"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8

RUDENKO, P. A., Chief
Veterinary Administration, Ministry of Agriculture, Kazakh SSR
"Experience of the work of the Sarkand Zooveterinary District"
SO: Veterinariya, 27 (5), 1950, p. 56

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8

RUDENKO, P.A., kandidat veterinarnykh nauk.

Controlling the warble fly in Kazakhstan. Veterinariia 34 no.1: 40-43 Ja '57. (MLRA 10:2)

1. Ministerstvo sovkhozov Kazakhskoy SSR.
(Kazakhstan--Warble flies)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8

RUDENKO, P. M., Cand Tech Sci -- (diss) "Research into the parameters of thermal treatment of ceramic articles in the roasting period by method of electroconductivity." Kiev, 1960. 15 pp; with illustrations; (Academy of Construction and Architecture Ukrainian SSR, Scientific Research Inst of Building Materials and Articles); 200 copies; free; (KL, 28-60, 161)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8

RUDENKO, P.M.; DIKOVA, S.A.

Making ceramic bricks and ceramic-brick panels. Stroi.mat. 6 no.4:10-12 Ap '60. (MIRA 13:6)
(Hollow bricks) (Building blocks)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8

USSR/Medicine-Veterinary, Infectious Diseases Sep 53

"Infectious Pleuropneumonia of Goats and Eradication of it in Kazakhstan," P. Rudenko, Sr Sci Assoc Inst of Vet Med, Kazakhstan Affiliate, All-Union Acad of Agr Sci im V. I. Lenin (VASKhNIL)

Veterinariya, Vol 30, No 9, p 52

Two subcutaneous injections of aluminum hydroxide formol vaccine, administered 7 days apart, proved highly effective in prevention of infectious pleuropneumonia in goats. Immunity created lasted one

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year. The dose for both the first and second inoculation was 5cc for adult goats and 3cc for young animals up to 6 months of age. The vaccine was administered in the area of the neck and produced no noticeable harmful effects.

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8

ARTEMOV, D.M.; RUDENKO, P.A.; BOYARIN, B.Ya.; KURTSEV, V.V.; VOLODINA, M.A.; KRIVOVAYA, V.I.; KOROLEV, I.V.; BUDNIKOVA, Z.M.; METAL'NIKOVA, A.L.; AFANAS'YEV, S.P., red.; GUDKOVA, N., red.; YAKOVLEVA, Ye., tekhn. red.

[Economy of Moscow Province; a statistical manual] Narodnoe khoziaistvo Moskovskoi oblasti; statisticheskii sbornik. [Moskva] Mosk. rabochii, 1958. 270 p. (MIRA 11:9)

1. Moscow (Province). Oblastnoye statisticheskoye upravleniye.
2. Nachal'nik Moskovskogo oblastnogo statisticheskogo upravleniya (for Afanas'yev).
(Moscow Province--Economic conditions--Statistics)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8

PETRUNYA, S.P., kand.med.nauk; RUDENKO, P.A., doktor

Results of surgery in separation of the retina. Oft.zhur. 13 no. 1:54-58 '58. (MIRA 11:4)

1. Iz Voroshilovgradskoy oblastnoy bol'nitsy.
(RETINA--SURGERY)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8

RUDENKO, P.A

Ox warbles and their control among cattle in Kazakhstan. Veterinariia 31 no.3:46-47 Mr '54. (MLRA 7:2)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8

LYAPIN, D.P.; MOGIL'NIKOV, S.V.; PASTUSHKOV, M.T.; RUDENKO, P.F.

Mechanizing labor-consuming operations in cutting development openings. Ugol' 31 no.5:11-15 My '56. (MLRA 9:8)

1. Donetskiy nauchno-issledovatel'skiy ugol'nyy institut.
(Coal mining machinery)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8

ZHUKOV, A.V.; GOROKHOVSKIY, A.D.; DAMASKIN, S.A.; RUDENKO, P.M.; ZONENBERG, M.F.; DIKOVA, S.A.; GAYDAY, V.K., red.

[Production of large wall elements from ceramics] Proizvodstvo krupnykh stenovykh konstruktsii iz keramiki. Kiev, Budivel'nyk, 1965. 33 p. (MIRA 18:8)

1. Moscow. Gosudarstvennyy nauchno-issledovatel'skiy institut stroitel'nykh materialov i izdeliy.

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8

RUDENKO, P.M., inzh.

Regulating kilning processes of ceramic products according to the electric conductivity of kilned materials. Stroi.mat. 5 no.12:31-33 D '59. (MIRA 13:3)
(Ceramic materials--Electric properties)
(Kilns)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8

RUDENKO, P.M., inzh.

Electric conductivity of some easily fusible clays and its use in determining the quality of kilning. Nov. v proizv. stroi. mat. no.1: 195-221 '59. (MIRA 12:12)
(Clay) (Electric conductivity)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8

[illegible], [illegible], [illegible]; ZINENBERG, M. Ye.; [illegible], [illegible]

[illegible] formation of efficient ceramic stone from poor raw [illegible]terials. Stroi. mat., det. i izd. no. 2:21-31 '65 (MIRA 19:1)

1. Gosudarstvennyy nauchno-issledovatel'skiy institut stroitel'-[illegible] materialov i izdeliy, Kiyev.

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8

ZHUKOV, A.V.; RUDENKO, P.M.; ZENFNBERG, M. Ye.; DAMASKIN, S.A.; SPEKTOR, B.V.; KRIVICH, K.N.

Investigation of a new method of reducing the heat conductivity of hollow ceramic stone and wall panels made of it. Stroi. mat., det. i izd. no. 2:52-61 '65 (MIRA 19:1)

1. Gosudarstvennyy nauchno-issledovatel'skiy institut stroitel'nykh matrialov i izdeliy, Kiyev (for Spektor). 2. Kiyevskiy eksperimental'no-issledovatel'skiy zavod. (for Krivich).

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8

DAZHUK, K.V., kand.tekhn.nauk; RUDENKO, P.M., inzh.; KUTAS, O.N., inzh.

Producing large blocks made of common bricks and ceramic bricks. Nov. v stroi. tekh. no.12:110-136 '57. (MIRA 11:1)
(Building blocks)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8

DRABAN, A.Z., inzhener; RUDENKO, P.M., inzhener; YAKOVENKO, O.I., inzhener.

"Keramzit" (porous clay filler) made of local raw materials of the Ukrainian S.S.R. Nov. v stroi. tekh. no.6:45-88 '55. (MLRA 9:11)

1. Nauchno-issledovatel'skiy institut stroitel'nykh materialov Akademii arkhitektury USSR.
(Ukraine--Clay)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8

GUDKOV, S.F.; IVANOV, A.K.; KORNILOV, V.F.; LUR'YE, B.I.; NALBANDYAN, A.B.; RUDENKO, P.S.

Plant test of the direct production of formaldehyde from natural gas. Gaz. prom. 8 no.4:35-39 '63. (MIRA 17:10)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8

RUDENKO, P.V.

Repairing analytical weights. Izm. tekh. no.8:60 Ag '65. (MIRA 18:9)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8

RUDENKO, P.V.

Checking 500 kilogram weights on OGV-IU scales. Izm. tekh. no.12:14 D '64. (MIRA 18:4)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8

RUDENKO, P.V.

Conveyor for drying mirrors. Stek. i ker. 18 no. 3:30-31 Mr '61. (MIRA 14:5)

(Conveying machinery) (Glass manufacture--Equipment and supplies)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8

RUDENKO, P. V.

Effect of the temperature of a weighed body on the result of weighing. Izm. tekh. no.11:23-24 N '60. (MIRA 13:11)
(Moisture--Measurement)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8

RUDENKO, S.

[Volga-Don waterway] Volgo-Donskoi vodnyi put'. [Leningrad] Lenizdat, 1952. 177 p. (MIRA 11:1)

(Volga-Don Canal)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8

RUDENKO, S., [illegible], Gerty Sovetskogo Soyuza

Great feat of the people. Kryl. rod. [illegible] No.[illegible]1-2 My '65.
(MIRA 18:6)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8

RUDENKO, S.

Volgo-Donskoi vodnyi put' [The Volga-Don waterway]. Leningrad, Lenizdat, 1952. 180 p.

SO: Monthly List of Russian Accessions, Vol. 6 No. 8 November 1953

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8

RUDENKO, S. A.

"The Problem of the Morphology of Perthitic Concretions of Feldspar," Zapiski V-S. Mineral. Obshch., No. 4, 1949.

Chair Mineralogy, Leningrad Order Lenin & Labor Red Banner Mining Inst., -c1949-.

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8

RUDENKO, S.A.

Genesis of mariupolite zircon and I.D. TSarovskii's review of my article on this subject. Zap. Vses. min. ob-va 87 no.4:513-517 '58. (MIRA 12:1)

1. Kafedra mineralogii Leningradskogo gornogo instituta.
(Mariupolite) (Zircon)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8

RUDENKO, S. A.

