

KHRUSHCHOV, N.A.; YERSHOV, A.D., glavnyy red.; KREYTER, V.M., zastitel'
glavnogo red.; BUIKEVICH, T.V., red.vypuska; KRASNIKOV, V.I., red.;
MOMDZHI, G.S., red.; SAAKYAN, P.S., red.; SMIRNOV, V.I., red.;
CHERNOSVITOV, Yu.L., red.; ENTIN, M.L., red.izd-va; GUROVA, O.A.,
tekhn.red.

[Molybdenum] Molibden. Moskva, Gos.nauchno-tekhn.izd-vo lit-ry
po geol.i okhrane neдр, 1961. 269 p. (Otsenka mestorozhdenii
pri poiskakh i razvedkakh, no.19). (MIRA 15:4)
(Molybdenum ores---Sampling and estimation)

DOVMAR, S.A.; CHEPA, P.A.; Prinsipali uchastiyev: BUTKEVICH, V.A., inzh.;
PARMON, G.Ya., inzh.

Friction and wear in the hot metal forming process with a chromized
die. Dokl. AN BSSR 8 no.10:671-674 O '64.

(MIRA 18:3)

1. Fiziko-tekhnicheskiy institut AN BSSR.

GOREV, K.V.; DOWNAR, S.A.; BUTKEVICH, V.A.

Changes in the engineering properties of 3Kh^W8 and 5KhGSVT
steels caused by secondary high-frequency hardening. Dokl.
AN BSSR 9 no. 11:742-744 N '65 (MIRA 19:1)

1. Fiziko-tehnicheskiy institut AN BSSR.

BUTKEVICH, V. G.

AUTHORS: Butkevich, V.G. and Butslov, M.M.

109-3-7/23

TITLE: Some Investigations of the "Shot-through" Secondary Electron Emission (Nekotoryye issledovaniya vtoichnoy elektronnoy emissii na prostrel)

PERIODICAL: Radiotekhnika i Elektronika, 1958, Vol.III, No.3, pp. 355 - 370 (USSR).

ABSTRACT: The phenomenon of the penetration of electrons through thin, metallic foils was first observed by Lenard (Ref.1), and since then, a number of workers have investigated this effect, but it did not have any practical applications until 1955-56, when a number of American workers developed multi-stage electron-optical amplifiers (Refs. 7 and 8). The aim of this work is to analyse the basic characteristics of the "shot-through" secondary electron emission of thin aluminium foils and, in some cases, of magnesium oxide-coated aluminium foils. Pure aluminium foils were prepared by condensing the metal in vacuum on to a nitro-cellulose film; the film was then dissolved. The resulting foils had a mirror-like surface, characterised by an almost total absence of any holes. The experimental investigation was carried out in a special instrument based on the spherical-condenser method. The instrument is shown in Fig.1. It consists of a sphere containing the investigated film in its centre.

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Some Investigations of the "Shot-through" Secondary Electron Emission

A beam of primary electrons is accelerated and focused by appropriate electrodes and directed on to the investigated foil or film. The secondary electrons at the opposite side of the foil are scattered at various angles and a fraction of them passes through the aperture in the sphere and is collected by a system of plates and collector grids. The diameter of the investigated foils was 5 mm. The primary electrons could be accelerated up to 40 kV and the system could be evacuated down to pressures of 3×10^{-7} mmHg. The experimental equipment permitted the investigation of the energy distribution of the secondary "shot-through" electrons as well as their angular distribution. The experimental results are shown in Figs. 2 to 17. Fig. 2 shows the angular distribution of the secondary electrons for the foils having a thickness $d = 0.2 \mu$ and an accelerating potential U_1 of 6 kV; the curves, whose areas are proportional to the number of electrons within a given energy band, are shown for the same film in Fig. 3. Fig. 4 shows the secondary emission coefficient σ as a function of U_1 for d ranging from 0.2 to 1.4 μ , while Fig. 5 illustrates the accelerating potential U_1 necessary to produce the "shot-through"

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Some Investigations of the "Shot-through" Secondary Electron Emission 109-3-7/23

effect in the foil of a given thickness; the thickness is given in mg/cm^2 . Figs. 6, 7 and 8 show the curves of the angular distribution of electrons at the exit side of the films of various thicknesses; similar curves are shown in Fig.9 for the groups of slow electrons, while Fig.10 shows the energy distribution of the slow electrons. Figs. 12 and 13 illustrate the energy losses of the electrons during their passage through the foil, while Fig.14 illustrates σ as a function of U_1 for aluminium foils coated with a layer of magnesium oxide. The electron energy distribution of MgO-Al foils is illustrated in Fig.15, while the angular distribution of the electrons for the same type of film is shown in Fig.16. The secondary emission coefficient for various film thicknesses, for both the rapid and slow electrons, is shown in Fig.17, from which it follows that any increase in thickness of the film results in a decrease in the number of the slow electrons and the curves $\sigma = f(U_1)$ become less steep. The decrease in the slope of $\sigma = f(U_1)$ for increasing foil thicknesses is due to an increase in the diffusivity of the primary electron beam and to an expansion

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109-5-7'23

Some Investigations of the "Shot-through" Secondary Electron Emission

of the area which produces the maximum number of the secondary electrons. The relationship between the rapid and slow electrons, as a function of the accelerating potentials, permits the determination of a functional dependence between the number of electrons penetrating the film and its thickness for various values of the accelerating potential. The resulting curves for an aluminium film are shown in fig.18. Analogous curves were evaluated for Al - MgO foils and these are shown in Fig.19.

There are 19 figures and 13 references, 4 of which are English, 3 German and 6 Russian.

SUBMITTED: June 20, 1957

AVAILABLE: Library of Congress
Card4/4

BUTKEVICH, V. M.

Use of shaft mill for joint grinding and drying of clay for dry pressing of brick. V. M. Butkevich, A. M. Uspenski, and V. V. Stal'nikov. *Steklo i Keram.* 9, No. 10, 14-17 (1952).—Simultaneous drying and grinding of highly moist clay in a shaft mill used for grinding and drying of coal proved possible. For a moisture content of 23%, there was no clogging of the app. Fineness of grind can be controlled by changing rate of flow of air mixt. in the shaft.

H. Z. Kanich

62

2

BUTKEVICH, V. P.

PA 4/L9T62

USSR/Medicine - Heat, Effects Jan 48
Medicine - Muscles, Sartorius

"The Action of Thermal Irritation on Muscular
Tissues of a Frog," V. P. Butkevich, 6 $\frac{1}{4}$ pp

"Vest Leningrad U" No 1

Reports experiments made to ascertain effect of
high temperatures (30-40° C) on sartorial muscle
of frogs. Muscular contraction was induced by
heat; injury by onset of narcosis and paranecrosis.
Concludes that irritation and injury by heat occur
simultaneously at all temperatures for which
readings were obtained.

4/49T62

BUTKEVICH, Yu.M., inzhener (g. Tallin).

Efficiency promoters of the Tallin Machine Building Plant.

Stroi.pred.neft.prom. 1 no.8:17-18 O '56.

(MLRA 9:12)

(Tallin--Machinery industry)

Butkevich, Yu. M.

KAAZIK, P.A. [Kaasik, P.A.], inzh. BUTKEVICH, Yu.M., inzh. (Tallim)

Stamp for inclined washers. Stroi.pred.neft.prom. 2 no.8:25-26
Ag '57. (Tallinn--Washers (Mechanics)) (MIRA 11:1)

BUTKEVICH, Yu.M.
BUTKEVICH, Yu.M., inzh.

Valuable efficiency suggestions. Stroi. i dor. mashinostr. 3
no.2:38-39 F '58. (MIRA 11:2)

(Screw-threads)
(Punching machinery)

BUTKEVICH, YU.V.

DA

BG Y
d

All-Russian Electrical Institute laboratory for power tests to destruction. BUTKEVICH, Y. V. *Elektricheskoe* (No. 11) 40-4 (1946) in Russian.—The power source consists of a special generator which can supply 550 MVA at 8 kVA for an impulse short-circuit test. Step-up transformer, control and safety devices and measuring apparatus including two special multi-beam oscillographs synchronized from the control desk are described. The main investigations undertaken in the laboratory are listed. A. L.

