

BEL'SKIY, N. V.

PA 11/49T68

USSR/Medicine - Birds
Medicine - Histology

Jul 48

"Postembryological Growth and Differentiation in Apus
Apus Apus L. Under Natural Conditions," N. V. Bel'-
skiy, Inst Zool and Pushkin Zool Sta, Moscow State
U imeni M. V. Lomonosov, 4 pp

"Dok Ak Nauk SSSR" Vol LXI, No 3

Reports observation of birds. Tabulates and plots
results. Submitted 15 May 48.

11/49T68

DEKHTER, N.V.

Significance of birds in protecting vegetation of the Central Botanical Garden
Bull. Glav. bot. sada no. 9, 1951

BEL'SKIY, N.V.

Use of insectivorous birds to protect plants of the Main Botanical
Garden. Trudy Glav.bot.sada 4:156-177 '54. (MIRA 8:5)
(Plants, Protection of) (Birds, Injurious and beneficial)

BEL'SKIY, N.V.

Biology of reproduction of the bee eater *Merops apiaster* L.
Uch. zap. Mosk. un. no.197:161-164 '58. (MIRA 11:9)
(Rollers (Birds))

BEL'SKIY, N.V.

Sporadic appearance of the honey buzzard in the parks of Moscow.
Ornitologia no.2:150-152 '59. (MIRA 14:7)
(Moscow--Buzzards)

BEL'SKIY, N.V.

Some growth and developmental characteristics of birds. Ornitologia
no.3:31-37 '60. (MIRA 14:6)

(Birds) · (Growth)

BEL'SKIY, N.V.

A case of insecticide poisoning of the pied wagtail at the
Botanical Garden. Ornitologia no.3:434-435 '60. (MIRA 14:6)
(Moscow--Wagtails)
(DDT (Insecticide))

BEL'SKIY, N.V.

Common kestrel and long-eared owl in the Botanical Garden. Ornitologia
no.4:316-324 '62. (MIRA 16:4)
(Moscow—Falcons) (Moscow—Owls)

BEL'SKIY, N.V.

Winter migrations of the great titmouse and nuthatch in cultivated areas. Ornitologia no. 5:309-313 '62. (MIRA 16:2)
(Moscow region--Titmice) (Moscow region--Nuthatches)
(Moscow region--Birds--Migration)

BEL'SKIY, N.V.

Avifauna of Moscow, Ornitologiya no.7:457-458 '65.

(MIRA 18:10)

FREYMAN, N.I.; YELETSKIY, A.Ye.; BEL'SKIY, N.V.

Dispensary services for patients with eczematoids (eczema-like
epidermodermites). Vest.derm.i ven. 34 no.12:24-27 '60.

(SKIN—DISEASES)

(ECZEMA)

(MIRA 14:1)

BEL'SKIY, N.Ye.

Determination of exopeptidase in the urine. Vrach.delo
no.324-47 Mr '63. (MIRA 16:4)

1. Kafedra hospital'noy terapii (zap. - prof. L.T.Malaya)
lechebnogo fakul'teta Khar'kovskogo meditsinskogo instituta.
(PEPTIDASE)
(URINE--ANALYSIS AND PATHOLOGY)

GARBER, K.S., dotsent; NIKITIN, A.I.; LYAUDIS, B.V.; MALINOVSKIY, B.N., kand. tekhn.nauk; BEL'SKIY, O.I.; VOLKOV, L.G.; KUZNETSOV, M.P.; KUTSENKO, A.D., SOROKIN, A.A.; STAKHURSKIY, A.D.; TRUBITSYN, L.M.; TRUSEYEV, A.I.; SHAFRAN, I.K., inzh.; SHESTAK, P.I.; UL'YANOV, D.P.

Automatic control of converter smelting by means of compu' rz.
Stal' 23 no. 7:608-610 J1 '63. (MIRA 16:9)

1. Dneprodzerzhinskiy metallurgicheskiy zavod-vtuz im. M.I. Arsenicheva (for Garger). 2. Institut kibernetiki AN UkrSSR (for Malinovskiy). 3. Zavod im. Dzerzhinskogo (for Shafran).

WRITE BELOW THIS LINE

ACCESSION NR: AP4039806

S/0286/64/000/010/0062/0063

AUTHOR: Bel'skiy, O. I.

TITLE: Light radiation integrator. Class 42, No. 162674

SOURCE: Byul. izobr. i tovar. znakov, no. 10, 1964, 62-63

TOPIC TAGS: integrator, radiation integrator, light radiation integrator, light integrator, pulse generator, thyatron, thyatron pulse generator, shaper amplifier, pulse counter

ABSTRACT: This author's certificate introduces a light radiation integrator which contains a thyatron pulse generator, shaper amplifier and pulse counter. In order to increase its accuracy and reliability of operation, a vacuum phototube in saturation conditions is used in the condensor discharge circuit. The resistance of the phototube varies in proportion with the stream of light.

ASSOCIATION: none

Card 1/3

ACCESSION NR: AP4039806

SUBMITTED: 23Nov63

DATE ACQ: 19Jun64

ENCL: 01

SUB CODE: *EC*

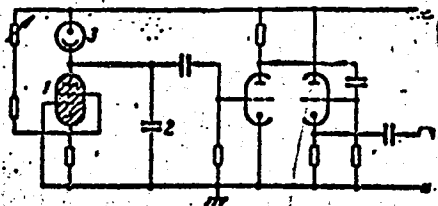
NO REF SOV: 000

OTHER: 000

Card 2/3

ACCESSION NR: AP4039806

ENCLOSURE: 01



1 -- thyatron; 2 -- two stage shaper amplifier; 3 -- vacuum phototube in saturation conditions.

Card 3/3

BEL'SKIY, P.

Wild life preserves in a desert. IUn. nat. no.9:29-31 S '58.
(MIRA 11:10)
(Soviet Central Asia--National parks and reserves)

BEL'SKIY, P.I., kontr-admiral zapasa

Sailors of the Volga Flotilla are heroes of the Battle of the
Volga. Mor.sbor. 46 no.2:27-30 F '63. (MIRA 16:2)

1. Byvshiy nachal'nik politicheskogo otdela Volzhskoy
flotilii.

(Volga River--Sailors (Navy))
(Stalingrad, Battle of, 1942-1943)

BEL'SKIY, P.S.

36338 Lesa darvinskogo zapovednika. (Po materialam lesoustroist. Ekspeditsii "Rosorgles".) Nauch-metod zapiski (Sovet ministrov rsfr, glav. upr po Zapovednikam.) vyp. 12, 1949, S. 266-300

SO: Ietopis' Zhurnal' nykh Statey, No. 49, 1949

AUTHOR: Bel'skiy, P.S. SOV-26-58-8-49/51

TITLE: Summer in the Belovezhskaya Pushcha (Leto v Belovezhskoy pushche)

PERIODICAL: Priroda, 1958, Nr 8, pp 126-127 (USSR)

ABSTRACT: The variations over a 7-year period from 1951 to 57 in natural phenomena (heat, cold, rain, snow, wind, etc.) bearing a strong influence on plant and animal life have been observed in the vast forest reservation in the Belorussian SSR and are presented on tables. There are 2 tables.

