USSR/Chemistry - Dyestuffs Nov 51
Naphthothiazole Derivatives

"Synthesis of 2-Alkyl-α-Naphthothiazoles. II," V. M. Zubarovskiy, S. N. Fidel', Student, Inst of Org Chem, Acad Sci USSR

"Zhur Obshch Khim" Vol XXI, No 11, pp 2064-2068

Synthesized 8 new homologues of 2-alkyl-α-naphthothiazole series contg alkyl radicals iso-propyl, isobutyl, butyl, amil, hexyl, heptyl, octyl, and undecyl. Studied their properties, prepd number of their salts. From their

194T55

USSR/Chemistry - Dyestuffs (Contd) Nov 51

quaternary salts and p-dimethylaminobenzaldehyde prepd 2 styryl dyestuffs and studied their light absorption properties.

194T55

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065520010-0"

Sensitizing & Sensitometry

Chem 2

1329

Condensation of o-Aminothiophenol with α-Hydroxy Acids. Alcohols and Ketones of the Benzthiazole Series. V. M. ZUBAROVSKI and M. D. RIKELMAN. *J. Gen. Chem. U.S.S.R.*, 1951, **21**, 2199-2205 and 2205-2210.—In the reaction previously described (*Phot. Abs.*, 1953, No. 1328) for the preparation of 2-hydroxymethylbenzthiazole, glycollic acid is replaced by other hydroxy acids. Monobasic acids, *e.g.*, lactic and mandelic, give analogous products: seven of these and their corresponding ketones are described. Malic and tartaric acids give mixtures in which the hydroxy compound is a minor constituent. 771.534.21 : 547.789.6

J. Soc. Dyers and Col.

1/8/54 BW

"APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065520010-0"

ZUBAROVSKIY, V. M.

Aldehydes, Nitration

Nitration of oc-thiophene aldehyde Dokl. AN SSSR 83 no. 1, March 1952

SO: Monthly List of Russian Accessions, Library of Congress, August 1953, Uncl.

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065520010-0

[illegible] (1961).—Heating 51 g. [illegible] acid with 100 g. [illegible] in CCl_4 1 hr. at 140 [illegible] with removal of [illegible] [illegible] [illegible] [illegible] 3 [illegible] 4 [illegible] A small amt. of semicarbazone [illegible] [illegible] the aldehyde with 2,4-dinitro- [illegible] [illegible] forms dinitrophenylhydrazone [illegible] [illegible] of 2,4-dimethylbenzo- [illegible] [illegible] [illegible] [illegible] The aldehyde oxidized with $KMnO_4$ and [illegible] [illegible] Oxidation of [illegible] with SeO_2 as above gave [illegible] [illegible] b. 168-70°, [illegible] m. 164°. [illegible] m. 232°. [illegible] m. 228°. [illegible] gave similarly 82% [illegible] b. 145-60°, m. 130-1°. [illegible] m. 158-60°. [illegible] decomp. 245°. 6-Chloro-3-methylbenz- [illegible] 6-chloro-2- [illegible] m. 125 [illegible] after purification by crystn. from [illegible] [illegible] 263°. 5-Nitro-3- [illegible] treated with 10.5 g. SeO_2 [illegible] followed by 12 hrs. standing) to 35% [illegible] m. 144-8° (from dil. [illegible]) [illegible] decomp. 283°; [illegible] decomp. [illegible] Boiling 30 g. [illegible] [illegible] m. 146°; [illegible] then treated with 10 g. dry [illegible] gave 40% 5-nitro-3-methylbenz- [illegible] This with SeO_2 as above gave 65% [illegible] m. 135°. [illegible]

[illegible]

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065520010-0"

ZUBAROVSKIY, V.M.

Synthesis of thiazole derivatives. Part 9. Method for the condensation of O-aminothiophenol with acids. Ukr.khim.zhur.19 no.4: 413-417 '53. (MLRA 8:2)

1. Institut organicheskoy khimii Akademii nauk USSR.
(Benzenethiol) (Acids, Organic)

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065520010-0"

CATALYST

Condensation of [illegible] with heterocyclic carboxylic acids. [illegible] [illegible] and A. [illegible]

[illegible] obtained [illegible]

[illegible] isomeric [illegible] methiodide [illegible] with the one described above. Equimolar mixt. of isonicotinic acid and I heated 4 hrs. at 210-40° gave 65% 2-(4-pyridyl)benzothiazole, m. 180° (from pet. ether); picrate, m. 237°. Heating the base with MeI 0.5 hr. at 100° gave the methiodide (III) [illegible] [illegible]

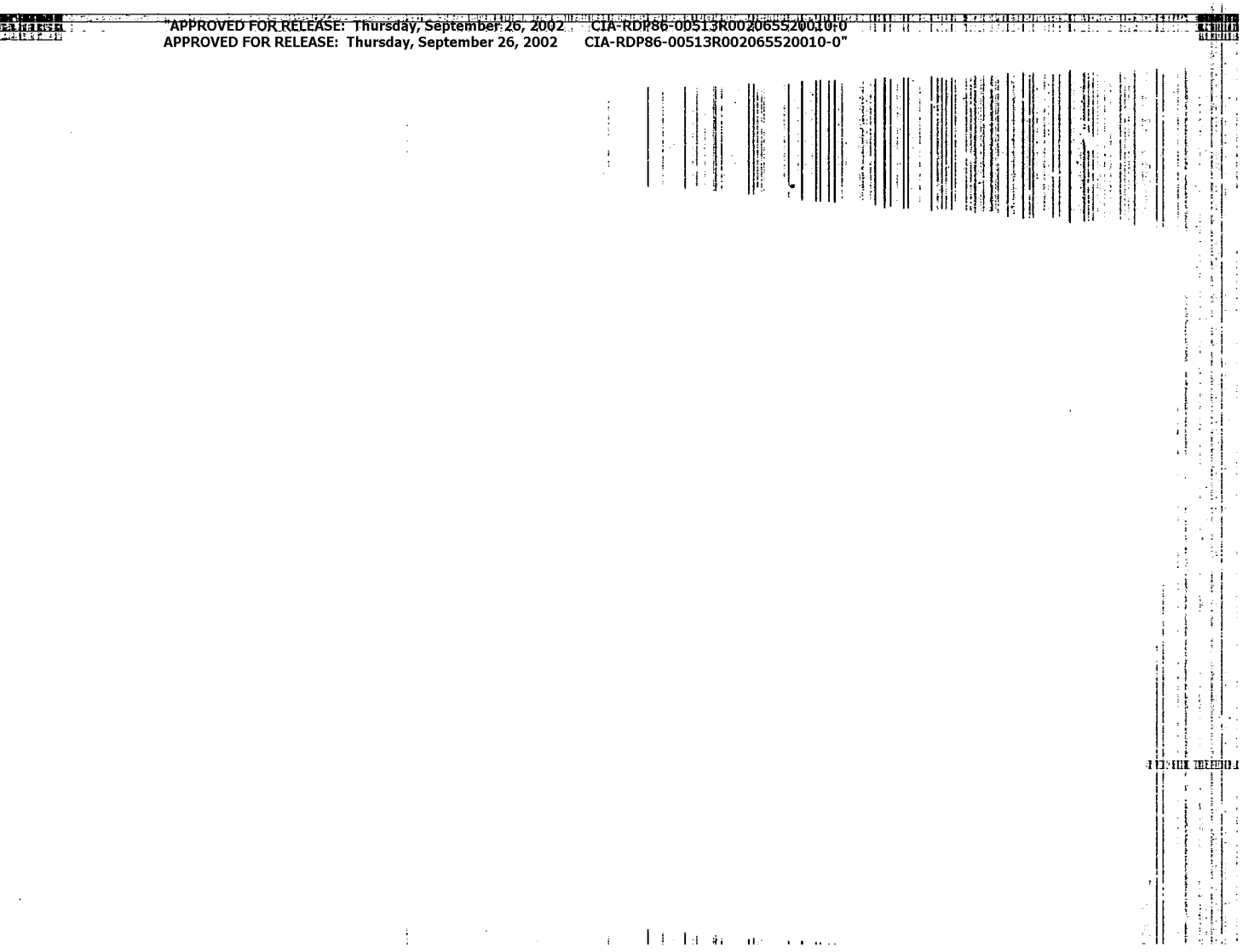
[illegible] changed to [illegible] 300° [illegible] method [illegible]

