IL'INA, N.S., kand.geologo-mineralog.nauk; YELINA, L.M.; RYZHOVA, A.A.; BUZINOVA, V.M.; DMITRIYEVA, L.Ya.; GIMPELEVICH, E.D.; GALAKTIONOVA, N.M.; IL'INSKAYA, V.V.; SOLOV'YEVA, N.S.; KARASEV, M.S.; BAKIROV, A.A., red.; VEBER, V.V., red.; DANOV, A.V., red.; DIKENSHTEYN, G.Kh., red.; MAKSIMOV, S.P., red.; POZNYSH, M.A., red.; SAIDOV, M.N., red.; SEMIKHATOVA, S.V., red.; TURKEL'TAUB, N.M., red.; UL'YANOV, A.V., red. [deceased]; KHALTURIN, D.S., red.; SHABAYEVA, Ye.V., red.; CHIZHOV, A.A., vedushchiy red.; YASHCHURZHINSKAYA, A.B., tekhn.red.

[Coal deposits of the central provinces of the Russian Platform] Kamennougol'nye otlozheniia tsentral'nykh oblastei Russkoi platformy. Pod red. N.S.Il'inoi. Leningrad, Gos.nauchno-tekhn.izd-vo neft. i gorno-toplivnoi lit-ry, 1958. 209 p. (MIRA 12:3)
(Russian Platform--Coal geology)

BUZINSKI, Jozef

Participation of engineers and technicians in the economic development of Opole Province. Przegl techn no.25:4. Je '62.

1. Przewodniczacy Prezydium Wojewodzkiej Rady Narodowej, Opole.

BUZINSKI, Jozef

A positive role of the engineers of the Opole Voivodeship.
Przegl techn 85 no. 42:7 18 O '64.

1. Chairman, Presidium of the Voivodeship People's Council in Opole.

SOV/147-58-3-15/18

AUTHOR: Soyfer, A.M.,
Buzitskiy, V.N.

TITLE: Normal Stresses Occurring During Torsional Oscillations of Turbine Blades (O normal'nykh napryazheniyakh, voznikayushchikh pri krutil'nykh kolebaniyakh lopatki)

PERIODICAL: Izvestiya Vysshikh Uchebnykh Zavedeniy, Aviatsionnaya Tekhnika, 1958, Nr 3, pp 119-125 (USSR)

ABSTRACT: Modern gas turbines employ compressor (especially axial compressor) with very thin blades of the order of 1,75 to 3% thickness but with faily high tolerances, 0.2 to 0.3 mm. The exact shape and thickness of the blades is checked only at some selected station, so that this also may lead to a fair discrepancy between the computed and the actual profiles of the blade along its axis. This may lead to appreciable normal stress being produced in the blade during its torsional oscillations. The object of the experiments, discussed in this paper, was to show the possibility of existence of these stresses, to establish dependence of these stresses on the manner of variation in thickness of the blade along its axis and to assesstheir magnitude in relation to the

Card 1/7

Normal Stresses Occurring During Torsional Oscillations of Turbine Blades

stresses produced in bending. The experiments were carried by means of strain-gauges and the loading in torsion was either static or dynamic, the latter at the resonance conditions. In order to obtain a qualitative picture of the phenomenon the theory of constrained torsion of their open profiles was employed (i.e. thin plates profiles). Such profiles have a very small modulus of rigidity in torsion and therefore tend to flatten. If this flattening is restricted (e.g. the clamped end of the blade or even a sharp increase in thickness), we have the case of restricted torsion which results in normal stresses being produced at cross-sections of the blade (as given in Ref.1, 2 and 3) their magnitude being given by Eq.1, where θ is the angle of twist of the cross-section, $d^2\theta/dz^2$ - is the rate of change of this angle along the axis Z and w is the principal function of torsion and depends upon the form of the transverse section as follows

$$w = \int_0^s \rho \, ds$$

ρ - being the radius from the centre of shear to the mean line of the profile; the method of

Card 2/7

Normal Stresses Occurring During Torsional Oscillations of Turbine Blades

determining w is described in Ref.1 to 3. The magnitude of the normal forces produced in the blade during the flattening of its profiles is determined (according to V.Z.Vlassov) by so-called bending-torsion bi-moment B (Eq.2) which gives the flux of so-called "secondary" shear stresses τ_c as a result of the existence of the normal stresses, as given by Eq.3, δ being the thickness of the profile (cross-section) of the blade. These secondary shear stresses are small but they give rise to a moment which may be equal to or even larger than the moment due to pure torsion, its value being: Eq.4. I_w - is the second moment of the area. Thus an applied twisting moment M_{xp} is opposed by two internal moments M_r (pure torsion) and M_c (constricted torsion), i.e. $M_{xp} = M_r + M_c$, so that Eq.6 gives the final relation between them. If, as a first approximation, M_r be neglected and the blade considered as a cantilever (in accordance with Ref.1) Eq.7 gives the expression for the normal stresses due to constricted torsion. This expression is analyzed for

Card 3/7

Normal Stresses Occurring During Torsional Oscillations of Turbine Blades

the following assumptions: 1) the vane chord and the form of the mean line of the profile are constant along the axis of the blade; 2) the thickness of the blade increases towards the root of the blade (i.e. $\delta = f(z)$); 3) the twisting moment is applied at the free end. The integral $\int M_{kp} dz$ represents then a triangle whose vertex is at the free end of the blade and the base is at the root of the blade. Since the blade grows thicker towards its root, depending upon the rate of increase of I_w and $\int M_{kp}\, dz$ along the axis of the blade, there will be a section where I_w prevails over the integral, so that δ_2 at first increases and then decreases towards the root of the blade, which is confirmed by experiments as shown in Fig.3 and Fig.4. Fig.1a and 2 show the method of experimental investigations for the case of static loading and Fig.1b and 4 show the arrangements for the case of dynamic loading. For the static loading 3 strain-gauges were used (1, 2, 3 in Fig.1a and 2) and for the dynamic loading 4 (1, 2, 3, 4 in Fig.1b) these always being attached on the concave surface.

Card 4/7

Normal Stresses Occurring During Torsional Oscillations of Turbine Blades

Standard blades of the turbine RD - 3 were used. First experiments were carried on the blade as taken out of production line and then on the convex side its thickness was reduced starting from the free end over a length of 90 mm, then 105, 125 and 155 mm (as indicated by the thick black lines on the Fig.1a) for the case of static loading and over lengths of 90, 110, 140, 160 and 190 mm for the case of dynamic loading (Fig.1b) also starting from the free end of the blade. Curves 1, 11, 111, 1V, and V in Fig.3 and 1 to V1 in Fig.5 correspond to each successive reduction of thickness along the blades tested. Stator blades were used for static loading and rotor blades for dynamic loading, which was obtained by means of a pneumatic pulsator operated by an electric (shunt) motor. From the graphs the following conclusions can be drawn: 1) the character of normal stresses in the blade of standard form subjected to torsional oscillation is similar to that produced under a static torsional moment (i.e. the maximum exists at some intermediate section); 2) the maximum stress is shifted along the

Normal Stresses Occurring During Torsional Oscillations of Turbine Blades

axis of the blade depending on the way in which the thickness of the blade varies; under certain circumstances it may be at the section where there is a sharp change in thickness; 3) the normal stresses due to torsional oscillations are comparable in magnitude to those produced in bending and may even be larger than bending stresses, especially in the case of resonant oscillations. Hence, when designing the blades the above factors should be kept in mind and the change in thickness along the axis of the blade should be arranged

Card 6/7

Normal Stresses Occurring During Torsional Oscillations of Turbine Blades

so that it leads towards lower normal stresses due to constricted torsion. There are 5 figures and 3 Soviet references.

