"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000722410003-2

YELYUTIN, O.P. (Moskva); KALININ, G.P. (Moskva); ROGOV, G.I. (Moskva); KHROMOV, S.M. (Moskva)

Physical and mechanical properties of alloys in the system titanium - molybdenum - aluminum. Izv. AN SSSR. Otd. tekh. nauk. Met. i gor. delo no.1:176-180 Ja-F '63. (MIRA 16:3)
(Titanium-molybdenum-aluminum alloys--Testing)(Phase rule and equilibrium)

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L 11094-63 EWP(q)/EWT(m)/BDS—AFFTC/ASD—D

ACCESSION NR: AP3000915 S/0279/63/000/002/0136/0140 56

AUTHOR: Yelyutin, O. P. (Moscow); Kalinin, G. P. (Moscow), Khromov, S. M. (Moscow) 55

TITLE: Physical properties of titanium-rich alloys of the titanium-aluminum-tin system

SOURCE: AN SSSR. Izv. Otd. tekh. nauk. Metallurgiya i gornoye delo, no. 2, 1963, 136-140

TOPIC TAGS: titanium-aluminum-tin system, titanium-rich alloy, titanium-rich-alloy structure, titanium-rich-alloy resistivity, resistivity temperature coefficient, thermal electromotive force, heat conductivity, titanium-rich-alloy strength

ABSTRACT: The physical and mechanical properties of Ti alloys with up to 10% Al and up to 25% Sn have been studied. The alloys were melted in a nonconsumable-electrode arc furnace in an argon atmosphere, forged into rods at a temperature ranging from 1100—1200 to 700—800C, annealed in a vacuum of 1×10^{-5} mm Hg at 1200C for 3 hr, and cooled to room temperature at a rate of 80C/sec. After

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this treatment, all alloys had a single-phase structure of α-solid solutions. Electrical resistivity at 20C was found to increase steadily with increasing Sn or Al content and reached 1.85 to 1.90 ohm x mm^2/m in alloys with 7.5 to 10% Al and 2.5 to 15% Sn. The temperature coefficient of resistivity, while remaining constant for a given alloy in the 20 to 180C range, decreases linearly with increasing Sn or Al content and is 20 x 10^{-5}/deg for alloys with 7.5 to 10% Al and 5.0 to 15% Sn. The thermal emf (in couple with Cu), which for pure Ti is +5 mv/deg C, decreases by alloying with Al or Sn, and at 2.5% Sn or 1% Al is negative. A maximum thermal emf of -10μ v/deg C was shown by ternary alloys with up to 10 to 20% Sn and 5 to 7.5% Al. Both alloying elements decrease heat conductivity from 0.030-0.013 cal/cm x sec x deg for pure Ti to 0.012 cal/cm x sec x deg for alloys containing 22.5% Sn and 2.5% Al. The tensile strength remains almost unaffected on the 78 to 85 kg/mm^2 level with additions of up to 10 to 12% Sn, but increases to 120 kg/mm^2 at 17% Sn with elongation dropping to 10%. Al is more effective than Sn in strengthening alloys. Ternary Ti-Sn-Al alloys with 6 to 12% and 4 to 7.5% Al have a maximum

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L 11094-63
ACCESSION NR: AP3000915

tensile strength of 125 kg/mm^2 and a ductility of 0 to 6%. Further increase in the Sn and Al content lowers both strength and ductility. Orig. art. has: 4 figures.

ASSOCIATION: Institut pretsizionny*kh splavov TsNIIChM (Institute of Precision Alloys TsNIIChM)

SUBMITTED: 21Aug62 DATE ACQ: 12Jun63 ENCL: 00

SUB CODE: ML NO REF SOV: 006 OTHER: 001

Card 3/3

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000722410003-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000722410003-2

Khromov, Sergey Petrovich.

KHROMOV, SERGEY PETROVICH.

Einfuhrung in die synoptische Wetteranalyse; unter Mitwirkung vonDr. N. Koncek; deutsch bearbeitet von Dr. Gustav Swoboda. Mit 250 Textabbildungen und Karten sowie 2 Tafeln. Wien, J. Springer, 1940. xii, 532 p., illus., charts, tables, diagrs.

Translation of the second edition of the author's "Vvedenie v sinoptichedkii analiz".

Bibliography: p.503-522.

Contains a paragraph on aircraft icing: p.447-479.

QC861.K54

SO: Aeronautical Sciences and Aviation in the Soviet Union, Library of Congress, 1955.

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000722410003-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000722410003-2

KHROMOV, S.P.

RT-931 (New charts of the principal frontal zones) Novye karty glavnykh frontal'nykh zon. METEOROLOGIIA I GIDROLOGIIA, (8): 11-19, 1940.

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000722410003-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000722410003-2

KHROMOV, Sergei Petrovich.

KHROMOV, Sergei Petrovich. ...Einfuehrung in die synoptische Wetteranalyse; unter Mitwirkung von Dr. N. Koncek... deutsch bearbeitet von Dr. Gustav Swoboda... 2., unveraenderte Aufl.; mit 250 Testabbildungen und Karten sowie 2 Tafeln. Wien, Springer, 1942. xii, 532 p.

Translation of the second edition of Vvedenie v sinopticheskii analiz.

"Literaturverzeichnis": p. 503-522.

DLC: QC861.K54
1942

SO: LC, Soviet Geography, Part I, 1951, Uncl.

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000722410003-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000722410003-2

KHROMOV, S. P.

Vvedeniye v sinopticheskiy analiz (Introduction to Synoptic Analysis). Published in 1944.

SO: U-3039, 11 Mar 1953

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000722410003-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000722410003-2

KHROMOV, S. P.

21518 KHROMOV, S. P.

Geograficheskoye razmeshcheniye glavnykh frontal'nykh zon v zemnoy atmosfere. [Tezisy Doklada].
Trudy Vtorogo Vsesoyuz. geogr. s"yezda. T. P.M., 1948, s. 193.

SO: Letopis' Zhurnal'nykh Statey, No. 29, Moskva, 1949

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000722410003-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000722410003-2

KHROMOV, Sergey Petrovich

[Principles of synoptic meteorology] Osnovy sinopticheskoi meteorologii. Leningrad, Gidrometeorologicheskoe izd-vo, 1948. 696 p. (MIRA 12:4)

(Meteorology)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000722410003-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000722410003-2

KHROMOV, S. P.

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000722410003-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000722410003-2

KHROMOV, S. P.

Weather Forecasting

"Principles of synoptic meterology." Reviewed by V. A. Dzhordzhio, V.A. Bugayev. Met, i gidrol. No. 3, 1949.

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

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000722410003-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000722410003-2

KHRCMOV, S. P.

28288

Sinoltichyeskaya myetyeo. Rologiya. Kak gyeografichye skaya nauka. Izvyestiya vsyesoyuz. Gyeogr. O-Vn, 1949. Byp. 5, S. 528-30

SC: LETOPIS NO. 34

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000722410003-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000722410003-2

American Meteorological Society

551.509.31 (47)

3.11-73

KHromov, S.P., K peresmotru osnovnykh poniatii sinopticheskogo analiza. (A review of the basic concepts of synoptic analysis.) Meteorologiia i Gidrologiia, No. 2:20-26, Oct. 1950. Zubian, G,D. Po povodu stat'i S.P. KHromova "K peresmotru osnovnykh poniatii sinopticheskogo analiza." (A critical review of the article by S.P. KHromov, "A review of the basic concepts of synoptic analysis.") Ibid., p. 27-33. DLC-KHromov approves the attempt to establish a connection between frontological concepts and advective-dynamic forms of synoptic analysis. This connection, however is insufficiently defined, which is why further investigation were needed. Some of the author's conclusions are not new or not entirely correct. His definition of differences between warm and cold air masses by means of baric topography can be applied in synoptic analysis. The review published in 1948 by KH.P POGOSIAN and N.L. TABOROVSKII contains many new and i-

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portant results for work in synoptic analysis which indicate that oponions stated in KHROMOV's review are incorrect. The main content of this review ~~[illegible]~~ is the criticism of unimportant questions but KHROMOV paid no attention to important conclusions developed by [illegible]SIAN AND TABOROVSKII for instance the kinematics and dynamics of of frontogenesis in the troposphere, the dynamic variations of air pressure, the analysis of frontal zones in connection with thermobaric fields and many others. Subject Headings: 1. Synoptic analysis 2. Frontal analysis 3. Frontolysis 4. U.S.S.R. I. Zubian, G.D. II. Fogosian, KH.P. III Taborovskii, N.L. N.T.A.