M. [illegible]

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065520010-0"

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065520010-0"

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065520010-0"



ZUBAROVSKIY, V.M.; VERBOVSKAYA, T.M.

Synthesis of thiazole derivatives. Part 12: Benzothiazolerhodanines. Zhur. ob. khim. 27 no.8:2177-2183 Ag '57. (MLRA 10:9)

1. Institut organicheskoy khimii Akademii nauk Ukrainskoy SSR.
(Thiazole) (Rhodanine)

5(3)

AUTHOR: Zubarovskiy, V. M.

307/79-29-6-54/72

TITLE: Synthesis of Thiazole Derivatives (Sintez proizvodnykh tiazola). XIII. Benzothiazolylthiazoles (XIII. Benztiazolilltiazoly)

PERIODICAL: Zhurnal obshchey khimii, 1959, Vol 29, Nr 6, pp 2018-2027 (USSR)

ABSTRACT: The [benzothiazolyl-(2)]-methyl ketone which was already earlier synthesized by the author (Ref 1), may serve as initial product for the synthesis of 2-methyl-benzothiazolylthiazoles, which were not yet described up to present and which are important for the synthesis of polymethene dyestuffs. In the present paper the bromination of the mentioned ketone and the ketone (I) obtained from it, was used for the synthesis of benzothiazolylthiazoles (II) and (VII). It was found that bromination of [benzothiazolyl-(2)]-methyl ketone in glacial acetic acid medium at 85-90° is easy, but it is very slow at low temperature. At the mol relation 2:1 of ketone and bromine, one half of the used ketone changes into (I), while the other half separates as bromide. By hydrolysis about 30% of used ketone can be reclaimed. The crude product (I) must be separated from the admixed initial ketone only by multiple recrystallization. The pure bromine ketone (I) melts at 91.5°. It was subjected to conversions described in scheme 1, which led to

Card 1/2

the isomeric benzothiazolylthiazoles (II) and (VII). The weak base (II) does not even react with excess methyl iodide in a hermetically sealed tube at 150° contrary to (VII), which forms quantitatively iodine ethylate (VIII; X=J) under the same conditions. When ethyl-p-toluene sulphonate is used both bases are converted into quaternary salts (III; $X=p\text{-}CH_3C_6H_4SO_3$) and (VIII; $X=p\text{-}CH_3C_6H_4SO_3$). From the quaternary salts of the above mentioned benzothiazolylthiazoles polymethene dyestuffs of various kind were synthesized such as "styryle" (IX) and (X), asymmetric thiazolethiacyanines (XI) and (XII), symmetric thiazolecarbocyanines (XIII) and (XIV), and finally rhodacyanines (XV) and (XVI). The absorption maxima of all dyestuffs were determined in a solution of ethyl alcohol in order to be able to compare their degree of coloring. There are 5 references, 3 of which are Soviet.

ASSOCIATION: Institut organicheskoy khimii Akademii nauk Ukrainskoy SSR (Institute for Organic Chemistry of the Academy of Sciences of the Ukrainskaya SSR)

SUBMITTED: April 21, 1958

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065520010-0"

S/079/60/030/04/43/080
B001/B002

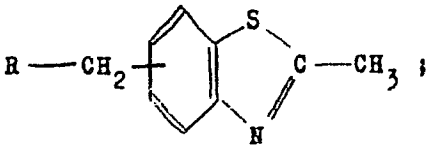
AUTHORS: Zubarovskiy, V. M., Khodot, G. P.

TITLE: Synthesis of Thiazole Derivatives. XIV. New Alcohols of the Benzthiazole Series and Their Conversions

PERIODICAL: Zhurnal obshchey khimii, 1960, Vol. 30, No. 4, pp. 1245-1250

TEXT: Among 2-methylbenzthiazole derivatives, 2-methyl-5-hydroxymethyl-(I) and 2-methyl-6-hydroxymethylbenzthiazole (II) were hitherto unknown. The esters of 2-methylbenzthiazole-5- and 2-methylbenzthiazole-6-carboxylic acid were the initial products used for the synthesis of these two alcohols. The methyl ester of the former acid was obtained from the methylester of 3-nitro-4-chlorobenzoic acid, according to the method described in Ref. 1, the ethyl ester of the second acid was obtained from acid chloride and alcohol. The conversion of the esters into carbinols (I) and (II) was carried out by their reduction with alumolithiumhydride in the range of -40° to -45°, since 2-methylbenzthiazole above 0° (as expected) reacts with the ether solution of alumolithiumhydride in the 1-double bond. Carbinols (I) and (II) may be separated from the admixture of the initial ester by

treatment with an alcoholic solution of caustic potash. The potassium salts of benzthiazole carboxylic acid thus developing, are easily separable. The synthesis of the isomeric carbinols (I) and (II) opened the way toward the synthesis of a series of 2-methylbenzthiazole derivatives with substituents in positions 5 and 6: chloromethyl-, cyanomethyl-, carboxymethyl-, diethylaminomethyl-, methoxymethyl- and acylmethyl—substituted compounds:



(I and II) R = OH, (III and IV) R = Cl, (V and VI) R = CN, (VII and VIII) R = COOH, (IX and X) R = CH_3COO, (XI) = C_6H_5COO, (XII) R = $N(C_2H_5)_2$, (XIII and XIV) R = CH_3O. The bases (XII - XIV) are liquids, the others are colorless, crystalline products. Under usual conditions, the new bases develop quaternary salts which may be used for the synthesis of

S/079/60/030/05/38/074
B005/B016

AUTHORS: Zubarovskiy, V. M., Khodot, G. P.

