic treatment by a stress higher than the yield strength is alternated with rest periods. The training* process, which comprises a fixed number of cycles with subsequent rest periods, is repeated 5-10 times. [MS]

ASSOCIATION: none

* Procedly straining

SUBMITTED: 18Apr63

ENCL: 00

SUB CODE: MM

NO REF SOV: 000

OTHER: 000

ATD PRESS: 4104

Card 1/1

L 2662-66 ENT(m)/EWP(w)/EPF(c)/T/EWP(t)/EWP(b)/EWA(c) JD/wB/GS

ACCESSION NR: AT5023089

UR/0000/65/000/000/0104/0110

AUTHOR: Ivanova, V. S.; Terent'yev, V. F.

TITLE: Effect of air atmosphere on the cyclic strength of metals

SOURCE: Problemy bol'shoy metallurgii i fizicheskoy khimii novykh splavov (Problems of large-scale metallurgy and physical chemistry of new alloys); k 100-letiyu so dnya rozhdeniya akademika M. A. Pavlova, Moscow, Izd-vo Nauka, 1965, 104-110

TOPIC TAGS: air, cyclic strength, metal oxidation, fatigue strength, crack propagation

ABSTRACT: The fact that the cyclic strength of many metals in air is much lower than in a vacuum points up the role of oxidation processes in accelerating fatigue breakdown and, second, points to the possibility of exploring new ways to enhance the cyclic strength of machine parts. For example, metal surfaces can be protected against the harmful effect of air by being wetted with organic liquids of the dodecanol type or coated with an insulating film that is impervious to gases or used in an air atmosphere to which inert gases (nitrogen, argon, or

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carbon dioxide) are added in order to reduce the amount of oxygen present. The accelerated fatigue breakdown of metals in the air atmosphere is differently explained by different investigators. Schaub and Liedtke (Zts. Metallkunde, 44, 570, 1953; Proc. 11. Fatigue, Stockholm, 1955, Berlin, 1956, p. 244) offer the theory that the commencement of fatigue breakdown requires: 1) the presence of a local slip that develops during cyclic deformation; 2) the interaction between the oxygen of the air and the atoms of the metal located in the activated slip planes. The combined effect of this reaction and the plastic deformation arising during cyclic deformation leads to the appearance of fatigue cracks. Thus, the mechanism of crack formation would be chemical in nature. This hypothesis, however, cannot be accepted, since chemical processes are rather a secondary factor in crack formation during the fatigue process. The primary factor should be regarded as the processes associated with the motion and interaction of crystal lattice defects (dislocations, vacancies) leading to disturbances in continuity. Chemical processes of the chemisorption type merely contribute, during the stage of crack propagation, to accelerating the appearance and development of fatigue cracks. On the whole, this survey of 22 literature sources shows that the mechanism of action of air on the process of fatigue breakdown is still inadequately investigated. Further basic and applied research into the effect of gaseous media on the fatigue

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ACCESSION NR: AT5023089

0

strength of metals and alloys is needed. Orig. art. has: 3 figures.

ASSOCIATION: none

SUBMITTED: 00

ENCL: 00

SUB CODE: MM

NO REF SOV: 002

OTHER: 020

Card 3/3

Handwritten initials

L 20625-66 EWP(k)/EWT(d)/EWT(m)/T/EWA(d)/EWP(w)/EWP(t) IJP(c) EM/JD/HW
ACC NR: AP6010088 SOURCE CODE: UR/0129/66/000/003/0016/0018

AUTHOR: Ivanova, V. S.; Terent'yev, V. F.

ORG: Institute of Metallurgy im. A. A. Baykov (Institut metallurgii)

31
30
B

TITLE: Effect of repeated deformation on the cyclic strength of low-carbon steel

SOURCE: Metallovedeniye i termicheskaya obrabotka metallov, no. 3, 1966, 16-18, and bottom half of insert facing p. 32

TOPIC TAGS: steel, low carbon steel, steel treatment, mechanothermal treatment, steel cyclic strength

ABSTRACT: The effect of mechanothermal treatment on the cyclic strength of St3 low-carbon (0.15% C) steel has been studied. Steel specimens were repeatedly (3-6 times) stretched up to the end of the yield-point elongation and after each stretching were aged at 100C for 20 hr. It was found that increasing the number of mechanothermal cycles improves the strength characteristics of the steel. The treatment repeated 5-6 times increased the tensile and yield strength to the same value, 42-48 kg/mm², and lowered the elongation to 17% and the reduction of area to 36%. Annealed steel had a tensile strength of 38.3 kg/mm², a yield strength of 21.5 kg/mm², an elongation of 40.8%, and a reduction of area of 43.5%. The cyclic strength (in push-pull tests with 400 cycles/min) increased from 26 to 35 kg/mm² and the fatigue life increased 50-100 times. Repeated deformation creates in the

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UDC: 620.178.311.868:621.78

L 20625-66

ACC NR: AP6010088

ferrite a uniform dislocation structure of high density, and aging brings about the precipitation of a finely dispersed secondary-phase which blocks the dislocations. Orig. art. has: 3 figures. [ND]

SUB CODE: 11, 13/ SUBM DATE: none/ ORIG REF: 002/ OTH REF: 001/ ATD PRESS: 4225

Card

2/2

lo

L 21745-66 ENT(d)/ENT(m)/ENP(w)/ENA(d)/T/ENP(t)/ENP(k) IIP(c) ID/IN/EM
ACC NR: AP6008044 SOURCE CODE: UR/0020/66/166/004/0843/0846

AUTHOR: Ivanova, V. S.; Terent'yev, V. F.

ORG: Institute of Metallurgy im. A. A. Baykov (Institut metallurgii)

TITLE: On the form of the fatigue curve for low carbon steel

SOURCE: AN SSSR. Doklady, v. 166, no. 4, 1966, 843-846

TOPIC TAGS: fatigue strength, fatigue test, mechanical heat treatment, deformation rate, low carbon steel

ABSTRACT: In a previous article by one of the authors (V. S. Ivanova, Fatigue Failure of Metals, Moscow, 1963) energy criteria were proposed for fatigue-- σ (reduced fracture strength) and N_c (critical number of loading cycles)--which are independent of the loading conditions and the initial structural state of the metal or alloy (due to various forms of heat treatment). Corresponding to the critical number of cycles N_c is a critical fatigue stress σ_c --the stress at which submicroscopic cracks appear in the first loading cycles together with the accumulation of inelas-

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UDC: 539.385

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ACC NR: AP6008044

tic distortions in the crystal lattice. Since σ_c is a limiting stress above which submicroscopic cracks appear during the first loading cycles, differences should be expected in the behavior of structure-sensitive properties of the metal for cyclic loads above and below σ_c , as well as a change in the slope of the fatigue curve beginning at the critical fatigue stress. Fatigue tests were conducted to verify this hypothesis on specimens of low carbon 20 steel (0.24% C). The specimens had the following mechanical characteristics in the annealed state (900°, 5 hours): $\sigma_B = 50.9 \text{ kg/mm}^2$, $\sigma_s = 30.6 \text{ kg/mm}^2$, $\delta = 37.9\%$, $\psi = 34.7\%$. Fatigue curves are given for the metal in the annealed state and after repeated thermomechanical treatment. This treatment consisted of active loading at room temperature to a strictly limited degree of deformation equal to the value of the yield surface with intermediate aging at 180° for 20 hours between deformation cycles in the unloaded state. Repetition of this treatment for 6 cycles resulted in complete disappearance of the yield surface and the yield stress was raised to a new value equal to the ultimate tensile strength. The fatigue curves for annealed specimens show a slight increase in slope indicating greater durability at the critical fatigue stress. The behavior of specimens subjected to repeated thermomechanical treatment is just the opposite

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ACC NR: AP6008044

with a much more pronounced change in slope toward lower durability. Thus the theoretical hypothesis is confirmed and the values of σ_c and N_c may be used for an exact determination of the critical stresses at which changes in the slope of the fatigue curve should be expected. Orig. art. has: 3 figures.

SUB CODE: 20, 11/ SUBM DATE: 03Aug65/

ORIG REF: 005/

OTH REF: 006

Card 3/3

L 23178-66 EWT(m)/EWA(d)/EWP(k)/EWP(t) JD/HW

ACC NR: AP6005562

SOURCE CODE: UR/0122/65/000/010/0059/0062

AUTHORS: Ivanova, V. S. (Doctor of technical sciences); Terent'yev, V. F. (Engineer)

ORG: none

TITLE: The effect of plastic deformation and subsequent aging on the cyclic strength of steel

SOURCE: Vestnik mashinostroyeniya, no. 10, 1965, 59-62

TOPIC TAGS: metal, metallurgy, aging, fatigue strength, plastic deformation, steel
~~Armco steel~~/ Armco steel, S4 steel

ABSTRACT: The effect of deformation and aging on the cyclical strength of steel machine parts is studied. Aging which occurs in the process of cyclical loading is the prototype example of deformation aging. The cyclical strength of steel under temperature increase from 200 - 400C reaches a maximum similar to the maximum strength limit under static stressing of steel in the temperature interval of blue brittleness. The effect of the degree of preliminary deformation on the increase of cyclical strength as the result of static deformation aging is shown in Fig. 1. It is concluded from this data that the growth of the degree of preliminary

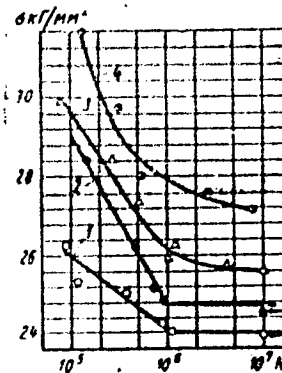
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UDC: 621.7:620.17²