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KHROMOV, S. P.

PA 175T11

USSR/Climatology - Fronts Mar/Apr 50

"Geographical Distribution of Climatological Fronts," S. P. Khromov

"Iz v-s Geograf Obshch" Vol LXXXII, No 2, pp 126-138

Detailed commentary on maps of climatological fronts of the world for Jan and Jul which were published in Khromov's book "Principles of Synoptic Meteorology." Maps have since been revised for more accuracy and detail, because maps published in the book suffered from over-schematic representation, and because Khromov has since obtained some results from studies of

[redacted] 175T11

USSR/Climatology - Fronts (Contd) Mar/Apr 50

synoptic maps of the northern hemisphere which bear upon the maps. Discusses problems of methodol and gives characteristics of all the fronts for Jan and Jul.

[redacted] 175T11

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"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000722410003-2

AMS/NB

1950
J

551.553.21

10-109

[Khromov, S. P. Mussony kak geograficheskaia real'nost'. [Monsoon as a geographical reality.] *Vsesoiuznoe Geograficheskoe Obshchestvo, SSSR, Izvestiia*, 82(3):225–246, May–June, 1950. map, 23 refs. *DLC*—A long and detailed discussion (without data) of the monsoons in various parts of the earth, based on pressure distribution rather than on wind data (which the author believes to be too much influenced by other factors). A chart of the various degrees of monsoon prevalence is presented for the entire earth, based on zones of relative frequency (<40%, 40–60% and >60%) of gradient winds from one quarter of the compass or from the exact opposite quarter. Pertinent works of many authors (1884–1948) are referred to and discussed. *Subject Headings:* Monsoons, Gradient winds.—*M.R.*

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

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"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000722410003-2

KHROMOV, S. P. 1A 172113

USSR/Climatology - Classification Nov/Dec 50
Literature

"Review of B. P. Alisov's Book 'Climatic Regions of Foreign Countries,'" S. P. Khromov

"Iz v-s Geograf Obshch" Vol LXXXII, No 6, pp 629-632

Very favorable review of subject book, which reviewer regards as completely new approach to climatol. Major concept of this new approach is that "geographical characteristics of atm circulation may serve as index which uniquely det entire complex of climate-forming processes for any geographical region."

175T13

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"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000722410003-2

KHROMOV, S. P.,

Meteorological Abstract
Vol. 4, No. 8
August, 1953
Part 1
Climatology and Bio-
climatology.

4.8-257

551.588.7 (2)

Khromov, S. P., Klimat v stalinskom plane preobrazovaniia prirody. [Climate in the Stalin plan for changing nature.] Leningrad. Universitet, Vestnik, No. 4:3-29, 1951. bibliog. DLC—The Stalin plan for changing nature is a popular name for a program of soil conservation, irrigation, afforestation, watershed management, agricultural methods, etc., and the construction of hydroelectric stations, established in 1948. The author discusses the possibilities for changing the climate near the ground in different climatic regions of the Soviet Union. A series of papers by Russian scientists if mentioned, beginning with VOEIKOV, who first made plans of climatic improvements for agricultural purposes. Subject Headings: 1. Climatic amelioration 2. Soil conservation 3. U.S.S.R.—A.A.

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"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000722410003-2

3.1-208 551.58(47)

Khromov, S. P. O sovremennom sostoianii klimatologii. [Modern climatology.] *Vsesoiuznoe Geograficheskoe Obshchestvo, Izvestiia*, 83(2):117-128, March-April 1951. DLC - A polemical article in which the author defends climatology as a science against the contention of Kashin and Pogosian that climatology is too descriptive and not sufficiently grounded in physical explanations of climatic phenomena. The author discusses the various trends in climatology in Russia as represented by Voeikov, Berg, Rubinshtein, Fedorov, Alisov, Salozhnikova, etc. and shows that physical climatology already is an essential part of climatology. Russian work in climatology is regarded superior to work done elsewhere and no mention is made of the trends and progress in climatology outside of the Soviet Union. *Subject Headings:* 1. Climatology 2. Climatological fads 3. U.S.S.R. *I.I.D.*

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"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000722410003-2

KHROMOV, S.P.

Meteorological Abst.
Vol. 4 No. 4
April 1953
Part 1
Aqueous Vapor and
Hydrometers

4.4-200 ✓ 551.577.1:551.573:551.571(47)

KHromov, Sergei Petrovich, K diskussii o vnutrennem vlagooborote. [A contribution to the discussion on the internal moisture cycle.] *Vsesoiuznoe Geograficheskoe Obshchestvo, Izvestiia*, 83(5):500–506, Sept./Oct. 1951. 10 refs. DWB—A critical review of curr..r Soviet literature on the effect of evaporation from the surface of continents or parts thereof upon the amount of rainfall over the given area. Meteorological arguments are presented to demonstrate that external water vapor is much more important as a source of rainfall over the European U.S.S.R. than is internal water vapor. *Subject Headings:* 1. Rain formation 2. Evaporation 3. Water vapor 4. U.S.S.R.—*I.L.D.*

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000722410003-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000722410003-2

KHROMOV, S. P.

Climatology

State and tasks of Soviet climatology. Izv. AN SSSR. Ser. geog. no. 3:75-86 '52

Monthly List of Russian Accessions, Library of Congress, July 1952. Unclassified.

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000722410003-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000722410003-2

KHROMOV, S.

"Present situation of climatology. Tr. From the Russian." p. 21.
(Zemepisny Sbornik. Vol. 4, no. 1/2, 1952. Bratislava.)

SO: Monthly List of ~~Russian~~ East European Accessions, Vol. 3, No. 6 Library of Congress, June 1954, Uncl.

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000722410003-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000722410003-2

KHROMOV, S. P.

Physical Geography

Method of physical geography, Izv. Vses. geog. obshch., 84, No. 2, 1952.

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

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000722410003-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000722410003-2

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"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000722410003-2

KHROMOV, S. P.

Vil'd Genrikh Ivanovich

Transcription of the name Vil'd Izv. Vses. geog. obshch. 84 No. 4, 1952.

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

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000722410003-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000722410003-2

1. DROZDOV, O. A.: KHROMOV, S. P.

2. USSR (600)

4. Fedorov, E. E.

7. "Climate of the plain of the European part of the U.S.S.R."
Ye. Ye. Fedorov, A. I. Baranov. Reviewed by O. A. Drozdov, S. P. Khromov.
Izv. Vses. geog. obshch. 84 No. 5, 1952.

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

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000722410003-2"

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KHROMOV-S.P.

3000

6.3-149 551.515.11 551.515.711

†Khromov, S. P., O sovremennykh teoriiakh tsikonoobrazovaniia. [On current theories on cyclone formation.] *Kazakhstanoe Geograficheskoe Obshchestvo, SSSR, Izvestiia* 84(5):490-498, Sept./Oct. 1952. bibliog. p. 490-498. DLC—The author reviews some of the theoretical and empirical evidence for the frontal origin of cyclones and anticyclones. The thermo-cyclogenesis theory of Stüve and the theory of A. S. Monin which even denies the need for baroclinicity in cyclogenesis, are briefly discussed. An extensive critical review is given of the advective dynamic theory of the origin of cyclones and anticyclones and for the supporting evidence. *Subject Headings:* 1. Cyclogenesis 2. Anticyclogenesis 3. Cyclone theories.—*I.L.D.*

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KHROMOV, S.P.

480

5.6-222 551.577.5(47)

KHromov, S. P., K voprosu o proiskhozhdenii osadkov Nizhnego Povolzh'ia. [The origin of precipitation in the lower Volga Region.] *Vsesoiuznoe Geograficheskoe Obshchestvo, SSSR, Izvestiia*, 85(1):81-84, Jan./Feb. 1953. 6 refs. DLC Discussion of a paper written by ZHAKOV (*see item* 4.4-20*, April 1953, *MAB*), who according to the author drew incorrect conclusions from correct data. KHROMOV points out that the continental air masses are transformed from maritime air and the primary source of precipitation is the Atlantic and Arctic oceans rather than the Caspian Sea and oases in the desert as assumed by ZHAKOV. Evapotranspiration from analyzed irrigated regions may increase the precipitation about 2-2.5%. *Subject Headings:* 1. Precipitation sources 2. Critical reviews 3. Lower Volga Region, U.S.S.R. I. Zhakov, S. I.—*R.A.* GEO

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"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000722410003-2

KHROMOV, S.P.