Morphological and genetic classification of perthitic intergrowths. S. A. Rudenko (Mining Inst., Leningrad). *Zapiski Vsesoyuz. Mineralog. Obshchestva* (Mém. soc. russe minéral.) 83, 27-30(1954); cf. *Zapiski Leningrad. Gornogo Inst.* 26, No. 2(1952).—R. restricts his discussions exclusively to perthitic and antiperthitic intergrowths of K and Na feldspars in pegmatitic rocks. "Isoperthites" are intergrowths of 2 nearly identical components, e.g. of plagioclases or microcline. The morphological orientation is given in the laws of planes of intergrowths, based on the orientation in the K feldspar component: law (I) ($\bar{1}$3.0.2); law (II) (100); law (III) (201); law (IV) (±110). In the antiperthites, the K feldspar is intergrown on (010), (100), or (±110) of the plagioclase (albite) with its tabular (010). The best-known isoperthites are those with labradorite; there are also some from S. Karelia, from pegmatites with *Ab*-rich plagioclase and even microcline. The genetic types of perthites are given by structural characteristics: (1) unmixing perthites with exchange of the cations K^+ and Na^+, the latter arranged in ordered positions in ($\bar{1}$5.0.2) of the K feldspar host crystal, i.e. in the plane of the murchisonite cleavage (often described in the literature as (801) or (701)); (2) segregation perthites with the laws II, IV, or III; (3) metasomatic segregation perthites, characterized by the metasomatic introduction of Na^+, and removal of K^+, as a post-magmatic phenomenon, with ichthyoglyptic quartz, poikilitic inclusions, following laws II, III, or IV; (4) metasomatic perthites proper show the *Ab* crystals oriented on structural discontinuities, with the same exchange of Na^+ for K^+; (5) transcrystn. perthites, frequent in pegmatites or gneisses, formed under dynamometamorphic actions, characterized by relics of plagioclase, surrounded by coarse crystals of microcline; (6) albitization perthites (metasomatic perthites of 2nd class), with *Ab* or oligoclase-albite replacing microcline from the periphery, or along discontinuities, by epitaxis or *in situ* of the original feldspar, with uniform optimum extinction (metasomatic perthites of 3rd class); (7) transcrystn. antiperthites are frequent in pegmatites, granite-aplites, or porphyries, often with relictic structures (antiperthites of 2nd class); (8) metasomatic antiperthites with a typical replacement of plagioclase by microcline from the periphery, or along discontinuities, by epitaxis, or albitization, replacing the microcline; (9) plagioclase-isoperthites with exchange of Na^+ for Ca^{++}, e.g. in primary iridescent labradorite; (10) transcrystn. isoperthites with acidic plagioclase or microcline with relictic structures similar to those of the perthites (5) and antiperthites; (11) metasomatic isoperthites by albitization, *Ab* replacing acidic or intermediate plagioclase. From the observed facts, 3 fundamental genetic types are derived: (1) high-temp. intergrowths, characterized by regular and uniform intergrowths of the 2 feldspars having the same network structure (x-ray studies have shown that the cleavage planes (001) and (010) may coincide and also the albite lamellae coincide); (2) intermediate temp. intergrowths, especially many metasomatic perthites and antiperthites; the orientation is often similar to that of the high-temp. types, but the replacement of the 2nd for the 1st feldspar is combined with the destruction of the latter in its lattice and a secondary epitaxis occurs; (3) low-temp. intergrowths, typically metasomatic; the intergrowth is regular but not uniform, and the host feldspar is destroyed in its structure. After a crit. discussion of previous classifications of perthitic intergrowths by Andersen (*C.A.* 23, 2009); Alling (*C.A.* 26, 4772; 32, 5346[6]); Bol'dyrev (*C.A.* 34, 4107[6]), R. proposes a new one, based on the following indications: size and shape of the intergrown particles in the space and on plane sections; the morphological law of the intergrown tabular crystal particles; the chem. compn. of the host feldspar and of the intergrown crystal particles, also the twin laws observed, the size of the twin individuals, etc.; structural particularities, e.g. continuous or discontinuous transitions from one feldspar to the other, the peripheral or

(over)

Chair of Mineralogy

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inclusion character of the replacing (new-formed) feldspar, etc. "Unmixing antiperthites" and "eutectic perthites" described in the literature are omitted in the new classification because objective indications for the existence of such formations are uncertain.

W. Eitel

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8

STULOV, N.N.; SHAFRANOVSKIY, I.I.; MOKIYEVSKIY, V.A.; POPOV, G.M.; BETEKHTIN, A.G.; NIKOLAYEV, V.A.; ANSHELES, O.M.; GRIGOR'YEV, D.P.; YEROFEYEV, B.N.; TATARSKIY, V.B.; SOLOV'YEV, S.P.; NIKITIN, V.D.; RUDENKO, S.A.; DUBININA, V.N.; ALYAVDIN, V.F.; VLADIMIROV, B.N.; KAZITSYN, Yu.V.; FRANK-KAMENETSKIY, V.A.; KALININ, A.I.; BALASHOVA, M.N.; SAL'DAU, E.P.; DOLIVO-DOBROVOL'SKAYA, G.M.; LAVRENT'YEV, M.F.

Viktor Ivanovich Mikheev. Zap. Vses. min. ob-va 86 no.2:317-320 '57. (MLRA 10:6)

(Mikheev, Viktor Ivanovich, 1912-1956)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8

Rudenko, S. A.

Mode and mechanism of the formation of zircon crystals in mariupolite. S. A. Rudenko. *Zapiski Vsesoyuz. Mineral. Obshchestva* 86, 454-8(1957).—Mariupolite is one of the most remarkable alk. abyssic rock types, occurring either in fine-granular, or in gneissic, or pegmatoidal varieties, in the latter case with giant monocrystals of microcline. Zircon is an accessory mineral, assocd. with albite, both minerals of typically metasomatic origin (cf. *Zapiski Leningrad. Gorn. Inst.* 33(1957)), their amts. varying in wide limits. Zircon replaces especially albite which often appears only in relict forms, in very characteristic "trachytoid" intergrowths. Fine-granular zircon aggregates in branched or even dendritic forms, skeletons, and zonal structures of zircon are often observed in most variable modifications, as typical for a crystn. from a viscous medium. Variations in the chem. compn. are often indicated by zonal color differences in the zircon crystals, and differences in their birefringence, or a "banding" which indicates a "pulsation" of the compn. of the postmagmatic solns. from which the zircon crystd., comparable to similar zoning in muscovite (cf. Nikitin, *C.A.* 45, 2829b), replacing quartz. W. E.

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8

RUDENKO, S., marshal aviatsii, Geroy Sovetskogo Soyuza

Shattering power of Soviet aeronautics. Av. i kosm. 47 no.4:31-35 Ap '65. (MIRA 18:4)

1. Byvshiy komanduyushchiy 16-y vozdushnoy armiyey.

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8

RUDENKO, S.A.

Genesis of apatite deposits in the Khibiny Mountains. Zap. LGI 47 no.2:49-70 '64. (MIRA 18:3)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8

RUDENKO, S.A.

MIKHEYEV, V.I.; RUDENKO, S.A.

New data on the characteristics of iridescence of feldspars. Zap.Vses.min.ob-va 83 no.4:355-361 '54. (MLRA 8:2)

1. Leningradskiy Gornyy institut.
(Feldspar)

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8

LIVYY, G.V.; KAZARINA, N.N.; GIL'MAN, B.A.; RUDENKO, S.D.; DREVINA, N.G.; BESSMERTNAYA, N.S.; ALPATSKAYA, V.P.; KOZLOVSKIY, S.I.; SLYUNIN, B.S.

Development and application of reinforced film coating of sheepskins for coats. Kozh.-obuv.prom. 4 no.3:25-28 Mr '62. (MIRA 15:5)
(Fur--Dressing and dyeing)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8

KAZARINA, N.N., inzh.; SHIFMAN, R.O., inzh.; GIL'MAN, B.A., inzh.; RUDENKO, S.D., inzh.

Simplified method of determining the content of fatty substances in leather and fur. Kozh.-obuv.prom. 4 no.8:28-29 Ag '62. (MIRA 15:8)

(Leather) (Fur)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8

RUDENKO, S.F.

Contribution to the study of the stunted forests of the Carpathians. Probl. bot. 5:97-103 '60. (MIRA 13:10)

1. Uzhgorodskiy universitet, Uzhgorod.
(Transcarpathia--Mountain ecology)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8

RUDENKO, S.I., marshal aviatsii, Geroy Sovetskogo Soyuza

Flight and tactical training is the advanced stage of combat effectiveness. Vest.Vozd.Fl. no.6:13-18 Je '60. (MIRA 13:7)

(Air warfare)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8

RUDENKO, S.I., marshal aviatsii, Geroy Sovetskogo Soyuza

Mighty wings of the Soviet state. Kryl. rod. 15 no.7:1-2 Jl '64.
(MIRA 18:1)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8

KAZAKOV, K.P., marshal artillerii; RUDENKO, S.I., marshal aviatsii; MIKHAYLIN, V.V., kontr-admiral; LEONOV, A.I., marshal voysk svyazi

Soviet military leaders on the revolution in military affairs. Voen.znan. 40 no.11:36 N '64. (MIRA 18:1)

1. Komanduyushchiy raketnymi voyskami i artilleriyey (for Kazakov). 2. Pervyy zamestitel' Glavnokomanduyushchego Voyenno-Vozdushnymi Silami (for Rudenko). 3. Pervyy zamestitel' komanduyushchego Krasnoznamennym Baltiyskim flotom (for Mikhavlin). 4. Nachal'nik voysk svyazi (for Leonov).

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8

"Evaporation from the Water Surface and Evaporation Losses from Large Water Reservoirs", Trudy, GGI, No 3 ([illegible]), 1[illegible] (3-70)

S : [illegible], [illegible] 1953

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8

AUTHOR: Rudenko, S.I., Professor, (Leningrad) SOV-25-58-10-14/48

TITLE: Tumulus Findings in the Altay Hills (O chëm povedali kurgany)

PERIODICAL: Nauka i zhizn', 1958, 25. Nr 10, pp 23 - 25 (USSR)

ABSTRACT: The author gives a detailed description of excavations conducted systematically since 1927 under his supervision in the Altay Mountains by the Institut istorii material'noy kul'tury Akademii nauk SSSR (Institute of the History of Material Culture) of the USSR Academy of Sciences. These excavations led to interesting results with regard to the culture and life in ancient times. There are 7 photographs.