ASS-5LA METALLURGICAL LITERATURE CLASSIFICATION

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
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BUTKEVICH, YU. V. PROF

PA40T19

USSR/Electricity
Circuit Breakers

May 1947

"High Voltage Circuit Breakers," Prof Yu. V. But-
kevich, Dr of Technical Sciences, 2 pp

"Elektrichestvo" No 5

At the 1946 International Conference for High Vol-
tage Electric Circuit Systems, the matter of high
voltage circuit breakers was not taken up. However,
author believes that these circuit breakers have a
very important place in future development of elec-
trical techniques. Therefore, he gives a short ac-
count of some articles which were submitted but not
discussed. Among these were works by Pollard (Eng-
land) and Vogelsanger (Switzerland).

ID

40T19

~~SECRET~~
BUTKEVICH, Yu.V., professor, doktor tekhnicheskikh nauk.

Building high-voltage apparatus in the U.S.S.R. for thirty years.
Vest.elektroprom. 18 no.11:11-14 N '47. (MLRa 6:12)

1. Vsesoyuznyy elektrotekhnicheskiy institut im. V.I.Lenina.
(Electric apparatus and appliances)

BUTKEVICH, YU V. Prof

USSR/Electricity - Arc Quenching Switching Circuits Mar 50

"Quenching an Open AC Arc in High-Voltage Installations," Prof Yu V. Butkevich, Dr Tech Sci, All-Union Elec Eng Inst Imeni Lenin

"Elektrichestvo" No 3, pp 3-9

PA 17177

Examines processes of quenching during "self-quenching," i.e., without removing voltage from interval, and with removal of voltage ("APV" - automatic reclosing). Examines conditions of arc quenching in installations during single-phase short circuit to ground with single-phase switching

17177

USSR/Electricity - Arc Quenching (Contd) Mar 50

off of damaged section. Gives formulas for estimating time of detonization and quenching of open arc. Submitted 12 Dec 49.

17177

BUTKEVICH, Yu. V.

"L. I. Ivanov, Obituary," Elektrichestvo, No.5, 1952

BUTKEVICH Yu.V.

AKOPYAN, A.A.; BORISOGLEBSKIY, P.V.; BUTKEVICH, Yu.V.; IMOKHOVSKAYA, I.F.;
RAZEVIG, D.V.; SIROTINSKIY, L.I.

Answer of the authors and of the editor. Elektrichestvo no.8:93
Ag '54. (MLRA 7:8)
(Electric engineering)

BUTKEVICH, Y. V., AKOPYAN, A. A., BURGS DORF, V. V. GERTSYK, A. K., GRYUNTAL, Y. L.,
ROKOTYAN, S. S., AND SOVALOV, S. A.

Development of 400-500 kV networks in the Soviet Union,
paper submitted for presentation at the Intl. Conf. on Large Electric Systems (CIGRE)
17th biennial Session, Paris, France, 4-14 June 1958.

Electra, No. 30, Nov 57, periodical news letter issued by the CIGRE, Paris France.

FOTIN, V.P.; AKOPYAN, A.A., red.; ANDRIANOV, K.A., red.; BIRYUKOV, V.G., glavnyy red.; BUTKEVICH, Yu.V., zamestitel' glavnogo red.; GRANOVSKIY, V.L., red.; KALITVYANSKIY, V.I., red.; KLYARFEL'D, B.N., red.; KRAPIVIN, V.K., red.; TIMOFEEV, P.V., red.; FASTOVSKIY, V.G., red.; TSEYROV, Ye.M., red.; SHEMAYEV, A.M., red.; DEMKOV, Ye.D., red.; FRIDKIN, A.M., tekhn. red.

[Voltage increase on long a.c. lines during nonsymmetric short circuits to ground] Povysheniia napriazhenii v dlennykh liniyakh perennogo toka pri nesimmetrichnykh korotkikh zamykaniyakh na zemli. Moskva, Gos.energ.izd-vo, 1958. 223 p. (Moscow. Vsesoiuznyi elektrotekhnicheskii institut. Trudy, no.64) (MIRA 12:2)
(Electric lines) (Short circuits)

Butkevich, Yu. V.

Chalik, M. G., Kostrov, M. F., Vesikov, V. A., Biryukov, V. G., Gerasimov, A. A., Sukerich, Yu. V., Barysig, D. V., and Others
807/105-59-6-22/20

Leonid Ivanovich Sirotnitskiy (Leonid Ivanovich Sirotnitskiy)
On His 60-th Birthday (k 60-letiyu so dnya rozhdeniya)

Elektrichestvo, 1959, Nr 6, pp 91-92 (USSR)

The scientist and pedagogist, Doctor of Technical Sciences Leonid Ivanovich Sirotnitskiy was born in April 1879. His career in the field of science and teaching began, when in 1907 he participated in the establishment of the first junior engineers college in Russia (at present Moskovskiy spetsializirovannyi tekhnicheskii, Moscow Polytechnic of Power Engineering), where to serve he worked for more than 25 years. In 1917 he began to work at the Moscow Polytechnic Vysshnye tekhnicheskiye uchilishche (Moscow Technical University) and later on in the Moskovskiy energeticheskii institut (Moscow Institute of Power Engineering). He introduced courses on electrical automation, electric traction, overvoltages and overvoltage protection at the VTI and MEI. Later on he mainly worked in the field of high-voltage engineering. He organized the chair of high-voltage engineering

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at the MEI and established a laboratory with this chair. In 1921 in collaboration with K. A. Krug he established the Otdel'nyy eksperimental'nyy institut (State Experimental Institute), which later on was transformed into the Vsesoyuznyy elektrotekhnicheskii institut imeni Lenina (All-Union Institute of Electrical Engineering imeni Lenin). Sirotnitskiy was the first head of the department of high voltage of the VTI. He still is in close contact with the VTI. He was the first head of the department of high voltage (Central Council of Electrical Engineering). In this function and as a consultant to the Ministry of Power Engineering, his expert opinion on the projects of the 400 kv electric line from the electric grids in the Pribaltic Republic and the d.c. line Stalingrad hydroelectric power station - Dombass. For many years he was the chairman of the committee for the elaboration of specifications for overvoltage protection. He was a member of the Presidium and deputy chairman of the Elektrotekhnicheskoye obshchestvo (Electrotechnical Society), chairman of the section for power stations at the VTI, and for many years he was chairman of the

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Elektrotekhnicheskoye obshchestvo MEI (Scientific and Technical Society of the MEI). He is at present still a member of the Scientific Council of the MEI and VTI, member of the Technical Council of the Ministerstvo stroitel'stva elektrostaniy (Ministry for the Construction of Power Stations). His three-volume textbook "High Voltage Engineering" is well known. At present he is engaged in teaching at the Institute of the Red Banner of Labor, of the order "Medal of Distinction" and several medals. In 1942 the title of a Merited Scientist and Engineer of the RSFSR was conferred upon him, and in 1950 he was awarded the Stalin Prize for his work on valve arresters. There is a figure.

Card 3/3

JUCZAITIS, B., VI k. stud.; SIMKUS, V., V k. stud.; DANIELIUS, J.
BIZEVICIUS, K.; KACERGIUS, A.; BUTKEVICIUS, P.; NESAVAITE, J.

Treatment of dermatoses with elimination diet. Sveik. apsaug.
8 no.1:42-43 Ja'63.

1. Kauno Valst. medicinos instituto Odos-veneros ligu dis-
panseris.

*

BUTKEVICIUS, S.

General activity in women with uterine fibromyomas. Sveik. apsaug. 7
no.3(75):52 Mr '62.

1. Kauno Valstybinio medicinos instituto akuserijos-ginekologijos
katedra.

(UTERUS NEOPLASMS physiolo)
(LEIOMYOMA physiolo)

NARIKASHVILI, S.P., BUTKHUZI, S.M.