FEDOROV, Ye.Ye., professor; PREDTECHENSKIY, P.P.; BUCHINSKIY, I.Ye.; SEYANINOV, G.T., professor; BOSHNO, L.V.; ALISOV, B.P.; BIRYUKOV, N.N.; GAL'TSOV, A.P.; GRIGOR'YEV, A.A., akademik; EYGENSON, M.S., professor; MURETOV, N.S.; KHROMOV, S.P.; BOGDANOV, P.N.; LEBEDEV, A.N.; SOKOLOV, V.N.; YANISHEVSKIY, Yu.D.; SAMOYLENKO, V.S.; USMANOV, R.F.; CHUBUKOV, L.A.; TROTSENKO, S.Ya.; VANGENGEYM, G.Ya.; SOKOLOV, I.F.; STYRO, B.I.; TEMNIKOVA, N.S.; ISAYEV, E.A.; DMITRIYEV, A.A.; MALYUGIN, Ye.A.; LIEDEMAA, Ye.K.; SAPOZHNIKOVA, S.A.; RAKIPOVA, L.R.; POKROVSKAYA, T.V.; BAGDASARYAN, A.B.; ORLOVA, V.V.; RUBINSHTEYN, Ye.S., professor; MILEVSKIY, V.Yu.; SHCHERBAKOVA, Ye.Ya.; BOCHKOV, A.P.; ANAPOL'SKAYA, L.Ye.; DUNAYEVA, A.V.; UTESHEV, A.S.; RUDNEVA, A.V.; RUDENKO, A.I.; ZOLOTAREV, M.A.; NERSESYAN, A.G.; MIKHAYLOV, A.N.; GAVRILOV, V.A.; TSOMAYA, T.I.; DEVYATKOVA, A.M.; ZAVARINA, M.V.; SHMETER, S.M.; BUDYKO, M.I., professor.

Discussion of the report (in the form of debates) [of the current state climatological research and methods of developing it]. Inform. sbor.GUGMS no.3/4:26-154 '54. (MIRA 8:3)

1. Chlen-korrespondent Akademii nauk SSSR (for Fedorov). 2. Glavnaya geofizicheskaya observatoriya im. A.I.Voeykova (for Predtechenskiy, Lebedev, Yanishevskiy, Isayev, Rakipova, Pokrovskaya, Orlova, Rubinshteyn, Budyko, Shcherbakova, Anapol'skaya, Dunayeva, Rudneva, Gavrilov, Zavarina). 3. Ukrainskiy nauchno-issledovatel'skiy gidrometeorologicheskiy institut (for Buchinskiy).

(~~Continued on next card~~)

Leningrad State Univ for Khromov

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"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000722410003-2

KHROMOV, S.P.

"Physics of the atmosphere." A.Kh.Khrgian. Reviewed by S.P.Khromov. Izv.Vses.geog.ob-va 86 no.3:308-310 My-Je '54. (MLRA 7:6)
(Khrgian, A.Kh.) (Meteorology)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000722410003-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000722410003-2

KHROMOV, S.P.

Berg, Raisa L'vovna; KHROMOV, S.P., professor, redaktor; VAZHENIN, K.A., redaktor; RIVINA, I.N., tekhnicheskiy redaktor.

[Through lakes of Siberia and Central Asia; travels of L.S.Berg. (1898-1906) and P.G.Ignatov (1898-1902)] Po ozeram Sibiri i Srednei Azii; puteshestviia L.S.Berga (1898-1906 gg) i P.G.Ignatova (1898-1902 gg.). Moskva, Gos.izd-vo geogr.lit-ry, 1955. 318 p. (MLRA 9:1)

(Siberia--Description and travel)
(Soviet Central Asia--Description and travel)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000722410003-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000722410003-2

7.8-10

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"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000722410003-2

KHROMOV, S.P.

Anniversary scientific meeting of the geography department of the Moscow University. Izv. AN SSSR.Ser.geog. no.5:85-90 S-O '55.
(Moscow University) (Geography) (MLRA 9:1)

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"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000722410003-2

KHROMOV, S.P.

KHROMOV, S.P.

"Collected scientific papers: Meteorology" [in English]. Reviewed by S.P.Khromov. Izv.Vses.geog.ob-va 87 no.4:381-382 Jl-Ag'55. (Meteorology) (MLRA 8:10)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000722410003-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000722410003-2

KIRONOV, S. P.

"Climatologie dynamique et probleme de classification des climats," a paper presented at the International Geographical Congress, Rio de Janeiro, August 1956, published in book Essais de Geographie, Moscow-Leningrad, 1956.

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000722410003-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000722410003-2

KHROMOV, S.P.

124-11-12903

Translation from: Referativnyy Zhurnal, Mekhanika, 1957, Nr. 11, p. 88 (USSR)

AUTHOR: Khromov, S. P.

TITLE: The Monsoons in the General Atmospheric Circulation. (Mussony v obshchey tsirkulyatsii atmosfery)

PERIODICAL: V. sb.: A. I. Voyeykov i sovrem probl. klimatol. Leningrad, Gidrometeoizdat, 1956, pp 84-108

ABSTRACT: The Author, at the outset, recalls the great accomplishments of A.I. Voyeykov in the study of the monsoons of East Asia and their significance for the climate of that area. Drawing a parallel with Voyeykov's views, the A. then makes a survey of contemporary thoughts on monsoons. In particular, he rejects the existence of a "European" monsoon (and any such monsoons in North America) by indicating that in Europe monsoon-genetic synoptic periods are frequently replaced by periods of westerly circulation. He designates a monsoon as a specific atmospheric flow regime for which he submits a purely kinematic definition. A monsoon cannot be related to a definite weather regime (for example, tied in with an annual precipitation cycle) and with a definite exchange of air between continents and oceans. The author underscores the fact

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124-11-12903

The Monsoons in the General Atmospheric Circulation (continued).

that the monsoon rains are of frontal-cyclonic character throughout the Far East area and are predominantly tied to polar fronts. To a minor degree such rains are the results of convective and orographic effects. The large variability of the displacement processes of the polar front affords at times extremely moist and at times extremely dry summers, for example, in China.

The summer monsoon in India, also, is of cyclonic nature, but that proposition is argued in less penetrating detail in the present paper.

According to the A., the winter monsoon in East Asia is a regime of posterior flow of cyclonic systems passing over the area of Japan and even to the East of it which are accompanied by heavy precipitation over Japan.

Considering the nature of a monsoon, the A. draws a parallel with the general circulation of the atmosphere, which he views as an aggregate of moving cyclonic-anticyclonic eddies which are built up and intensified above certain areas of the Earth. Correspondingly, the monsoons, also, especially in Africa and Southern Asia, appear as a consequence of the displacements of the planetary wind zones to the north and south. The A. insists that the monsoon of tropical countries, in one way or another, is a deflected tradewind. He takes issue with

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124-11-12903

The Monsoons in the General Atmospheric Circulation (continued)

Flohn who denies the possibility of any flow of a SE tradewind crossing into the northern hemisphere and appearing there as a SW-ly summer monsoon.

The paper concludes with a map of the geographic distribution of monsoons and describes the various regions of monsoon activity.

(A. Kh. Khrgian)

(Translator's Note: Khromov's findings on the frontal-cyclonic character of monsoons and on the statistical character of the climatological effects of monsoon phenomena, as well as his conclusions on the trans-equatorial flow and deflection of tradewinds, parallel earlier studies detailed in "Tropical & Equatorial Meteorology" by Maurice A. Garbell, Pitman Publishing Corporation, New York & London, 1947, 221 pp.)

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"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000722410003-2

14-57-7-14770

Translation from: Referativnyy zhurnal, Geografiya, 1957, Nr 7, p 86 (USSR)

AUTHOR: Khromov, S. P.

TITLE: Dynamic Climatology and Problems of Climate Classification (Dinamicheskaya klimatologiya i problema klassifikatsii klimatov)

PERIODICAL: V sb: Voprosy geografii, Moscow-Leningrad, AN SSSR, 1956, pp 127-133.

ABSTRACT: The article presents some views on genetic climate classification and some concrete results reached on this subject in the Soviet Union. It notes that atmospheric circulation is extremely important in climate formation. There are two ways to describe climate on the basis of atmospheric circulation: 1) to show climate peculiarities on an ordinary map of the baric or kinematic field, as Voyeykov and Keppen have done; 2) to determine all the synoptic processes which create the climate of a given area. Originally

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Dynamic Climatology and Problems of Climate Classification (Cont.) 14-57-7-14770

the same principles as those used by Alisov. Flon did not know of Alisov's work. The objectivity of Alisov's classification is proven by the fact that the general and specific details of both classifications are virtually the same. A bibliography of 17 titles is included.