TITLE: Synthesis of Thiazole Derivatives. XV. Benzothiazolyl Pyrazolones

PERIODICAL: Zhurnal obshchey khimii, 1960, Vol. 30, No. 5, pp. 1585-1590

TEXT: The authors of the present paper synthesized 3 novel benzothiazolyl pyrazolones from 2-methyl-(benzothiazolyl-6)-hydrazine (I), 2-methyl-(benzothiazolyl-5)-hydrazine (II), and 2-methyl-mercapto-(benzothiazolyl-6)-hydrazine (III). The synthesis of these 3 initial substances was published recently (Ref.). The compounds (I) and (II) are unstable, and were, therefore, stored in the form of their hydrochlorides. Only immediately before carrying out the synthesis, the bases were set free from these salts. Compound (III) may be stored for some time in the form of the base. To prepare the benzothiazolyl pyrazolones, the compounds (I), (II), and (III) were condensed with acetoacetic ester. The mixture of the substituted benzothiazolyl hydrazine with acetoacetic ester was heated to 130-135° in order to remove completely water and alcohol which are formed on condensa-

Synthesis of Thiazole Derivatives,
XV. Benzothiazolyl Pyrazolones

S/079/60/030/05/38/074
B005/B016

tion. If the condensation is made in the cold, the benzothiazolyl hydrazone of acetoacetic ester is formed which splits off alcohol when heated to the melting point, and is converted to the corresponding pyrazolone derivative. In this condensation, the benzothiazolyl pyrazolones result in 80-90% yield. Their structural formulas are given. They can easily be purified by precipitation from the alkaline solution. The benzothiazolyl pyrazolones synthesized are colorless crystalline substances of amphoteric character. Their aqueous-alcoholic solutions turn brown-red when adding ferric chloride. This color soon disappears again. The active methylene group of the pyrazolone ring makes the 3 resultant benzothiazolyl pyrazolones capable of different condensation reactions. The authors performed condensations with aldehydes, p-nitroso-dimethyl aniline, diphenyl formamidine, and the iodo ethylate of 2-(ω-acetanilido-vinyl)-benzothiazole. On condensation with the latter compound in pyridine, dimethine merocyanines are formed, the structural formulas of which are given. In addition to these dyes, the same well-known symmetrical cyanine dye bis-(3-ethyl-benzothiazole-2)-trimethine-cyanine iodide results on condensation in all three cases. Besides, yellow substances of unexplained structure are obtained. The merocyanines can easily be

Synthesis of Thiazole Derivatives.
XV. Benzothiazolyl Pyrazolones

S/079/60/030/05/38/074
B005/B016

purified of these impurities by means of chromatography. The yellow by-products are probably formed in connection with the conversion of the iodo ethylate of 2-(ω-acetanilido-vinyl)-benzothiazole to the symmetrical thiacarbocyanine which occurs as a side reaction. A presumable structural formula for one of these yellow products is given. The resultant merocyanines are decolorized by hydrochloric acid. When heated with dimethyl sulfate, they form salts which contain an active methyl group and may be applied to the preparation of polymethine dyes. In an experimental part, all procedures performed are described in detail. All resultant products are characterized by melting point and nitrogen content. There is 1 Soviet reference.

ASSOCIATION: Institut organicheskoy khimii Akademii nauk Ukrainskoy SSR (Institute of Organic Chemistry of the Academy of Sciences, Ukrainskaya SSR)

SUBMITTED: April 20, 1959

Card 3/3

ZUBAROVSKIY, V.M.; MOSKALEVA, R.N.; BACHURINA, M.P.

Benzoxazolylbenzimidazoles and cyanine dyes obtained from them. Ukr. khim. zhur. 30 no.1:80-82 '64. (MIRA 17:6)

1. Institut organicheskoy khimii AN UkrSSR.

ZUBAROVSKIY, V.M.; KHODOT, G.P.

Synthesis of thiazole derivatives. Part 22: Organomagnesium synthesis involving aldehydes and ketones of the benzothiazole and benzimidazole series. Zhur. org. khim. 1 no. 12:2232-2236 D '65 (MIRA 19:1)

1. Institut organicheskoy khimii AN UkrSSR. Submitted July 29, 1964.

ZUBAROVSKIY, V.M.; BACHURINA, M.P.

Synthesis of thiazole derivatives. Part 20. 6-(β-hydroxyethyl)-2-methylbenzothiazole. Zhur. ob. khim. 34 no.11:3797-3800 N '64 (MIRA 18:1)

1. Institut organicheskoy khimii AN UkrSSR.

ZUBAROVSKIY, V.M.; KHODOT, G.P.

Synthesis of thiazole derivatives. Part 21: Formyl derivatives of 2-methylbenzothiazole. Zhur. ob. khim. 34 no.11:3801-3806 N '64 (MIRA 18:1)

1. Institut organicheskoy khimii AN UkrSSR.

ZUBAROVSKIY, V.M.; MOSKALEVA, R.N.; BACHURINA, M.P.

Synthesis of thiazole derivatives. Part 19: Benzothiazolyl-benzimidazoles. Zhur.ob.khim. 32 no.5:1581-1586 My '62. (MIRA 15:5)

1. Institut organicheskoy khimii AN Ukrainskoy SSR.
(Benzimidazole) (Benzothiazole)

ZUBAROVSKIY, V.M.; KHODOT, G.P.

Synthesis of thiazole derivatives. Part 18: New ketones of the benzothizole series and their transformations. Zhur.ob.khim. 32 no.5:1574-1581 My '62. (MIRA 15:5)

1. Institut organicheskoy khimii AN Ukrainskoy SSR.
(Benzothizole) (Ketones)

ZUBAROVSKIY, V.M.; MOSKALEVA, R.N.; Prinimala uchastiye BACHURINA, M.P.

Synthesis of thiazole derivatives. Part 17: Hydroxymethyl-substituted 2-methylthiazoles. Zhur.ob.khim. 32 no.2:570-575 F '62. (MIRA 15:2)

1. Institut organicheskoy khimii AN Ukrainskoy SSR.
(Thiazole)

ZUBAROVSKIY, V.M.; VERBOVSKAYA, T.N.; KIPRIANOV, A.I.

Synthesis of derivatives of thiazole. Part 16: New hydroxyalkyl-2-methylbenzothiazoles. Zhur.ob.khim. 31 no.9:3056-3062 S '61. (MIRA 14:9)

1. Institut organicheskoy khimii AN Ukrainskoy SSR.
(Thiazole)

BOBOKHIDZE, O.; ARTAMONOV, L.; ORLOV, A.; ZDYBSKIY, I.; KOVALEV, I.; ZUBARSKIY, N.; FRIDMAN, M.