1. Archaeology--USSR

Card 1/1

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8

RUDENKO, S.I., ARTEMEV, V. V., BUTOMO, S. V., DROZHZHIN, V. M., ROMANOVA, Ye. N., STARIK, I. Ye. (USSR)

"Liquid Scintillators for Radiocarbon Dating in Archaeology."

report presented at the Conference on Radioisotopes in Metallurgy and Solid State Physics, IAEA, Copenhagen, 6-17 Sept. 1960.

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8

L 24198-66 EWT(1)/FCC GW

ACC NR: AP6011366 SOURCE CODE: UR/0362/66/002/003/0236/0247

AUTHOR: Galin, M. B.; Popov, A. A.; Rudenko, S. I.

ORG: Mirovoy Meteorological Center (Mirovoy meteorologicheskiy tsentr)

TITLE: Propagation of disturbances in a baroclinic atmosphere in the presence of radiation and turbulent thermal conductivity

SOURCE: AN SSSR. Izvestiya. Fizika atmosfery i okeana, v. 2, no. 3, 1966, 236-247

TOPIC TAGS: turbulent heat transfer, atmospheric model, adiabatic process

ABSTRACT: A four-level model (50, 150, 250, and 950 mbar levels) of the atmosphere was investigated by analyzing the stability of a zonal stream with respect to wave disturbances. The data were compared with those computed on the basis of Galin's two-level model (1959). The application of the four-level model to the study of the disturbance was partially based on theoretical studies by Galin (1964) and on differential equations of vortex transfer. The heat transfer in the atmosphere in the model was determined on the basis of a formula developed by Glinov (1964). The data show that the four-level model gives four wave types, one of which is similar to the Rossby wave. The Rossby waves and a second wave type correspond to the two wave types of the two-level model. The four-level adiabatic model is characterized by a new type of instability as compared with the two-level model. It was found that the stability cha-

UDC: 551.511.32

Card 1/2

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L 21198-66

ACC NR: AP6011366

racteristics of the model are greatly affected by the parameters of thermal stratification (γ). Orig. art. has: 10 figures, 25 formulas, 2 tables. [14]

SUB CODE: 08/ SUBM DATE: 03Nov65/ ORIG REF: 006/ OTH REF: 002/

ATD PRESS: 4245

Card 2/2

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8

[illegible], [illegible]. K.: "The effect of ultra short wave on the process of healing breaks in the long hollow bones (experimental investigation and clinical observations)." Odessa State Medical Institute N. I. Pirogov. Mukachevo, 1[illegible]. (Dissertation for the Degree of Candidate in Medical Sciences).

Source: Knizhnaya letopis' No. 2[illegible] 1956 Moscow

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8

RUDENKO, S. K.

Technic of Pirogov's operation. Khirurgiia, Moskva No. 11, Nov. 50. p. 83-4

1. Of the Clinical Department of Children's Surgery, Orthopedics, and Traumatology (Head and Scientific Supervisor--Prof. I. L. Zaychenko), Trans-Carpathian Scientific-Research Institute for the Care of Mothers and Children.

CLML 20, 3, March 1951

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8

IEVT, [illegible]; RODELKO, S.V.

Investigating the hardening of emulsion layers. Part 3: Determining the temperature of the creeping of emulsion layers at temperatures over 100°C. Zhur. nauch. i prikl. fot. i kin. 10 no.5:395-397 S-O '65. (MIRA 18:9)

1. Vsesoyuznyy nauchno-issledovatel'skiy kinofotoinstitut (NIKFI).

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8

RUDENKO, S.Ya., inzh.

Maintenance of the automatic equipment of railroad stations.
Avtom., telem. i sviaz' 9 no.7:33-36 Jl '65. (MIRA 18:8)

1. Laboratoriya signalizatsii i svyazi Severo-Kavkazskoy dorogi.

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8

RUDENKO, T., inzh.

Selecting optimum wing aspect ratio for free-flying models.
Kryl.rod 13 no.8:30-31 Ag '62. (MIRA 15:8)
(Airplanes--Models)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8

SAPOTNITSKIY, S.A.; GLUSHCHENKO, N.V.; Prinimali uchastiye: SPICHKINA, T.G.; RUDENKO, T.A.

Oxidation of sulfites by air in diluted acidified solutions. Zhur.prikl.khim. 35 no.10:2191-2195 O '62. (MIRA 15:12)

1. Gosudarstvennyy nauchno-issledovatel'skiy institut gidroliznoy i sul'fitno-spirtovoy promyshlennosti.
(Sulfites) (Oxidation)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8

RUDENKO, T. F.

Russia (1923- U.S.S.R.)

Manual for a railroad car technician. 5. izd. ispr. i dop. Moskva, Gos. transp. zheldor. izd-vo, 1954. (Mic 55-3914)

Collation of the original, as determined from the film:222 p.

Microfilm Slavic 472 T

1. Railroads - Cars. I. Deviatkov, V. F. II. Rudenko, T. F.

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8

RUDENKO, T.F.

DEVYATKOV, V.F.; RUDENKO, T.F.; ARSHINOV, I.M., redaktor; KHITROV, P.A., tekhnicheskiy redaktor.

[Handbook for railroad car masters] Rukovodstvo poezdnomu vagonnomu masteru. 5-e izd., ispr. i dop. Moskva, Gos. transp. zheleznodorozh. izd-vo, 1954. 222 p. [Microfilm] (MLRA 7:11)

1. Russia (1923- U.S.S.R.) Ministerstvo putey soobshcheniya. (Railroads--Cars)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8

RUDENKO, T. I.

47

Decomposition of the oxalates of plutonium under the action of its own α-radiation. V. V. Fomin, R. E. Kartushova, and T. I. Rudenko. *Atomic Energy* (U.S.S.R.) (English translation) 1, No. 8, 117(1956)(Pub. in *J. Nuclear Energy* 4, 247-52)(1956).—Decompn. rates of the oxalates of tri-, quadri-, and sexivalent Pu were detd. in air and vacuum, light and dark, and at −80° and at room temp. Decompn. occurs under the action of Pu α-radiation; however, in the case of Pu(IV) and Pu(VI) oxalates the CO formed promotes reduction to Pu(III) and Pu(IV) carbonates and oxides, or oxyoxalate-carbonate mixts.

James L. Lauer

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8

FOMIN, V.V.; RUDENKO T.I.

Properties of tributyl phosphate solutions in benzene, carbon tetrachloride, and n-decane. Part 1: Heats of mixing and changes in volumes on mixing anhydrous tributyl phosphate with benzene, carbon tetrachloride, and n-decane. Radiokhimiia 7 no.1:33-39 '65. (MIRA 18:6)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8

173

DECOMPOSITION OF PLUTONIUM OXALATES BY INTRINSIC ALPHA RADIATION, V. V. Fomin, R. E. Kartashova, and T. I. Rudenko, Soviet J. Atomic Energy, No. 3, 409-13(1956).

Decomposition of the oxalates of tri-, tetra- and hexavalent plutonium was studied in air and in a vacuum at room temperature and −80° both under illumination and in darkness. It was found that the decomposition is caused by alpha radiation from the plutonium, but in the oxalates of tetra- and hexavalent plutonium the carbon monoxide which is formed acts as a reducing agent which transforms the tetravalent plutonium to the trivalent form and the hexavalent to the tetravalent. The oxalates are then transformed into carbonates and, apparently, also partially into oxides or an oxyoxalate–carbonate mixture. (auth)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8

SOV/78-3-9-18/38

AUTHORS: Fomin, V. V., Kartushova, R. Ye., Rudenko, T. I.

TITLE: The Determination of the Stability Constant of the Ions $Ce(NO_3)_x^{3-x}$ With the Aid of a Tributyl Phosphate Extraction (Opredeleniye konstant ustoychivosti ionov $Ce(NO_3)_x^{3-x}$ pri pomoshchi ekstraktsii tributilfosfatom)

PERIODICAL: Zhurnal neorganicheskoy khimii, 1958, Vol 3, Nr 9, pp 2117-2127 (USSR)

ABSTRACT: The dependence of the distribution coefficient of trivalent cerium between a nitric acid solution and a solution of tributyl phosphate in benzene on the concentration of cerium, on the hydrogen concentrations, on the concentration of tributyl phosphate and on the nitrate ion was investigated. The radioactive isotope Ce^{144} was used as indicator in these investigations. In the investigation of the dependence of the distribution coefficient on the cerium concentration it was found that cerium does not polymerize in acid medium and the extraction does not depend on the concentration. The complex extracted has

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the following composition: $Ce(NO_3)_3 \cdot 3TBPh$. It was found that the distribution coefficient of trivalent cerium increases with rising hydrogen ion concentration. In contrast to this no increase of the distribution coefficients takes place in the case of the presence of salting-out compounds, e. g. $LiNO_3$. The following complex ions exist in the aqueous solution: $Ce(NO_3)^{2+}$ and $Ce(NO_3)_2^{+}$. The stability constants of these compounds are the following: 11 $\pm$ 2,5 and 32 $\pm$ 7. The equilibrium constant for the equation $Ce^{3+} + 3NO_3^{-} + 3TBPh \rightleftarrows Ce(NO_3)_3 \cdot 3TBPh$ was calculated to be 1. There are 6 figures, 7 tables, and 20 references, 10 of which are Soviet.