Relationship between descending and ascending effects of the reticular formation of the medulla oblongata [with summary in English].
Fiziol.zhur. 44 no.9:848-858 S '58 (MIRA 11:12)

1. Institut fiziologii AN Gruzinskoy SSR, Tbilisi.
(MEDULLA OBLONGATA, physiol.
reticular form., relationship between ascending &
descending eff. (Rus))

BUTKHUZI, S. M., Candidate of Biol Sci (diss) -- "Myographic and oscillographic study of the contraction of the skeletal muscles of the frog". Tbilisi, 1959, published by the Acad Sci Georgian SSR.. 17 pp (Tbilisi State U im Stalin), 160 copies (KL, No 21, 1959, 113)

BUTKHUZI, S.M.; NARIKASHVILI, S.P.

Significance of anesthesia in the inhibiting effect of the bulbar reticular formation on spinal activity. Biul. eksp. biol. med. 47 no.2:3-9 F '59. (MIRA 12:4)

1. Iz Instituta fiziologii AN Gruzinskoy SSR, Tbilisi. Predstavlena deystvitel'nym chlenom AMN SSSR I.S. Beritashvili.

(MEDULLA OBLONGATA, physiol.

reticular form., eff. of anesth. on inhib. eff. on spinal cord (Rus))

(ANESTHESIA, effects,

on inhib. eff. of medullar reticular form. on spinal cord (Rus))

(SPINAL CORD, physiol.

eff. of anesth. on inhib. eff. of medullar reticular form. (Rus))

ANTELDZE, B.F.; BUTKHUZI, S.M.; NARIKASHVILI, S.P.

Changes in breathing related to inhibition and facilitation of
signal reflexes during stimulation of the reticular formation.
Soob. AN Gruz. SSR 24 no. 1:81-88 Ja '60. (MIRA 14:5)

1. Akademiya nauk Gruzinskoy SSR, Institut fiziologii, Tbilisi.
Predstavleno akademikom I.S. Beritashvili.
(RESPIRATION)

NARIKASHVILI, S.P.; BUTKHUZI, S.M.; MONIAVA, E.S.

Effect of the cerebral cortex on non specific thalamic reactions.
Fiziol. Zh. 46 no.6:653-663 Je '60. (MIRA 13:8)

1. From the Institute of Physiology, Academy of Sciences of the
Georgian Soviet Socialist Republic, Tbilisi.
(CEREBRAL CORTEX) (OPTIC THALAMUS)

BUTKHUZI, S.M.

Afferent connections of the caudate nucleus. Soob. AN Gruz.
SSR 27 no.5:613-618 N '61. (MIRA 15:1)

1. AN Gruzinskoy SSR, Institut fiziologii, Tbilisi. Pred-
stavleno akademikom I.S. Beritashvili.

(BRAIN)

NARIKASHVILI, S.P.; MONIAVA, E.S.; BUTKHUZI, S.M.

Effect of tetanic stimulation of the sensory-motor cortex on the
thalamus relay nucleus. Fiziol. zhur. 47 no.7:863-871 J1 '61.

(MIRA 15:1)

1. From the Georgian S.S.R. Academy of Sciences Institute of
Physiology, Tbilisi.

(CEREBRAL CORTEX) (OPTIC THALAMUS)

ROYTBAK, A.I.; BUTKHUZI, S.M.

Reaction of awakening in response to the stimulation of the
specific thalamic nucleus. Dokl. AN SSSR 139 no.6:1502-
1504 Ag '61. (MIRA 14:8)

1. Institut fiziologii AN Gruzinskoy SSR. Predstavleno akademikom
I.S. Beritashvili.

(OPTIC THALAMUS)

(SLEEP)

ROYTEAK, A.I., BUTKHUZI, S.M.

"Arousal reaction to stimulation of a specific β thalamic nucleus."

Report submitted, but not presented at the 22nd International
Congress of physiological Sciences.
Leiden, the Netherlands 10-17 Sep 1962

NARIKASHVILI, S.P.; BUTKHUZI, S.M.; KADZHAYA, D.V.; MONIAVA, E.S.

Some characteristics of the reticular facilitation of responses
of the visual system. Trudy Inst. fiziol. AN Gruz. SSR 13:15-33
'63. (MIRA 17:6)

BUTKHUZI, S.M.

Correlation of changes in the electroencephalogram and general motor activity in normal cats during stimulation of the caudate nucleus. Trudy Inst. fiziol. AN Gruz. SSR 13:61-68 '63.
(MIRA 17:6)

DZIDZISHVILI, N.N.; BUTKHUZI, S.M.

Interaction of the cerebral cortex and the mesencephalic
reticular system in the compensation of locomotor functions.
Trudy Inst. fiziol. AN Gruz. SSR 13:69-76 '63.
(MIRA 17:6)

ACCESSION NR: AR4027233

S/0299/64/000/002/P011/P011

SOURCE: RZh. Biologiya, Abs. 2P63

AUTHOR: Dzidzishvili, N. N.; Butkhuzi, S. M.

TITLE: Interaction between the cerebral cortex and the mesoencephalic reticular formation in the compensation of the locomotor functions

CITED SOURCE: Tr. In-ta fiziol. AN GruzSSR, v. 13, 1963, 69-76

TOPIC TAGS: central nervous system, cerebral cortex, reticular formation, mesoencephalon, locomotor function

TRANSLATION: In investigations performed on adult dogs and cats, electrolytic lesions were produced in the mesoencephalic reticular formation (MRF; diameter 3-4 mm). In dogs, areas 4 and 6 were removed; in cats, the area around the cruciform gyrus. The movement of the animals and (in part of the experiments) the conditioned reflex activity was studied under conditions of free movement. Monolateral injury to the MRF produced the short-lasting appearance of rotary movements toward the side of the injury. After bilateral injury to the MRF, an acute locomotor disorder appeared (the animals could not stand on their

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ACCESSION NR: AR4027233

legs) from which they recovered within 2-3 weeks. The behavior of the animals changed; they became very quiet and peaceful. At the beginning the animals would trip on obstacles during walking. Injury to the intralaminar area of the thalamus, involving the same total area as that in the MRF, did not produce changes in movement. Injury to the MRF and removal of the motor zone of the cortex (with any successive operation) brought about a pronounced, irreversible, locomotor disorder and the death of the animals. The authors conclude that there is a close connection between the MRF and the sensory-motor areas of the cortex, thus guaranteeing normal function of the two parts of the brain, representing two links in a single system. The author feels that one should not ascribe an exclusive role in the recovery of lost motor functions to the cerebral cortex. E. Rutman

DATE ACQ: 14Feb64

SUB CODE: LS

ENCL: 00

Card 2/2

L 22226-66

ACC NR: AT5024226

SOURCE CODE: UR/3167/65/014/000/0039/0065

AUTHOR: Narikashvili, S. P.; Butkhuzi, S. M.; Moniava, E. S.

2
B+1

ORG: none

TITLE: The synchronizing mechanism of the brain stem reticular formation

SOURCE: AN GruzSSR. Institut fiziologii. Trudy, v. 14, 1965. Sovremennyye problemy deyatel'nosti i stroeniya tsentral'noy nervnoy sistemy (Present problems of the activity and structure of the central nervous system), 39-65

TOPIC TAGS: synchronization, CNS synchronization, reticular formation, bulbar reticular formation, mesencephalic reticular formation, cortical synchronization

ABSTRACT: To clarify the role of the upper and lower brain stem in the formation of induced synchronous cortical activity (recruiting response), the effects of electrical stimulation of the bulbar and mesencephalic reticular formations on the development and course of recruiting reactions induced by stimulation of nonspecific nuclei in the thalamus were studied in unanesthetized curarized cats and disencephalized cats. It was found that frequent stimulation of various parts of the bulbar reticular formation (BRF), which has an initial inhibitory effect on spinal activity, and of the mesencephalic reticular formation (MRF), which has an initial potentiating effect on spinal activity, suppresses the recruiting response to almost an equal degree. Stimulation of BRF and MRF with widely spaced pulses elicits slow waves of similar form.