Letters to the editor. Sov.profsoiuzy 7 no.23:54-56 D '59. (MIRA 12:12)

1. Instruktor sovprofa Gruzii (for Bobokidze). 2. Sotrudnik gazety "Trudovoy front" (for Artamonov). 3. Zamestitel' predsedatelya fabrichno-zavodskogo komiteta Ivanovskogo melanzhevogo kombinata (for Orlov). 4. Zamestitel' predsedatelya mestnogo komiteta bazy Tyrny-Auzskogo kombinata Kabardino-Balkarskoy ASSR (for Zdybskiy).
(Trade unions) (Efficiency, Industrial)

YELISEYEVA, V.I.; METELKIN, A.I.; ZUBARYAN, K.M.

Method of reinforcing natural and artificial leather; Soviet Certificate of Inventions No.145298. Kozh.-obuv.prom. 4 no.8:43 Ag '62. (MIRA 15:8)
(Leather industry--Technological innovations)

ZUBASHCHENKO, M.A.

Karst of Northern Vietnam. Izv.Vor.otd.Geog.ob-va no.3:159-166 '61. (MIRA 15:11)

(Vietnam, North—Karst)

ZUBASHCHENKO, M.A.

Principles of the geomorphological regionalization of North Vietnam. Nauch. zap. Ver. otd. Geog. ob-va; 145-151 '66).

(MIRA 17:9)

KUZNETSOV, N.D.; ZUBASHENKO, A.Ye.

Improving the designs of semiautomatic plate-making machines. Stek. i ker. 17 no.3:34-36 Mr '60. (MIRA 13:6)
(Pottery)

ZUBASHENKO, O.IE.

Semiautomatic apparatus for applying colored patterns on porcelain and faience articles. Leh.prom. no.3:5-8 Je - Ag '62. (MIRA 16:2)

1. Budyanskiy fayansovyy zavod.
(China painting)

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065520010-0

PROCESSES AND PROPERTIES INDEX

CA

2

The effect of bound water on the contact angle of wetting of colloidal films. E. A. Zabashchenko. *Nauch. Raboty Studentov Voronezh. Gosudarst. Univ.* 1959, Pt. 1, 79–87; *Khim. Referat. Zhur.* 1939, No. 11, 12.—The wettability of gelatin, acetylcellulose and starch films and the effect of glucose, urea, NaCl and EtOH (added to the aq. phase as well as to the colloidal soln.) on the size of the contact angle were investigated. The contact angle was measured according to the method of Rebinder. The hydrophilic properties of gelatin increased from addns. of glucose and urea owing, evidently, to the adsorption of these substances. Glucose and NaCl had no effect on the magnitude of the wettability of acetylcellulose. EtOH increased slightly its hydrophilic properties. The wettability of starch did not change from addns. of NaCl. A considerable static and kinetic hysteresis of wetting was observed in the gelatin and acetylcellulose films. Only the strongly bound solvated layers had an effect on the contact angle of wetting of the films investigated. W. R. Henn

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065520010-0"

ZUBASHCHENKO, M. A.

Zubashchenko, M. A. - "Toward a history of research on the karst of the Eastern European plain," Izvestiya Voronezhsk. gos. ped. in-ta, Vol. X, Issue 2, 1948, P. 89-110 --- Bibliog: 57 items

So: U-3566, 15 March 53, (Letopis 'Zhurnal 'nykh Statey, No. 13, 1949)

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065520010-0

ACC NR: AP6019015 (N) SOURCE CODE: UR/0032/66/032/001/0012/0014

AUTHOR: Yurchenko, Ye. I.; Savvin, S. B.; Zubasheva, L. V.; Garan', V. F.; Mishinskaya, I.S.

ORG: Scientific-Research and Planning-Technological Institute for Machine Construction (Nauchno-issledovatel'skiy i proyektno-tekhnologicheskiy institut mashinostroyeniya)

TITLE: Photometric determination of niobium in alloy steels by nitrosulfophenol S

SOURCE: Zavodskaya laboratoriya, v. 32, no. 1, 1966, 12-14

TOPIC TAGS: niobium containing alloy, alloy steel, colorimetric analysis, spectrophotometric analysis

ABSTRACT: A method was developed for the photometric determination of 0.01-2% Nb in alloy steels without the separation of Fe and the alloy elements. It is based on the reaction of Nb with nitrosulfophenol S in 3 N HCl solution. A sample of the steel (0.5 g with an expected content of 0.01-0.05% Nb and 0.25 g with an expected content of 0.05-2% Nb) is dissolved in 40 ml H_2SO_4 (1:4) in a 100 ml capacity glass; 1-1.5 ml H_3PO_4 (1.70) is added; the solution is oxidized by adding drops of HNO_3 and steamed until SO_3 vapors appear. The walls of the glass are washed with H_2O and the mixture is heated again until SO_3 vapors reappear. After cooling, 15 ml of 20% tartaric acid

UDC: 543.7

Card 1/2

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065520010-0

ACC NR: AP6019015

solution and some water are added. The solution is heated until the salts are dissolved, then it is cooled and transferred into a 100 ml measuring flask, and brought to the mark by the addition of distilled water. For the photometric determination, 4 ml of solution (with 0.01-0.10% Nb), 2 ml of solution (with 0.1-0.9% Nb) or 1 ml of solution (with 0.9-1.8% Nb) is placed in a 50 ml measuring flask; 24 ml of HCl (1:1), 15 ml of H_2O, and 1 ml of 0.1% solution of nitrosulfophenol S are added. The solution is heated for 5 min. at 65-70C, cooled, and brought to the mark by the addition of distilled H_2O. The light absorption is then measured with an SF-4 spectrophotometer in a layer 10 mm thick on the wavelength of 640 mμ or with an FEK-M photocolorimeter in a layer 30 mm thick with a red light filter. The measuring is carried out with respect to the solution of an alloyed steel having about the same composition but no Nb. The nitrosulfophenol S is added to this solution. The time required for photometric determination is 2.5-3 hr. The average relative error of analysis is 2-6%. Orig. art. has: 1 fig. and 2 tables.

SUB CODE: 07/ SUBM DATE: none/ ORIG REF: 005

Card 2/2

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065520010-0"

DASHEVSKIY, Lev Naumovich, kand. tekhn. nauk; POGREBINSKIY, Solomon Beniaminovich, inzh.; CHEKANOVA, Yekaterina Alekseyevna, kand. tekhn. nauk. Prinimali uchastiye: LOSEV, V.D.; ABALYSHNIKOVA, L.N.; ZORINA, Z.S.; ORLOVA, I.A.; ZUBATENKO, A.Ya.; PAVLENKO, Yu.S., inzh., retsenzent; GLUSHKOV, V.M., akademik, red.