Card 3/3

L. K.

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000722410003-2

KHROMOV, S.P.

USSR/ Meteorology

Card 1/1 Pub. 86 - 4/42

Authors : Khromov, S. P., Professor

Title : Fluctuations in climate and present warming trend

Periodical : Priroda 45/1, 24-34, Jan 56

Abstract : The changes of climate over millions of past years, as revealed by the study of geology, are discussed. The possibility of changes in climate within historical times is admitted. Actual temperature records at various places over periods exceeding two hundred years are presented as showing a warming trend. Isolated facts about temperature in remotely separated parts of the world are cited in impirical fashion. The possibility of variations in the sun's activity being the cause of changes in climate is advanced but no positive conclusions are drawn. Maps; graphs.

Institution : .....

Submitted : .....

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"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000722410003-2

KHROMOV, S.P.

Geographic distribution of monsoons. Izv.Vses.geog.ob-va 89 no.1:7-13 Ja-F '57. (MLRA 10:3)

(Monsoons)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000722410003-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000722410003-2

KHROMOV, S.P.

Continentality of climate. Izv.Vses.geog.ob-va 89 no.3:221-225 My-Je '57. (MIRA 10:11)

(Climatology)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000722410003-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000722410003-2

KHROMOV, S. P., Moscow State University (Address of author - Moscow V-234, Moscow State U., Korp. M, Kvart. 152).

On the Future Position of Soviet Climatology, Zeitschrift fuer Meteorologie, Berlin, Jan-Feb 1958. (Paper presented at the 1st Meeting of the Meteorological Society of the DDR, 14-16 Oct. 1957 in Berlin).

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"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000722410003-2

AUTHOR: Khromov, S.P. SOV-12-90-4-7/22

TITLE: Heinrich Fikker (First Anniversary of his death) (Genrikh Fikker. K godovshchine so dnya smerti)

PERIODICAL: Izvestiya Vsesoyuznogo geograficheskogo obshchestva, 1958, Vol 90, Nr 4, pp 356-357 (USSR)

ABSTRACT: The article is consecrated to the memory of Heinrich Fikker, famous Austrian meteorologist.

1. Meteorologists--USSR

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(13)

KHRDMOV, S.P.

PHASE I BOOK EXPLOITATION SOV/3606

Nauchnaya konferentsiya po problemam meteorologii Antarktiki, Moscow, 1959

Tezisy dokladov (Theses of Reports at the Scientific Conference on Meteorological Problems in Antarctica, Moscow, 1959) Moscow, Gidrometeoizdat (Otd-niye) 1959. 47 p. 1,000 copies printed.

Ed.: O.G. Krichak; Tech. Ed.: I.M. Zarkh.

PURPOSE: The publication is intended for meteorologists, particularly for those interested in the climatology of Antarctica.

COVERAGE: This book contains summaries of thirty-five reports presented at the Scientific Conference on Meteorological Problems in Antarctica, held in Moscow, October 26 to 28, 1959. The summaries are arranged in four groups: (1) general problems of the geography of Antarctica; (2) atmospheric circulation; (3) radiation balance, heat balance, climate and special features of individual elements; (4) methods of observation and measurement. No personalities are mentioned. There are no references.

PART I. GENERAL GEOGRAPHICAL PROBLEMS

Bagayev, V.A. [Candidate of Physics and Mathematics, Tsentral'nyy institut prognozov (Central Forecasting Institute)] and Ye. I. Tolstikov (Candidate of Geographical Sciences, Glavnoye upravleniye Severnogo morskogo puti (Main Administration of the Northern Sea Route)] Main Relief Features of Eastern Antarctica 5

Model', Yu.M. [Candidate of Geographical Sciences, Institute geografii AN SSSR (Institute of Geography, AS USSR)], and A.V. Radel'nya (Glavnoye upravleniye Severnogo morskogo puti (Main Administration of the Northern Sea Route)] Antarctic Icecap, its Thickness and the Relief of Underlying Rock 5

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Khromov, S.P. [Professor, Doctor of Geographical Sciences, Moskovskiy gosudarstvennyy universitet im. M.V. Lomonosova (Moscow State University im. M.V. Lomonosov)] Special Features of Summer Circulation and Weather in the Antarctic Waters According to Observations From the "Ob'" in 1956-1957 9

Krichak, O.G. [Candidate of Geographical Sciences, Tsentral'nyy institut prognozov (Central Forecasting Institute)] Atmospheric Circulation in Antarctica and the Southern Hemisphere 10

Gayperov, S.S. [Candidate of Geographical Sciences, Tsentral'naya aerologicheskaya observatoriya (Central Aerological Observatory)] Some Special Features of Circulation and Structure of the Atmosphere in Antarctica and the Central Arctic 11

Tolstikov, Ye.I. [Main Administration of the Northern Sea Route] Air Masses in Eastern Antarctica 12

Artapenko, F.D. [Docent, Candidate of Geographical Sciences, Leningradskiy gidrometeorologicheskiy institut (Leningrad Hydro-Meteorological Institute)] Development of Synoptic Processes Over Western Antarctica 13

Pogosyan, Kh.P. [Professor, Doctor of Geographical Sciences, Tsentral'nyy institut prognozov (Central Forecasting Institute)] Special Features of the Temperature at High Altitudes and of Atmospheric Circulation in Antarctica 16

Gruza, G.V. [Sredneaziyatskiy nauch issledovatel'skiy gidrometeorologicheskiy institut (Hydro-Meteorological Research Institute of Central Asia)] Problem of Studying Planetary Circulation by Means of Macroturbulence Characteristics 18

Shapyrev, V.M. [Professor, Doctor of Geographical Sciences, Leningradskiy gidrometeorologicheskiy institut (Leningrad Hydro-Meteorological Institute)] Some Special Features of the Regeneration of Cyclones on the Antarctic Front 19

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MAMONTOVA, Lidiya Ivanovna; KHROMOV, Sergey Petrovich; PROTOPOPOV, V.S., red.; BRAYNINA, M.I., tekhn.red.

[English-Russian meteorological dictionary] Anglo-russkii meteorologicheskii slovar'. Leningrad, Gidrometeor.izd-vo, 1959. 172 p. (MIRA 12:4)
(English language--Dictionaries--Russian)
(Meteorology--Dictionaries)

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KHROMOV, S.P.

PHASE I BOOK EXPLOITATION SOV/5463

Sovetskaya antarkticheskaya ekspeditsiya

Vtoraya morskaya ekspeditsiya na d/e "Ob'", 1956-1957 gg.; obshcheye opisaniye i nauchnyye rezul'taty (Second Marine Expedition on the Diesel-Electric Ship "Ob'", 1956-57; General Description and Scientific Results) Leningrad, Morskoy transport, 1959. 175 p. (Series: Its: [Materialy] no. 5) Errata slip inserted. 1,200 copies printed.

Sponsoring Agency: Arkticheskiy i antarkticheskiy nauchno-issledovatel'skiy institut.

Ed. (Title page): I. V. Maksimov, Doctor of Geographical Sciences, Professor; Ed.: L. G. Kaplinskaya; Tech. Ed.: O. I. Kotlyakova.

PURPOSE: This book is intended for oceanographers, meteorologists, and hydrochemists.

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"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000722410003-2

Second Marine Expedition (Cont.) SOV/5463

COVERAGE: The present volume, the fifth in a series of seven, is a collection of articles (except for two) devoted specifically to the oceanographic, meteorological, and hydrochemical findings of the Second Soviet Marine Expedition conducted on the diesel ship "Ob'" (I. A. Man, Captain) during 1956-57. The first two articles outline the Expedition's organization and program, and provide a general account of its activities during the 223-day voyage, which covered more than 40,000 miles of the Atlantic, Antarctic, and Indian Oceans. The expedition was sponsored by the Arctic and Antarctic Scientific Research Institute of the Glavsevmorput' Ministerstva morskogo flota SSSR (Main Administration of the Northern Sea Route of the Ministry of the Merchant Marine of the USSR) as part of the International Geophysical Year program. Its purpose was to investigate 1) atmospheric processes in the Antarctic region and their effect on the earth's general circulation, 2) basic regularities in the distribution of waters in the southern oceanic zone, 3) exchange of the waters of the southern seas with the waters of the world ocean, 4) geological structure of the sea bottom in the Antarctic region, and 5) the plankton, benthos,