ASSOCIATION: Upravleniye zapovednikov i okhotnich'yego khozyaystva Ministerstva sel'skogo khozyaystva SSSR /Moskva (The Administration of Natural Reservations and the Hunting Economy of the Ministry of Agriculture of the USSR /Moscow)

1. Plants--Meteorological factors 2. Animals--Meteorological factors 3. Plants--Ecology 4. Animals--Ecology

Card 1/1

69876-65 EWT(d)/EWT(m)/EWP(f)/T-2/ERA(c)/ETC(r)
ACCESSION NR: AT5017702

IN/CS
UR/0000/65/000/000/0113/0120

AUTHORS: Yeremeyev, A. F.; Bel'skiy, R. N.

27
B+1

TITLE: Choice of construction parameters for the fuel supply system in super-charged diesel engines

SOURCE: Dvigateli vnutrennego sgoraniya (Internal combustion engines); sbornik rabot. Moscow, Izd-vo Mashinostroyeniya, 1965, 113-120

TOPIC TAGS: diesel engine, diesel engine supercharger, fuel injection, engine fuel system

ABSTRACT: To obtain design curves for estimating fuel supply system parameters for supercharged diesel engines, data on the fuel systems of 14 Soviet and 9 foreign diesel engines (among them Baldwin-Lima-Hamilton, CM, Crosley) obtained from TUNIDI information were evaluated to determine parameter trends. From the data it was found that: a) as cylinder diameter D_u increased from 100-350 mm, fuel piston diameter increased linearly from 9-22 mm, supercharged, and 7-19 mm, unsupercharged; b) fuel piston diameter (supercharged could be expressed as

$$\frac{d_{n,k}}{d_n} = 1 + \frac{2}{0,052D_u + 1,6}$$

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L 63878-65

ACCESSION NR: AT5017702

(where d_n = piston diameter unsupercharged); c)

$$\frac{D_u}{d_c} = 19a_1 - b \frac{D_u^n}{10^4},$$

(where n = RPM; $a_1 = 1$ and 0.71 , $b = 0.175$ and 0.02 respectively for plain and supercharged engines); d) valve diameter d_k can be expressed as

$$d_k = 0.5d_n + 2;$$

e) the fuel volume pumped by the supply valve V_{omc} is

$$V_{omc} = a_2 e^{0.01D_u};$$

where $a_2 = 13$ and 20 for plain and supercharged engines, and the ratio of V_{omc} supercharged to V_{omc} plain is approximately constant 56-58%; f) the average fuel piston velocity on the supply stroke was found to be almost constant at 50% supercharging and changed as

$$\frac{C_{mn}}{C_m} = 0.015D_u + 0.93.$$

(where C_{mn} , C_m = supercharged and plain piston velocity) for 100% supercharging;

g) the injector nozzle area could not be expressed as a simple relation but exhibited a general tendency to increase by 15-20% for 100% supercharged engines.

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ACCESSION NR: AT5017702

A brief qualitative discussion of three different types of fuel supply valves is also presented. Orig. art. has: 4 figures, 5 formulas, and 1 table.

ASSOCIATION: none

SUBMITTED: 00

ENCL: 00

SUB CODE: PR

NO REF SOV: 003

OTHER: 000

gpc
Card 3/3

L 4471-66 EWT(1)/EWT(m)/FCC/T/EWA(h) IJP(C) GW

ACC NR: AP5024631 SOURCE CODE: UR/0048/65/029/009/1672/1675

AUTHOR: Bel'skiy, S.A.; Romanov, A.M. 23
22
B

ORG: none 19

TITLE: Angular dependence of the neutron-producing charged component of cosmic rays /Report, All-Union Conference on Cosmic Ray Physics held at Apatity 24-31 August 1964/

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v. 29, no. 9, 1965, 1672-1675

TOPIC TAGS: cosmic ray particle, cosmic ray anisotropy, particle production, neutron

ABSTRACT: The authors have measured the dependence on zenith angle of the intensity of the charged neutron-producing component of the cosmic rays. The charged cosmic-ray particles were recorded with a telescope consisting of a 1 m diameter semicircle of 45 counters connected in 15 channels of 3 counters each and an inner concentric circle of 30 counters. The neutrons produced in a 12 cm diameter 29 cm long cylindrical absorber of Pb, Cu, or Al were moderated in two cylindrical shells of paraffin and detected by a circle of 18 boron-containing counters. The inner and outer diameters of the paraffin moderators were 12.6 and 19.6, and 36 and 68 cm, respectively. Neutrons detected during 180 microsec following passage of a charged particle were recorded in the corresponding channel. The apparatus was mounted on a rotating platform at an undisclosed station where the atmospheric depth is 1030 g/cm². No azimuth dependence was

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67016345

L 4471-66

ACC NR: AP5024631

detected. The intensity of the charged neutron-producing component decreased more rapidly with increasing zenith angle for zenith angles less than 60° than did that of the general charged component; for zenith angles greater than 60° the neutron-producing component decreased less rapidly than the general charged component. The intensities of both components decreased with increasing zenith angle θ less rapidly than predicted by the $\exp(-h/L(\sec \theta - 1))$ law, where h is the atmospheric depth and L is the absorption free path (assumed to be 145 g/cm²). The relative counting rates with the different absorbers indicated that the average cross section for neutron production (per neutron) by charged cosmic ray particles is proportional to the four-thirds power of the absorber mass number. In conclusion, we express our gratitude to V.P. Gramatin for assisting with the measurements. Orig. art. has: 1 formula and 4 figures.

SUB CODE: NP/ SUBM DATE: 00/

ORIG REF: 000/ OTH REF: 002

PC

Card 2/2

BEL'SKIY, S.A.; STARODUBTSEV, S.V.

Rayleigh scattering of γ -rays from Co^{60} at small angles. Zhur.
eksp.i teor.fiz. 37 no.4:983-990 0 '59.

(MIRA 13:5)

1. Leningradskiy fiziko-tekhnicheskiy institut Akademii
nauk SSSR.

(Gamma rays--Scattering)

S/057/63/033/002/012/023
B108/B186

AUTHORS: Bel'skiy, S. A., Myakinin, Ye. V., Petrov, A. M.,
Romanov, A. M., and Yur'yev, V. V.

TITLE: The energy transfer to the wall of the discharge chamber in
the "Alpha" machine

PERIODICAL: Zhurnal tekhnicheskoy fiziki, v. 33, no. 2, 1963, 212 - 213

TEXT: The energy was measured with integral-type semiconductor and wire
bolometers connected to a measuring bridge. The vacuum in the hydrogen
plasma was $5 \cdot 10^{-5}$ - $2 \cdot 10^{-3}$ mm Hg. The energy measured by the detectors
rises monotonically with the voltage at the discharge capacitor battery.
This dependence is slightly less than in accordance with a square law.
Experiments with scintillation and boron counters and with a CaSO_4 -Xn
thermo-luminophor showed that the energy transferred to the wall by short-
wave electromagnetic radiation is not more than 10% of the plasma energy.
A larger part of energy lost to the walls must be due to other processes
(neutral particles; ZhTF, 30, 12, 1419, 1960).