[The "Kiev" computer; its design and operation] Vychislitel'naia mashina "Kiev"; proektirovanie i ekspluatatsiia. Kiev, Tekhnika, 1964. 322 p. (MIRA 17:11)

ZUBATENKO, A.Ya.

Testing system for an operational memeory device. Avtom. i prib. no.4:40-41 O-D '63. (MIRA 16:12)

1. Institut kibernetiki AN UkrSSR.

KONDALEV, A.I. [Kondaliev, A.I.]; ZUBATENKO, A.Ya.

Experimental diode capacitor memory system. Zbir. prats' z obchys. mat. i tekh. 2:105-110 '61. (MIRA 15:2)
(Electronic calculating machines)
(Information storage and retrieval systems)

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065520010-0"

35211

S/696/61/002/000/009/009
D299/D302

9,7140 (also 1147, 1164, 2902)

AUTHORS: Kondalyev, A.I. and Zubatenko, A.Ya.

TITLE: Experimental diode-capacitor working memory (DCWM)

SOURCE: Akademiya nauk Ukrayins'koyi RSR. Obchyslyuval'nyy tsentr. Zbirnyk prats' z obchyslyuval'noyi matematyky i tekhniky; v. 2, 1961, 105-110

TEXT: A memory device incorporating linear capacitors and diodes, was tested as a modified version of the working memory of the computer "Kyyiv". The working memory has to meet the following requirements: 1) Storing capacity--1023 binary 41-digit numbers; 2) circulating frequency-- at least 100 kc; 3) the codes received by, and transmitted from, the working memory, are in the form of standard pulses (suitable for the computer). The autonomy principle, used in design of the computer Kyyiv, was also used in developing the control system of the DCWM. The connection is described between the DCWM and the other computer units. In order to test the operation of the diode-capacitor memory and to determine the characteristics of its control elements, an experimental model for 16

Card 1/3

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065520010-0"

Experimental diode-capacitor ...

eight-digit numbers was constructed. The model incorporated the main DCWM control units, as planned for the computer Kyyiv. The model had the following units. A (4-digit) address register, a (4-digit) address counter, a commutation unit, decoder, amplifier etc. The following problems could be investigated on the model: 1) the dependence of its operation on the diode characteristics; 2) the dependence of storing time on the parameters of the memory unit; 3) the effect of the displacement voltages and of the pulse amplitudes on its operation; 4) the dependence of the read-signal level on the parameters of the memory unit; 5) the influence of regeneration frequency on storing time; 6) the influence of temperature conditions on its operation. In selecting the diodes, 7 types were investigated. It was found that the diode Д 18 (D1V) had the most convenient characteristics (R_{rev}/R_{dir} =28000). The storing time depends not only on the reverse resistance R_{rev}, but also on the capacitance C. An increase in displacement voltage led to a decrease in storing time. The maximum storing capacity was found to be 128 or 256 codes, with the given diode type. A temperature increase to +50°C, led to a lowering of

Card 2/3

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065520010-0"

Experimental diode-capacitor ...

the signal level by 60-70%, hence to lower storing capacity. Further, the various elements of the control unit of the DCWM are described. There are 8 figures and 1 table.

X

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065520010-0"

ZUBATKIN, G.Ye.

Improvement in local operations planning is one of the conditions for shortening building time. Trudy MIEI no.15:449-453 '61. (MIRA 14:12)

1. Glavnyy inzhener sektora Nauchno-issledovatel'skogo instituta ekonomiki stroitel'stva Akademii stroitel'stva i arkhitektury SSSR.
(Construction industry)

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065520010-0"

SIMANOVSKIY, B.Ye.; ZUBATKIN, G.Ye.; GOL'DBERG, I.I.

Organizing production and operations planning at the construction of an iron foundry. Prom. stroi. 40 no.8:10-13 Ag '63. (MIRA 16:8)

(Iron founding)

ZUBATOV, I. G.

23343 Uluchsheniye Sushki Zhmi. Tekstil. Prom-St', 1949, No. 7, s. 35-36.

SO: LETOPIS NO. 31, 1949

ZUBATOV, [illegible], and [illegible], G. P. (Odessa technological institute Lomonosov)

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065520010-0"

"Thermodynamic analysis of circuits of closed type for power installations with the MGD-generators."

Report presented at the Section on Thermodynamics, Scientific Session, Council of Acad. Sci. Ukr SSR on High Temperature Physics, Kiev, 2-4 Apr 1963.

Reported in Teplofizika Vysokikh temperatur, No. 2, Sep-Oct 1963, p. 321, JPRS 24,651. 19 May 1964.

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065520010-0"

ZUBATOVA, I.N.

Single firing of porcelain articles manufactured by hot die casting. Stek. i ker. 19 no.6:26-27 Je '62. (MIRA 15:7)
(Porcelain)

MITIN, N.G.; ZUBATOVA, I.N.; ROMANOVSKAIA, Z.Z.; KUDRINA, T.I.; VISHNEVSKIY, B.I.

Manufacturing porcelain ware by the method of slip casting.
Stek. i ker. 17 no.9:38-41 S '60. (MIRA 13:9)
(Porcelain)

ZUBATOVA, I.N.; SEN', Z.P.; KUDRINA, T.I.

Using bentonites in the production of faience. Bent.gliny Ukr. no.3:108-113 '59. (MIRA 12:12)

1. Nauchno-issledovatel'skaya laboratoriya Upravleniya farforo-fayansovoy i stekol'noy promyshlennosti Kiyevskogo sovnarkhoza. (Bentonite)

CHUMAK, V.G., kand. tekhn. nauk; ZUBATYY, A.G., inzh.

Determining the shrinkage of meat during freezing. Khol. tekh. i tekh. no.1:116-123 '65. (MIRA 18:9)

JASIUKEVICIUS, V.; JARULAITIS, V.; LAZYS, A.; SASNAUSKAS, K.; ZUBAUSKAS, A.; VILPISAUSKAS, V., red.; KONTRIMAS, K., red.; CECYTE, V., tekh. red.

[Production of bricks, tiles, and drainpipes] Plytu cerpiu ir dremu gamyba. [By] V.Jasiukevicius ir kiti. Vilnius, Valstybine politines ir mokslines literatures leidykla, 1961. 258 p. (MIRA 15:3)

(Bricks) (Tiles) (Drain tiles)

IVANAUSKAS, T.; MURASKA, J.; ZUBAVICIUS, T.

[Zuvintas Lake Preserve] Zuvintas. Vilnius, Valstybine politines ir mokslines literaturos leidykla, 1961. 46 p.
(MIRA 15:3)
(Zuvintas, Lake—Birds)

ZUPAVIN, [illegible]

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065520010-0"

34105. Imeni Vozhdya. (K25 - letiyu Mosk. avtozavoda im. Stalina). Ogonek, 1949, No. 45, s. 16

SO: Knizhnaya, Letopis', Vol. 7, 1955

ZUBAVIN, B.