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ichthyofauna, and microorganisms of the Antarctic waters. Observations of the magnetic field of the earth were also made. The expedition, headed by Professor Igor' Vladislavovich Maksimov, Doctor of Geographical Sciences and Professor at the Leningradskoye vyssheye inzhenernoye morskoye uchilishche imeni S. O. Makarova (Leningrad Higher Marine Engineering School imeni S. O. Makarov), consisted of the following 8 scientific task forces: aerometeorological (headed by Leonid Gennadiyevich Sobolev); hydrological (Kirill Vladimirovich Moroshkin); geological (Aleksandr Petrovich Lisitsyn); hydrochemical (Aleksey Nikolayevich Bogoyavlenskiy); hydrobiological (Viktor Aleksandrovich Arsen'yev); geophysical (Nikolay Panteleymonovich Grushinskiy); geographic (Gavrila Dmitriyevich Rikhter); and hydrographic (Yuriy Aleksandrovich Gordeyev). A complete list of the names and affiliations of the 65 scientific and administrative members of the Expedition is contained in the first article. The articles were written by members of the Institut okeanologii Akademii nauk SSSR (Institute of Oceanology, Academy of Sciences, USSR), Gosudarstvennyy okeanograficheskiy institut Gidrometsluzhby SSSR (State Oceanographic Institute of the Hydro-

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meteorological Service of the USSR), Vsesoyuznyy nauchno-issledovatel'skiy institut rybnogo khozyaystva i okeanografii (All-Union Scientific Research Institute of Fisheries and Oceanography), and the Arctic and Antarctic Scientific Research Institute. There are no references.

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BELINSKIY, Vasiliy Alekseyevich, prof., doktor fiziko-matem.nauk; KHROMOV, S.P., otv.red.; PROTOPOPOV, V.S., red.; VLADIMIROV, O.G., tekhn.red.

[German-Russian meteorological dictionary] Nemetsko-russkii meteorologicheskii slovar'. Leningrad, Gidrometeor.izd-vo, 1959. 237 p. (MIRA 12:12)
(German language--Dictionaries--Russian)
(Meteorology--Dictionaries)

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KHROMOV, S.P.
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3(3) PHASE I BOOK EXPLOITATION SOV/3223

Akademiya nauk SSSR. Kompleksnaya antarkticheskaya ekspeditsiya

Klimat Antarktiki (Climate of the Antarctic) Moscow, Geografgiz, 1959. 285 p. (Series: Its: Trudy; Meteorologiya i klimatologiya) Errata slip inserted. 4,000 copies printed.

Ed.: S. N. Kumkes; Tech. Ed.: S. M. Kosheleva; Editorial Board: V. F. Burkhanov, B. L. Dzerdzeyevskiy, Kh. P. Pogosyan, and G. M. Tauber.

PURPOSE: This book is intended for meteorologists and climatologists. It will be of interest to all earth scientists concerned with the Antarctic region.

COVERAGE: This book contains 18 articles on the weather and climate of Antarctica. Articles represent the generalized results of processing data obtained by the Soviets during their expeditions to the Antarctic, 1955-1958. Individual authors have attempted to clarify and unify previously divergent views on Antarctic

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meteorological processes (zonal circulation, temperature distributions, cyclonic and anticyclonic movement, etc.). No personalities are mentioned. References accompany individual articles.

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Gusev, A. M., and N. P. Rusin. The Meteorological Characteristic of the Interior Region of East Antarctica According to the Observations at Pionerskaya Station 102

Rastorguyev, V. I., and Kh. Alvares. Description of Antarctic Circulation as Observed From April to November 1957 110

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Climate of the Antarctic (Cont.) SOV/3223

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Climate of the Antarctic (Cont.) SOV/3223

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3(7) SOV/50-59-8-16/19

AUTHOR: Khromov, S. P.

TITLE: On Modern Classifications of Clouds (O sovremennykh klassifikatsiyakh oblakov)

PERIODICAL: Meteorologiya i gidrologiya, 1959, Nr 8, pp 43-46 (USSR)

ABSTRACT: The World Meteorological Organization published the new "International Cloud Atlas" in English and French in 1956. The Soviet Cloud Atlas, issued by the Gidrometeoizdat Publishing House, was published in 1957. It was compiled by the Tsentral'naya aerologicheskaya observatoriya (TsAO) (Central Aerological Observatory). The editors' commission consisted of 10 Soviet meteorologists (not only from the TsAO). Professor A. Kh. Khrgian conducted the edition of the Atlas. The two Atlases are compared here. The old international classification worked out in the 20's of this century was also valid in the USSR until recently. It was revised in the USSR, and is differs from the old international, and also - much more - from the new international classification. Both classifications, the Soviet and the new international, differ from the old international one. But each is distinguished in a different way. The

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On Modern Classifications of Clouds SOV/50-59-8-16/19

differences are pointed out. It is much regretted that two classifications so much different have been set up. It is shown that the difference is so big that an identification is impossible. It is shown that a transition from one classification to the other is not very simple, irrespective of the question which one is better. The only bad thing is that there are two. The international one is not so bad, and the classification of the TsAO is not so good, that the international classification should be replaced by that of the TsAO. There is 1 Soviet reference.

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ON THE CHARACTER OF THE INTERTROPICAL CONVERGENCE ZONE

1. The observations during the voyage of the ship "Ob" in the Southern hemisphere in 1956-57 gave an opportunity to make sure for the author the presence of two types of the intertropical convergence zone at least: 1. A zone of weakened trades with a sharp tropical front between them (the Eastern Atlantic ocean, November); 2. An equatorial west wind zone with the weakened SE trade southward and with light variable premonsoonal winds northward from it (the Indian ocean, May).

2. For the former case are characteristic: a keeping of direction of both trades inside the convergence zone with a decrease of their velocity; a sharp transition from the NE trade to the SE one in the tropical front zone several tens kilometers wide near the latitude 6°N, a conservation of the direction and of the great velocity (roughly 10 m/sec) of the SE trade when crossing the equator. The convergence zone was characterised by cumulus-clouds with the considerable vertical development (especially close to the tropical front), and with the linear arrangement, but without a freezing.

3. For the second case are characteristic: a sharp transition from the weakened SE trade to sufficiently strong (6-10 m/sec) westerlies in 2,5°S; a sharp transition from westerlies to light variable winds in 2,5°N; the pressure distribution which excludes any possibility of the geostrophical explanation of the west wind zone; the absence of any cold source close to the equator. The both latter circumstances make Fletcher's and Flohn's hypotheses about the origin of equatorial westerlies as unapplicable to this case. The clouds in the westerlies have the distinct freezing of summits, as opposed to the more southern and more northern regions.

4. The structure of the intertropical convergence zone don't restricted by two variants being discussed. There are necessary both the empirical investigations (including free-air ones), and the construction of a theory of circulation movements near the equator.

Prof. Dr. S. P. Khromov
U.S.S.R.

Report submitted for the XII General Assembly of the Intl. Union of Geodesy and Geophysics, Helsinki, Finland, 25 July - 6 August 1960.

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KHROMOV, S. P.

HROMOV, S.P. (Moszkva)

On the formation of warm clouds and precipitation in the tropics.
Idojaras 64 no.4:193-199 Jl-Ag '60. (EEAI 10:2)
(Tropics) (Clouds) (Precipitation (Meteorology))

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"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000722410003-2

KHROMOV, S.P.

"A climatic atlas of the Czechoslovakian Republic." Reviewed by S.P.Khromov. Izv.Vses.geog. ob-va 92 no.3:279-280 My-Je '60. (MIRA 13:6)

(Czechoslovakia--Climatology--Charts, diagrams, etc.)

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"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000722410003-2

KHROMOV, S.P., prof.

"Hydroclimatic cycle of the forest-steppe and steppe zones of the U.S.S.R. in dry and wet years." Reviewed by S.P.Khromov. Vest.AN SSSR 31 no.6:132-135 Je '61. (MIRA 14:6)
(Soil moisture) (Hydrometeorology)

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"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000722410003-2

HROMOV, Sz.P. [Khromov, S.P.] prof., dr. (Moscow)

On the dynamics of the intertropical convergence zone. Idojaras 65 no.2:65-77 Mr-Ap '61.

1. "Idojaras" szerkeszto bizottsagi tagja.

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"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000722410003-2

S/169/63/000/003/024/042
D263/D307

AUTHOR: Khromov, S.P.