ASSOCIATION: Kuybyshevskiy Aviatsionnyy Institut, Kafedra Konstruktsii Aviadvigateley (Kuybyshev Institute of Aeronautics, Chair of Aeroengine Construction)

SUBMITTED: 4th March 1958.

Card 7/7

ACC NR: AP6025583 (N) SOURCE CODE: UR/0413/66/000/013/0011/0012

INVENTOR: Soyfer, A. M.; Buzitskiy, V. N.; Pershin, V. A.

ORG: None

TITLE: A method for producing unwoven "MR" material from wire. Class 7, No. 183174

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 13, 1966, 11-12

TOPIC TAGS: wire product, pressure casting

ABSTRACT: This Author's Certificate introduces a method for producing unwoven "MR" material from metal wire. This material is used for producing elements and parts used in damping systems, shock absorbers and seals. To ensure proper shape of parts and increase their elastic hysteresis properties, spiral sections of wire are crossed over and set in a die casting mold corresponding in shape and size to the finished product. These are then pressed at 500 kg/cm^2 and the pressure is increased depending on the desired elasticity of the finished product. Whenever it is required, an elastic anticorrosion filler is introduced under pressure.

SUB CODE: 13/ SUBM DATE: 27Jul60

UDC: 672.85

Card 1/1

S/147/61/000/004/019/021
E194/E155

26.4210 (2114)

AUTHORS: Ivanov, V.P., Buzitskiy, V.N., and Zatkov, Yu.A.

TITLE: A pneumatic vibrator with stable excitation frequency

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Aviatsionnaya tekhnika, no.4, 1961, 144-146.

TEXT: In laboratory tests on oscillatory systems the sources of oscillation are usually electro-dynamic, electro-magnetic or mechanical vibrators, but it is sometimes convenient to use a pneumatic vibrator in which an air jet impinges on a rotating segmented disc. The principal limitation to the use of such devices is the difficulty of maintaining constant motor speed with the direct current motors that are commonly used. The equipment described here is simple and of good speed stability. The essential point is that the disc is driven by a convertor type MA-250 (MA-250) which consists of a combined d.c. motor and a.c. generator. Under certain conditions the a.c. generator can run as a synchronous motor with very stable speed. The principle is that the disc is run up to speed with the d.c. motor obtaining supply from a rectifier. The a.c.

Card 1/3

supply is obtained from an audio-frequency generator operating through an amplifier which can give sufficient power to hold the motor in step once it has been run up to speed. A signal lamp is provided to show when synchronous conditions have been reached. The impulse frequency range that can be obtained naturally depends on the motor speed range and the number of segments on the disc and the force of the air pulses depends on the available supply; however, equipment has been built with the motor speed range of 3000-15000 r.p.m. which, by altering the discs, can give a frequency range of 50-5000 c/s. The maximum pressure in the air main is 6 kg/cm^2 and the air flow at this pressure at a temperature of 288° absolute is about 0.02 kg/second; the diameter of the critical section of the nozzle is 4 mm and the static reaction of the jet at the pressure of 6 kg/cm^2 is about 1.5 kg. A rig has been built with two vibrators which can easily be arranged to give impulses differing in phase from 0 to 360° by rotating one of the stators; in principle more oscillators can be used to study more complex conditions.
There are 2 figures.
Card 2/3

A pneumatic vibrator with stable... S/147/61/000/004/019/021
E194/E135

ASSOCIATION: Kafedra konstruktsii aviadvigateley, Kuybyshevskiy aviatsionnyy institut (Department of Aviation Engine Design, Kuybyshev Aviation Institute)

SUBMITTED: F ebruary 13, 1961

Card 3/3

ACCESSION NR: AT4040402 S/0000/63/000/000/0269/0275

AUTHOR: Soyfer, A. M.; Buzitskiy, V. N.

TITLE: 'Manufacture and application of new-type all-metal elastic damping elements

SOURCE: Nauchno-tekhnicheskoye soveshchaniye po voprosam kolebaniy s uchetom rasseyaniya energii. 4th, 1962. Rasseyaniye energii pri kolebaniyakh uprugikh sistem (Scientific-Technical Conference on Problems of Vibrations with Dissipation of Energy Taken into Account, 1962. Dissipation of Energy in Vibrations of Elastic Systems). Trudy* soveshchaniya. (Proceedings of the Conference). Kiev, Izd-vo AN UkrSSR, 1963, 269-275

TOPIC TAGS: damping element, elastic damping element, metallic damping element, metallic shock absorber, DK shock absorber, ATSM shock absorber, shock absorber

ABSTRACT: The manufacture and operating characteristics of a new type of metallic damping elements and their use in various vibration-damping devices such as shock absorbers are described. The damping elements, Author Certificate No. 136608, are made from a material

Card 1/3

(designated "MR"—metallic rubber) whose structure represents an aggregate of spatial lattices built from thin metallic spirals similar to rubber macromolecules. Depending on the intended use and operating conditions, carbon, stainless, and heat resistant steels, nichrome, constantan, and other special alloys are used as wire materials. The wire diameter is usually 0.03—0.25 mm. The wire is wound into a dense spiral 0.15—1.0 mm in diameter, which after winding is stretched to 3 to 6 times its original length. The necessary length of such a spiral is placed in a die and cold formed into the desired shape. Damping elements (plates, washers, bushings, etc.) formed from MP material work well in a wide range of pulsating compression loads and in a narrower range of bending, shearing and tension loads. Elements with widely varying mechanical properties are made by suitable arrangements of spirals. The Scientific Research Laboratory of the Kuybyshev Aviation Institute has developed two types of metallic shock absorbers with MR elements. One of them the DK, is a multidirectional type shock absorber capable of damping vibrational loads at any arbitrary angle to the axis. Its damping characteristics are 3-4 times as good as those of the series produced rubber-metal AP ("Lord") shock absorbers. The second — the ATSM, is a supporting type shock absorber, similar to

ACCESSION NR: AT4040402

the "Met-L-Flex" shock absorber widely used in the aviation industry abroad, but with damping characteristics twice as high. Both shock absorbers have an indefinite shelf life and can be used for protection against vibration of instruments, machines, and components operating in aggressive media at high or low temperatures. Orig. art. has: 7 figures.

ASSOCIATION: none

SUBMITTED: 23Nov63 DATE ACQ: 28May64 ENCL: 00

SUB CODE: MD NO REF SOV: 000 OTHER: 000

Card 3/3

L 10848-67 EWP(k)/EWT(l)/EWT(m)/EWP(w)/EWP(v)/EWP(t)/ETI IJP(c) EM/WW/JJ/JD

ACC NR: AR6034732 SOURCE CODE: UR/0124/66/000/008/V052/V052 46

AUTHOR: Ivanov, V. P.; Buzitskiy, V. N.

TITLE: Estimation of resonance stresses in a packet of blades with free wire binding

SOURCE: Ref. zh. Mekhanika, Abs. 8V421

REF SOURCE: Tr. Kuybyshevsk. aviats. in-t, vyp. 19, 1965, 31-40

TOPIC TAGS: metal blade, vibration damping, internal friction, stress, resonance stress

ABSTRACT: The authors have investigated the possibility of estimating approximately the vibration damping of bending oscillations of individual blades and a packet of blades caused by the friction at points of contact between the blade and the damping wire. The problem is solved with the aid of the balance of work of the exciting forces; the forces of internal friction in the blade material, and the Coulomb friction at points of contact between the wire and blade. A condition is obtained for movement of placing the packet of blades with respect to the wire. V. I. Olimpiyev. [Translation of abstract]

Card 1/1 SUB CODE: 13/

SADYKOV, A.S., akademik; PAKUDINA, Z.P.; BUZITSKOVA, Ye.P.; GULI-KEVKHYAN, A.Sh.; KARIMDZHANOV, A.; ISAYEV, Kh.