L 23178-66

ACC NR: AP6005562

Fig. 1. The effect of static deformation aging on the cyclical strength of low-carbon steel: 1 - normalization; 2, 3 - static deformation of 4% and 9% respectively, aging for 8 hours at 100C; 4 - dynamic deformation 17%, aging for 8 hours at 100C.



deformation is accompanied by an increase in strength from static deformation aging. The magnitude of the strength increases depends not only on the degree of preliminary deformation but also on the mode of preliminary heat treatment. Plots are presented showing the effect of static deformation aging for varying degrees of deformation on the cyclical strength of Armco steels, as well as the effect of preliminary plastic deformation and subsequent heat treatment on the cyclical strength of steel S4. The success of the MMTD method (multiple mechanical-thermal treatment) is reviewed and the mechanism by which this method increases fatigue

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ACC NR: AP6005562

strength is outlined. Reference is made to Soviet, American, and German research
in this field. The authors conclude that rational application of this type of
mechanical thermal treatment can increase the fatigue limit of low-carbon steels
by as much as 30 to 40% with corresponding increase in machine parts durability. (6)
Orig. art. has: 8 figures. 3

SUB CODE: 11/ SUBM DATE: none/ ORIG REF: 007/ OTH REF: 005

Card 3/3 *LJC*

L 27233-66 EWT(m)/T/EWP(w)/EWP(t) IJP(c) JD

ACC NR: AM6003228

Monograph

40
37 UR/
21

Ivanova, V. S.; Gorodiyenko, L. K.; Geminov, V. N.; Zubarev, P. V.; Fridman, Z. G.;
Liberov, Yu. P.; Terent'yev, V. F.; Vorob'yev, N. A.; Kudryashov, V. G.

18 Role of dislocation in the strengthening and failure 19 of metals (Rol'dislokatsii
v uprochnenii i razrushenii metallov) Moscow, Izd-vo "Nauka", 1965. 179 p.
illus., biblio. Errata slip inserted. 4500 copies printed.

TOPIC TAGS: metal, alloy, metal strength, alloy strength; dislocation, dislocation theory, thermomechanical treatment, metal failure

PURPOSE AND COVERAGE: The book is a continuation and development of the ideas of the late Professor I. A. Odintsov on the theory of dislocations. This theory served as the basis for the elaboration of new methods of strengthening metals and alloys. In the first part (Chap. I-IV) of this monograph the role of dislocations in the development of plastic deformation and the generation of flaws is discussed. In the second part (Chap. V-VII), the theoretical premises for metal and alloy strengthening with thermomechanical treatment and the effect of this treatment on the mechanical properties of metals and alloys under static and cyclic loads are reviewed.

TABLE OF CONTENTS:
Card 1/2

UDC: *669.018.25:669-17

L 27233-66

ACCNR: AM6003228

Foreword -- 5

Ch. I. Regularities of slopping and strengthening on the different grades of deformation -- 7

Ch. II. Formation of submicroscopic flaws during deformation as a result of multiplication of and interaction between defects of the crystal lattice -- 29

Ch. III. Effect of grain size, temperature, and deformation rate on the characteristics of metal fluidity -- 46

Ch. IV. Mechanism of brittle rupture and regularities in the defectibility of metals during creep 73

Ch. V. Basic premises for the development of methods of material strengthening by means of thermomechanical treatment 103

Ch. VI. Effect of basic technological factors on the effect of strengthening in thermomechanical treatment -- 119

Ch. VII. Increase of cyclic strength under combined thermomechanical treatment -- 148

References -- 170

SUB CODE: 11/ SUBM DATE: 06Aug65/ ORIG REF: 180/ OTH REF: 238/

Card 2/2 CC

ACC NR: AP7005755

SOURCE CODE: UR/0126/67/023/001/0117/0122

AUTHOR: Ivanova, V. S.; Terent'yev, V. F.; Kudryashov, V. G.; Sabitova, N. S.

ORG: Institute of Metallurgy im. A. A. Baykov (Institut metallurgii)

TITLE: Mechanism of hardening during multiple deformation aging

SOURCE: Fizika metallov i metallovedeniye, v. 23, no. 1, 1967, 117-122

TOPIC TAGS: metal deformation, metal aging, metal heat treatment, creep, low carbon steel

ABSTRACT: The strength of metals can be additionally enhanced if they are deformed in stages alternating with aging. The best results are produced when the metal is subjected at room temperature to successive dynamic loadings up to a rigorously limited degree of deformation equal in magnitude to the creep plateau, alternated with intermediate aging (multiple thermomechanical treatment or MTMT). The MTMT of e. g. iron increases its yield point by 100-150% and ultimate strength by 50-75% while maintaining plasticity at the level of 17%. In this connection the authors investigated the dislocation structure of low-carbon steel and armco iron following their quadruple (i. e. 4-stage) MTMT with intermediate aging (150°C for 5 hr) after each stage of deformation. Dislocations were examined by etching with the reagent

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UDC: 539.4

ACC NR: AP7005755

LZ (100 cc of methyl alcohol + 1 g FeCl_3). Findings: the increase in the static and cyclic strength of armco iron and low-carbon steel following their MTMT is due to the formation of a stabilized dislocation structure which uniformly encompasses the hardened volume of the metal and leads to: a) limitation of surface deformation during cyclic loading of the metal and, as a consequence, retardation of the occurrence of fatigue cracks which, in its turn, prolongs the life of the metal; b) increase in the energy G_{1c} required for the propagation of a crack (per unit length of the crack). Knowledge of the parameters G_{1c} and K_{1c} (relative local increase in tensile stress at the leading end of a crack spreading under conditions of plane deformation) is an important and useful requirement for selecting the optimal regime of hardening treatment. Orig. art. has: 4 figures, 2 formulas.

SUB CODE: 13, 11/ SUBM DATE: 09Oct65/ ORIG REF: 008/ OTH REF: 007

Card 2/2

APPROVED FOR RELEASE: 07/16/2001
STETKEVICH, A.A.; TEREENT'YEV, V.F.

CIA-RDP86-00513R001755330011-5"

Data on allergic diagnosis of tick-borne encephalitis.
Trudy Tom NIIVS 12:37-42 '60 (MIRA 16:11)

1. Tomskiy meditsinskiy institut i Tomskiy nauchno-izzledovatel'skiy institut vaktsin i syvorotok.

*

STETKEVICH, A.A., TEREKTYEV, V.F.

Importance of the embryonic antigen in allergic diagnosis of
tick-borne encephalitis. Trudy TomNIIVS 14:24-28 '63.
(MIRA 17:7)

1. Tomskiy nauchno-issledovatel'skiy institut vaktsin i
syverotok i Tomskiy meditsinskiy institut.

Terent'ev
TERENT'YEV, V.G. (Moskva)

Case of diencephalic hyperthermia in decompression sickness [with
summary in French]. Zhur.nevr. i psikh. 57 no.9:1149-1151 '57.
(MIRA 10:11)

(FEVER, etiology and pathogenesis,
caused by diencephalic disord. in changes of simulated
altitude (Rus))
(ALTITUDE, effects,
diencephalic disord. causing fever in changes of simulated
altitude (Rus))
(DIENCEPHALON, physiology,
fever caused by diencephalic disord. in changes of
simulated altitude (Rus))

TERENT'YEV, V.G. Cand Med Sci -- (diss) "Certain reactions of
the nervous system ^{to the} of man ~~as~~ ^{of} effect ~~of~~ ^{of} general vertical
vibrations (Clinic-experimental study ~~of~~ applied to aviation)."

Mos, 1958, 15 pp (Min of Health USSR, Central Inst for the
Advanced Training of Physicians) 200 copies (KL, 51-50, 102)

1(2)
27(2)

SOV/177-58-1-18/25

AUTHORS: Borshchevskiy, I.Ya., Colonel of the Medical Corps, Candidate of Medical Sciences; Koreshkov, A.A., Colonel of the Medical Corps, Candidate of Medical Sciences; Markaryan, S.S., Major of the Medical Corps, Candidate of Medical Sciences; Preobrazhenskiy, V.V., Lieutenant-Colonel of the Medical Corps, Candidate of Medical Sciences; Terent'yev, V.G., Lieutenant-Colonel of the Medical Corps

TITLE: The Effect of the Vibrations of Certain Modern Helicopter and Aircraft Types on the Human Body (Vliyanie na organizm cheloveka vibratsiy nekotorykh tipov sovremennykh vertoletov i samoletov)

PERIODICAL: Voenno-meditsinskiy zhurnal, Nr 1, 1958, pp 74 - 77 (USSR)

ABSTRACT: The author reports on his examinations of persons tested by a type VP-70 vibration stand (Figure 1) which produces a single-component vertical vibration.

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SOV/177-58-1-18/25

The Effect of the Vibrations of Certain Modern Helicopter and Aircraft Types on the Human Body

By a special adjustment, vibrations reached a frequency of 10 to 70 hz and an amplitude of 0.2 - 2.5 mm. Four series of 3 tests each were performed. During the first two tests of each series, the person to be tested was subjected only to vibration and during the third test simultaneously to vibration and to a 105 to 110-decibel noise. Between tests there were intervals of 3 - 7 days. The data obtained have proved that vibrations with low frequencies and large amplitudes may disturb the pilot's visual orientation during flight and also negatively influence his ability to hit the target. The reactivity of the vestibular analyzer had noticeably increased. Hearing was impaired only by simultaneous vibration and noise effects. Vibrations with frequencies of 40 and 70 hz and amplitudes of 0.3 and 0.4 mm over periods of 4 and

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SOV/177-58-1-18/25

The Effect of the Vibrations of Certain Modern Helicopter and Aircraft Types on the Human Body

8 hours, caused insignificant functional changes in the human organism. Vibrations with a frequency of 10 hz and an amplitude of 1.8 and 2.4 mm result in pronounced and permanent functional changes and cannot be recommended as physiologically permissible for the cockpits of helicopters and other aircraft. There is 1 photograph.