TITLE: Types of the wind distribution in the ground-adjacent layer, in equatorial regions

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 3, 1963, 38, abstract 3B224 (Izv. Vses. geogr. o-va, 1961, v. 93, no. 2, 166-168)

TEXT: The author resolves the main variations of the distribution of wind in the equatorial region, which are close to the most typical conditions. (1) Tradewinds are found at the equator itself. Centers of depression are situated on the equator, so that baric gradients are directed along it to the east and west. Near the equator the tradewinds are transformed into zonal antitryptic, eastern and western winds, (an antitryptic wind is a movement set up as a result of gradient and friction forces). (2) One of the tradewinds penetrates past the equator. The baric gradient is considerable in the region of the equator, and its direction is close

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Types of the wind ... S/169/63/000/003/024/042
D263/D307

to meridional. The tradewind is transformed into almost a meridional antitryptic wind before reaching the equator, and in the second hemisphere, receding from the equator, continues to rotate under the influence of Coriolis' force. (3) The tropical front is distant from the equator by ~ 5° of latitude, and the baric gradient near the equator is small. The tradewind penetrates into the other hemisphere preserving its direction by inertia. (4) The tropical front is considerably distant from the equator, i.e. it is found in the zone of quasi-geostrophic wind. The tradewind passes across the equator preserving its direction by inertia and begins to change its direction in the other hemisphere, according to the basic conditions of the winds of that hemisphere. By the time it approaches the front, it already possesses a westerly component.
[Abstracter's note: Complete translation]

Card 2/2

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"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000722410003-2

KHROMOV, S.P.

Observations of clouds and precipitations in tropical oceans. Izv. Vses.geog.ob-va 93 no.3:199-210 My-Je '61. (MIRA 14:5)
(Ocean) (Clouds) (Tropics--Precipitation (Meteorology))

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000722410003-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000722410003-2

BELINSKIY, V.A., prof., red.; KHROMOV, S.P., prof., red.

[Data of the Pamir Expedition of 1957-1959] Materialy Pamirskoi ekspeditsii. Moskva, Mosk. gos.univ. No.1.[Aaerological observations] Aerologicheskie nabliudeniia. 1962. 234 p. (MIRA 16:4)

1. Pamirskaya ekspeditsiya 1957-1959 gg.
(Pamirs--Meteorology--Observations)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000722410003-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000722410003-2

KHROMOV, Sergey Petrovich; MAMONTOVA, Lidiya Ivanovna; MATVEYEV, L.T., otv. red.; YASNOGORODSKAYA, M.M., red.; BRAYNINA, M.I., tekhn. red.

[Meteorological dictionary] Meteorologicheskii slovar'. Izd.2., perer. i dop. Leningrad, Gidrometeorizdat, 1963. 619 p. (MIRA 17:1)

(Meteorology—Dictionaries)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000722410003-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000722410003-2

KHROMOV, S.P.

Abram Isakovich Asknazii; on the 25th anniversary of his death. (MIRA 16:2)
Meteor. i gidrol. no.2:53-55 F '63.
(Asknazii, Abram Isakovich, 1887-1937)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000722410003-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000722410003-2

KHROMOV, Sergey Petrovich; DROZDOV, O.A. [illegible]enzent; POKROVSKAYA, T.V., retsenzent; KAROL', B.P., otv. red.

[Meteorology and climatology for geography departments] Meteorologiia i klimatologiia dlia geograficheskikh fakul'tetov. Leningrad, Gidrometeoizdat, 1964. 498 p. (MIRA 18:1)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000722410003-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000722410003-2

SUVOROV, N.P., prof.; KHROMOV, S.P., prof.

Aleksei Feodos'evich Vangengeim, 1881-1942; organizer of the Hydrometeorological Service of the U.S.S.R. Meteor. i gidrol. no.6:44-45 Je '65. (MIRA 18:5)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000722410003-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000722410003-2

KHROMOV, S.P., prof.

Mikulas Koncek; on his 65th birthday. Meteor. i gidrol. no.8:64 Ag '65. (MIRA 18:7)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000722410003-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000722410003-2

KHROMOV, S.S., kand.istor.nauk

Outstanding leader of Soviet transportation; on the occasion of the 85th birthday anniversary of F.E.Dzerzhinskii. Zhel.dor.-transp. 44 no.9:70-72 S '62. (MIRA 15:9)
(Dzerzhinskii, Feliks Edmundivich, 1877-1926)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000722410003-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000722410003-2

AMANGALIYEV, I.; KHROMOV, V.

Participation of Komsomol organizations in the development of electric drilling. Neft.khoz. 41 no.8:66-67 Ag. '63. (MIRA 17:10)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000722410003-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000722410003-2

SOV/137-59-5-9801

Translation from: Referativnyy zhurnal, Metallurgiya, 1959, Nr 5, p 46 (USSR)

AUTHOR: Khromov, V.A.

TITLE: The Effect of Oxygen Enriched Blast on the Temperature in the Blast Furnace Hearth

PERIODICAL: Kislorod, 1953, Nr 4, pp 11 - 20

ABSTRACT: Temperatures along the hearth radius were measured with a "TsNIIChM-1" thermocouple with a molybdenum tip protruding by 95 mm from the cooled pipe. It was possible to carry out all the measurements in the reducing zone of the hearth with one thermocouple; in the oxidizing zone each measurement required the use of a new thermocouple. In pig iron smelting in a blast furnace at the Novo-Tagil'skiy Plant the average temperature of the hearth at the level of tuyeres did not change, if the blast contained 23.5% oxygen (1,741°C instead of 1,739°C with conventional blast). The average temperature was 1,775°C in foundry pig-iron casting with 25% oxygen carried out at the Novo-Tul'skiy Plant. In Fe-Mn smelting at the same plant in a 333 m^3 furnace

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SOV/137-59-5-9801

with 33.5% O_2, the temperature was 1,840°C, whereas at the Kosogorskiy Plant it was 1,885°C with conventional blast. If the amounts of heat escaped from the furnace with the slag were equal, then the temperature in the hearth did practically not depend on the O_2 content in the blast. If O_2 enriched blast is being used then the zone of maximum temperature approaches the tuyere opening and this temperature rises, whereas in the central portions of the furnace the temperature drops. The approach of the maximum temperature zone to the tuyere may be prevented by speeded-up outflow of the blast according to quoted formulae.

A.P.

Card 2/2

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000722410003-2

KHROMOV, V.A.

KHROMOV, V.A., Cand Tech Sci—(diss)"Effect of the enrichment of blast by oxygen ~~blowing~~ on the temperature of the blast furnace hearth." Mos, 1958. 18 pp, incl cover (Main Administration of Sci Res and ~~Project~~ Planning Organizations under ~~the~~ Gosplan ~~of the~~ USSR. Central Sci Res Inst of Ferrous Metallurgy), 110 copies (KL,48-58, 105)

-55-

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000722410003-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000722410003-2

SOV/67-58-4-2/29

AUTHOR: Khromov, V. A., Engineer

TITLE: The Influence of Blowing with Oxygen-Enriched Air on the Temperature in the Hearth of a Blast Furnace (Vliyaniye obogashcheniya dut'ya kislorodom na temperaturu v gorne domennoy pechi)

PERIODICAL: Kislorod, 1958, Nr 4, pp. 11-20 (USSR)

ABSTRACT: Opinions of scientists considering the above mentioned influence are divided. In some papers (Refs 1, 2, 3 and 4) it is declared that temperature is bound to rise considerably, but in others (Refs 5, 6, 7 and 8) the opinion is expressed that the mean temperature in the hearth of the furnace remains unchanged. In this paper the attempt is made to solve this problem at last by means of a thermoelectric element with a molybdenum point constructed especially for this purpose. In the chapter on: "The Results of Temperature Measurements Carried out in a Blast Furnace Hearth at Different Degrees of Enrichment of the Air Blast by Oxygen" blasting with 23,5% or 21% oxygen enrichment is dealt with in the first part. The second part deals with blowing with a 33,5% oxygen enrichment with ferromanganese. The following

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"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000722410003-2

The Influence of Blowing with Oxygen-Enriched Air on the Temperature in the Hearth of a Blast Furnace SOV/67-58-4-2/29

There are 8 figures, 1 table, and 22 references, 20 of which are Soviet.

Card 3/3 1. Blast furnaces—Operation 2. Oxygen—Thermal effects

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000722410003-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000722410003-2

VOSKOBOYNIKOV, V.G.; KHROMOV, V.A.; REBEKO, A.F.; MKRTCHAN, L.S.; MITSKEVICH, O.V.; BIRMAN, A.I.

Mathematical analysis of certain design parameters of thermal conditions of the blast furnace process. [Sbor. trud.] TSNIICHM no.29:9-23 '63. (MIRA 17:4)

1. TSentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii (for Voskoboynikov, Khromov, Rebeko, Mkrtchan).
2. TSentral'nyy nauchno-issledovatel'skiy institut kompleksnoy avtomatizatsii (for Mitskevich, Birman).