Accumulation dynamics of the reducing sugars, organic acids, pectic and tanning substances in the leaves and locks of some varieties of cotton. Uzb.khim.zhur. no.6:41-48 '58. (MIRA 12:2)

1. AN UzSSR (for Sadykov). 2. Institut khimii rastitel'nykh veshchestv AN UzSSR (for all).

(Cotton) (Biochemistry)

BUZITSKOVA, Ye.P.; SADYKOV, A.S.

Extraction and determination of some properties of pectic substances of cotton. Nauch.trudy TashGU no.263.Khim.nauki no.13:94-97 '64.
(MIRA 18:8)

SADYKOV, A.S., akademik; ISMAILOV, A.; TURULOV, A.V.; BUZITSKOVA, Ye.P.

Cotton plant leaves as a source of carotene. Uzb.khim.zhur. no.2:71 '61. (MIRA 14:10)

1. Institut khimii polimerov AN UzSSR. 2. Akademiya nauk UzSSR (for Sadykov).

(Carotene) (Cotton)

BUZ'KO, A.A.; RUBAN, I.A.; KRAVCHENKO, I.D., veterinarnyy tekhnik.

Biological stimulation and clitorotomy in fattening swine. Veterinariia 38 no.1:23-24 Ja '61. (MIRA 15:4)

1. Svinootkormochnyy sovkhoz Krymmyasotresta. 2. Direktor Krymskoy oblastnoy veterinarnoy polikliniki (for Buz'ko). 3. Glavnyy veterinarnyy vrach Svinootkormochnogo sovkhoza Krymmyasotresta (for Ruban). 4. Svinootkormochnyy sovkhoz Krymmyasotresta (for Kravchenko).
(Tissue extracts) (Swine) (Castration)

TIKHOMIROV, I.A., kand.tekhn.nauk; DEMCHUK, P.A., gornyy inzh.;
AGAFONOV, Ye.M., gornyy inzh.; BUZ'KO, A.S., gornyy inzh.

Using the EPM-1 rock loader in the drifting of inclines.
Ugol' Ukr. 6 no.1:31-33 Ja '62. (MIRA 15:2)
(Coal mining machinery)

ALEKSEYEV, N.A.; BUZ'KO, M.P.; IPPOLITOV, K.M.; PALKIN, R.I.; SIMONOVICH, Ye.Ya.; TARASOVA, V.S.; TITKOVA, M.G.; ALEKSEYEV, N.A., otv. za vypusk; GALAKTIONOVA, Ye.N., tekhn.red.; DONSKAYA, G.D., tekhn.red.

[Provisional norms for the use of materials and spare parts in repairing road machinery and tractors] Vremennye normy raskhoda materialov i zapasnykh chastei dlia remonta dorozhno-stroitel'nykh mashin i traktorov. Moskva, Avtotransizdat, 1960. 380 p.
(MIRA 13:10)

1. Russia (1917- R.S.F.S.R.) Ministerstvo avtomobil'nogo transporta i shosseynykh dorog. TSentral'naya normativno-issledovatel'skaya stantsiya.
(Road machinery--Maintenance and repair)
(Tractors--Maintenance and repair)

BUZ'KO, T. S.

"Treatment of Gastric and Duodenal Ulcer," Sov. med., 16, No.4, 1952

Buz'ko, T. S.

BUZ'KO, T.S.

Diagnostic role of the microscopic study of lavage fluid in gastric cancer. Sov.med. 21 Supplement:21 '57. (MIRA 11:2)

1. Iz propedevticheskoy terapevticheskoy kliniki Kubanskogo meditsinskogo instituta.
(STOMACH--CANCER)

BUZ'KO, V.M., peredova tkalya; GUMENYUK, Ye.I., peredova tkalya; DENISENKO, L., veduchiy redaktor; VUYEK, M., tekhnichniy redaktor.

[The way to higher skill] Shliakh do vysokoi maisternosti. Kyiv, Derzhavne vyd-vo Tekhn. lit-ry URSR, 1954. 42 p.(MLRA 8:2)

1. Chernivets'kiy tekstil'niy kombinat (for Buz'ko, Gumenyuk) (Weaving)

38722
S/191/62/000/007/009/011
B124/B144

15.8050

AUTHORS: Belakovskiy, Ya. I., Buzkov, V. A., Kartsev, Yu. M.

TITLE: Applicability of polyamides to bearings for small propeller shafts

PERIODICAL: Plasticheskiye massy, no. 7, 1962, 62-64

TEXT: Bushes for propeller shafts of ships were made of caprone, and of caprone with 10% silvery graphite, dipped into boiling water before casting in order to remove low-molecular compounds and then dried to a moisture content of 0.15-0.20%. The temperature of the melt in the casting cylinder was 230-240°C and the corresponding pressure 40-50 kg/cm². The molds were heated to 80-100°C, and the bushes cooled slowly to 30-40°C after casting. The low-molecular compounds (3.9%) were then removed by immersion in boiling water for 10 min per mm of wall thickness. The molecular weight of the finished polyamide was 28,000. The polyamide bushes were compressed in metal bushes, dipped in water for 10 days, and turned on a lathe to the dimensions required. River and sea water is suited for lubricating polyamide bushes, as was experimentally ascertained

Card 1/2

on the basis of high hydrodynamic pressures (up to 50 kg/cm^2) in the lubricant layer, expanding over a large area in the transverse and longitudinal sections of the bearing. Those bearings which have two bulges give the least friction, followed by bearings with three grooves and smooth bearings, finally by bearings with 10 facets, 10 strips, and bearings of rubber and metal. Bearings with two bulges are recommended for navigation in clean water, bearings with three grooves for waters contaminated by abrasive particles. In rivers the resistance of caprone bushes to wear is 1.2-1.5 times, greater than that of bronze, babbitt metal, and textolite bushes, in the sea 3 times greater. Their life is 3 or 4 times as long. The mechanical properties of caprone are not deteriorated by 1 month of storage at -15°C. There are 3 figures and 1 table.

S/653/61/000/000/019/051
I042/I242

AUTHOR: Buzkov, V.A.

TITLE: A method for the investigation of physicomechanical and antifriction properties of polyamides

SOURCE: Plastmassy v mashinostroyenii i priborostroyenii. Pervaya resp. nauch.-tekh. konfer. po vopr. prim. plastmass v mashinostr. i priborostr., Kiev, 1959. Kiev, Gostekhizdat, 1961, 237-244

TEXT: An important problem in the construction of naval machinery is the selection of a pair of materials for surfaces of water-lubricated bearings. The Odessa Institute of Naval Engineers has investigated this problem with the aid of the AE-5 (AYe-5) friction machine. A diagram and detailed description of the apparatus are given. Three samples of a plastic material were mounted under water against the side of a spinning metal ring. The moment of friction was measured

Card 1/2

BELAKOVSKIY, Ya.I.; BUZ'KOV, V.A.

Plastic bearing with self-formed compensator of the diametric gap. Mashinostroenie no.1:114 Ja-F '63. (MIRA 16:7)

(Plastic bearings)

BUZKOVA, V.

Determination of the carbonyl group. K. Dvořák, J. Třebral, V. Buzková, and K. Trybal (Vývojové středisko Chimmy, [illegible] Sborník Celostátní Pracovní Konf. Anal. Chem. 1, 313-21(1953) (Pub. 1953).—The compd. contg. CO is made to react with an excess of the hydrochloride of a carbonyl reagent, and the HCl liberated is titrated to the pH value of the pure HCl soln. with standard alkali with a glass electrode. With water-insol. compds. condensation is carried out in nonaq. solvents and water is added before titration. Investigated as reagents were the hydrochlorides of hydroxylamine (pH 3.65 in 0.5*N* soln.), of semicarbazide (pH 3.15 in 0.085*N* soln.), of thiosemicarbazide (pH 2.6), and of phenylhydrazine (pH 4.2). A soln. of $NH_2.NH_2.HCl$ is too acid (pH 1.0) and the potential jump too small to give accurate results. Alternatively, an equimol. mixt. of $NH_2OH.HCl$ and NaOH (or free phenylhydrazine) can be used, and the excess reagent detd. by titration with standard acid to the above pH. G. Vogel

BUZKOVA, V.; MOLDAN, B.; ZYKA, J.