Card 3/3

TERENT'YEV, V.G.

Method of graphic investigation of the knee-jerk reflex in man
[with summary in French]. Zhur.nevr. i psikh. 58 no.8:959-963 '58
(REFLEX,

knee jerk, registration (Rus))
(KNEE, physiol.

knee jerk reflex, registration (Rus))

TERENT'YEV, V.G.

Modification of vasomotor induced by general vibration. Zhur.vys.berv.
deiat. 9 no.5:649-656 S-O '59. (MIRA 13:3)

1. Institut aviatsionnoy meditsiny, Moskva.
(VIBRATION effects)
(REFLEX)

26467

27.2100

S/177/60/000/011/001/003
D219/D302

AUTHORS: Buyanov, P. V., Galkin, A. V., Karpov, Ye. A.,
Samukhin, N.V., Terent'yev, V. G., Shevchenko,
A. I.

TITLE: Contra-indications to the breathing of oxygen at
increased pressure

PERIODICAL: Voyenno-meditsinskiy zhurnal, no. 11, 1960, 64 - 68

TEXT: The authors wished to study the effect of systematic
breathing of oxygen under pressure and discover medical contra-
indications to its use, especially with regard to personnel suf-
fering from physical defects which do not render them unfit for
flying duty. 125 persons, 20 - 40 years old, underwent pressure
chamber tests and prolonged clinical observation. All were well
and fit for flying duty. 43 had various defects such as pleural
synechia and adhesions, hypertensive neurocirculatory dystonia
(5), 1st degree thyroid enlargement without malfunction (4) and
so on. Normal clinical records were taken and analyses done

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D219/D302

Contra-indication to the breathing...

plus X-Ray, neurological, electrophysiological and ENT examination. Subjects took part in 1 - 97 experiments at 7 - 14 day intervals. Physiological effects were noted immediately; rise in heat and respiration rate, arterial pressure, bioelectric respiratory muscle activity; ECG variation; fall of oxygen-hemoglobin level to 60 - 80% (slowing of circulatory rate; changes in latent period of conditioned motor reflexes; occasional subcutaneous emphysema. Subjects usually felt well after tests complaining rarely of fatigue or headache. Clinical examination generally revealed slowing of pulse (by 6 - 18 beats), increase in venous pressure, moderate increase in arterial pressure, slight fall in pulse pressure and increase in heart size. In over 30% of cases heart murmurs - usually pulmonary and aortic - appeared. No pathological ECG changes save extrasystoles in 4 cases. Changes were often recorded in capillary formation, phethysmograph curves and in vasomotor reflexes. Aftereffects: Lung vital capacity decreased by 200 - 400 ml. A third of the subjects had scattered dry rales. Lung X-Ray showed occasional

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S/177/60/000/011/001/003

Contra-indications to the breathing...D219/D302

shadowing and local disciform atelacteses. There was an increase in neutrophil leucocytes in the peripheral blood and a relative lymphocyte fall. Tendon reflexes became more and more sensitive, finger tremor increased, touch discrimination and co-ordination deteriorated and signs of general fatigue appeared. All changes were reversible, usually in a few hours. As regards personnel suffering from minor defects, the effect of these deficiencies was varies. In some cases e.g., chronic gastritis, they suffered no adverse effect either initially or after prolonged experimentation, but it was clear that systematic participation in such high altitude tests was contra-indicated in all cases of pulmonary tuberculosis, neurocirculatory dystonia, leucopenia, pronounced emotional instability, endocrine deficiency, chronic ENT conditions, or for persons, who became rapidly anoxic, had undergone brain trauma or who were suffering from upper respiratory tract infections or exacerbations of chronic upper respiratory tract disease.

X

SUBMITTED: August 1960

Card 3/3

VOLYNKIN, Yu.M.; YAZDOVSKIY, V.I.; GMIN, A.M.; VASIL'YEV, P.V.;
GYURDZHIAN, A.A.; GURCOVSKIY, N.N.; GORBOV, F.D.; SERYAPIN,
A.D.; BELAY, V.Ye.; BAYEVSKIY, R.M.; ALTUKHOV, G.V.;
KOPANEV, V.I.; KAS'YAN, I.I.; YEGOROV, A.D.; SIL'VESTROV,
M.M.; SIMPURA, S.F.; TEREHT'YEV, V.G.; KRYLOV, Yu.V.; FOMIN,
A.G.; USHAKOV, A.S.; DEGTYAREV, V.A.; VOLOVICH, V.G.;
STEPANTSOV, V.I.; KYASHNIKOV, V.I.; YAZDOVSKIY, V.I.; KASHIN,
P.S., tekhn. red.

[First space flights of man; the scientific results of the
medicobiological research conducted during the orbital
flights of the spaceships "Vostok" and "Vostok-2"] Pervye
kosmicheskie polety cheloveka; nauchny rezul'taty mediko-
biologicheskikh issledovaniy, provedennykh vo vremya orbital'
nykh poletov korabli-sputnikov "Vostok" i "Vostok-2."
Moskva, Izd-vo Akad. nauk SSSR, 1962. 202 p. (MIRA 15:11)
(SPACE MEDICINE) (SPACE FLIGHT TRAINING)

YEGOROV, A.D.; OGLEZNEV, V.V.; TEREENT'YEV, V.G. (Moskva)

Effect of moderately increased doses of positive x-rays
on the organism of healthy person; preliminary report. Vop.
kur., fizioter. i lech. fiz. kul't. 28 no.2. 135-137 Mr-Apr'63.
(MIRA 16:9)

(AIR, IONIZED--PHYSIOLOGICAL EFFECT)

VOLYNKIN, Yu.M.; YAZDOVSKIY, V.I., prof.; GENIN, A.M.; GAZENKO, O.G.; GUROVSKIY, N.N.; YEMEL'YANOV, M.D.; MIKHAYLOVSKIY, G.P.; GORBOV, F.D.; SERYAPIN, A.D.; BAYEVSKIY, R.M.; ALTUKHOV, G.V.; KOPANEV, V.I.; KAS'YAN, I.I.; MYASNIKOV, V.I.; TERENT'YEV, V.G.; HCYANOV, I.I.; FEDOROV, Ye.A.; FOMIN, V.S.; ARUTYUNOV, G.A.; ANTIFOV, V.V.; KOTOVSKAYA, A.R.; KAKURIN, L.I.; TSELIKIN, Ye.Ye.; USHAKOV, A.S.; VOLOVICH, V.G.; SAKSONOV, P.P.; YEGOROV, A.D.; NEUMYVAKIN, I.P.; TALAPIN, V.F.; SISAKYAN, N.M., akademik, red.; KOLPAKOVA, Ye.A., red.izd-va; ASI'AF'YEVA, G.A., tekhn.red.

[First group space flight; scientific results of medical and biological studies carried out during the group orbital flight of manned satellites "Vostok-3" and "Vostok-4"]
Pervyi gruppovoi kosmicheskii polet; nauchnye rezul'taty mediko-biologicheskikh issledovaniy, provedennykh vo vremya gruppovogo orbital'nogo poleta korablei-sputnikov "Vostok-3" i "Vostok-4." Moskva, Izd-vo "Nauka," 1964. 153 p.
(MIRA 17:3)

MIRIN, V.S., kand. med. nauk; TIRENT'YEV, V.G., polkovnik meditsinskoy
sluzhby, kand. med. nauk

Epileptic seizures caused by hypoxemia. Voen.-med. zhur. no.6:49-50
'64. (MIRA 18:3)

VOLYNKIN, Yu.M.; ARUTYUNOV, G.A.; ANTIPOV, V.V.; ALTUKHOV, G.V.;
BAYEVSKIY, R.M.; BELAY, V.Ye.; BAYANOV, P.V.; BRYANOV, I.I.;
VASIL'YEV, P.V.; VOLOVICH, V.G.; GAGARIN, Yu.A.; GENIN, A.M.;
GORBOV, F.D.; GORSHKOV, A.I.; GUROVSKIY, N.N.; YESHANOV, N.Kh.;
YEGOROV, A.D.; KARPOV, Ye.A.; KOVALEV, V.V.; KOLOSOV, T.A.;
KORESHKOV, A.A.; KAS'YAN, I.I.; KOTOVSKAYA, A.R.; KALIBERDIN,
G.V.; KOPANEV, V.I.; KUZ'MINOV, A.P.; KAKURIN, L.I.; KUDRVA,
R.V.; LEBEDEV, V.I.; LEBEDEV, A.A.; LOBZIN, P.P.; MAKSIMOV,
D.G.; MYASNIKOV, V.I.; MALYSHKIN, Ye.G.; NEUMYVAKIN, I.P.;
ONISHCHENKO, V.F.; POPOV, I.G.; PORUCHIKOV, Ye.P.; SIL'VESTROV,
M.M.; SERYAPIN, A.D.; SAKSONOV, P.P.; TEREENT'YEV, V.G.; USHAKOV,
A.S.; UDALOV, Yu.F.; FOMIN, V.S.; FOMIN, A.G.; KHLEBNIKOV, G.F.;
YUGANOV, Ye.M.; YAZDOVSKIY, V.I.; KRICHAGIN, V.I.; AKULINICHEV,
I.T.; SAVINICH, F.K.; STMPURA, S.F.; VOSKRESENSKIY, O.G.;
GAZENKO, O.G., SISAKYAN, N.M., akademik, red.