SUBMITTED: April 9, 1962
Card 1/1

ACCESSION NR: AP4013414

S/0057/64/034/002/0272/0279

AUTHOR: Bel'skiy, S.A.

TITLE: Ordered motion of particles in the "Alpha" installation

SOURCE: Zhurnal tekhn.fiz., v.34, no.2, 1964, 272-279

TOPIC TAGS: plasma, plasma flow, plasma diagnostic, electron temperature, bolometer, bolometer flow measurement, bolometer plasma diagnostic, Alpha installation

ABSTRACT: Ordered motions of particles in the plasma of the "Alpha" ("al'fa") installation were detected by means of bolometer measurements. The bolometer was constructed from a transistor and made use of the strong temperature dependence of the resistance of a p-n junction. The bolometer was mounted in a teflon head on a quartz rod and could be positioned anywhere along a diameter of the discharge chamber and in any of four orientations. The bolometer was sensitive to particles arriving from one hemisphere. From the ratio of the energies received with the bolometer in each of two opposite orientations, one can calculate the ratio of the component normal to the plane of the bolometer of the average velocity of the incident particles to the average thermal speed of the particles. The ordered motion of particles in the

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AP4013414

axial and azimuthal directions was observed with the bolometer at many points on a diameter of the discharge chamber of the "Alpha" installation. The variations of these motions with conditions of the discharge (electric and magnetic field strengths, gas pressure) were determined. The results are presented graphically. Ratios of ordered to thermal velocities greater than 0.3 were observed. The ordered motions observed in the azimuthal direction were in the direction of the Larmor rotation of a positive ion. Throughout most of the discharge, the direction of the axial motion was opposite to that of the electric field. For small magnetic fields and large electric fields the axial motion near the outer wall of the chamber was oppositely directed (i.e., in the direction of the electric field). For very small magnetic fields such a region of opposite flow also developed near the inner wall of the chamber. Since the bolometer was permitted to float, its potential was not known, and it was not immediately clear whether the observed motions were due to electrons or to ions. Previous spectrographic observations (A.N.Zaydel', G.M.Chashchina, ZhTF, 30, 1433, 1960) have shown that carbon and oxygen ions drift in the direction of the electric field. It is concluded, therefore, that at least the observed axial flux was due to electrons. Electron temperature of 1 and 6 eV were calculated from the bolometer data. These are considered to be unrealistically low. It is suggested that bolometric measurements of the type described could perhaps be suf-

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AP4013414

ficiently refined as to provide a direct method for measuring electron temperatures in-plasma. "In conclusion we wish to thank V.Ye.Golant and A.D.Piliy for valuable discussions of the experimental results, and R.S.Ivanov for assisting with the measurements." Orig.art.has: 3 formulas and 5 figures.

ASSOCIATION: Fiziko-tehnicheskii institut im.A.F.Ioffe AN SSSR, Leningrad (Physico-technical Institute, AN SSSR)

SUBMITTED: 21Jun62

DATE ACQ: 26Feb64

ENCL: 00

SUB CODE: PH

NR REF SOV: 007

OTHER: 000

Card³/3

BELSKIY, V.

Control of the injection pump in a tractor. Tr. from the Russian.

p. 450 (Mechanesece Zemedlstvi. Vol. 7, No. 19, Oct. 1957, Praha, Czechoslovakia)

akp. Demonstration of Zetor tractors.

p. (4) of cover. (Mechanesece Zemedlstvi. Vol. 7, No. 19, Oct. 1957, Praha, Czechoslovakia)

Monthly Index of East European Accession (EEAI) LC. Vol. 7, No. 2,
February 1958

BEL'SKIY, V., kand. tekhn. nauk

Theory of a mechanized launching of gliders. Kryn. rod. 13 no. 7:17-19
Jl '62. (MIRA 16:2)

(Gliders (Aeronautics))

BEL'SEY, V., kand.tekhn.nauk

Theory of the mechanized starting of a glider.
Krylod. 13 no.6:21-23 Je '62.

(MIRA 19:1)

BEL'SKIY, V. I.

The construction and assembly of industrial furnaces Moskva, Gos. izd-vo stroit. lit-ry,
1948. 397 p. (49-28435)

TN677.B43

BEL'SKIY, V.I.; CHERNOV, A.V., inzhener; TEBEN'KOV, B.P., kandidat tekhnicheskikh nauk, nauchnyy redaktor.

[Building industrial furnaces] Stroitel'stvo promyshlennykh pechai.
Moskva, Gos. izd-vo lit-ry po stroitel'stvu i arkhitekture, 1953.
411 p. (MLRA 7:4)

(Furnaces--Construction)

BEL'SKIY, V.I., inzhener; SOLODENNIKOV, L.D., inzhener.

Rapid method of fireproofing blast furnaces. *Biul. stroi. tekhn.*
10 no.4:5-9 F '53. (MIRA 6:12)

1. *Proyektstal'konstruktsiya.*

(Steelworks)

SOV/137-59-1-90

Translation from: Referativnyy zhurnal. Metallurgiya, 1959, Nr 1, p 12 (USSR)

AUTHOR: Bel'skiy, V. I.

TITLE: Increasing Labor Productivity in the Construction of Industrial Furnaces (Povysheniye proizvoditel'nosti truda pri stroitel'stve promyshlennykh pechey)

PERIODICAL: V sb.: Materialy Soveshchaniya po vopr. raboty pechey tsvetn. metallurgii i razvitiya pirometallurg. protsessov. Moscow, 1957, pp 533-540

ABSTRACT: The author describes measures to be taken for increasing labor productivity in the construction of furnaces by the following methods: Mechanization of loading-unloading and transportation work (transportation of bricks in 1 - 2 ton packages, which decreases labor consumption in furnace building by 19.5% as compared with conveyor delivery); decreasing labor consumption in bricklaying by using low-tolerance shaped bricks and air-hardening mortars; constructing separate furnace sections of large blocks made of block brick and refractory concrete reinforced with steel which affords elimination of steel framework in the furnace construction.

Card 1/1

Yu. O.

~~BEL'SKIY, Viktor Isanovich; SOLODENNIKOV, Leonid Dmitriyevich;~~
SERGEYEV, B.V., nauchnyy red.; LYTKINA, L.S., red.izd-va;
GILSON, P.G., tekhn.red.

[Manual on the building of industrial furnaces] Rukovodstvo
po kladke promyshlennykh pechei. Moskva, Gos.izd-vo lit-ry
po stroit., arkhitekt. i stroit.materialam, 1959. 256 p.
(MIRA 13:2)

(Furnaces--Construction) (Refractory materials)

BEL'SKIY, Viktor Isenovich, inzh.; GORA, Aleksandr Petrovich, inzh.;
MOLCHANOV, Nikolay Grigor'yevich, kand.tekhn.nauk; CHERNOV,
Aleksandr Vasil'yevich, inzh.; VAGIN, A.A., red.izd-va;
ISLENT'YEVA, P.G., tekhn.red.