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"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000722410003-2

KHROMOV, V. A.

G. L. Suchkin, V. A. KHROMOV: "Thermal electromagnetic emission of a system which is not subject to the reciprocity theorem in the microwave band." Scientific Session Devoted to "Radio Day", May 1958, Trudrezervizdat, Moscow, 9 Sep. 58

The onsager relations known in the themodynamics of irreversible processes are generalized for the case of a system which is not subject to the reciprocity theorem in symmetric and antisymmetric form.

The presence of spatial asymmetry of the intrinsic thermal emission is shown for waveguide systems containing nonreciprocal elements and an expression is found for the difference in the spectral density of the power transmitted by such an element in mutually opposite directions in terms of its parameters.

Results are presented of an experimental investigation of the above-mentioned phenomenon in a ferrite resonant isolator.

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"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000722410003-2

06468
SOV/141-1-5-6-12/28

AUTHORS: Suchkin, G.L. and Khromov, V.A.

TITLE: Thermal Electromagnetic Radiation of the Systems Not Obeying the Reciprocity Principle

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Radiofizika, 1958, Vol 1, Nr 5-6, pp 88 - 92 (USSR)

ABSTRACT: A system "C" which does not obey the reciprocity principle can be constructed in the form of a cylindrical waveguide with ideally conducting walls and is characterised by the absorption coefficients A_{ik}, reflection coefficients R_{ik} and transmission coefficients D_{ik} (where $i, k = 1, 2$). The system is illustrated in Figure 1. Further, it is assumed that the waveguide section is loaded at both ends with matched loads "H" at a temperature T. The spectral power density of the radiation of the system "C" in the two directions (Figure 1) is given by Eqs (1), where $P_{1\omega}$ and $P_{2\omega}$ are the power spectral densities, $\theta = kT$ and $\Gamma = D_{12} = D_{21}$. If the system is matched $(R_{11} = R_{22} = 0)$, Eq (1) can be written in the form of Eq (2). In a general

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SOV/141-1-5-6-12/28

Thermal Electromagnetic Radiation of the Systems Not Obeying the Reciprocity Principle

case, when the loads in the system "C" are different, the relationships between the power spectra are more complex than those of Eqs (1) or (2). In order to determine the difference between the power spectrum densities (between the two directions of radiation), it is necessary to represent the system in the form of a quadripole. The system can be described in terms of electrical impedance Z_{ik} by a linear equation of the type:

$$\left\| \begin{matrix} U_1 \\ U_2 \end{matrix} \right\| = \left\| Z_{ik} \right\| \left\| \begin{matrix} I_1 \\ I_2 \end{matrix} \right\| \quad (i, k = 1, 2) \qquad (5)$$

where U_i and I_i are the voltage and current at the terminals of the quadripole, respectively, while $\|Z_{ik}\|$ is the impedance matrix. The quadripole represented by

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Thermal Electromagnetic Radiation of the Systems Not Obeying the Reciprocity Principle

Eq (5) cannot be regarded as passive, since it contains internal fluctuating voltages. It is now necessary to determine the average power dissipated across a resistance R at a temperature T^o at one of the terminals, while the other terminal contains an impedance Z which is also at the temperature T^o (Figure 2). The average power dissipated in R by the Fourier-components of the electromotive force E_{1f} and E_{2f} is given by Eq (8).

The expression for the average power dissipated in a reversed quadripole is similar. The difference between the powers is therefore expressed by Eq (9). Since Eq (9) is very unwieldy, only the case of a symmetrical quadripole is considered. For this case, the difference between the power spectrum densities is given by:

$$\Delta P_f = 4\theta R\alpha \left(|Z_{21}|^2 - |Z_{12}|^2 \operatorname{Re}(Z_{22} + Z)\right) \qquad (10) .$$

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Thermal Electromagnetic Radiation of the Systems Not Obeying the Reciprocity Principle

From Eq (10), it follows that if the system does not obey the reciprocity principle,

$$\left|Z_{12}\right|^2 \neq \left|Z_{21}\right|^2 ,$$

and $\Delta P_f \neq 0$. The effect was investigated experimentally by measuring the thermal radiation of an isolator operating in the region of a ferromagnetic resonance. The experimental equipment consisted of a microwattmeter for the wavelength of 3 cm, a powerful electromagnet, a thermostat and the ferrite isolator. At a given ferrite temperature T_Φ, the intensity of the radiation from the isolator was measured for two opposite directions of the magnetic field. The matched load had a temperature of 290 °K. The magnetic field was varied from 0 to 3 000 Oe. The results are shown in Figure 3. This shows the effective radiation temperatures as a function of the applied magnetic field for three different ferrite temperatures. It is seen that

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SOV/141-1-5-6-12/28

Thermal Electromagnetic Radiation of the Systems Not Obeying the Reciprocity Principle

to each direction of the magnetic field corresponds a particular curve. As the field is increased, the differences between the radiation temperatures in the two directions become more pronounced. The authors express their gratitude to S.M. Rytov and V.S. Troitskiy for discussion of the results. There are 3 figures and 10 references, of which 7 are Soviet and 3 English.

ASSOCIATION: Issledovatel'skiy radiofizicheskiy institut pri Gor'kovskom universitete (Radiophysics Research Institute of Gor'kiy University)

SUBMITTED: March 6, 1958

Card 5/5

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"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000722410003-2

KHROMOV, V. A.

"To generalization of Kirchkoff's theorem for surface, moving arbitrarily"

report submitted for the 4th Intl. Congress of Acoustics, Copenhagen, Denmark, 21-28 Aug 1962.

Acoustical Inst. of the Acad. Sci., Moscow, U.S.S.R.

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"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000722410003-2

S/046/63/009/001/015/026
B104/B186

AUTHOR: Khromov, V. A.

TITLE: A generalization of the Kirchhoff theorem for a surface moving arbitrarily

PERIODICAL: Akusticheskiy zhurnal, v. 9, no. 1, 1963, 88 - 93

TEXT: The Kirchhoff formula expresses the value of the function φ in a given point at a given time by the values of the retarded function and its derivatives on a surface surrounding this point. Here the Kirchhoff formula is generalized for the case of a surface moving arbitrarily. The solution

$$\varphi(x_1', x_2', x_3', x_4') = \frac{1}{4\pi^2}\int_S \left[\frac{1}{R^2}\frac{\partial\varphi}{\partial N} - \varphi\frac{\partial}{\partial N}\left(\frac{1}{R^2}\right)\right] dS, \qquad (9)$$

of the Gordon equation $\Box\varphi = 0$ is derived as an integral over the surface moving in space in arbitrary manner with a velocity smaller than c:

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$$\varphi(x', y', z', t') = \frac{1}{4\pi}\int_s \left\{ \frac{1}{r(1-\beta_{nr})}\frac{\partial\varphi}{\partial n} - \frac{\partial}{\partial n}\left[\frac{1}{r(1-\beta_{nr})}\right]\varphi + \right. \quad (35)$$

$$\left. + \frac{\frac{\partial r}{\partial n}}{cr(1-\beta_{nr})}\frac{\partial\varphi}{\partial t} - \frac{2\beta_n}{cr(1-\beta_{nr})}\frac{\partial\varphi}{\partial t} - \frac{\frac{\partial\beta_n}{\partial t}}{cr(1-\beta_{nr})}\varphi \right\} ds.$$

β_n is the dimensionless normal velocity of the surface. If $\beta_n = 0$, (35) is equal with the Kirchhoff formula. There is 1 figure.

ASSOCIATION: Akusticheskiy institut AN SSSR, Moskva (Institute of Acoustics AS USSR, Moscow)

SUBMITTED: June 18, 1962

Card 2/2

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000722410003-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000722410003-2

ZHEREBIN, B.N., prof.; KHROMOV, V.A., kand. tekhn. nauk; MISHIN, P.P., inzh.; YEFIMENKO, G.M., inzh.; OBSHAROV, V.M., inzh.; RAYEV, Yu.O., inzh.

Automatic control of the distribution of blast to blast furnace tuyeres at the Kuznetsk Metallurgical Combine. Stal' 23 [i.e. 24] no.4:292-296 Ap '64. (MIRA 17:8)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000722410003-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000722410003-2

USSR/Cultivated Plants - Potatoes. Vegetables. Melons. M-3

Abs Jour : Ref Zhur - Biol., No 7, 1958, 29769

Author : Taranets, M.P., Khromov, V.F., Stolyarova, T.M.