SUBMITTED: October 2, 1957

Card 2/3

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8

L 44281-65 EWT(m)/EPF(c)/EWP(j) Pc-4/Pr-4 RM

ACCESSION NR: AP5008004 S/0186/65/007/001/0033/0039

21
B

AUTHOR: Fomin, V. V.; Rudenko, T. I.

TITLE: Properties of solutions of tributylphosphate in benzene, carbon tetrachloride and n-decane. I. Heats of mixing and changes in volumes during mixing of anhydrous tributylphosphate with benzene, carbon tetrachloride and n-decane.

SOURCE: Radiokhimiya, v. 7, no. 1, 1965, 33-39

TOPIC TAGS: tributylphosphate, benzene, carbon tetrachloride, n-decane, calorimetry

ABSTRACT: The authors have undertaken a systematic investigation of the properties of binary systems consisting of tributylphosphate and three of the more frequently employed solvents--benzene, carbon tetrachloride and n-decane. The main purpose of the investigation was to determine the extent of the deviation of each system from an ideal system. Heat of mixing for different concentrations of the components was determined by means of a microcalorimeter (shown in fig. 1 of the Enclosure) at 25°C. It was found in the tributylphosphate-benzene and tributylphosphate-carbon tetrachloride systems that heat is liberated ($\Delta H < 0$) and the volume decreases while in the tributylphosphate-n-decane system heat is absorbed and the volume increases.

Card 1/3

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8

L 44281-65

ACCESSION NR: AP5008004

It is concluded that tributylphosphate solutions in these three solvents cannot be viewed as ordinary solutions. The methods of investigation which were employed do not completely reveal the nature of the interactions in the systems considered, thus the results obtained represent only the first stage of the investigation of these systems. Orig. art. has: 5 figures and 7 tables.

ASSOCIATION: none

SUBMITTED: 17Feb64 ENCL: 01 SUB CODE: OC, GC

NO REF SOV: 008 OTHER: 004

Card 2/3

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8

Rudenko, T. I.

AUTHORS: Kartushova, R. Ye., Rudenko, T. I., Fomin, V. V. SOV/89-5-1-2/28

TITLE: The Thermal Dissociation of the Oxalates of Quadrivalent and Trivalent Plutonium (Termicheskoye razlozheniye oksalatov chetyrekhvalentnogo i trekhvalentnogo plutoniya)

PERIODICAL: Atomnaya energiya, 1958, Vol. 5, Nr 1, pp. 24-28 (USSR)

ABSTRACT: By means of a recording pyrometer developed by Kurnakov, the process of thermal dissociation (pyrolysis) of various types of plutonium was investigated. The state of intermediate products was determined in the Berg type gas pyrette, by potentiometric titration as well as by the method developed by Penfield (Penfil'd). It was found that the freshly precipitated oxalate of Pu (IV) loses 3 molecules of water at 100° C. From oxalates which had been stored for 3-4 days 1,5 to 2,7% $CO+CO_2$ are in addition separated at 100° C as a result of dissociation caused by the effect of the plutonium α-rays. At the same time partial reduction to trivalent plutonium takes place. Within the temperature range of from 170-200° C 2 molecules of water and 13% $CO+CO_2$ are, in addition, separated. The plutonium is reduced to the trivalent state mainly by the formation of $Pu_2(C_2O_4)_3 \cdot H_2O$.

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8

The Thermal Dissociation of the Oxalates of Quadrivalent and Trivalent Plutonium SOV/89-5-1-2/28

At 380° C the oxalate is transformed into plutonium dioxide. At 140° C the oxalate of Pu (III) is completely freed from water and goes over into plutonium oxide at 270° C in the air. In an inert medium dissociation of the oxalate takes place at 330° C accompanied by the formation of an oxalate carbonate. At 460° C the oxalate carbonate is dissociated and the trivalent plutonium is oxidized to quadrivalent plutonium, while, at the same time, a dioxide is formed. There are 4 figures, 4 tables, and 6 references, 2 of which are Soviet.

SUBMITTED: December 14, 1957

1. Plutonium--Decomposition 2. Plutonium oxylates--Chemical reactions
3. Titration--Applications 4. Gamma rays--Performance

Card 2/2

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8

RUDENKO, T.P., inzh.; PASHCHENKO, D.I., inzh.

Use of ammonium cation exchangers for the ammination of feed water. Energetik 11 no.10:10-11 O '63. (MIRA 16:11)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8

MATVIYENKO, B.A., doktor biolog. nauk; RUDENKO, T.P., aspirant

Sensitivity of Escherichia coli of various serotypes to antibiotics. Veterinariia 41 no.1:22-24 Ja '64. (MIRA 17:3)

1. Alma-Atinskiy zooveterinarnyy institut.

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8

SOV/84-58-10-23/54

AUTHOR: Rudenko, V., Acting Chief for Political Affairs, LERM (Air-~~craft Line~~ Maintenance and Repair Workshops), Sverdlovsk

TITLE: They Earned the Respect of Their Co-workers (Oni zasluzhili uvazheniye kollektiva)

PERIODICAL: Grazhdanskaya aviatsiya, 1958, Nr 10, p. 13 (USSR)

ABSTRACT: The author comments on the superior work of four technicians, graduates of the Troitskoye aviatsionnoye uchilishche (Troitskoye Aviation School), who were assigned to LERM in Sverdlovsk 3 years ago and have been servicing the Il-12, plane 1722.

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8

SOV/84-58-10-24/54

AUTHOR: Rudenko, V., Acting Chief for Political Affairs, LERM (Aircraft Line Maintenance and Repair Workshops), Sverdlovsk

TITLE: They Earned the Respect of Their Co-workers (Oni zasluzhili uvazheniye kollektiva)

PERIODICAL: Grazhdanskaya aviatsiya, 1958, No 10, p 13 (USSR)

ABSTRACT: The author praises the superior work of four technicians, graduates of the Troitskoye aviatsionnoye uchilishche (Troitskoye Aviation School). The 4 Komsomol members were assigned 3 years ago to the most difficult task at the workshops, that of servicing the Il-12 plane 1722 on a tight schedule.

ASSOCIATION: LERM (Aircraft Line Maintenance and Repair Workshops), Sverdlovsk

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8

RUDENKO, V. (Sverdlovsk)

They deserved the respect of the group. Grazhd.av. 15 no.10:13 O '58. (MIRA 11:11)

1. Zamestitel' nachal'nika po politicheskoy chasti Lineyno-ekspluatatsionnoy i remontnoy masterskoy.
(Airplanes--Maintenance and repair)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8

RUDENKO, V.A. (Chernigovskaya obl., g. Nezhin)

Appliance for demonstrating a revolving magnetic field and the construction principle of an asynchronous electric motor. Politekh.obuch. no.10:49-50 O '58. (MIRA 11:11)
(Electric apparatus and appliances)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8

GAYLORD, Norman G.; ANDREYEV, V.M. [translator]; RUDENKO, V.A.[translator]; SEGAL', G.M. [translator]; KOCHETKOV, N.K., red.

[Reduction with complex metal hydrides] Vosstanovlenie kompleksnymi gidridami metallov. Moskva, Izd-vo inostrannoi lit-ry, 1959. 912 p. (MIRA 14:2)

(Reduction, Chemical) (Hydrides)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8

RUDENKO, V.A.; LUSHNIK, V.F.

Constructing three-phase generators for demonstration purposes. Politekh.obuch. no.10:50-57 O '59. (MIRA 13:2)

1. Nezhinskiy pedagogicheskiy institut Chernigovskoy oblasti. (Electric generators)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8

18.7500

S/129/61/000/002/004/014
E073/E335

AUTHORS: Lyashenko, V.S., Doctor of Chemical Sciences, Professor, Bykov, V.N., Candidate of Technical Sciences and Rudenko, V.A., Engineer

TITLE: Sigma Phase in the Steel 1Х20Н14С2 (1Kh20N14S2)

PERIODICAL: Metallovedeniye i termicheskaya obrabotka metallov, 1961, No. 2, pp. 22 - 2

TEXT: The Steel 1Kh20N14S2 (ЭИ211) (EI211) has favourable mechanical properties in the initial state (Ref. 1) but is prone to brittleness at 500 to 700 °C, which is attributed to the rejection of carbides along the grain boundaries. However, the σ-phase has not been observed during this process. The authors have studied the problem of stabilising the structure of this steel (0.14% C, 20.2% Cr, 15.5% Ni, 2.44% Si and 1.14% Mn). It was aged at 650 °C for 5 000 hours. The microstructure investigations were made by means of optical and electron microscopes; the phase-components were studied by means of X-ray. The specimens were preliminarily stabilised at 1 000 °C for 1 hour, held at 650 °C for

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8

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E073/E335

Sigma Phase in the Steel 1Kh20N14S2

durations of 50, 100, 500, 1 000, 2 000 and 5 000 hours, respectively. The polished specimens were etched by means of a 20% H_2O_2 solution in concentrated hydrochloric acid. Two etching regimes were applied: a weak one for detecting the fine structure of the -phase and a normal one for studying the distribution of the carbide phase and of the grain boundaries. Electron-microscope studies of the structure were carried out on chromium-shaded colloidal replicas. The phase composition of the steel before and after ageing was determined by X-ray analysis of the polished specimen and of electrolytically-produced precipitates. In the original state the structure of the steel EI211 consists of coarse austenite grains and globular carbide formations of the composition $Me_{23}C_6$. During the first 50-100 hours of ageing, a large number of secondary carbi[illegible] [illegible]rticles precipitate, [illegible]he grain boundaries increase[illegible] [illegible]ze and after 500 hours ageing a continuous ca[illegible] [illegible]rk can be detected. Only