[Construction and repair of metallurgical furnaces] Stroitel'stvo
i remont metallurgicheskikh pechei. Pod obshchei red. A.V.Cherno-
va. Moskva, Gos.nauchno-tekhn.izd-vo lit-ry po cherno i tsvetnoi
metallurgii, 1959. 448 p. (MIRA 13:5)
(Metallurgical furnaces)

YANIN, N.G.; SCHETCHIKOV, I.I.; BEL'SKIY, V.I., otv.red.; PEVZNER, A.S.,
sav.red.isd-va; GILENSON, P.G., tekhn.red.

[Uniform time and pay standards for construction, assembly, and
repair operations in 1960] Edinye normy i rastsenki na stroi-
tel'nye, montazhnye i remontno-stroitel'nye raboty, 1960 g.
Moskva, Gos.isd-vo lit-ry po stroit., arkhitekt. i stroit.materia-
lam. Sbornik 15. [Installing industrial furnaces and flues]
Kladka promyshlennykh pechei i trub. 1960. 96 p.

(MIRA 13:6)

1. Russia (1923- U.S.S.R.) Gosudarstvennyy komitet po delam
stroitel'stva. 2. Normativno-issledovatel'skaya stantsiya No.5
(NIS-5) Ministerstva stroitel'stva RSPSR (for Yanin, Schetchikov).
(Wages) (Furnaces) (Flues)

BEL'SKIY, V.I.; BORISOV, V.V.; VOLYNTSEV, V.A.; GOYKOLOV, Ye.F.; ZHOVNI-
ROVSKIY, M.V.; ISSERS, A.Ye.; MAKAROV, H.S.; ROTNITSKIY, M.L.;
TEBEN'KOV, B.P.; TROITSKIY, V.A.; CHERNOV, A.V., inzh.; AGURIN,
A.P., nauchnyy red.; SOLODCHENNIKOV, L.D., nauchnyy red.; TOLKACHEV,
P.I., nauchnyy red.; KHLUDNIEVA, Ye.O., red.isd-va; EL'KINA, E.M.,
tekhn.red.

[Handbook on special operations; construction of industrial
furnaces] Spravochnik po spetsial'nym rabotam; sooruzhenie pro-
myshlennykh pechel. Pod red. A.V.Chernova. Izd.3., ispr. i dop.
Moskva, Gos.isd-vo lit-ry po stroit., arkhit. i stroit.materialam,
1960. 694 p. (MIRA 13:6)

1. Vsesoyuznyy nauchno-issledovatel'skiy i proyektnyy institut
"Teploproyekt."
(Furnaces--Construction)

BEL'SKIY, V.I.; KUDRYAVTSEV, A.V.; GORDEYEV, P.A., red.izd-va;
GOL'BERG, T.M., tekhn. red.

[Transporting materials in large units in connection with
the construction of industrial furnaces] Transportirovanie
materialov v paketakh pri stroitel'stve promyshlennykh pe-
chey. Moskva, Gos. izd-vo lit-ry po stroit., arkhit. i
stroit. materialam, 1961. 136 p. (MIRA 15:3)
(Materials handling)

BEL'SKIY, V.I., inzh.; KUDRYAVTSEV, A.V., inzh.

Operational layout for refractory lining of a 2000 m³ blast
furnace. Mont. i spets. rab. v stroi. 23 no. 2:21-25 F '61.
(MIRA 14:1)

1. Teploproyekt.
(Blast furnaces) (Refractory materials)

BEL'SKIY, V.I.; VASIL'YEV, Ye.S.; TOLKACHEV, P.I.; KUDRYAVTSEV, A.V.,
nauchnyy red.; ZVORYKINA, L.N., red.isd-va; MOCHALINA, Z.S.,
tekhn. red.

[Construction of industrial kilns, furnaces and smokestacks of
heat-resistant concrete] Stroitel'stvo promyshlennykh pechei i
trub iz zharostoikogo betona. [By] V.I. Bel'skii, E.S. Vasil'ev,
i P.I. Tolkachev. Moskva, Gosstroizdat, 1962. 267 p.

(MIRA 16:3)

(Industrial plants--Design and construction)
(Concrete construction)

BEL'SKIY, Viktor Iganovich; SERGEYEV, Boris Vladimirovich;
TEHEN'KOV, B.P., kand. tekhn. nauk, nauchnyy red.; GORDEYEV,
P.A., red. izd-va; SHEVCHENKO, T.N., tekhn. red.

[Industrial furnaces and smokestacks]Promyshlennyye pechi i
fabrichno-zavodskie trubyy. Moskva, Gosstroizdat, 1962. 270 p.
(MIRA 15:12)

(Furnaces) (Chimneys)

BEL'SKIY, V.I.; KUDRYAVTSEV, A.V.

Transportation of packaged refractories. Ogneupory 27 no.6:249-253
'62. (MIRA 15:5)

1. Institut "Teploproyekt".
(Refractory materials--Transportation)
(Unitized cargo systems)

AM4007943

BOOK EXPLOITATION

S/

Bel'skiy, Vladimir Leonidovich; Vlasov, Ivan Petrovich; Zaytsev, Valentin Nikolayevich; Kan, Saveliy Nakhimovich (Doctor of Technical Sciences, Professor); Karnozhitskiy, Vladimir Pavlovich; Kots, Veniamin Markovich; Lipovski, David Yevseyevich

Aircraft design (Konstruktsiya letatel'nykh apparatov) Moscow, Oborongiz, 1963. 708 p. illus., biblio. Errata slip inserted. 6200 copies printed.

TOPIC TAGS: aircraft construction, aircraft strength, aircraft design, aircraft rigidity, aircraft hydraulics, aircraft pneumatics, aircraft servo, aircraft service life, aeroelasticity, aerodynamic heating

PURPOSE AND COVERAGE: The book is intended for aeronautical engineers concerned with aircraft design and manufacture. It may also be useful to students of technical schools of higher education. The principles of aircraft construction and strength are discussed. The principles of arrangement are examined, and design methods for strength and rigidity are given. External design loads are analyzed, and other

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AM4007943

problems in the construction of airplanes, rockets, and helicopters are examined. The pneumatic and hydraulic aircraft systems as well as hydraulic servos are described. Considerable attention is paid to the problems of aeroelasticity, service life, and aerodynamic heating. The factual and numerical data and the schematic diagrams of aircraft are taken from non-Soviet sources. The authors thank K. A. Ly*nshtinsky for writing article .3 of Ch. 2 and N. M. Mitrofanov who participated in selection of material for some chapters. Special appreciation is expressed to A. M. Okulov for illustrating the book and to Doctors of Technical Sciences A. R. Bonin and Professor L. P. Ninokurov, and Candidates of Technical Sciences N. G. Savusya, L. A. Kolesnikov, A. A. Yarkho and, V. P. Rusanov for their valuable suggestions during the review and revision of the manuscript.

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Introduction -- 5

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~~BEL'SKIY, Viktor Igenovich; CHERNOV, Aleksandr Vasil'yevich;~~
KLENDU, M.A., inzh., nauchn. red.

[Brickwork and assembly of industrial furnaces and smoke-
stacks] Kladka i montazh promyshlennykh pechei i zavodskikh
trub. Moskva, Stroizdat, 1964. 234 p. (MIRA 17:6)

BEL'TYUKOV, V.I.