[Second group space flight and some results of the Soviet
astronauts' flights on "Vostok" ships; scientific results of
medical and biological research conducted during the second
group space flight] Vtoroi gruppovoi kosmicheskii polet i neko-
torye itogi poletov sovetskikh kosmonavtov na korabliakh
"Vostok"; nauchnye rezul'taty medikobiologicheskikh issledovaniy,
provedennykh vo vremya vtorogo gruppovogo kosmicheskogo poleta.
Moskva, Nauka, 1965. 277 p. (MIRA 18:6)

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CIA-RDP86-00513R001755330011-5"

L 11364-67 EWT(1) SCTB DD/GD

ACC NR: AT6036509

SOURCE CODE: UR/0000/66/000/000/0081/0083

AUTHOR: Buyanov, P. V.; Galkin, A. V.; Torent'yov, V. G.; Sheludyakov, Ye. Ye.;
Pisarenko, N. V.; Yaroshenko, G. L.

ORG: none

32

TITLE: Problems of the selection of candidates for special crews [Paper presented at conference on problems of space medicine held in Moscow from 24-27 May 1966]

SOURCE: Konferentsiya po problemam kosmicheskoy meditsiny, 1966. Problemy kosmicheskoy meditsiny. (Problems of space medicine); materialy konferentsii, Moscow, 1966, 81-83

TOPIC TAGS: cosmonaut selection, bioastronautics, space physiology, space psychology, psychophysiology, cosmonaut training

ABSTRACT: The systematic exposure of young test pilots to aviation or space-flight conditions is of importance relative to perfecting methods for selecting pilots and cosmonauts. Considering the caliber of professional activity, the test pilot must be in excellent physical and mental condition.

Selection takes place in three stages: preliminary ambulatory selection, stationary examination in special medical establishments, and elimination during the first months of occupational activity.

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L 11364-67

ACC NR: AT6036509

During preliminary selection, the medical commission was given documents describing anamnesis data, general and physical development, and medical treatment in the preceding year. After familiarization with these documents, nearly half the applicants were rejected due to therapeutic status or poor eyesight. During preliminary ambulatory examinations, medical specialists (therapists, otolaryngologists, neuropathologists, surgeons) analyzed blood, urine, EKG's during rest and after exercise, x-ray films of thoracic organs and nasal accessory sinuses, and conducted vestibular and other functional tests. In some cases, spinal x-rays, pressure chamber exposure, etc., were conducted.

Rejections during the first examination phase were high. The main reasons for rejection were ear, nose, and throat ailments, neurocirculatory dystonia, and vestibulo-autonomic instability.

During the stationary phase, an expanded program of clinical, physiological, and specialized tests was used. From 25 to 50% of the candidates who had passed the first phase of examinations were rejected. The main causes of rejection were diseases of internal organs (nearly half the rejects), vestibulo-autonomic instability, ear, nose, and throat diseases, and spinal disorders.

Cont 2/3

L 11304-07

ACC NR: AT6036509

In recent years, rejection of candidates during the second phase has declined as a result of a more detailed examination during the first phase and new methods of examination. For instance, substitution of the standard OR-10 vestibular test with I. I. Bryanov's test (summation of vestibular stimuli during Coriolis accelerations) significantly decreased the number of rejects due to vestibular disorders. At the same time, ear, nose, and throat rejects were more accurately diagnosed by substituting otoscopy and manometric examinations (Boyachev and Gerasimov manometers) with pressure chamber tests. Spinal x-rays during the ambulatory phase could not be justified.

The occupational activity of a number of candidates produced some changes which precluded their further participation and caused their rejection from testing work. About 10% of the candidates were found to be unsatisfactory during this phase.

These data permit the examiner to foresee probable deviations in health under occupational conditions during the selection phase, to evaluate individual methods applicable to selection, and to prognose work capacity under the influence of external factors. [W.A. No. 22; ATD Report 66-116]

SUB CODE: 05,06 / SUBM DATE: 00May66
Card 3/3/66

21548-66 EWT(1)/FSS-2/EEC(k)-2/EWA(d) SCTB TT/DD/GW
ACC NR: AP6007746 SOURCE CODE: UR/0293/66/004/001/0151/0155

AUTHOR: Buyanov, P. V.; Kovalev, V. V.; Terent'yev, V. G. Fedorov, Ye. A. Khlebnikov, G. F. 36
B

ORG: none

TITLE: Results of preflight and postflight medical examinations of Voskhod-1 crew members 12

SOURCE: Kosmicheskiye issledovaniya, n. 4, no. 1, 1966, 151-155 2

TOPIC TAGS: cosmonaut, physiological change, cardiovascular system, enzyme, encephalogram, muscular tonus, leukocyte/~~Voskhod-1~~

ABSTRACT: Results of preflight and postflight examinations of the Voskhod-1 cosmonauts were compared and physiological shifts were noted. The physiological profile of each cosmonaut was determined from background data compiled for two weeks before the flight. Examination of the cosmonauts after preflight training showed increased resistance to flight factors in all of them, especially Komarov. By comparison, Feoktistov and Yegorov showed less adaptability, especially in the cardiovascular system. In the week preceding the flight, Komarov and Feoktistov were somewhat nervous and emotional state of the cosmonauts. The four-day postflight medical examination began 15 minutes after landing. To ensure uniformity, all postflight tests

Card 1/2

UDC: 629.198.61 2

L 1270-00

ACC NR: AP6007746

(including laboratory tests) were conducted by the same people who had performed the preflight checks. Clinical investigation begun six hours after landing showed a moderate decrease in working capacity, revealed in an increase in the number of errors and a lengthening of latent periods during performance of psychological tests. Encephalograms showed intensification of retardation processes in the cerebral cortex. Slight variations in digestive enzyme activity were also observed in the cosmonauts after the flight: the activity of amylase, enterokinase, alkaline phosphatase, and trypsin increased. The following shifts were noted in cosmonauts immediately after the flight: slight instability in the Romberg position, tremor of fingers, increased tendency to perspire, moderate decrease in muscle tone, quickening of the pulse, and decrease in blood pressure due to increased diastolic pressure. Body weight decreased 2.6% for Koamrov, 4% for Feoktistov, and 3.9% for Yegorov. In addition, moderate shifts in metabolic processes were noted: increased energy consumption while resting, increase in blood urea and cholesterol, and increased elimination of nitrogenous components from urine. Some decrease in the phagocytic activity of leukocytes was also observed. The changes noted were attributed to fatigue and stress. They were of a strictly functional nature and usually disappeared within several days after the flight. Individual characteristics and differences in pre-flight preparation were reflected in the varying character of these physiological shifts.

[JS]

SUB CODE: 06/ SUBM DATE: 28Jul65/ ATD PRESS: 4219

Card 2/2 BLG

S/803/62/000/003/003/012
D201/D308

AUTHORS: Popov, P.I. and Terent'yev, V.G.

TITLE: Increasing the reliability of protection systems in the presence of noise

SOURCE: Moscow. Inzhenerno-fizicheskiy institut. Avtomatika i telemekhanika, no. 3, 1962. Sistemy upravleniya yadevnymi energeticheskimi ustanovkami, 22-25

TEXT: The authors show that in reactor protection systems, with differentiating circuits having a frequency response

$$W(j\omega) = \frac{T_1 j\omega}{(T_1 j\omega + 1)(T_2 j\omega + 1)} \quad (1)$$

a well designed period meter must satisfy the condition $T_1 - T_2$.

Card 1/1

S/803/62/000/003/004/012
D201/D308

AUTHORS: Popov, P.I., Terent'yev, V.G. and Filipchuk, Ye.V.
TITLE: Some methods of increasing the reliability of electron tube amplifiers
SOURCE: Moscow. Inzhenerno-fizicheskiy institut. Avtomatika i telemekhanika, no. 3, 1962. Sistemy upravleniya yadevnymi energeticheskimi ustanovkami, 26-34

TEXT: The authors analyze the following methods: 1) Parallel connection of the main and the standby amplifier, the latter being connected via a summing device utilizing negative feedback. 2) Standby amplifier switching by means of an anode load impedance, applicable to power amplifiers or oscillators with tungsten filaments. 3) A special circuit excluding the variation of gain and load current in the case of failure of heater circuit. Gain variations (with respect to normal gain) and design criteria are discussed. There are 6 figures.

Card 1/1

S/803/62/000/003/006/012
D201/D308

AUTHORS: Popov, P.I. and Terent'yev, V.G.
TITLE: Reliability of some circuits for switching in the standby equipment
SOURCE: Moscow. Inzhenerno-fizicheskiy institut. Avtomatika i telemekhanika, no. 3, 1962. Sistemy upravleniya yadevnymi energeticheskimi ustanovkami, 39-43

TEXT: The authors discuss the reliability of some basic circuits used for the switching in of the standby equipment and switching out of the faulty equipment. The probability of faultless operation $P(t)$ for 1,000 hours was taken as the quantitative reliability criterion. The rates of failure λ was assumed as follows: electron tubes $\lambda_e = (0.08 - 0.11) \times 10^{-3}$; high stab. resistors $\lambda_R = (0.00035 - 0.013) \times 10^{-3}$; capacitors $\lambda_c = (0.0035 - 0.018) \times 10^{-3}$; relays $\lambda_r = 0.00035 \times 10^{-3}$. The following basic circuits were analyzed: 1) A single-shot, cathode coupled multivibrator with

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Reliability of some circuits ...