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L 22226-66

ACC NR: AT5024226

The combination of slow BRF or MRF stimulation with slow stimulation of nonspecific thalamic nuclei is equally unfavorable to formation of the recruiting response. The only type of stimulation found to favor the development of thalamically-induced recruiting response was stimulation of the solitary tract nucleus (STN). Fast stimulation of the STN increases the potentials of an already established weak recruiting response, unlike MRF stimulation, which suppresses the recruiting response. STN stimulation preceding thalamic stimulation inhibits the development of the recruiting response induced by the latter much less than MRF stimulation preceding thalamic stimulation. If potentiation or inhibition of the recruiting response is an adequate index of the effect of synchronizing or desynchronizing mechanisms on the cortex, then of the structures studied here, only the solitary tract nucleus has a synchronizing effect, the BRF and MRF being almost identical in their desynchronizing effects. [DP]

SUB CODE: 06/ SUBM DATE: none/ OTH REF: 017/ SOV REF: 001/

Card 2/2 nst

I. 22195-66

ACC NR: AT5024228

SOURCE CODE: UR/3167/65/014/000/0089/0099

AUTHOR: Butkhuzi, S. M.

2
B+

ORG: none

TITLE: Changes in potentials evoked in the cortex during caudate nucleus stimulation

SOURCE: AN GruzSSR. Institut fiziologii. Trudy, v. 14, 1965. Sovremennyye problemy deyatel'nosti i storyeniya tsentral'noy nervnoy sistemy (Present problems of the activity and structure of the central nervous system), 89-99

TOPIC TAGS: caudate nucleus stimulation, evoked potential, cortical activity, CNS activity, cerebral cortex

ABSTRACT: The ascending effect of stimulation of the caudate nucleus was studied in nonnarcotized curarized cats and in disencephalized cats. It was found that sensory motor cortical responses to either peripheral or thalamic nucleus stimulation are suppressed by high-frequency stimulation of the caudate nucleus. This suppression, which lasts 100 to 500 msec after caudate nucleus stimulation ceases, is usually followed by a "rebound" augmentation of cortical responses. High-frequency caudate nucleus stimulation also suppresses antidromic cortical responses to bulbar pathway stimulation. It is suggested that sensory motor cortex response suppression during caudate nucleus stimulation is due to inhibition of both afferent and efferent cortical cells.

[DP]

2

SUB CODE: 06/ SUBM DATE: none/ OTH REF: 020/ SOV REF: 002/
Card 1/1

BUTKHUZI, S.M.

Electrophysiological analysis of the cortical regulation of the
activity of the nucleus caudatus. Fiziol. zhur. 51 no.1:47-53 Ja
'65. (MIRA 18:7)

1. Institut fiziologii AN Gruzinskoy SSR, Tbilisi.

BUTKHUZI, S.M.

Electrophysiological data on the correlation between the cerebral cortex and nucleus caudatus. Zhur. vys. nerv. deiat. 15 no.6:1036-1046 N-D '65. (MIRA 19:1)

1. Institut fiziologii AN GruzSSR, Tbilisi. Submitted July 28, 1965.

OUTKIEWICZ, V.

Properties of the magnetic layers

Własności warstw magnetycznych. Porady Automatyki i
Elektroniki, 1957, pp. 44-45.

The author studies the properties of the magnetic
layers in the case of a uniform magnetic field.

where the wavefront of the system
coincides with the vertical θ where the wavefront of the system

~~JANINA~~, Butkiewicz, J.

POLAND/Optics - Physical Optics

K-5

Abs Jour : Ref Zhur - Fizika, No 4, 1958, No 9227

Author : Butkiewicz Janina

Inst : Not Given

Title : Optical Micropyrometers with Vanishing Filaments

Orig Pub : Pamiary, automat., kontrola, 1957, 8, No 5, 180-184

Abstract : No abstract

Card : 1/1

P/818/81/008/000/001/003
I061/I261

16.3500

AUTHOR: J. Butkiewicz (Warsaw)

TITLE: Certain properties of generalized potential and of Green's function for an elliptic equation and their application

SOURCE: Polskie Towarzystwo Matematyczne. Roczniki. Seria I. Prace matematyczne. v.6, 1961, 49-68

TEXT: A general second order elliptic equation with variable coefficients is considered:

$$\Psi(u) \equiv \sum_{p,q=1}^n a_{pq}(A) \frac{\partial^2 u}{\partial x_p \partial x_q} + \sum_{\alpha=1}^n b_{\alpha}(A) \frac{\partial u}{\partial x_{\alpha}} + c(A)u = 0, \quad (1)$$

where $a_{pq}(A)$, $b_{\alpha}(A)$, $c(A)$ are functions defined in a closed domain $\bar{\Omega} = \{x_1, x_2, \dots, x_n\} \in \Omega + S$, satisfying Holder's conditions, Ω being n dimensional Euclidian space, bound by a closed surface S, satisfying Lapunov's conditions. This research is a generalization of W. Pogorzelski's theory given in [1] [W. Pogorzelski. Etude de

✓B

Card 1/2

P/515/61/006/000/001/003
I061/I261

On certain properties of generalized...

la solution fondamentale de l'équation elliptique et des problèmes aux limites, Annales Pol. Math., 3, 1957, pp. 247-284]. The author proves that under boundary conditions on S

$$\lim_{A \rightarrow P} \left[\frac{du(A)}{dT_p} \right] + p(P) u(P) = 0, \text{ where } P \in S, \quad (62)$$

a unique solution exists $u(A)$, satisfying Holder's conditions and given by a differential-integral equation:

$$u(A) = - \iiint_{\Omega} G(A,B) \lambda^{-1}_n(B) F \left[B, u(B), \frac{\partial u(B)}{\partial \xi_1}, \dots, \frac{\partial u(B)}{\partial \xi_n} \right] dB, \quad (72)$$

where $G(A,B)$ is the Green's function of the problem. The proof is given by the methods of successive approximations.

Card 2/2

BUTKIEWICZ, J. (Warszawa)

On the solution of certain limit problems for the elliptic
equation by the method of successive approximations. In French.
Annales pol math 9 no.3:235-252 '61. (EAI 10:8)
(Differential equations) (Functions)
(Approximate computation)

L O 5-67 EWT(1)

ACC AP6023956

SOURCE CODE: PO/0034/66/000/004/0123/0127

AUTHOR: Butkiewicz, J. (Master of arts)

ORG: Temperature Measurement Laboratory, GUM (Laboratorium Pomiarow Temperatury GUM)

TITLE: Draft system of criteria for test instruments used in the measurement of temperature in the -200 to +3000C range

SOURCE: Pomiar, automatyka, kontrola, no. 4, 1966, 123-127

TOPIC TAGS: temperature measurement, temperature measuring instrument, instrument calibration

ABSTRACT: The article discusses the problem of the effect of the addition of random errors and pre-existing calibration errors in the case of test instruments, and also the total effect of such random errors in combination with distortions in the transmission of the specific unit of measurement from the state standard to the test instrument in actual use. Particular attention is directed to the problem of calibration errors in test instrumentation designed for temperature measurements over wide intervals (from -200 to +3000C) and a tentative schedule of gage criteria is proposed for use with these instruments. The proposal is largely based on work planned and carried out in this area at the Temperature Measurement Laboratory, GUM (Laboratorium Pomiarow Temperatury GUM). Recommendations are also made with respect to future approaches to the calibration and verification problem with emphasis on the development