Relation of the motor cardiac reflexes in man to posture. Eksp.
issl. po fiziol., biochim. i farm. no.3:135-140 '61
(MIRA 16:12)

1. Permskiy meditsinskiy institut.

BEL'TYUKOV, V.I. Prinsipialni uchastiye: BERG. M.D.; KULIKOVA, M.M.

Effect of vibration and muscular tension on the heart.

Eksp. issl. pofiziol., biokhim. i farm. no.3:141-149

'61

(MIRA 16:12)

1. Permskiy meditsinskiy institut.

TKACHEV, A.G., doktor tekhn.nauk, prof.; DANILOVA, G.N., kand.tekhn.
nauk; BEL'SKIY, V.K., inzh.

Labratory experiments in investigating the pipe method of
cooling concrete. Gidr. stroi. 30 no.9:18-21 S '60.

(MIRA 13:9)

(Concrete construction)

BEL'SKIY, V. K., and DANILOVA, G. N.

"Heat Transfer at Boiling of Freony - 22 in a Large Volume
under the Free Motion Conditions."

Report submitted for the Conference on Heat and Mass Transfer,
Minsk, BSSR, June 1961.

DANILOVA, G.N., kand. tekhn. nauk; BEL'SKIY, V.K.

Studying the heat transfer in the boiling of Freons 113 and 12 on pipes with various roughness. Khol. tekhn. 42 no.4:24-28 JI-Ag '65.
(MIRA 18:9)

1. Leningradskiy tekhnologicheskii institut kholodil'noy promyshlennosti.

33915

S/066/62/000/001/002/004
D041/D113

26.5400

AUTHORS: Danilova, G.N., Candidate of Technical Sciences and
Bel'skiy, V.K., Engineer

TITLE: Experimental investigation of the heat exchange during
the boiling process of Freon-22

PERIODICAL: Kholodil'naya tekhnika, no. 1, 1962, 7-13

TEXT: The experimental results obtained when investigating the heat exchange during the bubble boiling of Freon-22 under natural convection conditions, are discussed. The experiments were conducted at the department of the theoretical principles of thermo- and refrigeration technology of the Leningradskiy tekhnologicheskii institut kholodil'noy promyshlennosti (Leningrad Technological Institute of the Refrigeration Industry). The test unit consisted of a steam generator and a condenser connected by a piping system. Brass and nickel test tubes with the following parameters were used: nickel tube: diameter - 2 mm; working length - 156 mm;

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S/066/62/000/001/002/004
D041/D113

Experimental investigation ...

wall thickness - 0.15 mm; brass tube: diameter - 2.9 mm; working length - 155 mm; wall thickness - 0.54 mm. After a vacuum was created in the unit, 2/3 of the steam generator was filled with Freon-22, the refrigerator switched on, the required temperature set in the thermostat of the condenser, and current conducted through the tube. The current intensity in the tube, the voltage drop on its ends, and the electromotive force of the thermo-couples were measured. The current intensity was measured with an astatic ammeter of the electromagnetic system of class 0.5, connected through the УТТ -6 (UTT-6) current transformer. The following results were obtained: (1) Hysteresis was observed in the case of the brass tube at "q" of up to 5,500 (q - - specific heat flow) and in the case of the rickel tube at "q" of up to 9,500 kcal/m².hour; (2) the brass and nickel tubes had different heat-emission coefficients; at small heat flows, the deviation was especially large, at "q" > 100,000 kcal/m².hour, the latter considerably decreased; (3) the obtained heat emission coefficients were several times larger than those calculated according to the criterion equations of S.S. Kutateladze (Ref. 1: Osnovy teorii teploobmena. [The

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S/066/62/000/001/002/004
D041/D113

Experimental investigation ...

bases of the theory of heat exchange, Mashgiz, 1957) and G.N. Kruzhilin (Ref. 2: Izvestiya AN SSSR, OTN, 1949, no. 5; Izvestiya AN SSSR, OTN, 1955, no. 10, Ye. K. Averin, co-author), developed using various liquids especially water. The heat emission coefficient can also be calculated using the V.I. Tolubinskiy formula (Ref. 3: Izvestiya vysshikh uchebnykh zavedeniy, "Energetika", 1959, no. 1); (5) the heat-emission coefficients of boiling Freon-22 are greater than of Freon-12; (6) the validity of the proposed method for measuring the temperature and heat flows was proved by using it in the case of water; the obtained results correlated well with those calculated according to S.S. Kutateladze's equation. There are 4 figures and 4 Soviet-bloc references.

ASSOCIATION: Leningradskiy tekhnologicheskii institut kholodil'noy promyshlennosti (Leningrad Technological Institute of the Refrigeration Industry).

Card 3/3

BEL'SKIY, Vladimir Leonidovich; VLASOV, Ivan Petrovich; ZAYTSEV,
Valentin NIKOLAYEVICH; KAN, Saveliy Nakhimovich, dokt. tekhn. nauk, prof.;
KARNOZHITSKIY, Vladimir Pavlovich; KOTS, Veniamin
Markovich; LIPOVSKIY, David Yevseyevich; BONIN, A.R.,
doktor tekhn. nauk, retsenzent; SOKOLOV, A.I., inzh., red.;
KUZ'MIN, G.M., tekhn. red.

[Design of aircraft] Konstruktsiia letatel'nykh apparatov.
[By] V.L. Bel'skiy i dr. Moskva, Oborongiz, 1963. 708 p.
(MIRA 16:8)

(Aircraft)

BELITSOV, V.M., starshiy prepodavatel'; KHARKHAROV, A.A., prof.

Chlorite bleaching of acetate knit fabrics. Tekst. prom. 24
no.5:49-51 My '64 (MIRA 13:2)

1. Leningradskiy institut tekstil'noy i legkoy promyshlennosti
imeni S.M. Kirova.

BEL'SKIY, V.N.

Lectures for workers of the regional communications offices. Vest.
svyazi 17 no.4:15 Ap '57. (MIRA 10:5)

1. Starshiy inshener Tekhnicheskogo upravleniya Ministerstva svyazi
SSSR.

(Telecommunication)

BEL'SKIY, V.N., otvetstvennyy red.; GALOYAN, M.A., red.; SHEFER, G.I.,
tekh. red.

[Suggestions by efficiency promoters in radio communications,
radio broadcasting, radio installation in towns, and district
telecommunications] Ratsionalizatorskie predlozhenia po radio-
sviazi, radioveshchaniu, radiofikatsii, vnutriraionnoi elektro-
sviazi. Moskva, Gos. izd-vo lit-ry po voprosam sviazi i radio,
1958. 141 p. (MIRA 11:9)

1. Russia (1923-
upravleniye.

U.S.S.R.) Ministerstvo svyazi. Tekhnicheskoye
(Radio) (Telecommunications)

N.
BEL'SKIY, V.; VASIL'YEV, P., master radiosporta

Ultrahigh frequency radio broadcasting. Radio no.6:13-14 Je '60.
(MIRA 13:7)

1. Nachal'nik otдела radioveshchaniya radio upravleniya Ministers-
tva svyazi RSFSR (for Bel'skiy).
(Radio, Shortwave)

BEL'SKIY, V.N., inzh.

Servicing of shortwave FM stations with remote control. Vest.
sviazi 22 no.11:12-13 N '62. (MIRA 16:12)

BEL'SKIY, V. V.