S/803/62/000/003/006/012
D201/D308

$P(t) = 0.923-0.90$. 2) A differential amplifier with $P(t) = 0.926 - 0.904$. 3) A diode and relay circuit with $P(t) = 0.926 - 0.904$. 4) A capacitive-relay circuit with $P(t) = 0.9988$, the most effective as a switching-over circuit. 5) A neon stabilizer circuit for positive and negative power supplies failure signalling with the same probability as 4. There are 5 figures.

Card 2/2

38hht

S/089/62/012/006/007/019
B102/B104

21.1000
26.5340
AUTHORS:

Popov, P. I., Terent'yev, V. G., Filipchuk, Ye. V.

TITLE:

The safety factor of the emergency shielding system of nuclear reactors

PERIODICAL: Atomnaya energiya, v. 12, no. 6, 1962, 497 - 502

TEXT: Some principles of automatic reactor shielding systems and their reliability are considered. The systems have to meet the following requirements: (1) If the object to be shielded breaks down, the processes taking place therein must be stopped; (2) a breakdown of elements or connecting pieces of the shield must not affect the technical processes. The reliability of such automatic systems can be improved by increasing their safety factor. The reliability with and without reserve is studied simultaneously, using the following quantitative characteristics: the probability $P(t)$ of uninterrupted operation, the probability $Q(t)$ of interruption, and the hazard $\lambda(t)$ of interruption. Interruptions in the shielding systems are regarded as being accidental and independent, and the hazard is considered to be constant. For the i -th element of the

Card 1/2 3

S/039/62/012/006/007/019
B102/B104

The safety factor of the ...

system one finds $P_i(t) = \exp(-\lambda_i t)$. A distinction is made between dangerous and harmless interruptions in the shielding system. The latter are caused by defects in this system, while the former are due to actual breakdown. Simple shielding systems, shields with coincidence circuit, the connection of spare channels, and systems with reserve are described. The reliability of a system in the most favorable case (P, Q) and in the most unfavorable case (P^*, Q^*) is characterized by $P(1000), Q(1000), P^*(1000)$ and $Q^*(1000)$ for 1000 hours of operation each. These values are numerically given for a shielding system with general reserves and for a system with reserves for each element. These systems use electron tubes and semiconductor elements. In addition, a system with increased reliability (coincidence circuit) is described (Fig. 6), for which the following numerical values can be obtained:

| | P(1000) | Q(1000) | P*(1000) | Q*(1000) |
|---------------------------------------|---------|---------|----------|----------|
| operation with electron tubes | 0.89 | 0.11 | 0.79 | 0.21 |
| operation with semiconductor elements | 0.994 | 0.006 | 0.97 | 0.03 |

There are 6 figures and 3 tables.

Card 2/4

The safety: 1000. I. de ...

310/B10; 006/007/019

SUBMITTED: February 2, 1962

Legend to Fig. 6. (ИК) ionization chambers; (K) "contactless" switches; (Л) logarithmic amplifiers; (Д) differentiating amplifiers; (ОИ) break-down detector; (БД) trigger device unit; (П) reversing switch; (С) coincidence circuit; (ЭМ) electromagnet; (К_п) switch.

X

Card 3/4 3

ACCESSION NR: AP4025741

S/0144/64/000/002/0228/0238

AUTHOR: Panin, Valerian Valerianovich (Engineer); Popov, Petr Ivanovich (Candidate of technical sciences, Docent); Terent'yev, Vladimir Georgiyevich (Assistant)

TITLE: Investigation of reliability of contactless-element switching circuits

SOURCE: IVUZ. Elektromekhanika, ⁷no. 2, 1964, 228-238

TOPIC TAGS: switch, cyclic switch, sequence switch, contactless switch, contactless switch reliability

ABSTRACT: The successive cyclic switching of channels in telemeter or remote-control systems is theoretically considered. An optimum structure of the (ring or binary) switch scheme is determined on the basis of the number of channels N and failure rates of the scheme components. Formulas for the number of transistors, diodes, and the faultless-operation probability are developed for the

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ACCESSION NR: AP4025741

ring scheme and the binary scheme (with a rectangular, pyramidal, or minimal matrix). It is found that the required number of channels always determines the dimensionality k of the matrix with a selected switch structure. The proper choice of k has an important bearing on the required number of diodes and the resulting reliability. With an optimum k , the reliability of all switch schemes is practically the same. Orig. art. has: 6 figures and 30 formulas.

ASSOCIATION: none

SUBMITTED: 10Apr62

DATE ACQ: 16Apr64

ENCL: 00

SUB CODE: EC

NO REF SOV: 001

OTHER: 001

Card 2/2

832. INFLUENCE OF INERTIA OF STEMMING ON EFFECT OF AN EXPLOSION.
Terent'ev, V. I. and Alekseev, O. I. (Gornyi Zhurnal (Min. J.),
1949, (10), 15, 16.).

In calculating lengths of stemming required, the inertia effect
is more important than any other. Formulae are given for calculating
lengths for various types of stemming material. (L).

ASB-55A METALLURGICAL LITERATURE CLASSIFICATION

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| U | V | W | X | Y | Z | AA | AB | AC | AD | AE | AF | AG | AH | AI | AJ | AK | AL | AM | AN | AO | AP | AQ | AR | AS | AT | AU | AV | AW | AX | AY | AZ | BA | BB | BC | BD | BE | BF | BG | BH | BI | BJ | BK | BL | BM | BN | BO | BP | BQ | BR | BS | BT | BU | BV | BW | BX | BY | BZ | CA | CB | CC | CD | CE | CF | CG | CH | CI | CJ | CK | CL | CM | CN | CO | CP | CQ | CR | CS | CT | CU | CV | CW | CX | CY | CZ | DA | DB | DC | DD | DE | DF | DG | DH | DI | DJ | DK | DL | DM | DN | DO | DP | DQ | DR | DS | DT | DU | DV | DW | DX | DY | DZ | EA | EB | EC | ED | EE | EF | EG | EH | EI | EJ | EK | EL | EM | EN | EO | EP | EQ | ER | ES | ET | EU | EV | EW | EX | EY | EZ | FA | FB | FC | FD | FE | FF | FG | FH | FI | FJ | FK | FL | FM | FN | FO | FP | FQ | FR | FS | FT | FU | FV | FW | FX | FY | FZ | GA | GB | GC | GD | GE | GF | GG | GH | GI | GJ | GK | GL | GM | GN | GO | GP | GQ | GR | GS | GT | GU | GV | GW | GX | GY | GZ | HA | HB | HC | HD | HE | HF | HG | HH | HI | HJ | HK | HL | HM | HN | HO | HP | HQ | HR | HS | HT | HU | HV | HW | HX | HY | HZ | IA | IB | IC | ID | IE | IF | IG | IH | II | IJ | IK | IL | IM | IN | IO | IP | IQ | IR | IS | IT | IU | IV | IW | IX | IY | IZ | JA | JB | JC | JD | JE | JF | JG | JH | JI | IJ | JK | KL | KM | KN | KO | KP | KQ | KR | KS | KT | KU | KV | KW | KX | KY | KZ | LA | LB | LC | LD | LE | LF | LG | LH | LI | LJ | LK | LM | LN | LO | LP | LQ | LR | LS | LT | LU | LV | LW | LX | LY | LZ | MA | MB | MC | MD | ME | MF | MG | MH | MI | MJ | MK | ML | MM | MN | MO | MP | MQ | MR | MS | MT | MU | MV | MW | MX | MY | MZ | NA | NB | NC | ND | NE | NF | NG | NH | NI | NJ | NK | NL | NM | NN | NO | NP | NQ | NR | NS | NT | NU | NV | NW | NX | NY | NZ | OA | OB | OC | OD | OE | OF | OG | OH | OI | OJ | OK | OL | OM | ON | OO | OP | OQ | OR | OS | OT | OU | OV | OW | OX | OY | OZ | PA | PB | PC | PD | PE | PF | PG | PH | PI | PJ | PK | PL | PM | PN | PO | PP | PQ | PR | PS | PT | PU | PV | PW | PX | PY | PZ | QA | QB | QC | QD | QE | QF | QG | QH | QI | QJ | QK | QL | QM | QN | QO | QP | QQ | QR | QS | QT | QU | QV | QW | QX | QY | QZ | RA | RB | RC | RD | RE | RF | RG | RH | RI | RJ | RK | RL | RM | RN | RO | RP | RQ | RR | RS | RT | RU | RV | RW | RX | RY | RZ | SA | SB | SC | SD | SE | SF | SG | SH | SI | SJ | SK | SL | SM | SN | SO | SP | SQ | SR | SS | ST | SU | SV | SW | SX | SY | SZ | TA | TB | TC | TD | TE | TF | TG | TH | TI | TJ | TK | TL | TM | TN | TO | TP | TQ | TR | TS | TT | TU | TV | TW | TX | TY | TZ | UA | UB | UC | UD | UE | UF | UG | UH | UI | UJ | UK | UL | UM | UN | UO | UP | UQ | UR | US | UT | UU | UV | UW | UX | UY | UZ | VA | VB | VC | VD | VE | VF | VG | VH | VI | VJ | VK | VL | VM | VN | VO | VP | VQ | VR | VS | VT | VU | VV | VW | VX | VY | VZ | WA | WB | WC | WD | WE | WF | WG | WH | WI | WJ | WK | WL | WM | WN | WO | WP | WQ | WR | WS | WT | WU | WV | WW | WX | WY | WZ | XA | XB | XC | XD | XE | XF | XG | XH | XI | XJ | XK | XL | XM | XN | XO | XP | XQ | XR | XS | XT | XU | XV | XW | XX | XY | XZ | YA | YB | YC | YD | YE | YF | YG | YH | YI | YJ | YK | YL | YM | YN | YO | YP | YQ | YR | YS | YT | YU | YV | YW | YX | YY | YZ | ZA | ZB | ZC | ZD | ZE | ZF | ZG | ZH | ZI | ZJ | ZK | ZL | ZM | ZN | ZO | ZP | ZQ | ZR | ZS | ZT | ZU | ZV | ZW | ZX | ZY | ZZ |
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TERLET'YEV, V.I., kand. tekhn. nauk, otv. red.; KUCHERYAVOVA, V.I.,
red.