Card 1/2

UDC: 536.5.089.6

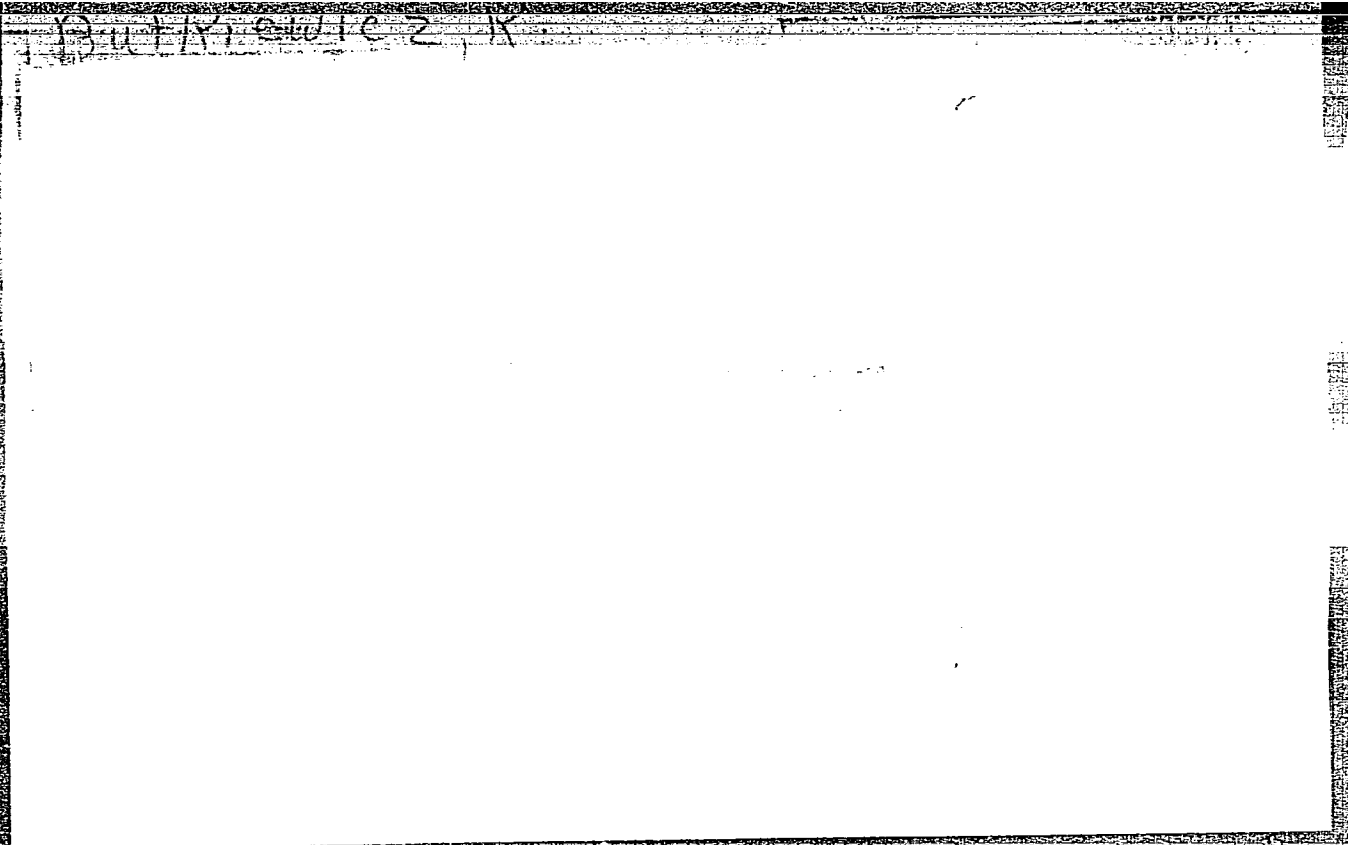
L 072 5-67

ACC No: AP6023956

of stricter and more thorough criteria. Orig. art. has: 15 formulas. 0

SUB CODE: 14/ SUBM DATE: none/ ORIG REF: 002/ OTH REF: 001/ SOV REF: 002

Card 2/2 *gd*



BUTKIEWICZ, K.

Chromatopolarographic investigations. XII. Differential polarography⁷ in measuring concentration of eluate from the chromatographic column. Wiktor Kemula, Stanislaw Brzozowski, and Karol Butkiewicz. *Chem. Anal.* (Warsaw) 3, 489-94 (1958) (English summary); cf. *C.A.* 51, 18479c.—Two dropping electrodes, one for analyzing the effluent and the other as reference electrode, were used. The velocities of eluting were the same for both columns. The method was tested on 2,4- and 2,5-(O,N)₂C₆H₃Cl mixts. Expts. were made on 5-cm. columns at the rate of 10 and 8 ml./hr. NaBr was used as standard soln. The method gave satisfactory results. It permits the use of galvanometers with high sensitivities even in the case of solns. contg. considerable amts. of org. substances. The method makes it possible to increase considerably the sensitivity of ordinary chromatopolarography (about 20-times for 2,4- and 2,5-(O,N)₂C₆H₃Cl mixts. (Kemula *et al.*, *C.A.* 50 3950g).
Z. Kurtovic

MM
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4

99

BUTKIEWICZ, T.

In memoriam Dr. Zygmunt Jurewicz. Polski przegl. chir. 26 no.10:
869 Oct 54.

(BIOGRAPHIES
Jurewicz, Zygmunt)

BUTKIEWICZ, T.

Treatment of wounds of the soft tissue. Polski przegl.chir. 26
no.11 Suppl.:7-37 1954.

(WOUNDS AND INJURIES,
soft tissue, ther.)

BUTKIEWICZA, T. prof. dr.

Summing-up by the chairman of the Polish Society of Surgeons.
Polski przegl.chir. 27 no.7:683-686 July 1955.
(SHOCK,
conf. in Poland)

EXCERPTA MEDICA Sec,9 Vol.11/9 Surgery Sept 1957

4935. BUTKIEWICZ T. I. Klin. Chir., Warszawa. "Leczenie zakrzepów i zakrzepowego zapalenia żył kończyn (dolnych). The treatment of thrombosis and thrombophlebitis of the veins of the (inferior) extremities POL. PRZEGL. CHIR. 1956, 28/7 (603-629) Tables 8

A lesion of the nervous system following trauma (mechanical or chemical) is considered to be of utmost importance in the pathogenesis; humoral disturbances and toxins are next in order. In the treatment great importance is attached to novocaine blocks of the sympathetic system. Conclusions are based both on the author's clinical experience (since 1936, 490 cases have been treated with good results) and experimental work. The treatment of thrombophlebitis with anticoagulants is considered to be only symptomatic and empirical and despite better results achieved in comparison to some other methods it has no sufficient scientific basis and does not take into account the effect of the forming thrombus on the local circulation and possibility of improvement of that circulation by appropriate treatment. None of the coagulants, heparin included, prevents with certainty the occurrence of lung infarction or fatal embolism. A markedly favourable effect of heparin treatment was observed only in very early cases and only in the thrombosis of the calf veins but not of the thigh. Among other unfavourable effects are: danger of haemorrhage, necessity of systematic laboratory tests, etc. On the other hand, treatment by novocaine block is based on biological grounds, documented by X-ray pictures and clinical observations. Novocaine blocking affects the conditions of local circulation by: (1) abolishing irritation of the vasomotor system induced by the formed thrombus, (2) dilatation of the arteries and veins, (3) considerable improvement of the local circulation and trophic conditions of the tissue. To obtain these satisfactory results it is necessary to inject not only the neighbourhood

4935

CONT

of the sciatic nerve but the whole lumbar segment of the sympathetic trunk.
Zakryś - Lublin

BUTKIEWICZOWA, J.

"Thermocouples for use in carbon atmospheres" by M.Nadler, Ch.
Kempter. Reviewed by J.Butkiewiczowa. Pomiary 8 no.1:47 Ja
'62.

BUTKIEWICZOWA, J.

"Dynamic characteristics of sensitive elements for temperature measurements" by A.Kopielowicz, M.Klimowickij. Reviewed by J.Butkiewiczowa? *Pomiary* * 8 no.1:48 Ja '62.

** other articles in this series also reviewed by
BUTKIEWICZOWA*

L 27248-66

ACC NR: AP6009861

SOURCE CODE: UR/0413/66/000/004/0053/0053

AUTHORS: Yudin, Ye. Ya.; Tsodikov, V. Ya.; Khusainova, O. M.; Yakobson, I. M.;
Terekhin, A. S.; Butkin, B. I.; Chuchayev, V. G.

ORG: none

TITLE: Composite noise damper. Class 27, No. 178934

SOURCE: Izobreteniya, promyshlennyye obratzы, tovarnyye znaki, no. 4, 1966, 53

TOPIC TAGS: acoustic noise, sound absorption

ABSTRACT: This Author Certificate presents a composite noise damper for gas-dynamical equipment, engine exhaust channels, and ventilator shafts. The damper contains resonators placed along the side walls of the channel and sheets of sound absorbing material placed parallel to the resonators (see Fig. 1). To increase the damping efficiency and to decrease the consumption of the sound absorbing material, the sheets have open holes along their entire length for absorption of sound waves at both high and low frequencies.