USSR / Microbiology - Microbes Pathogenic to Humans and Animals F-4

Abs Jour: Referat. Zh. Biol., No. 1, 1958, 734

Author : Bel'skiy, V.V.

Title : Medication Resistance of Dysentery Causative Agents

Orig Pub: Sb. tr. Kurskiy med. in-t, 1956, No. 11, 380-381

Abstract: Of the 566 strains isolated from dysentery patients and bacteria carriers, almost all (98.2%) exhibited resistance to phthalazole in concentrations of 0.4 and 0.6%. Cultures highly resistant to syntomycin were isolated chiefly from patients who were administered syntomycin. Cultures repeatedly isolated from these patients were 30-200 times more resistant than cultures obtained

Card 1/2

BEL'SKIY, V.V.

Duration of syntonycin resistance in the external environment in
Shigella para dysenteriae isolated from patients. Zhur.mikrobiol.
epid. i immun. no.1:87-90 Ja '58. (MIRA 11:4)

1. Iz kafedry mikrobiologii Kurskogo meditsinskogo instituta.
(SHIGELLA DYSENTERIAE, effect of drugs on,
chloramphenicol, duration of resist. in strains isolated
from patients (Rus)
(CHLORAMPHENICOL, effects,
on Shigella dysenteriae, duration of resist. in strains
isolated from patients (Rus)

BEL'SKIY, V. V.: Master Med Sci (diss) -- "The pharmaceutical stability of causative agents of dysentery to synthomycin (Based on material from the city of Kursk)". Kursk, 1958. 14 pp (Leningrad Order of Lenin State Inst for the Advanced Training of Physicians im S. M. Kirov), 200 copies (KL, No 15, 1959, 119)

EXCERPTA MEDICA Sec 4 Vol 12/7 Med. Micro. July 59

2055. THE PERIOD OF PRESERVATION OF SYNTHOMYCIN RESISTANCE IN
EXTERNAL ENVIRONMENT BY DYSENTERY BACILLI ISOLATED FROM
PATIENTS (Russian text) - Belskiy V. V. - ZH. MIKROB. EPID. I
IMMUNOBIOL. 1958, 1 (87-90) Tables 1

Synthomycin(chloramphenicol)-resistant strains of dysentery bacilli retained their
resistance to this antibiotic for a considerable time under various conditions: cul-
tivated on plain agar, infrequent or daily transfer of cultures in dried faeces or in
fresh and autoclaved tap water.

BEL'SKIY, V.V.

Formation of synthomycin-resistant strains of dysenterial pathogens
in the patient's body. Zhur.mikrobiol.epid.i immun. 30 no.10:112-117
0 '59. (MIRA 13:2)

1. Iz kafedry mikrobiologii Kurskogo meditsinskogo instituta.
(DYSENTERY BACILLARY ther.)
(CHLORAMPHENICOL ther.)

BEL'SKIY, V.V.

Duration of the syntomycin resistance and the capacity for its restoration in dysentery pathogens. Zhur.mikrobiol., epid. i immun. 42 no.9:50-55 S '65. (MIRA 18:12)

1. Kurskiy meditsinskiy institut. Submitted June 17, 1964.

S/032/60/026/06/09/044
B010/B126

5.5500

AUTHORS:

Bel'skiy, V. Ye., Fomin, O. K.

TITLE:

The Radiometric Determination of Potassium

PERIODICAL: Zavodskaya laboratoriya, 1960, Vol. 26, No. 6, pp. 707 - 709

TEXT: I. M. Korenman and Ye. I. Zorin have established (Ref. 5) that with the use of samples, whose thickness is greater than that necessary for the complete absorption of the β -rays of K^{40} , the number of impulses per minute per percent of potassium remains constant, that is, independent of the thickness of the sample. This assumption is incorrect, since the self-absorption of the various potassium salts is varied. On this basis the value $(Z/A)_{\text{effective}}$ (Z = ordinal number, A = atomic weight) of different potassium compound and mixtures was determined, and it was established that (Table, influence of the type of sample on the activity measured) the number of impulses is inversely proportional to the value $(Z/A)_{\text{eff}}$. The influence of the type of sample on the activity measured is small, but

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The Radiometric Determination of Potassium

3109
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B010/B126

special corrections are only necessary when the values $(Z/A)_{\text{eff}}$ for the standard sample, and for the sample to be examined are different. When potassium chloride or heavier elements are used as standards on the analysis of samples with higher hydrogen content, a correction must definitely be made. A corresponding equation which contains the number of pulses of the sample and of the standard, and both corresponding values of $(Z/A)_{\text{eff}}$ is used for this. There are 1 figure, 1 table, and 6 references: 5 Soviet and 1 American.

ASSOCIATION: Lisichanskiy filial Gosudarstvennogo nauchno-issledovatel'skogo i proyektnogo instituta azotnoy promyshlennosti i produktov organicheskogo sinteza (Lisichansk Branch of the State Scientific Research and Project Institute of the Nitrogen Industry and of the Products of Organic Synthesis)

Card 2/2

VINNIK, M.I.; BEL'SKIY, V.Ye.; IVANKOVA, N.L.

2,4,6-Trinitroaniline acylation kinetics and the determination of equilibrium concentrations of ions in solutions of boron fluoride in acetic acid. Zhur.fiz.khim. 39 no.7:1624-1630 J1 '65.

(MIRA 18:8)

1. Institut khimicheskoy fiziki AN SSSR.

BEL'SKIY, V.Ye.; VINNIK, M.I.

Acid-base interaction in the system acetic acid - acetic
anhydride. Izv. AN SSSR, Ser. khim. no.12:2132-2136 D '63.
(MIRA 17:1)

1. Institut khimicheskoy fiziki AN SSSR.

BEL'SKIY, V.Ye.; VINNIK, M.I.

Kinetics and the mechanism of acylation of aromatic amines in
the system acetic acid - acetic anhydride. Izv.AN SSSR.
Ser.khim. no.1:40-45 Ja '64. (MIRA 17:4)

1. Institut khimicheskoy fiziki AN SSSR.

BEL'SKIY, V.Ye.; VINNIK, M.I.

Kinetic method of the analysis of mixtures of acetic anhydride
and acetic acid. Zhur. anal. khim. 19 no.3:375-378 '64.
(MIRA 17:9)

1. Institut khimicheskoy fiziki AN SSSR, Moskva.

BEL'SKIY, V.Ye.; VINNIK, M.I. (Moscow)

Acid properties of boron fluoride solutions in acetic acid. Zhur.fiz.
khim. 38 no.8:1950-1955 Ag '64. (MIRA 18:1)

1. Institut khimicheskoy fiziki AN SSSR.

BEL'SKIY, V.Ye.; IVANKOVA, N.L.; VINNIK, M.I.