[Improving the technology of open pit mining of iron ore
deposits in the Kursk Magnetic Anomaly] Sovershenstvovanie
tekhnologii otkrytoi razrabotki zhelezorudnykh mestorozh-
denii KMA. Moskva, izd-vo "Nauka," 1964. 166 p.

(MIRA 17:9)

1. Nauchno-issledovatel'skiy institut po problemam Borskoy
magnitnoy anomalii im. I.D. Zhovnyakova.

TERENT'YEV, V.I.

Ways of increasing the speed of shot-boring holes. Izv.AN
Kazakh. SSR Ser.gor. dela no.3:94-101 '51. (MLRA 9:6)
(Boring)

TARANT'YEV, V.I.

Effect of charge depth on the change in the specific consumption
of explosives. Izv.AN Kazakh.SSR.Ser.gor.dela,met.i stroimat.
no.1:21-24 '52. (MLRA 9:8)
(Expolives)

Terent'ev, V.I.
BARON, L.A., doktor tekhnicheskikh nauk; TERENT'YEV, V.I., kandidat
tekhnicheskikh nauk; KALOSHIN, S.G., gornyy inzhener.

Reducing the occurrence of silicosis and increasing the effective-
ness of perforatory drilling by using bits with hard tips set at
an angle. Bor'ba s sil. 1:76-82 '53. (MLBA 7:10)

1. Komissiya pri Akademii nauk SSSR po bor'be s silikozom (for
Baron). 2. Institut gornogo dela Akademii nauk Kazakhskoy SSR (for
Kaloshin).

(MINE DUSTS) (BORING MACHINERY)

BARON, L.I., doktor tekhnicheskikh nauk; KEKIN, A.A., kandidat tekhnicheskikh nauk; TERENT'YEV, V.I., kandidat tekhnicheskikh nauk; AKHMETOV, M.M., kandidat tekhnicheskikh nauk; ZHANABATYROV, Ye.S., gornyy inzhener

Studying the effectiveness of different systems used for the precipitation of dust in boring with pneumatic hammers. Bro'ba s sil. 2:118-131 '55. (MLRA 9:5)

1. Komissiya pri Akademii nauk SSSR po bor'be s silikozom (for Baron)
2. Insitut gornogo dela Akademii nauk Kazakhskoy SSR.
(DUST COLLECTORS) (BORING)

TERENT'YEV, V.I.

Change in the lump size of ore broken down by deep boreholes.
Inv.AN Kazakh.SSR.Ser.gor.dela, met. i stroimat. no.11:79-83 '56.
(MIRA 10:1)

(Mining engineering)

TERENT'YEV, V.I., kandidat tekhnicheskikh nauk.

The study of the size of ore fragments as related to factors in
blasting operations. Vest.AN Kazakh.SSR 12 no.3:83-92 Mr '56.
(MIRA 9:7)

1.Predstavlena deystvitel'nym chlenom AN KazSSR A.S.Popovym.
(Blasting)

TERENT'YEV, V.I.

Changing the output of large-size ore depending on the spacing of
explosive charges. Izv. AN Kazakh. SSR. Ser. gor. dela, nat., stroi.
i stroimat. no.2:121-124 '57. (MLRA 10:9)

(Blasting)

TERENT'YEV, VI

PHASE I BOOK EXPLOITATION 998

Akademiya nauk SSSR. Institut gornogo dela.

Voprosy teorii razrusheniya gornykh porod deystviyem vzryva (Theoretical Problems in Crushing Rock by Blasting) Moscow, Izd-vo AN SSSR, 1958. 161 p. 2,500 copies printed.

Resp. Ed.: Mel'nikov, N.V., Corresponding Member, USSR Academy of Sciences; Ed. of Publishing House: Klimovitskiy, Ya.A.

PURPOSE: This collection of articles is of interest to mining specialists.

COVERAGE: The present collection of 9 articles by various authors presents the results of scientific research in the field of rock crushing in mining by means of blasting. The studies conducted are of both theoretical and practical nature. The articles examine the distribution of explosive energy and the propagation of spherical explosive waves in soil. Theoretical principles in determining the size of charges for certain types of mining operations are discussed and analysed. The articles are accompanied by diagrams, photographs, tables and bibliographic references.

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Theoretical Problems (Cont.)

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| Lukhanov, A.F. Disintegrating Rocks by Blasting | 61 |
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| Terent'yev, V.I. A Study of the Relationship Between Ore Lumpiness and Factors in Explosion Operations | 100 |
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Theoretical Problems (Cont.)

998

- Pokrovskiy, G.I. Prerequisites of the Theory of Rock Crushing by Blasting 140
- Rakhmatulin, Kh.A. and Stepanova, L.I. Propagation of the Explosive Shock
Wave in Soils 149
- Resolution of the Scientific Conference of Dec. 20-21, 1955 of the Inter-
departmental Commission for Explosives at the Mining Institute of the Academy
of Sciences, USSR 160

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TERENT'YEV, V.I.

Granulometric composition of lumpy ore. Trudy Inst. gor. dela AN
Kazakh. SSR no.3:40-47 '58. (MIRA 11:6)

(Ores--Assaying)

TERENT'YEV, V. I.

BELYAYEV, A. F.

AUTHOR: Solomonov, M. SOV/24-58-5-30/31
TITLE: Scientific-Method Conference on the Problem of
 Breaking-up Rocks by Explosions (Problema nauchno-
 metodicheskoye soveshchaniye po probleme drobleniya
 gornyykh porod vzyvov)

PERIODICAL: Izvestiya Akademii Nauk SSSR, Otdeleniye Tekhnicheskikh
 Nauk, 1958, Nr 5, pp 143-144 (USSR)

ABSTRACT: On February 24-26, 1958 a conference was held on breaking-
 up rocks by explosions at the Institute of Mining, Ac.Sc.,
 USSR (Institut Gornogo Dela AN SSSR). 100 people from
 52 towns participated and the participants included
 representatives of Works, Research Institutes of the
 Ac.Sc. from various parts of the Soviet Union,
 departmental research institutes and of higher teaching
 establishments.

construction" by Ye. Yu. Brodov, ZsIIS;
 "Industrial production methods of estimating the
 fragmentation of rock produced by explosive breaking-up
 in quarries" by G. P. Demidyuk, and G. S. Cherepanov,
 Institute of Mining, Ac.Sc. USSR;
 "Photogrammetric method of evaluating fragmentation of
 a rock mass" by G. S. Meshikov, Moscow Mining Institute.
 In the section relating to the influence of the
 parameters of explosive fragmentation on the breaking-up
 of rocks and data of industrial investigations the
 following papers were presented:
 "On the degree of fragmentation of ore and determination
 of its optimum value" by V. I. Terent'yev, Mining-
 Geological Station, Ac.Sc., USSR;
 "On the first results of applying inclined bore holes
 of a reduced dimension for explosive work under difficult
 rock conditions in the Perovskiy quarry near
 Stanitskaya."

TERENT'YEV, V.I., kand.tekhn.nauk; PALBY, I.A., inzh.; IVANOV, L.A.,
inzh.

Use of transducers in testing pneumatic boring machines.
Gor.zhur. no.8:45-46 Ag '60. (MIRA 13:8)
(Boring machinery—Testing)
(Transducers)

TERENT'YEV, V.I., otv. red.; PEVZNER, G.Ye., red. izd-vr; RYLINA,
Yu.V., tekhn. red.

[Problems in mining the deposits of the Kursk Magnetic
Anomaly] Voprosy razrabotki mestorozhdenii Kurskoi mag-
nitnoi anomalii; sbornik statei. Moskva, 1961. 307 p.
(MIRA 14:5)

1. Akademiya nauk SSSR. Institut gornogo dela.
(Kursk Magnetic Anomaly--Iron mines and mining)

TERENT'YEV, V.I., kand. tekhn. nauk, otv. red.; PEVZNER, G.Ye., red.
izd-va; LAUT, V.G., tekhn. red.

[Geology, engineering geology, and hydrogeology of deposits
in the Magnetic Anomaly] Voprosy geologii, inzhenernoi geologii
i gidrogeologii mestorozhdenii KMA; sbornik statei. Moskva,
Izd-vo Akad.nauk, SSSR, 1961. 92 p. (MIRA 15:1)

1. Akademiya nauk SSSR. Institut gornogo dela.
(Kursk Magnetic Anomaly—Geology, Economic)

TERENT'YEV, V.I., otv. red.; BANKVITSER, A.L., red.izd-va;
SIMKINA, G.S., tekhn. red.