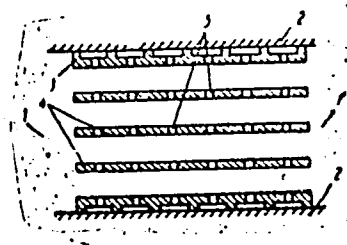
Card 1/2

UDC: 62-758.34

L 27248-66

ACC NR: AP6009861

Fig. 1. 1 - exhaust channel; 2 - channel walls;
3 - resonators; 4 - sheets; 5 - open
holes in sheets.



Orig. art. has: 1 diagram.

SUB CODE: 20, 13/ SUBM DATE: 01Feb65

Card 2/2 CC

BUTKIN, N.A., gornyy inzh.

Experiment in the technical consolidation of mines. Ugol' 36 no.3:
47-50 Mr '61. (MIRA 14:5)

1. Kombinat Primorskugol'.
(Uglovskoy Basin--Mine management)

BUTKIN, N.A.

Prospects for increasing open-pit coal mining in the Maritime
Territory. Ugol' 38 no.6:6-7 Je '63. (MIRA 16:8)

1. Glavnyy inzh. Primorskogo kombinata ugol' noy promyshlennosti.
(Maritime Territory--Coal mines and mining)

BUTKIN, N. G.

Control of tuberculosis in the Sverdlovsk region. Probl. Tuberk.,
Moskva No. 6, Nov.-Dec. 50. p. 44-7

1. Of Sverdlovsk Tuberculosis Institute (Director-Candidate
Medical Sciences I. A. Shaklein), Sverdlovsk.

GLML 20, 3, March 1951

BUTKIN, N.G., starshiy nauchnyy sotrudnik; SHKLOVKINA, A.V.; HAZAROVA, I.B.

Larusan therapy of pulmonary tuberculosis; preliminary communication.
Probl.tub. 34 no.2:36-39 Mr-Apr '56. (MLBA 9:8)

1. Iz Sverdlovskogo oblastnogo instituta tuberkuleza (dir. - prof.
I.A.Shaklein, zam. dir. po nauchnoy chasti - kandidat meditsinskikh
nauk N.G.Butkin)

(TUBERCULOSIS, PULMONARY, therapy,
larusan (Rus))

BUTKIN, N.G.; SHELKOVKINA, A.V.

Course of pulmonary tuberculosis in workers employed in dusty..
areas in the asbestos industry. Probl. tub. 41 no.6:48-51 '63.
(MIRA 17:9)

1. Iz Sverdlovskogo nauchno-issledovatel'skogo instituta tuberkuleza
(dir. - prof. I.A.Shaklein).

BUTKIN, V.D., inzh.; KULACHOK, M.I.

Research on boring with a roller bit, carried out on the BSSH-1Y
rig-testing machine. Gor.zhur. no.5:37-41 My '61. (MIRA 4:6)

1. Chelyabinskiy nauchno-issledovatel'skiy institut gornogo dela.
(Rock drills--Testing)

BUTKIN, V.D., inzh.

Calculating the efficiency of boring machines in open-pit mines.
Ugol' 26 no.9:24-25 S '61. (MIRA 14:9)

1. Chelyabinskiy nauchno-issledovatel'skiy institut gornogo dela.
(Chelyabinsk Basin--Strip mining)
(Rock drills)

BUTKIN, V.D., gornyy inzh.

Use of low angular velocity drives in drilling very hard and
abrasive rocks with a roller bit. Gor. zhur. no.6:35-37
Je '62. (MIRA 15:11)

1. Chelyabinskiy nauchno-issledovatel'skiy institut
gornogo dela.

(Rock drills)

CHERNORUTSKIY, G.S., kand.tekhn.nauk; SIBRIN, A.P., inzh.; BUTKIN, V.D., inzh.

System of measuring the feed rate in the automation of rigs in boring with a roller bit in open pits. Izv. vys. ucheb. zav.; gor. zhur. 5 no.3:148-150 '62. (MIRA 15:7)

1. Chelyabinskiy politekhnicheskii institut (for Chernorutskiy, Sibrin). 2. Chelyabinskiy nauchno-issledovatel'skiy institut gornogo dela (for Butkin).

(Boring machinery--Measurement)

(Automatic control)

BUTKIN, V.D., kand.tekhn.nauk; TELESNOV, A.S., inzh.; BRYUBOV, B.F., inzh.

Dependence of roller bit operation indices on the conditions of
boring. Gor.zhur. no.10:36-38 O '64. (MIRA 18:1)

1. Nauchno-issledovatel'skiy i proyektno-konstruktorskiy institut
po dobyche poleznykh iskopayemykh otkrytym sposobom, Chelyabinsk.

BUTKIN, V.D., kand. tekh. nauk; TELESHOV, A.S., inzh.; BRYUKHOV, B.F., inzh.

Resistance and wear of roller bits depending on the hardness of
rocks. Gor. zhur. no.9:46-48 S '65. (MIRA 18:9)

BUTKIN, Ye. I. Cand Vet Sci -- (diss) "Experiments in the sanitation of
defective farms ^{in connection with} ~~with regard to the~~ brucellosis in cattle." Mos, 1957.

18 pp (Min of Agriculture USSR. Mos Vet Acad), 140 copies (KL, 6-58, 101)

USSR/Diseases of Farm Animals - Diseases Caused by Bacteria
and Fungi.

R-2

Abs Jour : Ref Zhur - Biol., No 11, 1958, 50176

Author : Butkin, Ye.I.

Inst : Moscow Academy of Veterinary Sciences.

Title : Experimental Assanation of Farms with Bovine Brucellosis
by the Method of Frequent Complex Examinations.

Orig Pub : Tr. Mosk. vet. akademii, 1957, 19, No 1, 283-293

Abstract : On farms where recent acute brucellosis infections were
present, complex applications of Ar, RSR, as well as of
the ophtalmic allergen and lactic ring tests with short
intervals between examinations (10 days), made it possi-
ble for the author to isolate the main group of sick ani-
mals within $1\frac{1}{2}$ to 2 months. Thus, the danger of spreading
bovine brucellosis among herds was avoided. Bibliography,
30 titles.

Card 1/1

Country : USSR
Category : Diseases of Farm Animals. R
 : Diseases Caused by Bacteria and Fungi.
Abs. Jour : Ref Zhur-Biol., No 21, 1958, 96963
Author : Butkin, Ye. I.
Institut. : MOSCOW Veterinary Academy.
Title : The Problem of Differentiating Healthy Animals
 from Animals Sick with Brucellosis in a Vaccinated Herd.
Orig Pub. : Tr. Mosk. vet. akad., 1957, 19, vyp. 2, ch. 1,
 73-78
Abstract : Cows that were vaccinated 6-12 months before
 the experiment with a dry vaccine of the No 19
 strain, were investigated. Cows which had aborted
 after vaccination, showed a colored ring
 reaction to milk and positive AR [agglutination
 reaction] and BSR [blood serum reaction]
 with a value of 4-3 crosses. Vaccinated animals
 which were given a ring test, always showed
 positive AR and BSR. Six months after vaccination,
 a considerable number of cows

Card: 1/2

USSR/Diseases of Farm Animals. Diseases Caused by Bacteria and Fungi R-2

Abs Jour: Ref Zhur - Biol., No 1, 1959, 2799

Author : Butkin, Ye. I.

Inst : Moscow Veterinary Academy

Title : Applying Experimental Biomyoin Therapy to Bruce-
llosis Afflicted Cows

Orig Pub: Tr. Mosk. vet. akad., 1957, 19, vyp. 2, ch. 1,
79-85

Abstract: Biomyoin was applied according to three methods:
1. orally, on 6 consecutive days during the first
stage of the treatment, and on 3 days during the
second stage; 2. orally, in combination with hyper-
immune sera injected subcutaneously; 3. intra-
muscularly, 6 times during the first stage of the
treatment and 3 times during the second stage.
Hyperimmune sera were introduced twice during the
first stage of the treatment with a 6-day interval,

Card 1/2

Country : USSR R
Category : Diseases of Farm Animals. Diseases Caused by Bacteria and Fungi
Abs. Jour. : Ref Zhur-Biol, No 23, 1958, No 105820
Author : Gannushkin, M. S.; Bessarabov, B. F.; Butkin,*
Institut. : -
Title : Biomycin in Paratyphoid of Piglets, Brucellosis of Cattle and Infectious Pleuropneumonia of Goats
Orig Pub. : Veterinariya, 1958, No 3, 53-56

Abstract : The therapeutic effectiveness of biomycin (B) was tried in two experiments conducted on 24 and 115 young pigs affected with paratyphoid. All animals treated with B recovered. The use of synthomycin [chloramphenicol], as well as the action of antiparatyphoid serum and that of sulfa preparations, proved less effective than B. Better results were achieved when B was applied

* Ye. I.; Zanaa, M.