Mass analytic determination of iodide and bromide through lead (IV) acetate solutions. Coll Cz Chem 30 no.1:28-33 Ja '65.

1. Institut fur analytische Chemie, Karlsuniversitat und Zentralinstitut fur Geologie, Prague. Submitted December 3, 1963.

BUZLANOV, G.F.

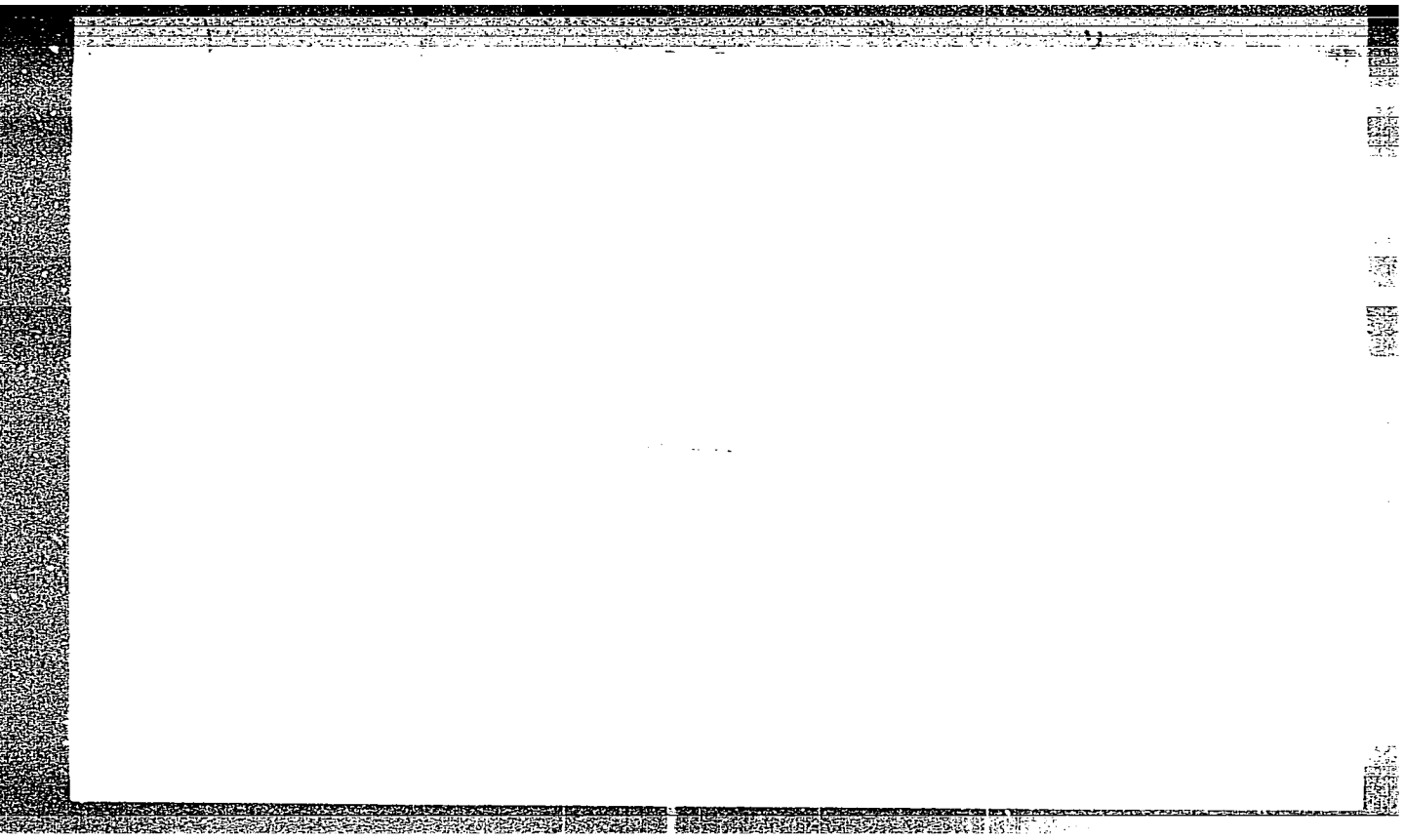
Production of nonferrous metals in Yugoslavia. Biul. TSIIN tsvet. met. no. 6:35-36 '58. (MIRA 11:7)
(Yugoslavia--Nonferrous metal industries)

BUZLANOV, G.F.

Gold mining and its use in capitalist countries. Kolyma 21 no.3:43-46 Mr '59. (MIRA 12:6)
(Gold mines and mining)

BUZLANOVA, M.

Conference on the Use of Polarography in the Chemistry and Technology of Polymers and Monomers. Zav.lab. 31 no.4:519-520 '65. (MIRA 18:12)



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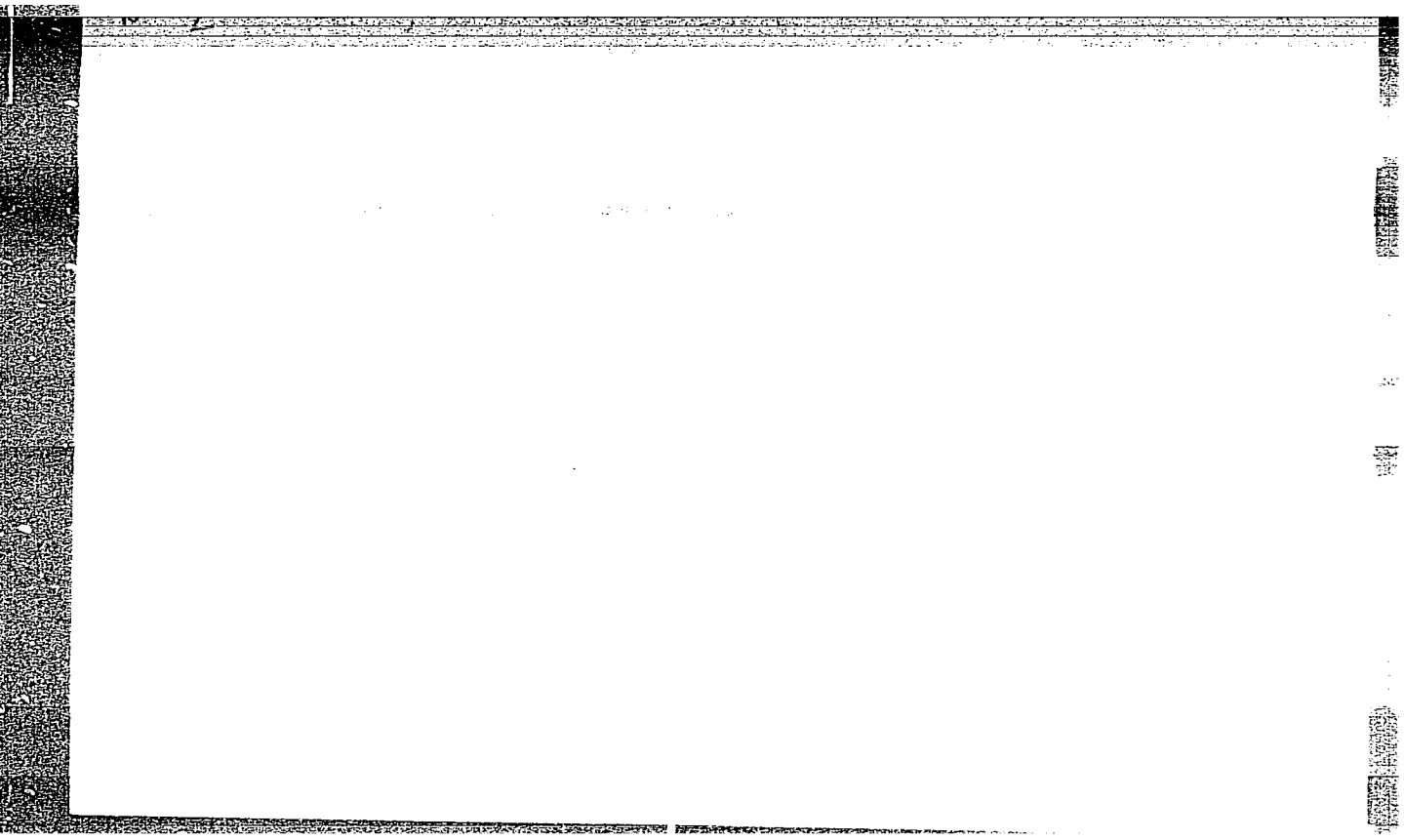


APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307820009-2"

AUTHORS: Terent'yev, A. P., Obtemperanskaya, S. I., 32-2-12/60
Buzlanova, M. M.

TITLE: Potentiometric Method for the Determination of Acrylnitrile With Sodiumsulfite (Potentsiometricheskiy metod opredeleniya akrilonitrila s pomoshch'yu sul'fita natriya)

PERIODICAL: Zavodskaya Laboratoriya, 1958, Vol. 24, Nr 2, pp. 157-157 (USSR)

ABSTRACT: Although acrylnitrile is produced industrially there is no satisfactory method for its determination. For this reason the present method was developed. It is based on the reaction between acrylnitrile and sodiumsulfite:

$$CH_2=CH\cdot CN + Na_2SO_3 + H_2O \rightarrow \begin{matrix} CH_2-CH_2CN \\ | \\ SO_3Na \end{matrix} + NaOH$$

To the dried and distilled sample of the substance dioxane and a certain amount of 0,5 n sodiumsulfite solution is

Card 1/2

added. After having stirred with an agitator the solution to be investigated is titrated potentiometrically with 0,1 n hydrochloric acid in a bulb. According to a table mentioned the accuracy of the method is between 99,77 and 100,25 %. There is 1 figure.

ASSOCIATION: Moscow State University, imeni M. V. Lomonosov
(Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova)

AVAILABLE: Library of Congress

1. Acrylnitrile-Determination 2. Sodium sulfite-Applications
3. Titration

AUTHORS: Terent'yev, A. P., Obtemperanskaya, S. I., SOV/32-24-7-12/65
Buzlanova, M. M.

TITLE: A Potentiometric Method of the Determination of Acrylonitrile With the Help of Hydroxylamine (Potentsiometricheskiy metod opredeleniya akrilonitrila s pomoshch'yu gidroksilamina)

PERIODICAL: Zavodskaya Laboratoriya, 1958, Vol. 24, Nr 7, pp. 814 - 815 (USSR)

ABSTRACT: For the quantitative determination of acrylonitrile the reaction with hydroxylamine was used:

$$CH_2=CH.CN + NH_2OH \longrightarrow \underset{NHOH}{CH_2}-CH_2 CN$$

The reaction proceeds quantitatively in a neutral or weakly alkaline medium. The forming β-hydroxyl-amino proprionitrile can be titrated potentiometrically with a 0,1 n hydrochloric acid solution, if the excess quantity of free hydroxylamine is bound by acetone. A ЛП-5 lamp potentiometer and a glass electrode were used. The oxime produced in the reaction of hydroxylamine with acetone is neutral and does not disturb the determination. The results obtained from parallel determinations with pure

Card 1/2

acrylonitrile are given in table, together with the exact prescription for the analysis. This method can be used for the quantitative determination of acrylonitrile in colored solutions. There is 1 table.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im.M.V.Lomonosova (Moscow State University imeni M.V.Lomonosov)

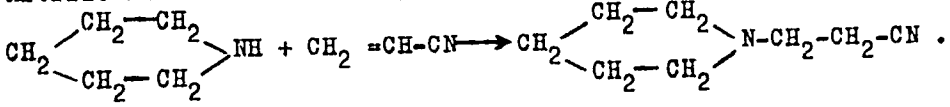
5(3) SOV/75-14-4-27/30

AUTHORS: Terent'yev, A. P., Buzlanova, M. M., Obtemperanskaya, S. I.

TITLE: Quantitative Determination of Acrylonitrile by Means of Piperidine

PERIODICAL: Zhurnal analiticheskoy khimii, 1959, Vol 14, Nr 4, p 506 (USSR)

ABSTRACT: The authors used for the quantitative determination of acrylonitrile its reaction with piperidine:



The reaction is quantitative in the presence of catalytic quantities of acetic acid. The formed β-(N-piperidyl)-propionitrile has basic properties and can be titrated with acid. The weighed-in sample of acrylonitrile is treated at room temperature during 30 minutes with an excess of piperidine. The piperidine excess is bound by acetic anhydride and the β-(N-piperidyl)-propionitrile then is titrated with a solution of concentrated hydrochloric acid in anhydrous methanol. A mixture of methyl red and methylene blue is used as indicator. The amide and the acetic acid formed in the reaction of piperidine with acetic anhydride do not

Card 1/2

disturb the titration. Prior to the analysis the acrylonitrile has to be dried over calcium chloride and distilled. Purified dioxane is used as solvent for the reaction. As piperidine may always contain impurities though it has been thoroughly purified and as these impurities react with acid and are not bound by acetic anhydride, a blank test has to be conducted simultaneously with the determination. Acrylic acid and its esters disturb the described determination method; ethylene cyanohydrin does not disturb the determination. For checking the method the authors determined acrylonitrile also with the sulfite method (Ref 2). The results are in good accordance. One table lists the results of 6 determinations with the new method. The error does not exceed 0.3%. The paper contains a detailed description of the preparation of the methanolic hydrochloric acid and the indicator as well as the process of determining acrylonitrile. There are 1 table and 2 Soviet references.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova (Moscow State University imeni M. V. Lomonosov)

SUBMITTED: April 3, 1958

TERENT'YEV, A.P.; OBTEMPERANSKAYA, S.I.; BUZLANOVA, M.M.; VLASOVA, T.Ye.

Determination of carboxylic acid anhydrides by means of hexamethylenimine and piperidine. Vest. Mosk un. Ser. 2: Khim. 15 no.4:71-73 Jl-Ag '60. (MIRA 13:9)

1. Kafedra organicheskoy khimii Moskovskogo universiteta.
(Anhydrides) (Hexamethylenimine) (Piperidine)

OBTEMPERANSKAYA, S.I.; TERENT'YEV, A.P.; BUZLANOVA, M.M.

Quantitative determination of monoatomic alcohols by acrylonitrile. Zhur.anal.khim.16 no.3:372-374 My-Je '61. (MIRA 14:6)

1. M. V. Lomonosov Moscow State University.
(Alcohols)
(Acrylonitrile)

MARKEVICH, S.M.; POLYANSKIY, N.G.; BUZLANOVA, M.M.; SAFRONENKO, Ye.D.

Rapid mercurimetric method for the determination of isobutylene in cracking fractions. Zhur. anal. khim. 16 no. 4:489-493 Jl-Ag '61. (MIRA 14:7)

1. Scientific-Research Institute of Synthetic Alcohols, Branch in Novokuybyshevsk.

(Propene)

TERENT'YEV, A.P.; BUZLANOVA, M.M.; OBTEMPERANSKAYA, S.I.