[Mining and dressing ores of the Kursk Magnetic Anomaly]
Voprosy razrabotki i obogashchenia rud KMA. Moskva,
Izd-vo Akad. nauk SSSR, 1962. 183 p. (MIRA 15:3)

1. Akademiya nauk SSSR. Institut gornogo dela.
(Kursk Magnetic Anomaly--Iron mines and mining)
(Ore dressing)

AGOSHKOV, M.I.; TERENT'YEV, V.I., kand.tekhn.nauk; TERPOGOSOV, Z.A.,
kand.tekhn.nauk; KARYAKIN, V.F., *gornyy inzh.*

Practice of using a flat bottom in a mine of the Kursk Magnetic
Anomaly. *Gor. zhur. no.9:28-31 S '62.* (MIRA 15:9)

1. *Chlen-korrespondent AN SSSR (for Agoshkov).*
(Kursk magnetic anomaly--Iron mines and mining)

TERENT'YEV, V. I.; BABAYANTS, G. M.; KARYAKIN, V. F.

Systems of underground mining of ferrous quartzites at the Kursk
Magnetic Anomaly. Biul.tekh.-ekon.inform.Gos.nauch.-issl.inst.
nauch. i tekh.inform. no.10:3-8 '62. (MIRA 15:10)

(Kursk Magnetic Anomaly—Iron mines and mining)

TERENT'YEV, V.I., kand. tekhn.nauk, otv. red.; MAKOVSKIY, G.M.,
red.; ZUDINA, V.I., tekhn. red.

[Mining and dressing iron ores of the Kursk Magnetic Anomaly]
Razrabotka i obogashchenie zheleznykh rud KMA; sbornik statei.
Moskva, Izd-vo AN SSSR 1963. 138 p. (MIRA 17:1)

1. Akademiya nauk SSSR. Nauchno-issledovatel'skiy institut po
problemam KMA.

TERENT'YEV, V.I., kand. tekhn. nauk, otv. red.; MAKOVSKIY, G.M.,
red.; PEVZNER, G.Ye., red.izd-va; GUS'KOVA, O.M.,
tekhn. red.

[Geology, mineralogy and engineering geology of the Kursk
Magnetic Anomaly] Geologiya, mineralogiia i inzhenernaia
geologii KMA. Moskva, Izd-vo AN SSSR, 1963. 140 p.
(MIRA 17:2)

1. Gubkin. Institut po problemam KMA.

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AUTHOR: Kalmykov, A. A.; Tereshin, V. I.; Chebotarev, V. V.

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ORG: none

TITLE: Traversal of a spatially nonuniform magnetic field by plasmoids

SOURCE: AN UkrSSR. Issledovaniye plazmennykh sgustkov (Study of plasma clusters).
Kiev, Naukovo dumka, 1965, 103-111

TOPIC TAGS: plasmoid, plasma magnetic field, ~~plazmascope~~, plasma conductivity, spectroscopy

ABSTRACT: ²Plasmoid² motion in a nonuniform magnetic field is studied with particular emphasis on the blocking of the slow-moving tail part which carries a large amount of impurities and is not strongly ionized. Periodic space perturbation of magnetic field was introduced in such a way that the high conductivity pure part of the plasmoid was not greatly affected, while the cooler tail end interacted strongly with the field. These experiments were performed on straight sections of a plasma guide using magnetic probes, spectroscopy and a pulsed plasmoscope for the study of plasmoid properties. Magnetic probes showed the almost complete expulsion of the magnetic field by the fast ($5 \cdot 10^6$ cm/sec) portion of the plasmoid. These measurements were used to determine the extent of a high-conductivity plasmoid as its position in the guide changed. It was

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shown that as the amplitude of the nonuniform field increased, the upper limit on the ion velocity moved toward lower speeds. It was further shown that the greatest losses of the high conductivity part of the plasmoid was due to particles following force lines toward the vessel walls. The plasmoid component which propagates best in such fields was that for which the conditions of high frequency stabilization are met, provided the appropriate space-modulation oscillation replaces the stabilizing frequency. Orig. art. has: 6 figures, 1 formula.

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SUBM DATE: 11Nov65/

ORIG REF: 004/

OTH REF: 001

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AUTHOR: Kalmykov, A. A.; Tereshin, V. I.; Chebotarev, V. V.

54
B+1

ORG: none

TITLE: Stabilization of plasmoid boundaries in the traversal of corrugated magnetic fields

SOURCE: AN UkrSSR. Issledovaniye plazmennykh sguatkov (Study of plasma clusters).
Kiev, Naukova dumka, 1965, 112-118

TOPIC TAGS: plasmoid, plasma magnetic field, plasma velocity, plasma stability

ABSTRACT: The results in this work indicate that corrugated magnetic guiding fields can replace high frequency stabilization of a plasmoid surface. The period of corrugation in the guiding fields was 10 cm, which at a plasma velocity of $2 \cdot 10^7$ cm/sec corresponded to a frequency of 2 Mc. The modulation amplitude was about 15%--sufficient to stabilize the instability leading to a spiraling of the plasma. This is demonstrated by a plasmoscope adapted for pulsed operation. When the modulation amplitude reached 25% of the constant guiding field, some assymetry of plasma boundary was observed. At higher plasma velocity, the corrugated field failed to stabilize the plasma and tongue-like protuberances were observed. Energy loss measurements show that some 20% of the energy remained in the plasmoid for long travel distance. This, the authors

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ascribe to the stabilization of those parts of the plasmoid which satisfy stability conditions in the corrugated field, whereas the remaining plasma was lost to the walls. Orig. art. has: 3 figures.

SUB CODE: 20/

SUBM DATE: 11Nov65/

ORIG REF: 007/

OTH REF: 002

Card 2/2

llh

TERENT'YEV, V.L.

TERENT'YEV, V.L., inzhener; LOBANOV, A.I.

High-speed cutting on multispindle lathes. Sel'khoz mashina
no. 7:30-32 J1 '54. (MLRA 7:7)
(Turning) (Metal cutting)

CA

11-D

Effect of cations and anions on the rate of extraction of chlorophyll from living leaf tissues. T. N. Gostney, V. M. Terent'ev, and K. P. Parnon. *Instit. Akad. Nauk Belorus. S.S.R.* 1948, No. 3, 75 D. Rate of chlorophyll from petalopsis or carrot leaves is accelerated by the presence of ions of Na, Ba, Ca and Mg in the 10% KOH used for extr. The acceleration increases with increased concn. of the ions (used as nitrates except for CaCl₂) and max. effect occurs at 2N concn. The order of activity increases Na, Ca, K, Ba, Sr, Mg. Possibly the ions favor the cleavage of chlorophyll from its linking with protein and lipides.
G. M. Kosolapoff

CA

15-A

Growth-control substances and the possibility of their use in the control of weeds. T. N. Gulyev and V. M. Terent'ev. *Izv. Akad. Nauk Belorus. S.S.R.* 1948, No. 4, 99-101. -- A brief review. Weeds of dicotyledonous types are controlled readily by 4.0 kg per ha of 2,4-D, although its effects are shown even by 2.4 kg/ha. At these levels the material causes a delay of up to 9 days in sprouting of wheat. G. M. Kosolapoff

TERENT'YEV, V. I.

Godnev, T. N., Terent'ev, V. I. and Parmon, N. P. "On the relative rates of diffusion of chlorophyll and the products of its mutual reaction with weakly-dissociating acids of high molecular weight", Izvestiya Akad. nauk SSSR, 1949, No. 1, p. 93-94, - Bibliog: 6 items.

So: U-3261, 10 April (Letopis 'Zhurnal 'nykh Statey, No. 12, 1949).

CA

HD

Accumulation of chlorophyll and carotene (provitamin A) in leaves of perennial onions. V. M. Terent'ev. *Invest. Abod. Nauch. Bolovntz. S.S.R.* 1949, No. 6, 127-32. Various varieties of perennial onions accumulate during the vegetative period considerable amts. of chlorophyll and carotene: 870 (GR) mg. per 100 g. of the former and 58-70 of

the latter. During vegetative cycle two periods of pigment accumulation are observed; these come before the flowering stage and after the death of the reproductive organs. The flowering period corresponds to a min. content of the pigments.
G. M. Korolapoff

TERENT'YEV, V.M.

GODNEV, T.N., professor; TERENT'YEV, V.M., kandidat biologicheskikh nauk.

Study of the effect of potassium and phosphate nutrition on the formation of structural tissues and on stalk firmness of cereals in connection with lodging. Sbor. nauch. trud. Inst. biol. AN BSSR no. 1: 25-34 '50. (MLRA 9:1)

1. Deyatvitel'nyy chlen AN BSSR (for Godnev).
(Grain) (Plants--Nutrition)

GODNEV, T.N., profesor; TERENT'YEV, V.M., kandidat biologicheskikh nauk.