Kinetics of the acylation of nitroanilines in boron fluoride solutions in glacial acetic acid. Zhur. fiz. khim. 39 no.6:1426-1431 Je '65. (MIRA 18:11)

1. Institut khimicheskoy fiziki AN SSSR. Submitted March 10, 1964.

L 63467-65 EWP(e)/EWT(w)/EPP(c)/ENP(i)/ENP(j)/ENP(t)/ENP(b)/ENA(c)
 IJP(c)/RPL JD/JW/RM

ACCESSION NR: AP5019790

UR/0076/65/039/007/1624/1630

541.124/128

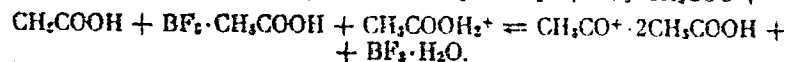
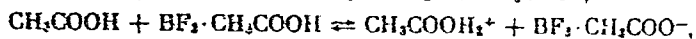
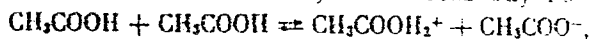
AUTHOR: Vinnik, M. I.; Bel'skiy, V. Ye.; Ivankova, N. L.

TITLE: Kinetics of acylation of 2,4,6-trinitroaniline and determination of equilibrium ion concentrations in acetic acid solutions of boron fluoride

SOURCE: Zhurnal fizicheskoy khimii, v. 39, no. 7, 1965, 1624-1630

TOPIC TAGS: acylation, trinitroaniline, trinitroanilide, boron fluoride, acetic acid

ABSTRACT: The acylation of 2,4,6-trinitroaniline in concentrated boron fluoride solutions in glacial acetic acid is a reversible process in which the conversion of 2,4,6-trinitroaniline to the anilide depends on the BF_3 content of the solution. Conversion can be increased by adding acetic anhydride or decreased by adding water. These facts were utilized to calculate the equilibrium concentration of ions in solutions containing from 23.5 to 49.5 wt. % BF_3 . The ions may be formed by the following processes:



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The equilibrium of the acylation process is represented by the equation $2,4,6\text{-trinitroaniline} + \text{BF}_3 \cdot \text{CH}_3\text{COOH} \rightleftharpoons 2,4,6\text{-trinitroanilide} + \text{BF}_3 \cdot \text{H}_2\text{O}$. From the dependence of the anilide: aniline equilibrium ratio on the amount of anhydride added, the concentrations of the acylium ions were calculated. As the BF_3 content increases, the rate constant of acylation of 2,4,6-trinitroaniline increases faster than the acylium ion concentration. This is caused by an increase in the activity coefficient of the unionized form of aniline. Allowance cannot be made for the change in the activity coefficient because acylation takes place too quickly in the medium studied. The conductivities of boron fluoride solutions in glacial acetic acid were determined. Orig. art. has: 2 figures, 3 tables, and 11 formulas.

ASSOCIATION: Institut khimicheskoy fiziki, Akademiya nauk SSSR (Institute of Chemical Physics, Academy of Sciences SSSR)

SUBMITTED: 10Mar64

55
ENCL: 00

SUB CODE: GC, IC

NO REF SOV: 003

OTHER: 001

Card 2/2

ACC NR: AP6032906

SOURCE CODE: UR/0062/66/000/009/1654/1655

AUTHOR: Bel'skiy, V. Ye.; Yefremova, M. V.; Shermergorn, I. M.

ORG: Institute of Organic and Physical Chemistry im. A. Ye. Arbuzov, Academy of Sciences, SSSR (Institut organicheskoy i fizicheskoy khimii Akademii nauk SSSR)

TITLE: Kinetics of the hydrolysis of bis(chloromethyl)phosphinic acid esters

SOURCE: AN SSSR. Izvestiya. Seriya khimicheskaya, no. 9, 1966, 1654-1655

TOPIC TAGS: herbicide, bischloromethylphosphinic acid ester hydrolysis, hydrolysis kinetics, hydrolysis, chemical kinetics, ester, phosphinic acid, alkyl radical

ABSTRACT: Kinetics of the hydrolysis of the biologically active esters of bis(chloromethyl)phosphinic acid in water were studied at 75—95°C. The experimental values of the pseudomolecular reaction rate constants k are given in Table 1.

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UDC: 541.127+542.938+661.718.1

ACC NR: AP6032906

Table 1. Effect of radical R in the esters
 $(\text{CH}_2\text{Cl})_2\text{P}(\text{O})\text{OR}$ on the rate of hydrolysis in
 water at various temperatures

No.	R	$k \cdot 10^4, \text{sec}^{-1}$				
		95°	90°	84,8°	80°	75°
1	CH_3	28,9	21,8	14,3	9,31	6,13
2	C_2H_5	11,2	8,43	5,36	3,25	2,20
3	<i>n</i> - C_3H_7	7,66	5,21	3,36	2,23	—
4	<i>i</i> - C_3H_7	7,14	4,58	3,03	2,00	—
5	<i>n</i> - C_4H_9	6,13	3,96	—	1,75	1,08
6	<i>n</i> - C_6H_{11}	5,49	3,83	2,50	1,53	1,00
7	<i>i</i> - C_6H_{13}	1,73	1,23	0,766	0,474	—
8	<i>neo</i> - C_6H_{11}	0,666	0,449	0,300	—	—
9	phenyl	7,05	5,07	—	2,76	—
10	allyl	283	211	142	100	66,1

The results showed that the reaction rate of the hydrolysis depends on the nature of the alcohol radical in the ester and for the alkyl radicals in the acid it is determined by the steric factors.

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The temperature dependence of the hydrolysis is described by the Arrhenius equation with the parameters shown in Table 2.

[WA-50; CBE No. 12]

Table 2. Dependence of the activation E observed, and preexponential factor A on the nature of the radical R in the esters $(CH_2Cl)_2P(O)OR$

R	Cl,	C ₂ H ₅ ,	n-C ₃ H ₇ ,	iso-C ₃ H ₇ ,	n-C ₄ H ₉ ,
E kcal/m.	21,2	21,8	21,9	21,7	22,0
lg A	8,03	8,02	7,89	7,73	7,84
R	n-C ₃ H ₇ ,	t-C ₄ H ₉ ,	iso-C ₃ H ₇ ,	phenyl	allyl
E, kcal/m	22,0	22,7	20,6	16,0	19,5
lg A	7,81	7,74	6,04	4,32	8,04

SUB CODE: 07/ SUBM DATE: 14Feb66/ ORIG REF: 002/ OTH REF: 001

Card 3/3

BEL'SKIY, V.Z.

The 7210 double-sided planing machine. Biul.tekh.-ekon.inform.
no.6:30-32 '61. (MIRA 14:6)
(Planing machines)

BEL'SKIY, V.Z.

The 7110 openside planer. Biul. tekhn.-ekon.inform. no.8:37-39
'61.

(Planing machines)

(MIRA 14:8)

BEL'SKIY, V.Z.

The 7112 single-column planing machine. *Biul.tekh.-ekon.inform.*
no.2:20-22 '62. (MIRA 15:3)

(Planing machines)

BEL'SKIY, V.Z.

The 7216 and 7136 planing machines. Muz. tekhn.-ekon. inform. Gos.
nauch.-issl. inst. nauch. i tekhn. inform. 27 no.8:50-52. Ag '64.
(MIRA 17:11)

BEL'SKIY, V.Z.