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8

89672

S/129/61/000/002/004/014
E073/E335

Sigma Phase in the Steel 1Kh20[illegible]2

the lines of the carbide $Me_{23}C_6$ can be detected on the X-ray diffraction patterns of electrolytically separated residues from specimens aged for 50 to 500 hours. In specimens aged for 1 000 hours a few dark disperse rejections can be observed after weak etching. These are distributed along grain boundaries in spots where carbides accumulate and are almost always in contact with the carbides. In the X-ray diffraction pattern of the precipitates of this specimen diffraction can be observed which corresponds to the presence of the σ-phase. After ageing for 2 000 hours the structure of the specimen shows sections containing carbides which are surrounded by a zone with a "spongy" structure differing from the basic one. Dark rejections can be observed in the background of this zone. Apparently, if the component ratio is favourable, these areas reflect a metastable structural state corresponding to the formation of the σ-phase. Ageing the specimens for 2 000 to 5 000 hours led to an increase in the number and the dimensions of σ-phase rejections and also to

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8

89672
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E073/E335

Sigma Phase in the Steel 1Kh20N14S2

the appearance of a considerable quantity of acicular separations in the grain itself. The X-ray diffraction patterns reveal only the lines of the σ-phase and of the carbide $Fe_{23}C_6$. Thus it was found that in the first period of isothermal annealing of steel at 650 °C the saturated austenite decomposes, which is accompanied by the separation of finely disperse carbides of the composition $Me_{23}C_6$. No separation of the σ-phase during this period (up to 600 hours) was observed. This is attributed to the fact that in the initial state, after stabilisation at 1 000 °C, owing to the high carbon content, this steel does not contain δ-ferrite, the composition of which may lead to the formation of the σ-phase. Due to the process of carbide formation there will be a drop in the carbon and chromium concentration in the solid solution which produces favourable conditions for separation of the α-phase. This is confirmed by the increase in the magnetic susceptibility. The formation of the σ-phase is facilitated

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89672
S/129/61/000/002/004/014
E073/E335

Sigma Phase in the Steel 1Kh20N14S2

owing to the presence in the α-phase (alloyed ferrite) of components which increase the tendency to σ-phase formation. In addition to the formation of the σ-phase from unstable ferrite, a partial dissolution of the carbide occurs since with decreasing chromium concentration the solubility of carbon in the solid solution increases. On increasing the duration of the isothermal holding, local chromium-enriched sections occur owing to the solution of carbide rejections. The excess chromium produced favourable conditions for forming σ-phase nuclei. All the σ-phase rejections which were detected on the electron microphotographs and particularly in specimens which were aged for 5 000 hours did have a globular structure. The intermediate metastable phases α' and [illegible] were not observed at any of the ageing stages. Apparently, introduction of these into the chain of transformations is not adequately justified. The following conclusions are arrived at.

1) Dispersion hardening of the steel 1Kh20N14S2 at 650 °C

Card 5/7

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89672

S/129/61/000/002/004/014
E073/E335

Sigma Phase in the Steel 1Kh20N14S2

proceeds in two stages. The first stage of up to 500 hours duration is characterised by the rejection of secondary carbides $Me_{23}C_6$ and their coagulations preferentially along the austenite grain boundaries. The second stage is linked with σ-phase formation.

2) For holding times exceeding 500 hours the process of coagulation of the carbide $Me_{23}C_6$ produces favourable conditions for the formation of the α-phase around the carbide particles.

3) The diffusion mobility of the atoms of the components of the metastable ferrite ensures growth of the σ-phase nuclei. σ-phase particles also grow owing to the dissolution of carbides.

4) In sections with a distorted crystal lattice the σ-phase is also formed along the slip planes, the twin boundaries. σ-phase rejections are acicular in shape, whilst usually σ-phase rejections have a globular structure.

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S/129/61/000/002/004/014
E073/E335

Sigma Phase in the Steel 1Kh20N14S2

(Note: this is almost a complete translation.)
There are 1 figure and 5 references: 4 Soviet and 1 non-Soviet.

X

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8

AKHREM, Afanasiy Andreyevich; TITOV, Yuriy Andreyevich; RUDENKO, V.A., red.

[Microbiological transformations of steroids] Mikrobiologicheskie transformatsii steroidov. Moskva, Nauka, 1965. 503 p. (MIRA 18:11)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8

CA

Splitting of tertiary amines, analogous to the Braun reaction. V. A. Rudenko, A. Ya. Yakubovich, and T. Ya. Nikiforova. *J. Gen. Chem.* (U.S.S.R.) 17, 2256-8 (1947)(in Russian).—Toluene is placed in a cylindrical vessel, provided with a trap cooled with solid CO_2 attached to the vessel through a reflux condenser, and 2 tubes reaching nearly to the bottom of the cylinder. A layer of Hg is introduced so as to cover the opening of one of the tubes. After heating to 60-70° $COCl_2$ and Me_3N are introduced through the 2 tubes at such a rate that the reaction is completed in the liquid phase; $COCl_2$ is used in 10% excess over equimol. The reaction can be continued for any length of time. Distn. of the reaction mixt. gives 65-75°, *dimethylcarbamyl chloride*, Me_2NCOCl, b. 165-7°, while a solid, which is formed simultaneously, was identified as Me_4NCl. Copious amts. of MeCl are produced during the reaction. If the reaction is conducted with ice-salt cooling, a white solid powder is formed, which on heating readily generates Me_2NCOCl. Apparently this is the product of primary addn. and may be represented by $(Me_2\overset{+}{N}COCl)Cl^-$. The high-temp. reaction may be represented by $Me_3N + COCl_2 \rightarrow Me_2NCOCl + MeCl$; $Me_3N + MeCl \rightarrow Me_4NCl$. Thus, the reaction is analogous to Braun's cleavage of amines by BrCN.

G. M. Kosolapoff

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8

RUDENKO, V. A.

I. N. Nazarov and V. A. Rudenko, Derivatives of acetylene, Article LXXXIV. Synthesis and investigation of heterocyclic compounds. V. The action of ammonia and methylamine on vinyl-allyl-ketones. A new method of synthesis of γ- piperidones. P. 616.

A new simple and general method is described for the synthesis of various γ- piperidones under action of ammonia and methylamine on vinyl-allyl-ketones and their methoxy derivatives, which are easily obtained by hydration of divinyl-acetylene hydrocarbons.

Inst. of Organic Chemistry of the
Acad. of Sci. USSR
March 5, 1948

SO: Bulletin of the U.S.S.R. Academy of Sciences (Chemistry Series)
Izvestia Akad. Nauk, S.S.S.R., No. 6, 1948.

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10

Acetylation of α-cyanohydrins. A. Ya. Yakubovich, V. A. Rudenko, and E. N. Merkulova. *Zhur. Prikład. Khim.* (J. Applied Chem.) 21, 151-5(1948).—The acetylation of α-cyanohydrins by AcOH, AcCl, and ketene was investigated. The best results were obtained with ketene, when 73% yields were secured. $MeCH(OH)CN$ (I) (50 g.), 0.15 ml. H_2SO_4, and 85 g. AcOH were stirred at 130° with addn. of 0.34 g./min. benzene, the resulting vapors being passed through a short distg. column; as AcOH was removed, it was gradually replaced, keeping a 50-100% excess in the flask. At the end of the run (38-48 hrs.) the mixt. was distd., giving 30-40% of the acetate (II). I (50 g.) was added over 20 min. at 15-20° to 66 g. AcCl with cooling and stirring, using a dry air stream to remove HCl; after 20 min. addnl. stirring at 20° the mixt. was distd., yielding 58% II, b_{10} 73-4°. The action of ketene on $Me_2C(OH)CN$ (III) was studied. III (550-650 g.) in a Morey app. (*C.A.* 33, 8174[1]) was fed countercurrent to ketene at 10 g./min., the ketene supply being 1 g. mole/hr.; 7-8 cycles were used to complete the operation, 75% yields and 88% conversion of the corresponding acetate (IV) being obtained. IV, as obtained, b_{14} 78-80° and contained 0.5% AcOH and 95% pure IV, thus giving a 73% actual yield. The analytical procedures used were: detn. of cyanohydrin acetate in mixt. with AcOH, which was done by addn. of 0.5-g. sample to 25 ml. satd. aq. NaCl soln. contg. 5% NaOAc, rapid titration with 0.1 *N* NaOH to phenolphthalein, followed by addn. of 40 ml. excess 0.1 *N* NaOH, heating on a steam bath 15 min., and back-titrating the excess NaOH, thus obtaining the free AcOH and the acetate estns.; CN was detd. by shaking 0.8-1.0-g. sample with 5 ml. EtOH and 15 ml. 10% NaOH until soln. occurred, then adding 10 ml. 10% NH_4OH and 1 ml. 2% KI and immediately titrating with *N* $AgNO_3$ to permanent cloudiness. IV on pyrolysis in a steel tube at 420-40° gave 95% CH_2:CMeCN, b_{760} 89.2°. The equil. curve for the liquid-vapor system AcOH-CH_2:CMeCN was detd. in an Othmer app. (*C.A.* 22, 3560). The results are given graphically (0.2% hydroquinone stabilizer present). The following results on the AcOH content at 760 mm. were found. Liquid phase: 90.5° 11.57-9.8%, 91.7° 17.7-18.4, 97.7° 47.8, 98.5° 51, 102.5° 66.6, 107.8° 79.2, 112.2° 86.2, 115.5° 94.5. Vapor phase: 5.3, 9.98-10.55, 30.13, 28.1, 41.25, 58.2, 73.3, and 87.2%, resp. G. M. K.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

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RUDENKO, V. A.