Inst : -

Title : An Experiment to Improve the Quality of Seed Potatoes

Orig Pub : Kartofel', 1957, No 2, 51-52.

Abstract : The experiment is described which was made at the Sovkhoz im. Komintern (in Penzenskaya Oblast') in 1952 to improve the quality of seed potatoes by its cultivation from select tubers on bottom-land plots. On a field patch where one planted unselected material the yield amounted to 75 centners per ha., whereas on bottom land where tuber selection was applied it came to 170 centners per ha. There was 58% tubers with degeneration symptoms in the first case and only 6% in the second.

Card 1/1

KHROMOV, V.G.

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000722410003

Akademiya nauk SSSR. Institut metallurgii SOV/5968

Titan i yego splavy, vyp. 3: Metallovedeniye titana (Titanium and Its Alloys, No. 3: Metal Science of Titanium) Moscow, Izd-vo AN SSSR, 1960. 161 p. Errata slip inserted. 2,700 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Institut metallurgii imeni A.A. Baykova.

Resp. Ed.: N.F. Anyan, Corresponding Member, Academy of Sciences USSR; Ed. of Publishing House: N.I. Podgoretskiy; Tech. Ed.: Ye. V. Malenkova.

PURPOSE: This collection of articles is intended for scientific research workers and metallurgical engineers.

COVERAGE: The articles summarize results of experimental studies of titanium-base alloys. The microstructure and mechanical properties of titanium-base alloys containing aluminum, chromium or other metals are analyzed along with the effect of cold-work, hardening and heat treatment on alloy structure and properties. The book is of interest on alloys to embrittlement as a result of strain aging is mentioned, and the nitriding of titanium, carried out to increase its surface strength and wear resistance of titanium alloys, is described. Transformations occurring in commercial titanium under conditions of electric heating are examined. Attempts to develop titanium-base alloys capable of withstanding temperatures over 400°C are discussed as are problems of titanium-powder metallurgy and reliability of certain titanium-base alloys. No personalities are mentioned. Most of the articles have bibliographic references, the majority of which are recent.

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"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000722410003-2

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186200 only 2308, 2808, 1417

S/136/60/000/011/010/013
E021/E406

AUTHORS: Borok, B.A., Candidate of Technical Sciences, Gavrilova, V.K., Karpman, G.M. and Khromov, V.G.

TITLE: Production of Titanium Strip by Rolling Powders

PERIODICAL: Tsvetnyye metally, 1960, No.11, pp.69-76

TEXT: The present paper gives results of a systematic study of the process of titanium strip production, carried out in 1957 to 1959. The powder used had a specific weight of 0.65 - 0.80 g/cm^3 and not less than 90% of the particles were 10 μ. Impurities did not exceed: 0.25% O_2, 0.01% H_2, 0.08% N_2, 0.50% Fe + Ni, 0.08% Si, 0.05% C. A diagram of the method of production is shown in Fig.1. The thickness of the strip produced was found to be directly proportional to the specific weight of the powder and did not depend on the particle size. The maximum thickness produced was 1.20 mm on rolls of 120 mm diameter. With increase in roll diameter, the thickness of the strip could be increased. Fig.3 shows the effect of the speed of rolling on the thickness of the strip (Curve 1), the power per width of the strip in kW/cm (Curve 2), the energy consumption (Curve 3) and the productivity (Curve 4). For a rolling speed of about 3 m/min with rolls 120 mm

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Production of Titanium Strip by Rolling Powders

in diameter and strip 120 mm wide, the production is 44 kg/hour or approximately 250 tons/year. With 500 mm wide strip it is approximately 1000 tons/year. The porosity can be varied from 23 to 57% by varying the distance between the rollers. The strip produced has sufficient strength for transferring to the sintering furnace. With increase in sintering temperature from 850 to 1150°C, the strength and plasticity of the strip increase (Table 2). After 30 minutes at 1400°C, grain growth was noted. At 950°C, increasing the time of sintering causes the number of pores to decrease and the grain boundaries to become more distinct. After two hours, grain growth occurs. Cold rolling the strip produced with 20 to 80% degree of reduction presents no difficulty. With increase in reduction, the mechanical properties increase. The properties of strip sintered at 850 to 1150°C, cold rolled and heat treated for 30 minutes at 700°C, are low. By repeating the cycle of the low temperature sinter and cold rolling, better properties similar to those of the control strip could be obtained (Table 4). Some trouble was encountered with the brittleness of the strip. This was associated with hydrogen impurity and could be removed

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AKSENOV, G.I.; BOROK, B.A.; MALIN, A.P.; KHROMOV, V.G.

Experience in the industrial rolling of metal powders. Trudy LPI no.222:40-44 '63. (MIRA 16:7)
(Rolling (Metalwork)) (Powder metallurgy)

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TIKHONOV, G.F.; SOROKIN, V.K.; KHROMOV, V.G.

Rolling highly-porous strips for filters of titanium powder. Trudy LPI no.222:71-72 '63. (MIRA 16:7)
(Powder metallurgy) (Rolling (Metalwork))

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KHROMOV, V.G.

Determining the angle of grip in rolling metal powders. Trudy LPI no.222:73-74 '63. (MIRA 16:7)

(Rolling (Metalwork))

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"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000722410003-2

KHROMOV, V.G.

Shaping strip edges in rolling metal powders. Trudy LPI no.222: 75-76 '63. (MIRA 16:7)

(Rolling (Metalwork))

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ACCESSION NR: AR4018325 S/0137/64/000/001/D018/D018

SOURCE: RZh. Metallurgiya, Abs. 1D98

AUTHOR: Khromov, V. G.

TITLE: Obtaining high-plasticity titanium by rolling powder

CITED SOURCE: Tr. Kuyby*shevsk. aviats, in-t, vy*p. 16, 1963, 93-105

TOPIC TAGS: Titanium, electrolytic titanium powder, nonferrous metals, nonferrous metal treatment, powder metallurgy, nonferrous metal rolling, metal powder heat-treatment, plasticity

TRANSLATION: A description is given of experiments on producing highly-plastic titanium conducted in TsNIIChermet/Central Scientific Research Institute of Ferrous Metallurgy/ and at the Gor'kiy Plant. Methodology of conducting experiments and their results are cited. It was determined on the basis of experiments that in rolling electrolytic titanium powder in rollers 600 and 900 mm in diameter, a sheet ~5 mm thick is obtained. Corroborating evidence of the advantageousness of sintering and annealing electrolytic titanium in a closed container filled with Ar after several washes is given. A sheet material of electrolytic titanium powder

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was obtained which was close in plasticity to iodide titanium. The method of sintering proposed can be recommended for annealing products of titanium and several other metals.

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ACCESSION NR: AT4012722 S/2981/63/000/002/0119/0129

AUTHOR: Onopriyenko, V. A.; Khromov, V. G.; Romanova, L. S.; Tikhonov, G. F.

TITLE: Direct rolling of aluminum powder sheets

SOURCE: Alyuminiyevy*ye splavy*. Sbornik statey, no. 2. Spechenny*ye splavy*. Moscow, 1963, 119-129

TOPIC TAGS: powder metallurgy, aluminum, aluminum powder, sheet rolling, aluminum sheet

ABSTRACT: In both Russian and Western publications, the problem of rolling ferrous and non-ferrous powders has often been investigated, but no papers have dealt with the rolling of aluminum powder. In the present paper, the authors demonstrate the possibility of manufacturing sheets of foil made of SAP (sintered aluminum powder) by directly rolling the powder. Under these conditions, rolling of high-quality sheets requires a certain grain size of the grade APS powder. Rolling may be both cold or hot (at 300-320C), but the strips made of heated powder are stronger. A flow process has been designed for manufacturing foil made of SAP by simple rolling. Samples have been made with a thickness of 1 to 0.05 mm. The influence of the degree of deformation and of annealing on the ultimate strength, as well as on the density and hardness, was determined.

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For degrees of deformation exceeding 50%, there was a decrease in these mechanical properties. The ultimate strength of 0.06 mm rolled sheet was 36-42 kg/mm^2 at 20C and 7-9 kg/mm^2 at 480C. "N. N. Kashirin, N. A. Malekhanov, M. A. Moiseyev, Ye. A. Petrov, B. A. Borok, A. P. Malin and A. N. Potapov also took part in the work." Orig. art. has: 14 figures and 2 tables.

ASSOCIATION: none

SUBMITTED: 00 DATE ACQ: 13Feb64 ENCL: 00

SUB CODE: MM NO REF SOV: 001 OTHER: 000

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