Nesmolkaiushchaia batareia. Rasskazy
(Incessant battery; short stories). Moskva, Voennoe
izd-vo, 1954. 142 p.

SO: Monthly List of Russian Accessions, Vol. 7, No. 5, August 1954

BARER, A.S.; Prinimali uchastiye: GOLOV, G.A.; ZUBAVIN, V.B.; TIKHOMIROV, Ye.P.

Limit of human resistance to transverse acceleration and the physiological reactions of the organism. Probl.kosm.biol. 2:255-272 '62. (MIRA 16:4)
(ACCELERATION--PHYSIOLOGICAL EFFECT)

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065520010-0"

PHASE I BOOK EXPLOITATION SOV/4300

SOV/12-M-27

Akademiya nauk SSSR. Institut mekhaniki

Inzhenernyy sbornik, t. 27 (Engineering Collection, Vol. 27) Moscow, Izd-vo AN SSSR, 1960. 210 p. 2,000 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Otdeleniye tekhnicheskikh nauk.

Resp. Ed.: A. A. Il'yushin; Ed.: V. M. Akhundov; Ed. of Publishing House: V.M. Akhundov; Tech. Ed.: A.P. Guseva.

PURPOSE: This book is intended for engineers, applied physicists, and applied mathematicians.

COVERAGE: The book consists of 24 articles on such problems as wing theory, supersonic flow, theory of shells, stability, plasticity and elasticity, the bending of thin plates and shells, and various aspects of applied mathematics. No personalities are mentioned. References accompany most of the articles.

AVAILABLE: Library of Congress

ZUBCHENKO, I.I., aspirant

Engagement of a chain, equidimensional by link pitch, with chain-wheel teeth. Izv. vys. ucheb. zav.; Mashinostr. no. 10:56-60 '65 (MIRA 19:1)

1. Submitted November 28, 1964.

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065520010-0"

ZUBATOV, A. V.

Herbicides

Chemical method of controlling weeds. Sel. i sem 19, No. 8, 1952.

Monthly List of Russian Accessions, Library of Congress October 1952. UNCLASSIFIED.

"APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065520010-0"

1. ZUBATOVA, D.M.

2. USSR (600)

3. Weed control

4. Chemical weed control. Dost.sel'-khoz. No. 2, 1953.

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

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065520010-0"

IVANAUSKAS, T.; ZUBAVICHUS, T. [Zubavicius, T.].

Reacclimatization of the mute swan in Lithuania [with summary in English]. Biul.MOIP, Otd.biol. 61 no.5:5-8 S-O '56.

(MLRA 10:2)

(ZUVINTAS, LAKE--SWANS)

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065520010-0"

IVANAUSKAS, T.L., professor; ZUBAVICHUS, T.I.

Zuvintas Preserve. Priroda 43 no.10:61-64 O '54. (MLRA 7:10)
(Zuvintas preserve)

L 18079-63 EWT(l)/BDS/ES(a)/ES(g)/ES(c)/ES(k) AMD/AFFTC/AEDC Pg-4
ACCESSION NR: AP3005652 A/DD B/0219/63/056/007/0024/0029

AUTHOR: Barer, A. S.; Golov, G. A.; Zubavin, V. B.; Tikhomirov, Ye. P.

TITLE: Physiological body reactions of the human organism during action of maximal (in time and value) acceleration directed along the back-chest axis. Report 1: Tolerance limits and basic trend of physiological reactions

SOURCE: Byulleten' eksperimental'noy biologii i meditsiny*, v. 56, no. 7, 1963, 24-29

TOPIC TAGS: acceleration, physiological body reaction, maximum tolerance, cardiovascular system, respiratory system

ABSTRACT: To determine the maximum tolerances to accelerations acting along the back-chest axis at an angle of 65°, 45 men aged 24-34 in a series of 203 experiments were subjected to accelerations ranging from 4 to 15 g on a large centrifuge radius. The following were studied: cardiovascular system, external respiratory system, coordination of movements, bioelectric activity of the brain, bioelectric activity of skeletal muscles, and subjective sensations of the sub-

L 18079-63
ACCESSION NR: AP3005652

jects. Television and movies were used during the experiments. Reactions of the subjects to the mean acceleration values of 6-10 g can be divided into 4 stages. 1. Adaptation to external environment, characterized by significant increases in all systems and functions under study. 2. Resistance as the functional level of the systems decreases and the energetic level of response reactions becomes exhausted (gradual voltage decrease in the electromyograms and ECG and EEG shifts). 3. Adaptation collapse and functional discoordination. 4. Recovery, starting from the moment the centrifuge stops. For higher accelerations the highest functional levels of the systems are evoked and these in turn lead to exhaustion and the collapse of compensatory reactions. The limiting factors for high acceleration rates (12 to 15 g) are cardiovascular and external respiratory functional disturbances. The maximum tolerance for 6 g is 653 seconds, for 8 g 186 seconds, for 10 g 58 secs, for 12 g 28 secs, for 14 g 18 secs, and for 15 g 10 secs. Orig. art. has: 2 figures.

ASSOCIATION: none

SUBMITTED: 16Aug62 DATE ACQ: 21Aug63 ENCL: 00

Card 2/2 SUB CODE: AM NO REF SOV: 004 OTHER: 005

BARER, A. S.; GOLOV, G. A.; ZUBAVIN, V. B.; MURAKHOVSKIY, K. I.; RODIN, S. A.; SOROKINA, Ye. I.; TIKHOMIROV, Ye. F.

"Physiological reactions of the human organism to transverse accelerations and some means of raising the resistance to such probes."

report submitted to 15th Intl Astronautical Cong, Warsaw, 7-12 Sep 64.

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065520010-0"

[illegible]RER, A. [illegible].; ZH[illegible]VIN, V. B.

Nature of electroencephalogram and the work capacity of a man under the influence of accelerations acting along the "back-chest" axis. Probl. kosm. biol. 4:[illegible]-360 '65. ([illegible] 18:9)

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065520010-0"

ACC NR: AT6011850 SOURCE CODE: UR/0000/66/000/000/0211/0212

AUTHOR: Barer, A. S.; Golov, G. A.; Zubavin, V. B.; Sorokina, Ye. I.; Tikhomirov, Ye. P.

ORG: none

TITLE: Oxygen balance of an organism at prolonged accelerations

SOURCE: International Astronautical Congress. 17th, Madrid, 1966. Doklady. no. 12. 1966. Kislorodnyy balans organizma pri dlitel'nodeystvuyushchikh uskoreniyakh

TOPIC TAGS: biologic acceleration effect, animal physiology, dog, hypoxia, space physiology, human physiology

ABSTRACT:
The author reviewed the literature as well as experiments on humans (1500 tests using 120 subjects) and white rats (375 tests). He stated that changes in oxygen balance in humans are one of the main factors limiting prolonged G tolerance. This is primarily due to circulatory and respiratory functions which are directly affected by accelerations. The magnitude of these changes depends on the magnitude and duration of accelerations.