Manufacturing the 7210-6 universal planing machine. Biul.tekh.-
Ékon.inform.Gos.nauch.issl.inst.nauch.i tekh.inform. 18
no.11:28-29 N '65. (MIRA 18:12)

HEL'SKI, Ye.I., kandydat tekhnichnykh navuk.

Investigating the deformation capacity of carbon tool steels.
Vestni AN BSSR no.4:142-149 '52. (MLRA 7:8)
(Deformations (Mechanics)) (Tool steel)

BEL'SKIY, Ye.I.

BEL'SKI, Ye.I., kandydat tekhnichnykh navuk.

Problems of the methodology for finding the coefficient of
external friction in plastic deformation. Vestsi AN BSSR no.5:
145-153 S-0 '52. (MLRA 7:8)

(Deformations (Mechanics))

1720177
GOREV, K.V.; BEL'SKIY, Ye.I.; DANILENKO, T.P.; KHALFINA, B.Ya.

Effect of heat treatment on the mechanical properties of 35KhGSA
and 4502 steels. Sbor.nauch.trud.Fiz.-tekh.inst.AN BSSR no.1:71-
79 '54. (MIRA 10:1)

(Steel alloys--Heat treatment)

BEL'SKIY, Ye. I.; KAZACHENOK, V. I.; MAKUSHOK, Ye., redaktor; TRUKHANOVA, A.,
tekhnicheskiy redaktor.

[Principles of working metals under pressure] Osnovy obrabotki
metallov davleniem. Minsk, Gos. izd-vo BSSR, 1956. 185 p.

(MLRA 10:4)

(Metalwork)

Bel'skiy, Ye. I.

AUTHORS Bel'skiy, Ye. I., Tomilin, P. I. 32-8-29/61

TITLE On the Method of Investigating the Inclination to Deformation of Metals at High Temperatures.
(K metodike issledovaniya deformiruyemosti metallov pri vysokikh temperaturakh.)

PERIODICAL Zavodskaya Laboratoriya, 1957, Vol. 23, Nr 8, pp. 957-958 (USSR)

ABSTRACT The paper suggests the use of a device which permits tests at a temperature of 1350°C with the employment of a pendulum ram and a silican carbide furnace. For obtaining temperatures up to 1500°C a graphite furnace was used here which makes possible a rapid obtention of high temperatures. This speed is assumed as mean value on heating of a standard sample up to 1300°C and amounts to ~0,5°/sec in the given case. Higher heating speeds are obtained in an electric way. Heating to the maximum of magnetic transformation here yielded the speed of ~180°C/sec. (Examples are given). In elasticity tests difficulties in the seizing of the immovable ends may occur. The head seizure proved to be recommendable. A further difficulty represents the recording of the indicator diagrams in dynamic tests. In this case a special device is used which consists of a periodical

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On the Method of Investigating the Inclination to Deformation of Metals at High Temperatures.

clamping of the sample head according to the impact of the pendulum hammer. A further difficulty is the selection of the material of beaters which can deform at high temperatures or which, due to its porosity, permits the penetration of the test metal into the pores. Beaters of thermocorundum or mullite are recommended here. The beaters of thermocorundum require previous heating due to their insufficient thermal stability. In special cases beaters of ceramic material (static research) or of steel (in the case of short impact touch intervals) are used.
(2 illustrations)

ASSOCIATION: Belorussian Polytechnical Institute.
(Beloruskiy politekhnicheskiy institut)

AVAILABLE: Library of Congress.

CARD 2/2

BEL'SKIY, Ye. I.

137-58-3-5869

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 3, p 201 (USSR)

AUTHOR: Bel'skiy, Ye. I.

TITLE: Resistance to Deformation as a Function of the Rate of Plastic Deformation of a Metal (Soprotivleniye deformirovaniyu v zavisimosti ot skorosti plasticheskogo deformirovaniya metalla)

PERIODICAL: Sb. nauchn. tr. Belorussk. politekhn. in-t, Nr 57, pp 60-68

ABSTRACT: A survey of modern theories and concepts of the resistance to deformation (RD) of a metal as a function of the rate of plastic deformation (D), and a summary of experimental methods for the investigation of this relationship. It is pointed out that methods of indirect determination of the RD indices under conditions of high-speed D have come into wide use recently. One of these methods studies the influence of D rates by investigating the "local" effect of plastic D produced by the penetration of a cone into the surface of the metal being tested. Another method, the method of cone-shaped specimens, was proposed for the determination of the relative σ_B under tensile impact loading and was then expanded to include the construction of a graph showing the strain under impact. It is shown that the properties commonly observed in

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137-58-3-5869

Resistance to Deformation as a Function (cont.)

metal during a plastic D process are the result of simultaneous occurrence of two parallel processes, namely the hardening(H), which depends only on the degree of D, and the relaxation. The second process is a function of time and temperature. In the case of metallic alloys these two processes are augmented by a third one, viz., the process of diffusional, physicochemical H produced by the separation of a new phase. This process is also dependent on the rate and the temperature of D; however, the dependence in this case is of different nature than in the case of mechanical H. It is established that the properties and, particularly, the RD of a metal which has been cold worked at high rates of D, are different from those of a metal which had been deformed at slow rates of D. This difference in the behavior of the metal is explained by the fact that at greater rates of deformation there is an accumulation of distortions which do not have time to discharge their energy. Consequently, the RD at any instant of the D is not a single-valued function of the instantaneous values of the degree, rate, and temperature of D. It is shown experimentally that increasing the rate of compression from 0.01 to 1.0 mm/sec increases the RD by almost as much as it is increased when the rate of compression is raised from 1.0 mm/sec to 2000 mm/sec. Various metals exhibit this phenomenon to various degrees. The higher the fusion temperature of the metal, the less are the chances for the restoration of its crystal lattice at a given temperature and rate of D. With an increase in the experimental temperature

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Resistance to Deformation as a Function (cont.)

the rate of relaxation increases, which results in an increase of the "dynamic coefficient." At temperatures near absolute zero no significant difference in the RD is observed at different rates of D. This is explained by the fact that, owing to the low thermal mobility of the atoms in this case, the relaxation is insignificant even at very low rates of plastic D. Bibliography: 23 references.

L. G.

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PHASE I BOOK EXPLOITATION

SOV/4851

Bel'skiy, Yevgraf Iosifovich, and Vladimir Isidorovich Kazachenok

Spravochnoye posobiye kuznetsa-shtampovshchika (Die-Forging Operator's Manual) Minsk, Gosudarstvennoye izdatel'stvo BSSR, Redaktsiya nauchno-tekhnicheskoy literatury, 1960. 489 p. 5,000 copies printed.

Eds.: R. Tomilin and F. Kashtanov; Tech. Ed.: N. Stepanova.

PURPOSE: This book is intended for foremen and operators in the die-forging industry. It may also be used by students majoring in die forging at secondary and higher schools of technical education.

COVERAGE: The book contains basic information on the production of die forgings, the design and use of tools, and forging-plant equipment. The authors also give data on materials used in the forging industry. Problems connected with the introduction of new, advanced die-forging methods and other problems

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Die-Forging (Cont.)

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encountered in the die-forging industry and discussed. Chapters XII and XIII were written by V. N. Bulakh, Candidate of Technical Sciences. No personalities are mentioned. Soviet references accompany each chapter.

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