23746 NAGLYADNAYA SKHEMA DLYA OB'SNENIYA OBRAZOVANIYA STOYACHIKH VOLN. FIZIKA V SHKOLE, 1949, NO. 3, S. 71

SO: LETOPIS' NO. 31, 1949

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8

RUDENKO, V. A.

USSR/Chemistry - Acetylene Derivatives
Chemistry - Heterocyclic Compounds

Jan/Feb 49

"Acetylene Derivatives: No 86, Study of Heterocyclic Compounds: VII, Synthesis of 4-Vinylethynyl-4-Hydroxypiperidines by Condensation of Vinylacetylene With -Piperidones," I. N. Nazarov, V. Ya. Raygoradskaya, V. A. Rudenko, Inst Org Chem Acad Sci USSR, 8 pp

"Iz Ak Nauk SSSR, Otdel Khim Nauk" No 1

Investigates condensation of vinylacetylene with -piperidones effected by powder like potassium hydroxide, leading to the formation of 4-vinylethylene-r-hydroxpiperidines with a yield of about 80%. Hydrogenation of the latter was also effected in the presence of a Pd-catalyzer in the appropriate 4-butyl-4hydroxypiperidines and under the action of magnesiumchlorobutyl on -piperidone. Submitted 20 Mar 48

PA 27/49T24

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USSR/Chemistry - Acetylene Derivatives Apr 52

"Acetylene Derivatives. 137. Heterocyclic Compounds. XIII. The Reaction of 4-Piperidines With Primary Amines. Production of 4-Imino-and 4-Aminopiperidines," I. N. Nazarov, V. A. Rudenko, Inst of Org Chem, Acad Sci USSR

"Zhur Obshch Khim" Vol XXII, No 4, pp 623-632

In heating of δ-piperidines with primary amines, 4-iminopiperidines were formed, which in a number of cases were isolated in their pure state. When they are heated with water or dil HCl, they

224T39

hydrolize easily and form δ-piperidones, while they yield the corresponding 4-aminopiperidines upon hydrogenation.

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PUDENKO, V.A.

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8

1. NAZAROV, I. N.; MATSOYAN, S. G.; RUDENKO, V. A.

2. USSR 600

4. Piperidone

7. Acetylene derivatives. Part 129. Heterocyclic compounds. No. 24. Transformations of 1-phenyl-2, 5-dimethyl-4-piperidone, Izv. AN SSSR. Otd. khim. nauk, No. 6, 1952.

9. Monthly List of Russian Accessions, Library of Congress, April 1953, Uncl.

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8

1. I. N. NAZAROV, S. G. MATSOYAN, V. A. RUDENKO

2. USSR (600)

4. Amines

7. Acetylene derivates. Part 123. Heterocyclic compounds. No. 23. Action of primary aromatic amines and of aminopyridine on vinyl allyl ketones. Synthesis of aryl substituted piperidones and 1 (pyridy) 4 piperidones. Izv. AN SSSR. Otd. khim, nauk no. 6. 1952.

9. Monthly List of Russian Accessions, Library of Congress, April 1953, Uncl.

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8

RUDENKO, V. A. Cand Chem Sci

Dissertation: "Action of Ammonia and Metylamine on Vinyl-Alkyl-Ketones. New Method for Synthesis of Gamma-Piperidols." 29/12/50

Inst of Organic Chemistry, Acad Sci USSR

SO Vecherayaya Moskva
Sum 71

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8

RUDENKO, V. A.

"Acetylene Derivatives: XCV. Heterocyclic Compounds. Part 8, The Activity of Ethylamine and Ethanolamine on Allylisopropenylketone and Methoxyketone Derived from It. Preparation of Gamma-Piperidones Containing with Nitrogen an Ethyl and a Beta-Hydroxyethyl Radical," Iz. Ak. Nauk SSSR Nauk, 5, 1949.

"Acetylene Derivatives. XCVI, Heterocyclic Compounds. Part 9, Synthesis of 1,2, 5-Trimethyl-4-piperidones and Their Compound Ethers, Ibid.

"~~Acetylene Derivatives. Report 95. Heterocyclic Compounds.~~

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8

NESMEYANOV, A.N., akademik, otvetstvennyy redaktor; BOBROV, P.A., doktor khimicheskikh nauk, otvetstvennyy redaktor; YELIZAROVA, A.N., kandidat khimicheskikh nauk, chlen redaktsionnoy kollegii; KAPLAN, Ye.P., kandidat khimicheskikh nauk, sekretar'; LIBERMAN, A.L., kandidat khimicheskikh nauk, chlen redaktsionnoy kollegii; NAGIBINA, T.D., kandidat khimicheskikh nauk, chlen redaktsionnoy kollegii; RUDENKO, V.A., kandidat khimicheskikh nauk, zamestitel' otvetstvennogo redaktora; EYDUS, Ya.T., doktor khimicheskikh nauk, chlen redaktsionnoy kollegii.

[Syntheses of organic compounds] Sintezy organicheskikh khimii. Moskva, Izd-vo Akademii nauk SSSR. Vol.2. 1952. 190 p. (MLRA 6:5)

1. Akademiya nauk SSSR, Institut organicheskoy khimii.
(Chemistry, Organic)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8

RUDENKO, V. A.

USSR/Chemistry - Acetylene Derivatives May 52

"Acetylene Derivatives, 138, Heterocyclic Compounds; XIV. Preparation of Secondary γ-Piperidoles by Reduction of γ-Piperidones," I. N. Nazarov, V. A. Rudenko, Inst of Org Chem, Acad Sci USSR

Zhur Obshch Khim, Vol 22, No 5, pp 829-835

By reducing substituted γ-piperidones by the action of metallic Na in alc or by catalytic reduction with H over Ni or Pt, the corresponding alcs of the piperidine series are obtained, generally in the form of 2 or more steric isomers. The ratio of these isomers can vary with the reaction conditions. By reduction

263T31

of 2,5-dimethyl-4-piperidone with metallic Na in alc, 2,5-dimethyl-4-piperidole (bp 96-97°) is obtained, while catalytic hydrogenation with Ni supplies a mixt of stereoisomers (bp 138°). In reduction of the carbonyl group in γ-piperidones having 3 or more substituents in the piperidone ring, a complex mixt of stereoisometric γ-piperidoles is obtained.

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8

NAZAROV, I.N.;MASHKOVSKIY, M.D.;RUDENKO, V.A.;PROSTAKOV, N.S.;ISHCHENKO, V.I.

New analgesic promedol. Klin. med., Moskva 30 no.8:60-63 Aug 1952. (CIML 23:2)

1. Professor, Corresponding Member Academy of Sciences USSR for Nazarov; Professor for Mashkovskiy. 2. Moscow.

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8

RUDENKO, V. A.

Acetylene derivatives. CXLVIII. Heterocyclic compounds. 25. Synthesis of secondary and tertiary 1-phenyl-2,5-dimethyl-4-piperidinols and their esters. I. N. Nazarov, S. G. Matsoyan, and V. A. Rudenko. *Bull. Acad. Sci. U.S.S.R., Div. Chem. Sci.* 1953, 278-86 (Engl. translation).—See *C.A.* 48, 6440a. CXLIX. Synthesis of β-amino ketones by the action of secondary amines on β-methoxy ketones and α,β-unsaturated ketones. I. N. Nazarov and S. A. Vartanyan. *Ibid.* 287-92.—See *C.A.* 48, 6441c.

H. L. H.

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001445920008-8

Rudenko, V.A.

Acetylene derivatives. CXLVIII. Heterocyclic compounds. 25. Synthesis of secondary and tertiary 1-phenyl-2,5-dimethyl-4-piperidinols and their esters. I. N. Nazarov, S. G. Matsoyan, and V. A. Rudenko. *Izvest. Akad. Nauk S.S.S.R., Otdel. Khim. Nauk* [illegible] 303-13; cf. *C.A.* 48, 1358e, 4435k.—Hydrogenation of 30 g. 1-phenyl-2,5-dimethyl-4-piperidone (IA) in EtOH over PtO_2 over 20 hrs. gave 30.5 g. mixed stereoisomeric *1-phenyl-2,5-dimethyl-4-piperidinols* (I), $b_{0.5}$ 115-20°, which solidified on standing and, after pptn. from cold petr. ether, m. 69-72°. The mixed isomers in Et_2O with dry HCl gave a *HCl* salt, m. 266-7° (from EtOH), which with NH_4OH yielded the *low-melting isomer* of I, m. 75-6° (from petr. ether); *picrate*, m. 177-8.5° (from EtOH). Hydrogenation of 4.35 g. IA.HCl m. 157-8°, over PtO_2 in EtOH gave, after the usual treatment, 3.8 g. of the same I.HCl, m. 266-7°. Reduction of 58 g. free IA with 67 g. Na in 120 ml. H_2O and 500 ml. Et_2O gave 50 g. mixed I isomers, $b_{0.5}$ 122-30°, m. 50-75°, which, extd. with hot petr. ether, gave on cooling of the ext., 24 g. *high-melting isomer* of I, m. 81-2°; *HCl salt*, m. 170-1° (from dry EtOH); a picrate could not be obtained. The mother liquor on diln. with Et_2O and satn. with HCl gave 24.8 g. HCl salt of the low-melting isomer, m. 265-7°, identical with that described above. Hydrogenation of 23 g. IA.HCl in EtOH over Raney Ni at 80 atm. H and 100-20° gave, after vacuum distn., 16 g. mixed I isomers, $b_{0.2}$ 105-10°, yielding with dry HCl 10 g. HCl salt, m. 266-7°, as above. To 15 g. IA in 300 ml. abs. EtOH were added 24 g. Na, and, after completion of the reaction, 100 ml. H_2O and 145 ml. concd. HCl; evapn., filtration, addn. of NaOH, and extn. with Et_2O yielded from the ext. 11 g. mixed I isomers, b_1 120-6°, which, boiled with petr. ether, gave 6.5 g. high-melting isomer, m. 81-2°, while the soln. with dry HCl gave 2.4 g. HCl salt, m. 266-7°, described above. Addn. of 32 g. IA to 18 g. powd. KOH suspended in 240 ml. Et_2O through which a C_2H_2 stream was passed with ice cooling (continued 3 hrs. after the addn.), treatment with H_2O, satn. with NaOH, and extn. of the aq. layer with Et_2O gave 25 g. *1-phenyl-2,5-dimethyl-4-ethynyl-4-piperidinol*, $b_{0.5}$ 120-5°, yielding with HCl 21 g. *HCl salt*, m. 216.5-17.5° (from abs. EtOH); the salt with