ACC NR AT7011450

Changes in external respiration including gas exchange during accelerations can be attributed to biomechanical difficulties and disrupted pulmonary circulation. Here, increased work by diaphragm muscles increases oxygen consumption. At high acceleration magnitudes (12 G and higher), this disruption of gas exchange renders the entire external respiratory process "unprofitable," or inefficient.

Up to 8—12 G, there is an increase in the activity of pulmonary ventilation reflected in accelerated respiration and an increase in per-minute volume. A further increase in acceleration magnitude leads first to relative and then to an absolute decrease in volumetric indices of external respiration. With an increase in acceleration, there is a steady 200 ml/G decrease. An increase in the per-minute respiratory volume in the 8—12 G range is associated with increased O_2 consumption and elevated CO_2 elimination. However, the relative efficiency of pulmonary ventilation decreases as acceleration magnitude increases. The percentage content of O_2 in respired air increases while CO_2 decreases. An analysis of the literature and data from the author's experiments indicate that the nature of qualitative changes in the gaseous composition of respired air is associated with an

increase in physiologically dead space due to changes in pulmonary circulation. Accelerations cause arterial hypoxemia, the severity of which depends on acceleration magnitude and duration. Beyond a dependence on acceleration magnitude, the level of hemoglobin decreases by 60—65%. The general oxygen requirement under these situations also does not depend on acceleration magnitude and is a constant value.

The circulatory system plays a leading role in supplying oxygen to the brain during acceleration. In experiments on human subjects, cerebral circulation and circulation in external vessels of the head were monitored. The force vector of acceleration plays an important part here, especially the longitudinal component. When the value of this component reaches 1.6—1.3 G, there is an increase in the pulsed pooling of cerebral vessels. At 3 G, a normal situation prevails while at 5 G, blood pooling decreases by a factor of two. EEG data was used as an index of the state of cerebral circulation.

In experiments with animals, general oxygen consumption, oxygen tension in tissues, and the tissue

oxidation reduction potential were studied. Here, it was established that during accelerations, there is a displacement of oxygen balance in various tissues with a tendency toward insufficient oxidation which depends on acceleration magnitude and duration as well as specific metabolic qualities of the tissues under study. For instance, the period necessary for the elimination of oxygen depth in the brain was 1.5—2.0 times shorter than for skeletal muscles.

In experiments where animals and humans were exposed to various atmospheric conditions during acceleration (normal, increased oxygen partial pressure, and decreased barometric pressure to 405 mm Hg), it was found that increased oxygen pressure improved resistance to prolonged accelerations. However, when general and cerebral hemodynamics were disrupted due to a high longitudinal acceleration component, this positive effect was eliminated by a disruption of gas exchange. Increased oxygen partial pressure (100 mm H_2O) increased human tolerance of 12 G by 35—40 sec. /ATD PRESS: 5098-F/

SUB CODE: 06 / SUBM DATE: none

"Physical and Chemical Composition of Water in Rakovnicky Creek" p. 334 (VODA, Vol. 33, No. 12, December 1953, Praha, Czechoslovakia).

SO: Monthly List of East European Accessions, LC, Vol. 3, No. 5, May 1954, Unclassified

CZECHOSLOVAKIA/Chemical Technology. Chemical Products and Their Application - Corrosion. Protection From Corrosion. H-4

Abs Jour: Referat Zhur-Khimiya, No 5, 1958, 14873.

Author : Zubcenko D.
Inst :
Title : Specific Form of Corrosion of the Pipes of the Water Supply System of the Town of Rozmov Near Radhost.

Orig Pub: Voda, 1956, 35, No 9, 265-269.

Abstract: As a result of investigations of the sources of potable water, nature of incrustations and of the material of the water pipes, the causes of corrosion and means of preventing the latter have been determined. Steel pipes are less subject to corrosion than cast iron pipes and the latter must contain small amounts of Ni, Cu or Cr in order obviate possible graphitization of the iron. Reduction in size of iron and graphite particles has

Card : 1/2

CZECHOSLOVAKIA/Chemical Technology - Chemical Products and Their Application - Water Treatment. Sewage Water. H-5

Abs Jour : Ref Zhur - Khimiya, No 3, 1958, 8457

Author : Zubcenko D.
Inst :
Title : Use of Activated Silica as an Auxiliary Agent in Coagulation.

Orig Pub : Voda, 1957, 36, No 5, 132-134

Abstract : A review.

Card 1/1

ZUBCENKO, D.

Valley reservoirs in river basins containing peat.

p. 38
Vol. 5, no. 1/2, Mar. 1955
VODNI HOSPODARSTVI
Praha

SO: Monthly List of East European Accessions (EEAL), LC, Vol. 5, no. 3
March 1956

Chemical changes in the water of the dam on the Lyde River at Vranov, p. 51. VODNI HOSPODARSTVI. (Ustredni sprava vodniho hospodarstvi) Praha, no. 2, Feb. 1956.

SOURCE: East European Accessions List, Vol. 5, no. 9, September 1956

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065520010-0"

ZUBCENKO, D.

Activated silica as an auxiliary coagulation agent. p.132.
(Voda, Vol. 36, No. 5, May 1957, Praha, Czechoslovakia)

SO: Monthly List of East European Accessions (EEAL) LC. Vol. 6, No. 9, Sept. 1957. Uncl.

ZUECENKO, D.

Rain water. p. 59.

VODA Vol. 35, no. 2, Feb. 1956

Czechoslovakia

Source: EAST EUROPEAN LISTS Vol. 5, no. 7 July 1956

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065520010-0"

[illegible]

Special case of the corrosion of the water main in Roznov pod Radhostem.
p. 365

VODA (Ustredni sprava vodniho hospodarstvi)
Vol. 35, No. 9, Sept. 1956

Praha, Czechoslovakia

SOURCE: East European List (EEAL) Library of Congress, Vol. 6, No. 1, January 1957

ZUBCENKO, Daniel, inz.

Clogging of steam piping by salts. Energetika Cz 11 no.11:554 N '61.

(Steam pipes)

ZUBCENKO, Daniel, ing.

Corrosion of water pipes and hot water pipes. Energetika Cz 11 no.5: 231-234 My '61.

ZUBCHANINOV, V. V. APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065520010-0"

"The Scattering of Potassium Ions on the Surface of Tantalum," Zhur. Eksper. i Teoret. Fiz., 12, No. 9, 1942. Mbr., Physics Inst., Leningrad Order Lenin State Univ., -1941-. im. Budnov.

"APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065520010-0"

1. ZUBCHANINOV, N. V.

2. USSR (600)

4. Machine Tools

7. Universal support. Stan. i instr. 24, No. 2, 1953.

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

1. ZUBCHANINOV, N. V.

2. USSR (600)

4. Lathes

7. Universal support. Stan. i instr. 24, No. 2, 1953.

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

ZUBCHANINOV, V.G. (Moskva)

Stability of rods as structural elements beyond the elastic limit. Inzh.sbor. 27:101-113 '60. (MIRA 13:6)
(Elastic rods and wires)

ZUBCHANINOV, V.G. (Moskva)

Stability of rods beyond the elastic limit in some structures. Inzh. sbor 28:204-211 '60. (MIRA 13:10)
(Elastic rods and wires)

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065520010-0"

31079
S/179/61/000/005/018/022
E081/E477

10.7200

AUTHOR: Zubchaninov, V.G. (Kalinin)

TITLE: Axially symmetric form of the loss of stability of a round cylindrical casing beyond the elastic limit

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Otdeleniye tekhnicheskikh nauk. Mekhanika i mashinostroyeniye. v.5, 1961, 131-132

TEXT: The paper covers the stability of a round cylindrical casing, of radius R, length l and wall thickness h, which is subjected to an even axial pressure beyond the elastic limit by the force P. It is assumed that on loss of stability, the area of elastoplastic deformation extends over the whole casing and that plastic deformation is small. Using the variational equation developed by L.A.Tolokonnikov (Ref.1: Rostovsk.-na-Donu gos. un-ta, 1955, v.XXXII, no.4) and using an approximate expression for potential internal forces and moments, an equation for the stability of the casing is found by normal means and is solved for casings with freely supported and with fixed ends. Numerical results are given for a cylinder in which R/h = 50, which is constructed

Card 1/2

Axially symmetric form ...

from a material having linear hardening properties. The relationship between PR/h and ℓ/R is shown graphically and it is also shown that for both fixed and freely supported specimens, the effect of length on the critical load decreases rapidly as ℓ/R increases up to $\ell/R \simeq 1$. Above this value the effect of cylinder length is small, and where the length is greater than the radius, it may be regarded as being of infinite length; a formula for determining the critical loading under these conditions is given. There are 1 figure and 3 Soviet-bloc references.

SUBMITTED: February 26, 1959

ZUBCHANINOV, V.G. (Kalinin)

Elastoplastic stability of rods. Inzh.zhur. 1 no.3:139-145 '61.
(MIRA 15:2)
(Elastic rods and wires)

ZUBCHANINOV, V.G. (Kalinin)

Elastoplastic stability of plates. Inzh.zhur. 5 no.2:299-305 '65.
(MIRA 18:4)

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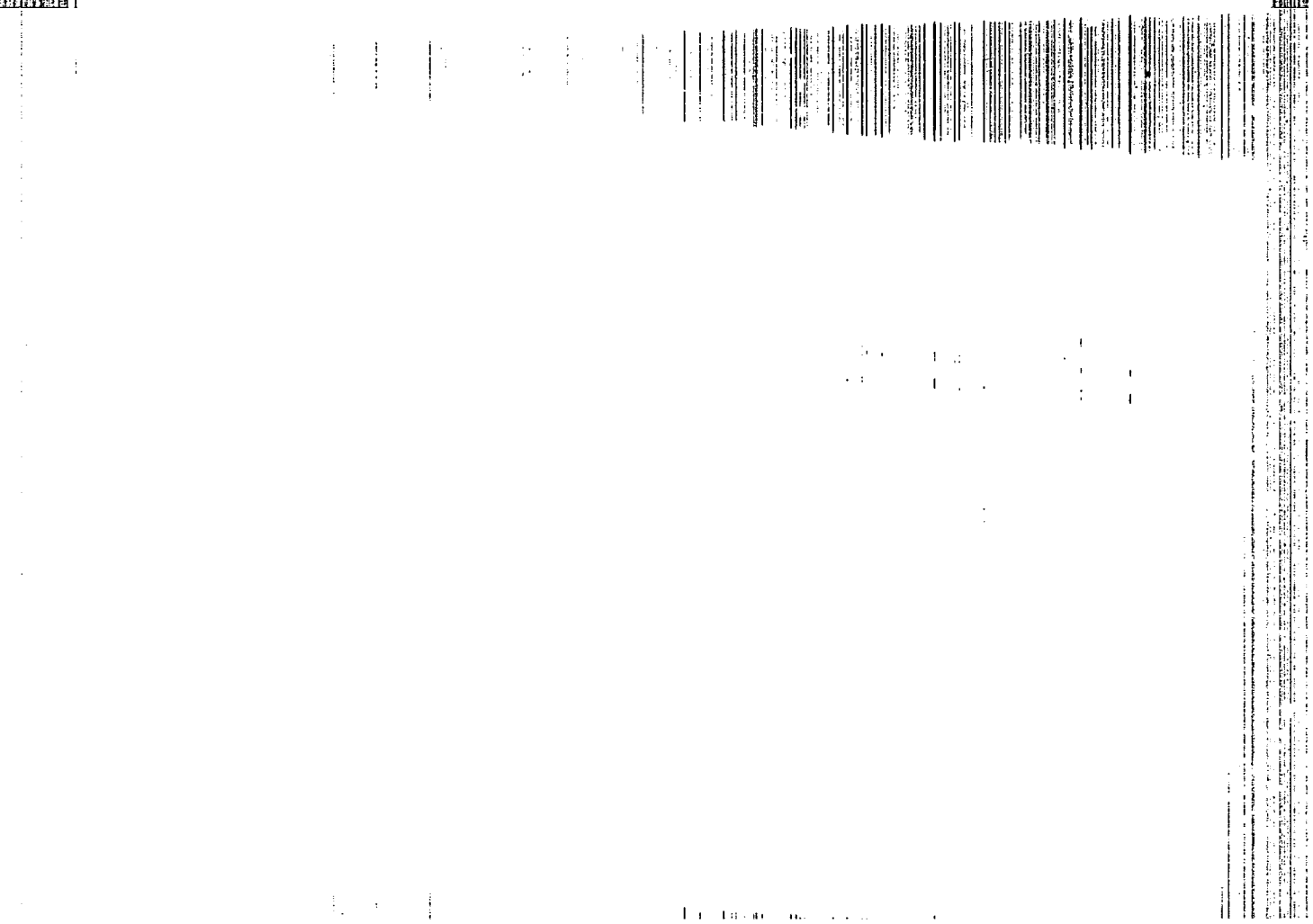

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065520010-0"

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065520010-0"

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065520010-0"

ZUBCHANINOV, V.G. (Kalinin)

Elastoplastic stability of rods. Inzh. zhur. 5 no.5:983-991 '65.
(MIRA 18:10)