Determination of phosgene in the presence of chlorine and hydrogen chloride. Zhur.anal.khim. 16 no.6:743-744 N-D '61. (MIRA 14:12)

1. M.V. Lomonosov Moscow State University.
(Phosgene)

TERENT'YEV, A.P.; OBTEMPERANSKAYA, S.I.; BUZLANOVA, M.M.; VLASOVA, T.Ye.

Use of hexamethylenimine in the quantitative determination of carboxyl and sulfonyl halides. Zhur.anal.khim. 17 no.7:900-902 0 '62. (MIRA 15:12)

1. Lomonosov Moscow State University.
(Halides) (Anhydrides) (Hexamethylenimine)

POLYANSKIY, N.G., MARKEVICH, S.M.; SAFRONENKO, Ye.D.; BUZLANOVA, M.M.

Use of bivalent mercury sulfate in the quantitative analysis of olefins and tertiary alcohols. Report No.1: Quantitative determination of α-methylstyrene and dimethylphenylcarbinol present simultaneously. Trudy Kom.anal.khim. 13:93-98 '63. (MIRA 16:5)

1. Nauchno-issledovatel'skiy institut sinteticheskikh spirtov, Novokuybyshevskiy filial.
(Styrene) (Alcohols) (Mercury sulfates)

BUZLANOVA, M.M.; KOZHIKHOVA, N.A.; POLYANSKIY, N.G.

Use of mercuric sulfate in quantitative analysis of olefins and tertiary alcohols. Report No. 2. Determination of tertiary amylenes. Zhur. anal. khim. 18 no.9:1125-1127 S '63. (MIRA 16:11)

1. Scientific-Research Institute of Synthetic Alcohols and Organic Products, Branch in Novokuybyshevsk.

TERENT'YEV, A.P.; OBTEMPERANSKAYA, S.I.; VOLODZ'KO, V.Ye.; BUZLANOVA, M.M.

Quantitative determination of methyl acrylate by means of haxamethylenimine. Zhur. anal. khim. 19 no. 1:135-136 '64. (MIRA 17:5)

1. Moskovskiy gosudarstvennyy universitet imeni Lomonosova.

BUGLANOVA, I.N., STEPANOVSKAYA, V.F.

Separation of some ketones by thin-layer chromatography.
Zhur. anal. khim. 20 no.7:859-862 '65. (MIRA 18:9)

1. Scientific-Research Institute of Synthetic Alcohols and Organic Products, Branch in Novokuibyshevsk.

BUZLANOVA, M.M.; KUROCHKINA, N.A.

Polarographic determination of aluminium in waste waters.
Zav. lab. 31 no.8:947 '65. (MIRA 18:9)

1. Novokuybyshevskiy filial nauchno-issledovatel'skogo instituta sinteticheskikh spirtov i organicheskikh produktov.

BUZLANOVA, M.M.; STEPANOVSKAYA, V.F.

Thin-layer chromatography of oximes. Zhur. anal. khim. 20 no.8:874-876 '65. (MIRA 18:10)

1. Novokuybyshevskiy filial Nauchno-issledovatel'skogo instituta sinteticheskikh spirtov i organicheskikh produktov.

BUZLOV, G.A.; KAZANSKIY, B.A.

Results of work on prospecting by the use of radio waves in Karamazar complex ore mines. Uch. zap. SAIGIMSa no.8: 167-175 '62. (MIRA 17:1)

1. Sredneaziatskiy nauchno-issledovatel'skiy institut geologii i mineral'nogo syr'ya, Tashkent, i Severo-Tadzhikskaya geofizicheskaya ekspeditsiya.

BUZLYAROV, NIKOLAY IVANOVICH

N/5
747
.B9

Voprosy Planirovaniya Pechati V SSSR (Problems of Planning in the Printing Industry of the USSR)
Moskva, Iskusstvo, 1957.
209 P. Graphs, Tables.

747 N/5
752.21 N/5
783.31 N/5

NEA

BUZLYAKOV, N.I.; ZAREMBA, B.V.; LAGUTIN, N.S.; MAYYER, V.F.; FETISOV, S.M.; VASIL'YEVA, L., red.; MUKHIN, Yu., tekhn. red.

[Today and tomorrow; facts and figures about the standard of living of the Soviet people]Segodnia i zavtra; tsifry i fakty ob urovne zhizni sovetskogo naroda. Moskva, Gospolitizdat, 1962. 126 p. (MIRA 15:11)
(Cost and standard of living)

BUZMAKOV, G. A., inzh.

A television converter. Radio no.7:40-42 Jl '62. (MIRA 16:6)
(Television--Equipment and supplies)

BUZMAKOV, I.

Practices of a progressive elevator are not reflected in the pamphlet "Progressive elevator of Kuybyshev Province." Muk.-elev.prom. 21 no.4:30 Ap '55. (MLRA 8:7)

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

[redacted]

[illegible]ZENKO, I.G.

"Anatomicotopographic Conditions, Methods, and Economic Effectiveness of Castration." Cand Vet Sci, Omsk State Veterinary Inst, Min Higher Education USSR, Omsk, 1954. (KL, No 17, Apr 55)

SO: Sum.No. 704, 2 Nov 55 - Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (16).

Country	:	USSR R
Category	:	Diseases of Farm Animals. Diseases Caused by Bacteria and Fungi
Abs. Jour.	:	Ref Zhur-Biol, No 23, 1958, No 105809
Author	:	Ovsyanov, N. I.; Buzmakov, I. G.; Svintsova,*
Institut.	:	Siberian Scientific Research Veterinary Institute
Title	:	Study of the Effectiveness of Albamycin in Paratyphoid and Pneumonias of Calves
Orig. Pub.	:	Byul. nauchno-tekhn. inform. Sibirsk. n.-i. vet. in-t, 1958, No 3, 24-26
Abstract	:	It was shown that albamycin produces a positive effect only in recent cases of disease when administered subcutaneously in a dose of 50,000-70,000 units per 1 kg. of body weight, once or twice a day during the whole period of disease until clinical recovery is achieved.-- A. D. Musin
		* K. G.; Smol'nyakov, V. I.; Falikov, N. M.
Card:		1/1

R - 4

BUZMAKOV, P.

Behind a closed door. Mast. ugl. 8 no.7:22 Jl '59.
(MIRA 12:10)

1.Vneshtatnyy instruktor Shakhterskoge raykoma Kommunisticheskoy partii Ukrainy.
(Ukraine--Coal miners)

BUZMAKOV, P.

Outside and inside.... Sov.shakht. 10 no.9:43 S '61.
(MIRA 14:8)
(Labor and laboring classes—Dwellings)

BUZMAKOV, P.

Out of touch with the collective. Sov.shakht. 11 no.2:38-39 F '62. (MIRA 15:1)

(Donets Basin—Coal miners)

BUZMAKOV, P. (g. Shakhtersk, Donetskoy obl.)

Indefatigable voluntary worker. Voen.znan. 38 no.12:24 D '62.
(MIRA 15:12)

(Shakhtersk (Donetsk Province)—Military education)

BUZMAKOV, V.V., aspirant

Methods for sowing forage lupine for seed. Zemledelie 26 no.1:73-75 Ja'64.

BUZNA, A.

Exemplary initiative of young tractro operators.

p. (2) of cover. (MECHANISACE ZEMEDELSTVI) Vol. 7, no. 24, Dec. 1957, Praha, Czechoslovakia

SO: Monthly Index of East European Accessions (EEAI) LC, Vol. 7, No. 3, March 1958

[illegible], [illegible].