Card:

BUTKIN, Ye.I., kand.veterinarnykh nauk; Prinsipal uchastiye IVANOV, V.L.,
vrach-bakteriolog

Effectiveness of living antipasteurellosis vaccine. Veterinariia
39 no.12:37-38 D '62. (MIRA 16:6)

1. Kurskaya oblastnaya nauchno-proizvodstvennaya veterinarnaya
laboratoriya.
(Kursk Province--Chicken cholera--Preventive inoculation)

BUTKINA, K.N.

Distribution and degree of severity of goiter in Sverdlovsk school children and the results of preventive measures. *Pediatrics* 38 no.12:41-47 '60. (MIRA 14:2)

1. Iz kafedry gosspital'noy pediatrii (zav. - doktor med.nauk D.Ye. Sheynberg) Sverdlovskogo meditsinskogo instituta (dir. - prof. A.F. Zverev) na baze detskoy bol'nitsy No.13 Oktyabr'skogo rayona (glavnyy vrach N.Ī. Kaminskaya).
(SVERDLOVSK--GOITER)

KLYNER, A.M., kand.med.nauk; BUTKINA, T.K., kand.med.nauk

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E

Physiological and hygienic evaluation of working conditions of technical school undergraduates. Gig. i san. 26 no.8:38-43 Ag '61. (MIRA 15:4)

1. Iz Sverdlovskogo instituta gigiyeny truda i professional'noy patologii.

(SVERDLOVSK--TECHNICAL EDUCATION--HYGIENIC ASPECTS)

Butkina, Ye.
BULATOV, A.; BUTKINA, Ye.

Increasing the utilization factor of the elevator leg. Muk.-elev.
prom.21 no.9:29 S'55. (MIRA 8:12)

1. Sverdlovskaya normativno-issledovatel'skaya stantsiya Zagotzerno
(Grain elevators)

BULATOV, Aleksandr Aleksandrovich; BUTKINA, Ye.P.

[Receiving grain from combines at the Topchikha elevator]
Opyt priema zerna iz-pod kombainov na Topchikhinskom ele-
vatore. Moskva, Izd-vo tekhn. i ekon.lit-ry po voprosam
khleboproduktov, 1960. 24 p. (MIRA 15:8)
(Grain--Storage) (Grain elevators)

BUTKO, A.A.

Our practices in introducing winter barley in the Don Valley.
Zemledelie, 25 no.2:76-79 F '63. (MIRA 16:5)

1. Glavnyy agronom sovkhoza "Novyy mir", Samarskogo rayona,
Rostovskoy oblasti;

(Don Valley--Barley)

L 10927-67 EWP(d)/EWP(l)/EWP(v)/EWP(k)/EWP(h)/EWP(l) SCTB DE/GD

ACC NR: AT6022289

SOURCE CODE: UR/0000/66/000/000/0026/0032

AUTHOR: Butko, A. I.

34

ORG: none

TITLE: Some problems of bioelectric control of technical plants

SOURCE: Vsesoyuznaya nauchnaya sessiya, posvyashchennaya Dnyu radio, 22d, 1966. Sektsiya bioniki. Doklady, Moscow, 1966, 26-32

TOPIC TAGS: bioelectric phenomenon, biologic training simulant, optimal control, servosystem

ABSTRACT: There exist presently numerous practical devices with bioelectric control where the final control object is the living organism. A brief survey of the achievements in the field is presented. The author stresses the need for the development of multifunctional manipulators for work under the conditions of increased danger. The operator can either be excluded from the control process which replaces him by an appropriate automaton, or man can be converted into an "optimal" operator, i.e., the characteristics of the control process can be improved from the point of view of the complete control system of which man is only a link. The author surveys problems connected with the second type of solutions: a circuit corresponding to human control of machines, operation of the model of "eye" servosystem designed by A. Lauringson (Izvestiya AN Estonskoy SSR, t. XIII, seria fiziko-matematicheskikh nauk, No. 2, 1964).

Card 1/2

L 10927-67

ACC NR: AT6022289

The urgent problems discussed include coding and decoding of bioelectric information, efficient feedback means, methods for operator training for production of bioelectric signals, and the study and the optimization of dynamic characteristics of bioelectric control circuits.

SUB CODE: 06/ SUBM DATE: 08Apr66/ ORIG REF: 008

Card 2/2 ⁴⁷¹⁰

ACC NR: AP7000142

SOURCE CODE: UR/0046/66/012/001/0405/0410

AUTHORS: Blagoy, Yu. P.; Butko, A. Yo.; Mikhaylenko, S. A.; Yakuba, V. V.

ORG: Physicotechnical Institute for Low Temperatures, AN UkrSSR, Khar'kov (Fiziko-tekhnicheskiiy institut nizkikh temperatur AN UkrSSR)

TITLE: Velocity of sound in liquid nitrogen, oxygen, and argon at temperatures higher than the normal boiling temperatures

SOURCE: Akusticheskiy zhurnal, v. 12, no. 4, 1966, 405-410

TOPIC TAGS: sound propagation, oxygen, nitrogen, argon, specific heat

ABSTRACT: The velocity of sound in liquid nitrogen, oxygen, and argon in the temperature region of 77--87K and 112--120K was determined. The investigation supplements the results of I. S. Radovskiy (Eksperimental'noye issledovaniye skorosti ul'trazvuka na linii nasyscheniya v argone. Zh. prikl. mekh. i tekhn. fiz., 1963, 3, 159. Issledovaniya skorosti zvuka v zhidkom i gazoobraznom argone. Zh. prikl. mekh. i tekhn. fiz., 1964, 3, 172). The experimental technique is described by A. Ye. Butko, S. A. Mikhaylenko, and V. V. Yakuba (Ul'trazvukovoy interferometr dlya nizkotemperaturnykh zhidkostey. Sb. Voprosy metodiki ul'trazvukovoy interferometrii. Tr. Vses. konferentsii po metodike ul'trazvukovoy interferometrii. Kaunas, Izd-vo Mintis, 1966). A schematic of the experimental installation is presented. From the

Card 1/2

UDC: 531.22.512.50

ACC NR: AP7000142

experimental results, values for the adiabatic and isothermal compressibility and specific heats at constant pressure and constant volume, respectively, were derived. The experimental results are tabulated. It was found that these results were in good agreement with data reported in the literature. Orig. art. has: 4 tables, 1 graph, and 6 equations.

SUB CODE: 20/ SUBM DATE: 26Apr65/ ORIG REF: Q06/ OTH REF: 012

Card 2/2

BUTKO, D.G. (Lugansk)

Conducting a geometry lesson in a factory workshop. Mat.v shkole
no.6:30-31 N-D '62. (MIRA 16:1)

(Pantograph)

BUTKO, D.P.; VASIL'YEV, B.F.

Organization of analytical work at the Nizhniy Tagil
metallurgical combine. Stal' 25 no.6:562-563 Je '65.
(MIRA 18:6)

1. Nizhne-Tagil'skiy metallurgicheskiy kombinat.

BU^o'KO, I.T.; GUSEV, V.I., redakter; ALEKSANDROVICH, Kh., tekhnicheskiy
redakter.