Study of the effect of potassium and phosphate nutrition on the formation of structural tissues and on stalk firmness of cereals in connection with lodging. Sbor.nauch.trud.Inst.biol.AN BSSR no.1:97-99 '50. (MLRA 9:1)

1.Deystvitel'nyy chlen AN BSSR (for Godnev).
(Carrots) (Carotene)

CA

11-0

Quantitative determination of chlorophyll and some carotenoids. T. N. Godnev and V. M. Terent'ev (Akad. Nauk. Belorusskoi S.S.R., Minsk): *Trudy Inst. Khim. Rastenii im. K. A. Timiryazeva* 7, No. 1, 230-64(1950).— To det. chlorophyll, triturate the specimen with quartz sand, chalk, or $MgCO_3$ and ext. with 90% EtOH or 85% Me₂CO. If specimen is dry, or abs. EtOH or Me₂CO for a fresh specimen. Ret. under suction in a filtering funnel. Subject the ext. to colorimetry. For a simplified detn. use a standard soln. of 60 ml. of 4% $K_2Cr_2O_7$, 28.6 ml. of 1% $CuSO_4$, and 10 ml. of 10% NH_4OH . To det. carotene, ext. as above, add the ext. (or an aliquot) to 20 ml. of petr. ether, sep. the aq.-Me₂CO layer (colorless), wash the org. layer several times with H_2O , pass it through a chromatographic tube with

MgO , wash with a little petr. ether, and use the resulting yellow soln. for colorimetric detn. Ankoferene in EtOH can be used as the standard, 14.15 mg. per 100 ml. EtOH corresponding in color to 2.35 mg. of carotene in 1 l. of petr. ether. Det. the amt. of carotenoids in the acetone ext. photometrically with suitable light filters after detg. chlorophyll with a red filter. To combine the detn. of chlorophylls a and b and carotenoids chromatograph on sugar in petr. ether; chlorophyll b forms the upper band, chlorophyll a forms a band below it, xanthophyll forms a still lower band, while carotenoids are not retained. G. M. Kosolapoff

GODNEV, T.N., professor; TERENT'YEV, V.M., kandidat biologicheskikh nauk.

Effect of light on the pigmentation and seedling growth of certain woody plants. Sbor.nauch.trud.Inst.biol.AN BSSR no.2:121-130 '51.
(MLRA 9:1)

1. Deystvitel'nyy chlen AN BSSR.
(Plants, Effect of light on)

1. GODNEV, T.N.; TERENT'EV, V.E.
2. USSR (600)
4. Grain
7. The fight against lodging of cereal crops on peat soils, T.N. Godnev, V.E. Terent'ev, Priroda 4.2 no. 5, 1953.

9. Monthly List of Russian Accessions, Library of Congress, APRIL 1953. Unclassified.

TERENTYEV, V M.

MD ✓ The amounts of cellulose and lignin in the grain stalks in relation to the lying-down of crops. V. M. Terent'ev and A. N. Khrobotova. *Izvest. Akad. Nauk Beloruss. S.S.R.* 1955, No. 1, 103-6 (in Russian).—At full physiol. maturity the stalks of the normal and lain-down oats and barley contain dry substance 80.8-91.0 and 80.0-91.0, cellulose 30.5-50.0 and 23.5-47.5, and lignin 14.2-22.0 and 16.5-22.4% of the dry substance, resp. At milky physiol. maturity the relative chem. compn. of the stalks is the same, but the abs. amts. of dry substance, cellulose, and lignin are slightly below the values found for the matured stalks. Cellulose is the main factor detg. the resistance of crops against lying-down.
E. Wierbicki

USSR/Cultivated Plants. Cereals:

M

Abs Jour: Ref Zhur-Diol., No 17, 1958, 77575.

Author : ~~Torontiyev~~, V.M.; Stasenko, N.N.; Kcnovalov, L.N.

Inst : Institute of Biology AS BSSR.

Title : On Several Features of Growth and Development of Grain Crops on Peat Soil.

Orig Pub: Byul. In-ta biol. AN BSSR, vyp. 2, 1956 (1957), 94-99.

Abstract: Observations were conducted for the development of plants of Kitchener wheat on peat and mineral soils. On the peat soil, tillering and shooting up was more intensive, but in the fruit-bearing organs, less dry substance accumulated than on the mineral soil, in connection with which the

Card : 1/2

USSR/Cultivated Plants. Cereals.

M

Abs Jour: Ref Zhur-Biol., No 17, 1958, 77575.

seeds obtained were biologically less valuable.

Card : 2/2

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USSR/Plant Physiology - Water Regimen

I.

Abs Jour : Ref Zhur - Biol., No 18, 1958, 32010

Author : Stasenko, N.N., Terentyev, V.M.

Inst : Institute of Biology, AS BSSR

Title : The Influence of the Soil Moisture on the Water Regime
and on the Carbohydrous Exchange of Oat Plants

Orig Pub : Byul. In-ta biol. AN BSSR, vyp. 2, 1956 (1957), 100-106

Abstract : The types of water (according to the A.V. Dumanskiy method
and the content of sugars (according to the Bertrand's
method) were determined in the leaves of oats of the
"Zolotoy dozhd" (golden rain) variety. They were grown
in vegetation vessels with peaty soil of the lowland ty-
pe with a moisture of 50 to 75% of full capacity.
Greater content of free water and a lesser amount of
bound water were discovered. At the same time smaller

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USSR/Plant Physiology - Water Regimen.

I.

Abs Jour : Ref Zhur - Biol., No 18, 1958, 82010

contents of separate forms of carbohydrates and a greater accumulation of dry substances were also discovered in the phase of tillering in the presence of smaller soil moisture. The total content of water was identical in both cases.

During the blossoming phase, the total water contents and the amount of free water decreased whereas the contents of bound water increased when soil moisture was lower in opposition to high moisture conditions. The formation, transportation and utilization of carbohydrates increased in intensity.

Bibliography, 15 titles. -- B.E. Kravtsova

Card 2/2

- 17 -

USSR / Soil Science. Mineral Fertilizers.

J-4

Abs Jour: Ref Zhur-Biol., No 8, 1958, 34422.

Abstract: of Belorussia - an increase in yield of grain on the average by 36 - 108% and that of straw by 18-63%; the absolute weight of grain was also increased. Pre-sowing soaking of seeds in the solution of CuSO_4 , strengthened the growth, development and power of shrubbing in oats, and increased the yield of grain by 33-52%, and straw by 65-74%, and also the resistance of it in respect to breaking down. I and B had still stronger effect on the sturdiness of the stems of oats. The work was carried out in the Institute of Biology of Academy of Sciences of BSSR. -- A. P. Shcherbakov.

Card 2/2

41

COUNTRY : USSR.
CATEGORY : CULTIVATED PLANTS. Grains. Leguminous Grains.
Tropical Cereals.
ISS. JOUR. : IZBIOL., Vol. 1 1957, no. 1575
AUTHOR : Godnev, T.N.; Terent'yev, V.M.
INSTR. : AS USSR
TITLE : The Effect of Water Table Levels and Moisture in Peat Soil on Cereal Grain Growth and Resistance to Lodging.
ORIG. PUB. : V sb.: Biol. osnovy oroshayem.zemledel., M., AS SSSR, 1957, 624-632
ABSTRACT : The influence of water table level and soil moisture on the development, growth, lignin and cellulose content and yield of wheat, oats and barley was studied at Kossovskaya Experimental Bog Station in Brestskaya Oblast while testing optimum water and air for these cereals on bog soils. A comparison was made between sluiced and unsluiced plots where the run-off drains were placed 40, 20 and 10 m apart. The sluiced plot distin-

CARD: 1/3

Country :
CATEGORY : CULTIVATED PLANTS.
ABB. JCUP. : RZBiolt., No. 1 1959, No. 1575
AUTHOR :
INST. :
TITLE :

CRIG. PUB. :

ABSTRACT : guished itself from the non-sliced by high ground water level and soil moisture. Only oats reacted favorably i yield to the higher water table; lower moisture conditions proved more beneficial to barley; wheat took an intermediate position. Notable effects on the formation of the mechanical tissues of the stalks were not produced by variations in the soil moisture conditions. The root systems of the cereals developed for the

CARD: 2/3

TERENT'YEV, V.M.; STASENKO, N.M.; KONOVALOVA, L.N.

~~www.terent'yev.com~~
Some specific features of the growth and development of cereal plants
on peat soils. Biol. Inst. biol. AN BSSR no.2:94-99 '57.(MIRA 17:2)
(Grain) (Peat soils)

TEJENT'YEV, V.M.; STASENKO, N.M.

Effect of soil moisture on the water cycle and carbohydrate metabolism of the oat plant. Biul. Inst. biol. AN BSSR no.2:100-106 '57.
(Soil moisture) (Peat soils) (Oats) (MIRA 11:2)

TERENT'YEV, V.M., Doc Bio Sci—(diss) "Basic problems of the physiology
of ~~cereals~~ ^{plants} in peat soil." Minsk, 1958. 46 pp (Inst of Biology
Acad Sci BSSR), 150 copies. List of author's work at end of text
(15 titles) (RL,30-58,124)

-40-

WASHTAKOV, S.M., prof., doktor biolog.nauk, otv.red.; GODNEV, T.N., akademik,
red.; TERENT'YEV, V.M., kand.biolog.nauk, red.; SHLYK, A.A., kand.
khimicheskikh nauk, red.; BULAT, O., red.izd-va; TIKHANOVICH, K.,
tekhred.

[Biochemistry and physiology of plants; collection of scientific
works] Biokhimiia i fiziologiya rastenii; sbornik nauchnykh rabot.
Minsk, Izd-vo Akad. nauk BSSR, 1958. 295 p. (MIRA 12:1)

1. Akademiya nauk Belorusskoy SSR, Minsk. Institut biologii.
2. AN Belorusskoy SSR (for Godnev).
(Biochemistry) (Botany--Physiology)

TERENT'YEV, V.M.; LOYKO, A.N.

Mechanical properties of root systems of cereal plants on Peat
soil as related to ledging of plants. Biul. Inst. biol. AN BSSR
no. 3:151-156 '58. (MIRA 13:7)
(ROOTS (BOTANY)) (GRASSES)