"A note on the all-Slovak conference of [illegible] tractor drivers and technicians."

p.195 (Mechanisace Zemedelstvi, Vol. [illegible], No. [illegible], [illegible] 195[illegible], Praha, [illegible])

Monthly Index of East European Accession (EEAI) LC, Vol. 7, No. [illegible], 1958

BUZNA, V.

Methods of saving coal in boilers. p. 154.
ÉPITŐANYAG, Budapest, Vol. 7, no. 4, Apr. 1955.

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 4, no. 10, Oct. 1955, Uncl.

ACC NR: AM6032862 Monograph RU/

Buznea, Dinu (Colonel; Engineer); Nicolau, Mircea (Colonel; Engineer)

Electronics in military engineering (Electronica in armata) Bucharest, Editura militara, 1965. 300 p. illus. Number of copies printed not given.

TOPIC TAGS: radio electronics, radar, television, radio navigation, rocket guidance, RADIO ENGINEERING, MILITARY ENGINEERING, ELECTRONICS

PURPOSE AND COVERAGE: This book deals with various apsects of radio electronics as applied to military technology. The operating principles of electronic equipment and installations are explained along with the physical processes taking place in wire broadcasting, radio transmission, telecommunications, missile guidance, and electronic computers used in the automatic deployment and guidance of the armed forces.

TABLE OF CONTENTS [Abridged]:

Card 1/2

ACC NR: AM6032862

Ch. V. Radio navigation -- 218
Ch. VI. Electronics in rocket guidance -- 247
Ch. VII. Electronics in the automatic guidance of troops -- 269

SUB CODE: 09,15/ SUBM DATE: 25Nov64/

Card 2/2

RUMANIA / Analytical Chemistry--Analysis of inorganic substances. E-2

Abs Jour : Referat Zhur--Khimiya, No. 11, 1959, 38276

Author : Buznea, G.; Constantinescu, O.; and Topor, D.
Inst : Not given
Title : The Application of Organic Solvents in the Selective Elution of Cations Adsorbed on Ion Exchange Resins. I. Selective Elution of Zinc and Copper.

Orig Pub : Studii si Certetari Chim, 6, No. 2, 333-338 (1958) (in Rumanian with summaries in French and Russian)

Abstract : It has been determined that when acetone containing 20% H_2O and 0.5% HCl (sp gr 1.16) is used as the eluent, the complete resolution of Zn^{2+} and Cu^{2+} adsorbed on Rumanian-made type

Card 1/3

BUZNEA, O.; GRIGORESCU-SABAU, C.

Isotopic analysis of the lead in some ores of Rumania. Studii cerc fiz 12 no.1:79-86 '61. (EEAI 10:9)

1. Institutul de fizica atomica, Bucuresti.

(Ores) (Lead) (Isotopes) (Mass spectrometry)

YUR'YEV, V.M.; ROL'BEYN, L.; OL'KHOVSKIY, A., obshchestvennyy inspektor po okhrane truda; BUZNETSKIY, V.A., inzh.-kontroler

Readers' letters. Bez.truda v prom. 6 no.1:36 Ja '62. (MIRA 15:1)

1. Uchastkovyy gornotekhnicheskiy inspektor Kuybyshevskoy rayonnoy gornotekhnicheskoy inspektsii, Donetskogo okruga (for Yur'yev).
2. Glavnyy inzh. UM-79 tresta 19, g. Minsk (for Rol'beyn).
3. Upravleniye Krivorozhskogo okruga Gosgortekhnadzora USSR (for Buznitskiy).

(Industrial safety)

BUZNIAK, M.

Woycicki, W. Obtaining benzoic acid for the determination of calorimetric bombs. p. 926.
ROCZNIKI CHEMI, Warszawa, Vol. 29, no. 2/3, 1955.

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 4, no. 10, Oct. 1955, Uncl.

BUZNIK, I.M., polkovnik meditsinskoy sluzhby, dotsent

Content and methods of medical control of the nutrition of flying personnel. Voen. - med. zhur. no.1:64-70 '63. (MIRA 17:8)

BUZNIK, I.M.

Simple methof for determining energy expenditure in man. Vop.pit. 15 no.2:54 Mr-Ap '56. (MLRA 9:7)

1. Iz Voyenno-meditsinskoy akademii imeni S.M.Kirova, Leningrad.
(METABOLISM)

L 11383-67 EWT(l)/EWT(m) SCTB DD/GD SOURCE CODE: UR/0000/66/000/000/0078/0079
ACC NR: AT6036507

39

AUTHOR: Buznik, I. M.

ORG: none

TITLE: The effect of penetrating radiation on food products and on the physiological value of food [Paper presented at the Conference on Problems of Space Medicine held in Moscow from 24 to 27 May 1966]

SOURCE: Konferentsiya po problemam kosmicheskoy meditsiny, 1966. Problemy kosmicheskoy meditsiny. (Problems of space medicine); materialy konferentsii, Moscow, 1966, 78-79

TOPIC TAGS: space food, bioastronautics, cosmic radiation biologic effect, ionizing radiation biologic effect, radiation chemistry, food preservation

ABSTRACT: The problem of radiation damage to the food supply during long space-flights is very real, especially if the provisions are used to shield the spacecrew from radiation. Changes in irradiated food are especially important in view of the exceptional requirements for human health and working capacity under spaceflight conditions. In addition, a nutritional plan must be devised which can counteract or eliminate unfavorable metabolic changes produced by various spaceflight factors, especially radiation.

Card 1/3

L 11383-67

ACC NR: AT6036507

Existing literature studies on the physiological value and toxicity of irradiated food have produced conflicting results, due to different experimental methods and varying research aims.

Experiments described in this article showed that irradiation with large doses of gamma rays (about 2,000,000 r of 1.25 Mev gamma rays) worsened the organoleptic qualities of the food and decreased its physiological value, due to destruction of nutrients and to radiochemical processes in them. Thus the smell, color, and taste of irradiated fats deteriorated, and products of oxidation and polymerization of fats accumulated. Unfavorable changes also occur in proteins, but they are less pronounced. Changes in irradiated carbohydrates are even less significant than in proteins. Riboflavin (vitamin B_2), pyridoxine (vitamin B_6), retinol (vitamin A), tocopherol (vitamin E), and other important vitamins are partially destroyed in irradiated food. This is important as adynamia causes food consumption to drop sharply in spaceflight conditions. With decreased food consumption, the organism receives less vitamins: if the quality of these vitamins is impaired by irradiation, the metabolism and general well-being of the cosmonaut is affected. Although food may be artificially vitaminized, it is still essential to determine the vitamin content of food during and after irradiation.

Card 2/3

L 11383-67
ACC NR: AT6036507

Formation of harmful substances in irradiated food is possible. Such substances include some products of radiochemical changes in fats, whose toxic effect is evident only when vitamin supply is insufficient. It has been shown that irradiation of food products with corpuscular radiations and electromagnetic radiations (with energy greater than 10 Mev) produces induced radioactivity in the food. This induced radioactivity apparently has great value when the food is irradiated with cosmic rays, which have higher energies. It was concluded that important changes take place in irradiated food products, which must be considered when planning cosmonaut nutrition. [W.A. No. 22; ATD Report 66-116]

SUB CODE: 06 / SUBM DATE: 00May66

Card 3/3 egk

BUZNIK, I.M.