[Hints and suggestions for the collective farmer on developing
his own dwelling] Sovety i poshelaniia kolhozniku po zastreike
individual'noi usad'by. Minsk, Izd-vo Akademii nauk Belorusskoi
SSR, 1955. 106 p. (MIRA 9:5)

(Farm houses)

AUTHORS: D'yachenko, S.S. and Palatnik, L.S., Kaplan, R.S., German, S.I.
and Butko, N.I. SOV/126-6-6-23/25

TITLE: Structural Changes in the Steel 20KhM-L After Holding for a Long Time at Elevated Temperatures (Strukturnyye izmeneniya v stali 20KhM-L pri dlitel'nykh teplovykh vydershkakh)

PERIODICAL: Fizika metallov i metallovedeniye, 1958, Vol 6, Nr 6, pp 1122-1129 (USSR)

ABSTRACT: The stability of the structure of the steel 20KhM-L at elevated temperatures was investigated and the influence was elucidated of the applied stresses on structural changes. Specimens of this steel were investigated after normalisation annealing for 3 hours at 650 - 680°C (initial state) and after holding them for various durations in the loaded and no-load state at various temperatures. The composition of this steel was as follows: C 0.15%, Si 0.30%, Mn 0.61%, S 0.026%, P 0.039%, Cr 0.5% and Mo 0.55%. The mechanical characteristics of the specimens after holding them at various temperatures between 530 and 550°C for durations up to 5400 hours are entered in Table 2. The investigations included

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SOV/126-6-6-23/25
Structural Changes in the Steel 20KhM-L After Holding for a Long Time
at Elevated Temperatures

metallographic, X-ray and electron-microscopic studies. It was established that carbide particles appear in the ferrite grains only after tempering in the temperature range 650 - 680°C but not at lower temperatures. Changes in the tempering temperature are accompanied by insignificant changes in the lattice parameter of the α -phase (2.8624 kX after tempering at 570°C and 2.8615 after tempering at 650°C). It was established from X-ray diffraction patterns that after normalisation annealing and tempering at 650 to 680°C for 3 hours, a mixture of 3 carbides can be detected in the carbide precipitate with the structure: Cr_{23}C_6 , Mo_2C and $\text{Fe}_2\text{Mo}_2\text{C}$. In the case of long-duration holding at 500 - 550°C, a coalescence of carbides takes place as a result of which carbide-free zones form at the boundaries of pearlitic grains. Coalescence leads to a growth of carbides of the structure Cr_{23}C_6 and to the dissolution of Mo carbides which can be explained by the low stability of the latter caused by the fact that they have a higher degree of dispersion than carbides of the type

Card 2/3

SOV/126-6-6-23/25

Structural Changes in the Steel 20KhM-L After Holding for a Long Time at Elevated Temperatures

$Cr_{23}C_6$. Stresses which are near to the yield point of the steel lead to an acceleration of the process of coalescence by one order of magnitude at 530°C and by two orders of magnitude at 550°C. Due to the dissolution of Mo carbides, the α -phase becomes enriched with alloying elements and this should have a favourable influence on the high-temperature characteristics of components made of this steel. There are 3 tables, 5 figures and 16 references, of which 12 are Soviet, 2 French, 1 German and 1 English.

ASSOCIATION: Khar'kovskiy politekhnicheskij institut imeni V.I.Lenina, Khar'kovskiy turbinnyy zavod im. S.M.Kirova (Khar'kov Polytechnical Institute imeni V.I.Lenin, Khar'kov Turbine Works imeni S.M.Kirov)

SUBMITTED: April 11, 1957, after revision, September 7, 1957.

Card 3/3

BUTKO, N.I.

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Академия наук СССР. Институт металлургии. Намуны совет по проблеме жаропрочности сплавов

Тезисы доклада на симпозиум по жаропрочности сплавов, т. 5 (Investigations of Heat-Resistant Alloys, Vol. 5) Moscow, Izdatel'stvo SSSR, 1959. 423 p. Errata slip inserted. 2,000 copies printed.

Ed. of Publishing House: V.A. Kiselev; Tech. Ed.: I.P. Kuznetsov; Editorial Board: I.P. Kuznetsov, Academician, G.V. Kurdyumov, Academician, N.V. Agayev, Corresponding Member, USSR Academy of Sciences (Resp. Ed.), I.A. Odling, I.M. Pavlov, and I.P. Zudin, Candidate of Technical Sciences.

FOREWORD: This book is intended for metallurgical engineers, research workers in metallurgy, and may also be of interest to students of advanced courses in metallurgy.

CONTENTS: This book, consisting of a number of papers, deals with the properties of heat-resisting metals and alloys. Each of the papers is devoted to the study of the factors which affect the properties and behavior of metals. The effects of various elements such as Cr, Ni, Mo, and V on the heat-resisting properties of various alloys are studied. Deformability and variability of certain metals as related to the thermal conditions are the object of another paper. The problems of hydrogen embrittlement, diffusion and the application of ceramic coatings on metal surfaces by means of electrochromatography are examined. One paper describes the apparatus and methods used for growing monocrystals of metals. Iron-base metals are critically examined and evaluated. Results are given of studies of intermetallic compounds and the behavior of atoms in metal. Tests of turbine and compressor blades are described. No personalities are mentioned. References accompany most of the articles.

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BUTKO, Ya.

Every day is dedicated to creativeness. Prof.-tekh. obr. 21 no.6:
12-14 Je '64. (MIRA 17:9)

ARKHANGEL'SKIY, I.I., prof.; BUTKO, M.F., starshiy nauchnyy sotrudnik

Evaluating detergents and disinfectants used in dairying.
Veterinariia 41 no.6:102-105 Je '64. (MIRA 18:6)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut veterinarnoy
sanitarii.

I. 9642-66 EWT(m)/EWP(w)/EWA(d)/T/EWP(t)/EWP(z)/EWP(b) LJP(c) MJW/JD/HW
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B.

AUTHOR: Popova, N. N.; Sandler, N. I.; Butko, N. I.

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ORG: Ukrainian Scientific Research Institute of Metals (Ukrainskiy nauchno-issledovatel'skiy institut metallov)

44 55

TITLE: Effect of rare-earth metals of the cerium subgroup on the critical cold brittleness of carbon steel

44, 55, 14 2, 55

SOURCE: Metallovedeniye i termicheskaya obrabotka metallov, no. 11, 1965, 21-22

TOPIC TAGS: rare earth metal cerium, carbon steel, cold brittleness, ductiliby

ABSTRACT: The results of a comparative investigation of the carbon steels 20, St. 3, and Kgt. 3 with and without addition of cerium are presented. REM (rare earth metals) were added to the molten steel following its deoxidation. The REM were added in the form of ferrocerium or mischmetal containing 50-70% Ce, in proportions of 0.05, 0.07, 0.10, 0.15, 0.30, and 0.40% Ce by weight of melt. Subsequent investigation of the effect of Ce on the crystallization of the steel ingots, performed by means of macro- and micrographic and autoradiographic examination as well as by measuring the microhardness of the dendrite axes and interaxial dendrite spaces revealed the following: the addition of 0.10-0.15% Ce improves the macrostructure of steel, markedly reduces its content of sulfur and oxygen, and enhances its ductility and plasticity in the presence of high temperatures, and it also reduces the critical temperature of the

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cold brittleness of steel from approximately -35°C to -65°C . For steel MSt. 3, notch sensitivity and proneness to mechanical aging, as well as weldability and vibration resistance of welded joints of this steel, remain the same with or without the addition of Ce. It is important to emphasize that, on the other hand, the addition of 0.3% Ce to steel reduces its ductility and markedly raises its critical temperature of cold brittleness. Hence, in order to improve the ductility of steel at low temperatures the amount of REM added to the steel must be rigorously controlled. Orig. has: 1 figure.

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Card

2/2

POPOVA, N.N.; MITEL, I.I.; SHUBENKO, G.I.; KURMANOV, M.I., kand. tekhn.
nauk, nauchnyy rukovoditel' raboty

Effect of the cerium subgroup of rare-earth elements on the
structure and properties of a carbon steel ingot. Sber.trud.
UNTEM no.118250-261 '65.

(MIRA 18:11)

POPCVA, N.N.; BUTKO, N.I.; SHUBENKO, G.I.

Microscopic determination of cerium sulfide inclusions. Zav. lab.
31 no.3:327-330 '65. (MIRA 18:12)

1. Ukrainskiy nauchno-issledovatel'skiy institut metallov.

POFOVA, N.N.; SANDLER, N.I.; BUTKO, N.I.

Effect of rare-earth metals of the cerium subgroup on the cold-brittleness threshold of carbon steel. Metalloved. i term. obr. met. no.11:21-22 N '65. (MIRA 18:12)

1. Ukrainskiy nauchno-issledovatel'skiy institut metallov.