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NAZAROV, I. N. Side 2/2

conc'd. *in vacuo*, and treated with H_2O gave 6 g. I *benzoate*, b_1 160–5°, m. 62.5–3.5° (from petr. ether); the *HCl salt* of this isomer, m. 149–51° (from EtOH and MeEtCO), treated with H_2O is hydrolyzed to the free base, m. 62.5–3.5°. I, m. 81–2°, in C_6H_6 treated with AcCl and Mg shavings gave I *acetate-HCl*, m. 180–1.5° (from EtOH–Et_2O); free *base*, b_1 135–8°. I (m. 81–2°) treated similarly with Mg and *p*-$O_2NC_6H_4COCl$ in C_6H_6 gave I *p-nitrobenzoate-HCl*, m. 195–6° (from EtOH-EtMeCO); free *base*, m. 130–1° (from petr. ether). Reduction of this HCl salt over PtO_2 in 90% EtOH gave the *p-aminobenzoate*, m. 157–8° (from MeEtCO-petr. ether). Refluxing *1-phenyl-2,5-dimethyl-4-ethyl-4-piperidinol*-HCl, m. 186–7°, in AcCl-Ac_2O 5 hrs. gave the *acetate-HCl*, m. 182–3° (from MeEtCO). IA treated with PhLi in Et_2O, at −10°, then 2 hrs. at room temp. and 1.5 hrs. at reflux, and the resulting Li alcoholate mixt. treated with BzCl in Et_2O at reflux gave *1,4-diphenyl-2,5-dimethyl-4-piperidinol benzoate-HCl*, m. 187–8° (from EtOH-C_6H_6); free *base*, m. 178–9° (from petr. ether). The Li alcoholate (above) treated with $(EtCO)_2O$ *in situ* and refluxed 4 hrs. in Et_2O gives the *propionate-HCl*, m. 167–8° (from Me_2CO-EtOH); free *base*, m. 88–90° (from petr. ether). Ac_2O similarly gave the *acetate-HCl*, m. 176–7.5°.

CXLIX. Synthesis of β-amino ketones by the action of secondary amines on β-methoxy ketones and α,β-unsaturated ketones. I. N. Nazarov and S. A. Vartanyan. *Ibid.* 314–20.—2-Methyl-4-(vinylethynyl)tetrahydropyran-4-ol (cf. *C.A.* 46, 2050*i*) (150 g.) stirred in 370 g. MeOH and 3 g. $HgSO_4$ 8.5 hrs. at 35–40° with gradual addn. of 10

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methoxy-1,1'-dimethylhydurilic acid (cf. Biltz and Heyn; *C.A.* 14, 62). With 10 g. 6-amino-5-acetamido-1-methyluracil in lieu of V, only 1.5 g. VI and 2.8 g. crude VII are obtained. The mechanism of these reactions is discussed. V. Test reactions in the purine series. Hellmut Bredereck, Ingeborg Hennig, and Otto Müller. *Ibid.* 850-6.—"Open" acetates of 5,6-diaminouracils (I) are sapond. by acids to the corresponding I, whereas the ring acetates, with the exception of the dimethyldiacetate A, which has an open structure (cf. *Chem. Ber.* 86, 321(1953)), react with acids in 2 ways: a part is sapond. to I; another part splits off AcOH or H_2O with the formation of 8-methylxanthines (II). In the Ac detn. according to Freudenberg, of acetates with ring structure, the Ac value is always about 0.5 equiv. of Ac too low. An investigation of the residue from the Ac detns. showed that the compds. which give the correct Ac value give the tosyl deriv. (III) of the corresponding I deriv., whereas those which give a low Ac value give a mixt. of III and the tosyl deriv. of the corresponding II. When 1 g. of the monoacetate or 1 g. of the sulfate of diaminouracil is refluxed 3 hrs. with 4.7 g. *p*-$MeC_6H_4SO_3H$ (IV) in 100 cc. abs. MeOH 3 hrs. and the soln. concd. to 30 cc., *4-amino-5-(tosylamino)uracil* (V), crystg. with 1 H_2O, m. 266–8°, is formed. V, heated with H_2O and acidified with H_2SO_4, gives I sulfate. Refluxing 1 g. triacetate or 0.8 g. diacetate, of diaminouracil with 3.2 g. IV in 100 cc. MeOH 3 hrs. evapg. the filtered 8-methylxanthine (VI) *in vacuo*, and fractionally crystg. the residue give *8-methyl-7-tosylxanthine*

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g. $HgSO_4$ gave 80 g. $CH_2.CH_2.O.CHMe.CH_2.C:CHCOR$ (IA, R = CH_2CH_2OMe) (I), b_1 109–11°, n^{20}_D 1.4800, d_{20} 1.0340. This hydrogenated over Pt in EtOH gave the *satd. analog*, b_1 90–2°, n^{20}_D 1.4600, d_{20} 0.9987. I with aq. $KMnO_4$ at room temp. gave *2-methyltetrahydropyran-4-one*, b_{12} 51–2°, n^{20}_D 1.4440 (*semicarbazone*, m. 109–70°), and, in addn., $MeOCH_2CH_2CO_2H$, b_{12} 100–3°, n^{20}_D 1.4200. I heated with *p*-$MeC_6H_4SO_3H$ 0.5 hr. at 100–10°/12 mm. gave some 50% *compd.* (II) (IA, R = $CH:CH_2$), b_4 101–4°, n^{20}_D 1.4919, d_{20} 1.0050, a yellow pungent liquid. I heated in an autoclave with 20% aq. Me_2NH 5 hrs. at 80° gave *compd.* (III) (IA, R = $CH_2CH_2NMe_2$), b_4 128–30°, n^{20}_D 1.5040, d_{20} 1.0370. Similarly I and aq. *piperidine* gave the *piperidine analog* of III, b_4 138–40°, n^{20}_D 1.5150, d_{20} 1.0440; heating 15 g. $MeC(:CH_2)COCH_2CH:CH_2$ with 10 g. Et_2NH in a sealed tube 3 hrs. at 80° gave 10.2 g. *3-methyl-5-diethylamino-1-hexen-3-one*, b_7 94–5°, n^{20}_D 1.4580, d_{20} 0.8821; the same forms in 2.1-g. yield on heating 15 g. $MeCH(OMe)CH_2COCMe:CH_2$ with 15 g. Et_2NH and 5 ml. H_2O 2 hrs. at 60° in a sealed tube. Similarly Bu_2NH gave by either route *2-methyl-5-dibutylamino-1-hexen-3-one*, b_2 110–12°, b_1 111–13°, d_{20} 0.8740, n^{20}_D 1.4620. Heating 10 g. $CH_2:CHCOCH_2CH:CH_2$ with 10 g. Et_2NH in an ampul 3 hrs. at 70° gave 18.5 g. *1,5-bis(diethylamino)-3-hexanone*, b_4 94–5°, n^{20}_D 1.4630, d_{20} 0.8924, also formed in 1.7-g. yield on heating 10 g. mixed $MeOCH_2CH_2COCH_2CH:CH_2$ and $MeOCH_2CH_2COCH_2CHMeOMe$ with 10 g. Et_2NH and 2 ml. H_2O 4 hrs. at 60°; the product, b_4 96–8°. Similarly Bu_2NH by either route gave *1,5-bis(dibutylamino)-3-hexanone*, b_4 110–11°, b_1 107–9°, n^{20}_D 1.4620, d_{20} 0.8686. Bu_2NH heated 0.5 hr. at 80° with $Me_2C:CHCOCH:CH_2$ gave a good yield of *2-methyl-6-dibutylamino-2-hexen-4-one*, b_4 123–5°, n^{20}_D 1.4600, d_{20} 0.8730; a low yield of the same product, b_4 127–0°, forms from aq. Bu_2NH and $MeOCH_2CH_2COCH:CMe_2$. Hydrogenation of this amino ketone over Pt gave *2-methyl-6-dibutylamino-4-hexanone*, b_2 102–3°, n^{20}_D 1.4500, d_{20} 0.8553. The same product, b_2 101–3°, formed on heating $MeOCH_2CH_2COCH_2CHMe_2$ with aq. Bu_2NH 2.5 hrs. at 80°. G. M. Kosolapoff

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RUDENKO, V. A.