Problem of the hygienic evaluation of the quality of meat, irradiated with ionizing radiations. Vop. pit. 19 no.2:63-69 Mr-Ap '60. (MIRA 14:7)

1. Iz kafedry obshchey i voyennoy gigiyeny (nachal'nik - prof. P.Ye. Kalmykov) Voyenno-meditsinskoy ordena Lenina akademii imeni S.M. Kirova, Leningrad.
(MEAT) (RADIATION STERILIZATION)

BUZNIK, I.M., polkovnik meditsinskoy sluzhby

Improving the formaldehyde method for determining total nitrogen. Voen.-med. zhur. no.8:50-52 Ag '61. (MIRA 15:2)
(NITROGEN--ANALYSIS) (FORMALDEHYDE)

BUZNIK, I.M., polkovnik meditsinskoy sluzhby, kand. med. nauk

Energy loss in soldiers during winter tactical exercises. Voen.-med.zhur. no.10:50-51 '64. (MIRA 18:5)

BUZNIK, N. Kh., Engineer, Cand Tech Sci

Dissertation: "Influence of Cooling-Lubricating Fluids on the Quality of Honed Surfaces."

21/6/50

Moscow Automechanical Inst.

SO Vecheryaya Moskva
Sum 71

BUZNIK, V.

PA 3T5

USSR /Thermal Technology
Steam Boilers

Mar. 1946

"Heat Content in Steam Superheaters, " V. Iakhanin and V Buznik, 2 pp

"Morskoy Flot" Vol VI, No 3

Theoretical discussion with graphs and formulae

3T5

BUZNIK, V., kandidat tekhnicheskikh nauk.

Changes in the specifications of marine watertube boilers in alternating working conditions. Mor. flot 7 no.4:26-30 Ap '47. (Boilers, Watertube) (MLRA 9:6)

BUZNIK, V. M.

Buznik, V. M. "A comparison of contemporary methods of reckoning the varying conditions of naval boiler heating," Trudy Nikolayevsk. korablestroit. in-ta, Issue 6, 1948, p. 5-38 + Bibliog: 19 items

SO: U-2888, Letopis 'Zhurnal'nykh Statey, No. 1, 1949

BUZNIK, V. M.

Buznik, V. M. "On the problem of calculating the heating of naval boilers under varying conditions," Trudy Nikolayevsk. korablestroit. in-ta, Issue 6, 1948, p. 39-43 - Bibliog: 5 items

SO: U-2888, Letopis 'Zhurnal'nykh Statey, No. 1, 1949

BUZNIK, V. M.

Buznik, V. M. "Analysis of contemporary methods of estimating convectional surfaces of naval boilers," Trudy Nikolayevsk. korablestroit. in-ta, Issue 6, 1948, p. 56-75 - Bibliog: 10 items

SO: U-2888, Letopis 'Zhurnal'nykh Statey, No. 1, 1949

BUZNIK, V.M.; PUCHKOV, A.F., redaktor; KLIMINA, Ye.V., redaktor; KONTOROVICH, A.I., tekhnicheskiy redaktor.

[Designing marine steam boilers] Proektirovanie sudovykh parovykh kotlov. [Leningrad] Gos. izd-vo sudostroit. lit-ry, 1951. 331 p. (Steam boilers, Marine) (MLRA 8:2)

BUZNIK, V. M.

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

Name	Title of Work	Nominated by
Buznik, V. M.	"Designing Ship Boilers"	Nikolayevsk Shipbuilding Institute imeni S.O. Madarov

SO: W-30604, 7 July 1954

BUZNIK, V.M.; YENIN, V.I., dotsent, retsenzent; GOL'DENFON, A.K., kandidat tekhnicheskikh nauk, retsenzent, redaktor; VOL'KHOVER, R.S., tekhnicheskiy redaktor.

[Marine steam boilers] Sudovye parovye kotly. Leningrad, Gos. soiuznoe izd-vo sudostroit. promyshlennosti, 1954. 440 p. (MLRA 8:4)
(Steam boilers, Marine)

BABADZHANYAN, Levon Arakelovich; GOL'DENFON, Aleksandr Kel'manovich; BUZNIK, V.M., dotsent, kand.tekhn.nauk, retsenzent; SERDYUKOV, S.A., nauchnyy red.; SHAURAK, Ye.N., red.; KONTOROVICH, A.I., tekhn.red.

[Testing marine steam boilers] Ispytaniia sudovykh parovykh kotlov. Leningrad, Gos.soiuznoe izd-vo sudostroit.promyshl., 1958. 322 p. (MIRA 12:3)
(Boilers, Marine--Testing)

S/124/61/000/011/025/046
D237/D305

26.5200

AUTHORS: Buznik, V.M., and Vezlomtsev, K.A.

TITLE: Generalization of experimental data on heat exchange by free and forced convection in internal flow

PERIODICAL: Referativnyy zhurnal, Mekhanika, no. 11, 1961, 91, abstract 11B602 (Tr. Nikolayevskogo korablestroit. in-ta, 1959, no. 19, 13 - 18)

TEXT: It is shown that heat exchange during free and forced convection is governed by the same law; $N = N_o + N_L + N_T$ where N_o - Nusselt number for heat exchange due to conduction only ($U = 0$), N_L and N_T are Nusselt number's for laminar and turbulent motion. Utilizing the theoretical and empirical relations for N_L and N_T the authors find that

$$N = N_o + 0.5R_s^{0.5}p^{0.25} + 0.01R_s^{0.8}p^{0.4} \qquad (1)$$

Card 1/2

Generalization of experimental ...

where $R_s^2 = G + R^2$. Formula (1) is recommended for calculating heat exchange on the flat plate cylinder and sphere for the whole practically usable range of Reynolds and Grashof numbers. 15 references. [Abstractor's note: Complete translation].

Card 2/2

S/124/62/000/003/028/052
D237/D302

16.3000

AUTHORS: Buznik, V.M., and Vezlomtsev, K.A.

TITLE: Heat transfer from a cylinder under mixed convection

PERIODICAL: Referativnyy zhurnal, Mekhanika, no. 3, 1962, 94, abstract, 3B592 (Tr. Nikolayevskogo korablestroit, in-ta, 1959, no. 19, 19 - 26)

TEXT: The apparatus is described and results are given of the investigation of heat transfer and of the observations of the thermal boundary layer of a circular cylinder (nickel-plated brass calorimeter of 29 mm diameter and 180 mm length) in a transverse flow in a direct action aerodynamic tube with the enclosed working part of square cross-section 250 mm sq., under the conditions of low velocity forced convection. Empirical formulas and graphs are obtained from the data, for the dependence of the Nusselt No. on Prandtl and Reynold's No.'s ($2 \times 10^2 \leq R \leq 5.10^3$) and for the dependence of the thickness of the thermal boundary layer on the above numbers and on the Grashof No.; photographs of the configuration of the

Card 1/2

S/124/62/000/003/028/052
D237/D302

Heat transfer from a cylinder ...

thermal boundary layer on the cylinder under varying flow conditions, are given. [Abstractor's note: Complete translation].

Card 2/2

S/124/62/000/003/026/052
D237/D302

10,3400

AUTHORS: Buznik, V.M., and Vezlomtsev, K.A.

TITLE: Mode of change of the thermal boundary layer around a horizontal cylinder, during natural convection

PERIODICAL: Referativnyy zhurnal, Mekhanika, no. 3, 1962, 93, abstract 3B588 (Tr. Nikolayevskogo koraolestroit, inta, 1959, no. 19, 27 - 33)

TEXT: The apparatus and method of investigation with application of Tepler's camera, of the change in the thermal boundary layer of a horizontal cylinder of 29 mm diameter and 180 mm length under free convection in air and in water are described for the temperature ranges of the surface of the cylinder and of the surrounding medium, equal to 40°C - 160°C and 1°C - 160°C respectively. The scheme of the set-up and the results of investigation are given; photographs of the thermal and boundary layers in both media, graphs of the variation in thickness of the boundary layer v. temperature changes given above, and graphs of Nusselt No.'s and layer thickness versus some power of the product of Grashof and Prandtl No.'s.

Card 1/2

Mode of change of the thermal ... S/124/62/000/003/026/052
D237/D302

[Abstractor's note: Complete translation].

Card 2/2