USSR

Acetylene derivatives. CL. Heterocyclic compds. 26. Synthesis of polycyclic compounds containing a condensed ring of 4-piperidone. I. N. Nazarov, L. I. Ukhova, and V. A. Rudenko. *Bull. Acad. Sci. U.S.S.R., Div. Chem. Sci.* 1953, [illegible] (Engl. translation).—See *C.A.* 48, 9371b. CLII. Heterocyclic compounds. 28. Synthesis of some derivatives of tetrahydro-γ-thiapyranones. I. N. Nazarov and A. I. Kuznetsova. *Ibid.* 455-60.—See *C.A.* 48, 9371i. CLI. Heterocyclic compounds. 27. Synthesis of polycyclic γ-amino alcohols and their esters. I. N. Nazarov, L. I. Ukhova, and V. A. Rudenko. *Ibid.* 655-67.—See *C.A.* 48, 12746h. CLIII. Diene condensation of 1-vinylcyclohexene with methacrylic acid, methyl methacrylate, acrolein, 2,2-dimethyldivinyl ketone, and crotonic acid. I. N. Nazarov and T. D. Nagibina. *J. Gen. Chem. U.S.S.R.* 23, 599-609(1953)(Engl. translation).—See *C.A.* 48, 9372d. CLXV. Cyanoethylation of acetylenic alcohols and glycol. I. N. Nazarov and G. A. Shvekhgeimer. *Ibid.* 24, 157-63(1954).—See *C.A.* 49, 8003c. H. L. H.

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RUDENKO, V.A.

Acetylene derivatives. CLI. Heterocyclic compounds. 27. Synthesis of polycyclic γ-amino alcohols and their esters. I. N. Nazarov, L. I. Ukhova, and V. A. Rudenko (Inst. Org. Chem., Acad. Sci. U.S.S.R., Moscow). *Izvest. Akad. Nauk S.S.S.R., Otdel. Khim. Nauk* 1953, 730–42; cf. *C.A.* 48, 9371*b*.—Into a soln. of 9 g. Na in 300 ml. liquid NH_3 60 l. C_2H_2 was passed in 3 hrs., then 30 g. 1,2-dimethyl-4-oxodecahydroquinoline (I) in Et_2O slowly added (while the C_2H_2 stream was maintained), and the mixt. let stand overnight, treated at −15° with NH_4Cl-H_2O, and extd. with Et_2O, yielding 82% *1,2-dimethyl-4-ethynyl-4-hydroxydecahydroquinoline* (II), b_2 129–31°, a viscous liquid. I (30 g.) in Et_2O was added in 1.5 hrs. to 18.6 g. KOH suspended in dry Et_2O which was satd. with C_2H_2 at −3° and the C_2H_2 supply was maintained during and for 4.5 hrs. after the addn.; on the following day the product was treated with H_2O, extd. with Et_2O, neutralized with CO_2 until the Et_2O soln. became clear, dried, and distd., yielding 27.3 g. viscous product, b_4 134–7°, partly crystg. on diln. with petr. ether and yielding 4 g. solid form of II, m. 130–1°; *picrate*, m. 188–9°. Distn. of the uncrystallized residue yielded 9 g. fraction, b_4 137–9°, which was the pure alc., making the total yield 40%. A soln. of 19.5 g. K in 232 g. BuC(OH)Me_2 was evapd. *in vacuo* to dryness, the ROK suspended in Et_2O, treated 2 hrs. with C_2H_2, 30 g. I added, and the C_2H_2 flow maintained at −10° 4 hrs. longer; treatment as above [illegible] 41% total yield of II, composed of 6 g. solid form, m. [illegible]–1°, and 8 g. viscous glassy form, b_3 130–2°. Hydrogenation of solid II over Pd in EtOH gave the *4-vinyl analog* (III), b_4 132–4°, m. 93.5–5.0° (from petr. ether), and complete hydrogenation gave the *4-Et analog*, m. 147–8° (from petr. ether), also formed from liquid II; the satd. deriv. does not form a picrate. II with EtMgBr gave the *other isomer* of III, b_4 129–31°, m. 106–6.5°; *picrate*, m. 164.5–6.0°. The II prepd. from I in liquid NH_3 (see above) on hydrogenation gave mostly III, m. 147–8°, and only a little of the other isomer (m. 104–5°). Addn. of 30 g. CH_3:CC:CH and 25 g. I to 14 g. powd. KOH in Et_2O at −10°, stirring 6.5 hrs. with cooling, and treatment as above gave 25 g. *1,2-dimethyl-4-vinylethynyl-4-hydroxydecahydroquinoline*, b_2 138–40°, a glass. Hydrogenation of this over Pd in EtOH gave the *4-Bu analog*, m. 119–20° (from petr. ether). BuMgCl with I gave the *other isomer* of the Bu analog, m. 98–9°. PhBr (78 g.) was added to 7.2 g. shaved Li in Et_2O under a N atm., the mass refluxed 2 hrs., after the reaction subsided, after which the resulting PhLi soln. treated at −12° over 5 hrs. with 60 g. I in Et_2O, stirred 0.5 hr. longer with cooling, let stand overnight, refluxed 3 hrs., treated with H_2O, and the aq. layer satd. with NaOH and again extd. with Et_2O; the combined org. layers gave 40.7 g. solid product, which, crystd. from Me_2CO, yielded 9.7 g. *high-melting isomer* of *1,2-dimethyl-4-phenyl-4-hydroxydecahydroquinoline* (IV), m. 107.5–8.0°; *HCl salt*, m. 279–80°; *picrate*, m. 220–1°. The residue gave 25 g. mixed isomers, m. 128–45°. The mother liquor gave 13.5 g. *low-melting isomer*, m. 113–14°, whose *picrate* m. 191–2° (from EtOH). PhLi similarly treated with 60 g. 1,2,9-trimethyl-4-oxodecahydroquinoline (IVA) at −10° yielded 52.6 g. crude product, $b_{0.03}$ 155–9°, which gave 12.4 g. *1,2,9-trimethyl-4-phenyl-4-hydroxydecahydroquinoline isomer*, m. 104–5° (from Me_2CO) [*HCl salt*, m. 255–6° (from EtOH)], and 3.7 g. *low-melting isomer*, m. 130–2° (*HCl salt*, m. 284–5°); 30 g. mixed isomers was also formed. Similarly PhLi with 1,2-dimethyl-4-oxo-perhydro-1-pyrindine gave *1,2-dimethyl-4-phenyl-4-hydroxyperhydro-1-pyrindine*, $b_{0.01}$ 147–51°, n_D^{20} 1.5474, d_{20} 1.0613. A similar reaction with 1,2-dimethyl-4-oxoperhydro-6,7- (or 7,8)-benzoquinoline gave *1,2-dimethyl-4-phenyl-4-hydroxyperhydro-6,7 (or 7,8)-benzoquinoline*, $b_{0.02}$ 167–72°, a glass. To 24 g. I in 470 ml. EtOH was added 42 g. Na, and the mixt. acidified with 20% HCl after 2 hrs. and the filtrate from the NaCl concd. and treated with solid KOH and extd. with Et_2O, yielding 15.4 g. *1,2-dimethyl-4-hydroxydecahydroquinoline* (V), b_2 114–15.5°. Hydrogenation of I in EtOH over Raney

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Rudenko, V.A.

USSR/Chemistry - Reduction cyclization

Card 1/1 Pub. 151 - 27/38

Authors : Nazarov, I. N.; Shvekhgeymer, G. A.; and Rudenko, V. A.

Title : Cyanethylation of cyclic and heterocyclic ketones. Reduction cyclization of cyanethylation products.

Periodical : Zhur. ob. khim. 24/2, 319-329, Feb 1954

Abstract : The reaction of cyanethylation of various cyclic and heterocyclic ketones was investigated. Ketones with certain substitutes in alpha-position were found to offer high yields of monocyanethyl products. The derivation of ketonitriles from 2,4-dimethyl- 4-cyclopentenone and 2,4- 2-cyclopentenone is explained. Hydrogenation of ketonitriles and ketodinitriles in an autoclave leads to the closing of the latter into corresponding piperidine systems. The results obtained through reduction cyclization of cyanethylation products, are listed. Eight references: 3-USA; 3-USSR and 2-German (1885-1951).

Institution : Academy of Sciences USSR, Institute of Organic Chemistry

Submitted : June 27, 1953

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L 31853-65 EWT(m)/EPF(n)-2/T/EWP(t)/EWP(b) Pu-4 IJP(c) JD/JG 30

ACCESSION NR: AP5004276 S/0126/65/019/001/0145/0147 B

AUTHOR: Bykov, V. N.; Rudenko, V. A.; Zakharova, M. I.

TITLE: The redistribution of dislocations in a molybdenum single crystal by annealing

SOURCE: Fizika metallov i metallovedeniye, v. 19, no. 1, 1965, 145-147

TOPIC TAGS: dislocation redistribution, subgrain boundary, molybdenum single crystal, vacuum furnace, slip plane, subgrain fragmentation, dislocation rosette, pickling pit, vacuum annealing, lattice defect

ABSTRACT: A study has been made of the redistribution of dislocations and the formation of subgrain boundaries in the process of annealing a sample of monocrystalline molybdenum produced by electron-beam smelting. The groups of dislocations are usually arranged in the form of a dislocation "rosette," under the influence of concentrated local plastic deformations. In cast metals, local plastic deformation can be produced by the presence of submicroscopic pores which develop during the metal-cooling period. Annealing of the mentioned samples at temperatures of 1,500 and 2,000C results in a redistribution of the dislocations. Some of the latter shift to the boundaries of the subgrains and are absorbed by them. Others

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ACCESSION NR: AP5004276

contribute to the formation of new dislocation boundaries within the subgrains. The interaction between the dislocation grids and walls located in different planes results in the fragmentation of the old subgrains into smaller blocs. The formation of new subgrain boundaries also reveals intermittent and staggered shifts of dislocations. Orig. art. has: 7 photomicrographs.

ASSOCIATION: None

SUBMITTED: 02Apr64 ENCL: 00 SUB CODE: SS

NO REF SOV: 002 OTHER: 001

Card 2/2

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