FILIPSKY, Z.

"Causes of the explosion of paper-machine dryers." (Conclusion) p. 127.

PAPIR A CELULOSA. (Ministerstvo lesu a drevarskeho prumyslu). Praha, Czechoslovakia, Vol. 13, No. 6, June 1958.

Monthly list of East European Accessions (EEAI), LC, Vol. 8, No. 8, August 1959.
Uncla.

FILIPSON, I.N. Vrach

Modification of Romanovskii's technic of staining blood and bone marrow smears. Lab.delo no.1:30-31 Ja-Feb.'55. (MLRA 8:8)

1. Iz klinicheskoy laboratorii Vologodskoy gorodskoy bol'nitsy (glavvrach S.F.Shvarev, zav.laboratoriyey N.A.Vatagina)

(STAINS AND STAINING,
eosin of blood cells & bone marrow)
(BLOOD CELLS
staining, eosin technic)
(MARROW,
staining, eosin technic)

Filipson, I. N.

PHASE I BOOK EXPLOITATION SOV/5107

Leningrad. Institut radiatsionnoy gigiyeny

Ul'trafioletovaya radiatsiya i yeye gigiyenicheskoye znacheniye: sbornik trudov (Ultraviolet Radiation and Its Sanitary Importance; Collection of Transactions) Leningrad, 1958. 198 p. Errata slip inserted. 700 copies printed.

Additional Sponsoring Agency: RSFSR. Ministerstvo zdravookhraneniya.

Ed. (Title page): M. F. Galanin, Director of the Institute of Radiation Hygiene, Corresponding Member, Academy of Medical Sciences USSR, Professor; Ed. (Inside book): D. N. Tyukov.

PURPOSE: This collection of articles is intended for researchers and personnel working in public health and medicine who are interested in the hygienic and therapeutic effects of ultraviolet radiation.

COVERAGE: The purpose of the present collection is to supply material for future publications on important problems in the field. The collection includes studies on ultraviolet radiation made at the Institut radiatsionnoy gigiyeny (Institute of Radiation Hygiene) under the direction of Professor M. F. Galanin, Corresponding Member, AMN SSSR (Academy of Medical Sciences USSR). Throughout the text frequent reference is made to the works of Soviet contributors to the field. There is a bibliography of Soviet and non-Soviet sources at the end of every article except the tenth.

SVIDERSKAYA, T.A., kand.med.nauk; ZHUK, Ye.G., nauchnyy sotrudnik; FILIPSON, I.N., vrach

Utilization of ultraviolet rays of different spectral combinations for reducing sequelae of radiation injury. Gig.i san. 25 no.2: 27-32 F '60. (MIRA 13:6)

1. Iz Instituta radiatsionnoy gigiyeny Ministertva zdravookhraneniya RSFSR.
(RADIATION INJURY prevention & control)
(ULTRAVIOLET RAYS)

FILIPSON, I.N.

Obtaining blood from laboratory animals for the calculation of the reticulocytes and thrombocytes by means of Alekseev's modified method. Lab.delo 6 no.2:35-36 Mr-Ap '60. (MIRA 13:6)

1. Institut radiatsionnoy gigiyeny, Leningrad.
(BLOOD--COLLECTION AND PRESERVATION)
(BLOOD CELLS)

SVIDERSKAYA, T.A.; FILIPSON, I.N.

Effect of ultraviolet and ionizing irradiations on hemopoiesis in the bone marrow of guinea pigs. Radiobiologiia 3 no.1:45-52 '63. (MIRA 16:2)

1. Nauchno-issledovatel'skiy institut radiatsionnoy gigiyeny, Leningrad.
(ULTRAVIOLET RAYS—PHYSIOLOGICAL EFFECT)
(GAMMA RAYS—PHYSIOLOGICAL EFFECT) (ERYTHROPOIESIS)

USSR/Farm Animals - Cattle. Q-2

Abs Jour : Ref Zhur - Biol, No 1, 1959, 2645

Author : Starovoy, D.I., Filipson, V.I.

Inst : All-Union Scientific-Research Institute of Animal Husbandry.

Title : The Interbreeding of Cattle in Altay.

Orig Pub : Tr. Vses. n.-i. in-ta zhivotnovodstva, 1957, 21, 58-70.

Abstract : Three-breed hybrids (fathers of Kostromsk Breed x mothers of Siberian-Simmenthaler Hybrid Breed) in Altay proved to be superior to two-breed hybrids (Siberian-Simmenthaler) with respect to milk fat content and milk yield, under equal milking conditions. Also, they proved superior to Siberian cattle and Simmenthaler hybrids with respect to fattening and beef qualities. After first lactation, these three-breed hybrids (n = 19) in the Troitskiy

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USSR/Farm Animals - Cattle.

Q-2

Abs Jour : Ref Zhur - Biol., No 1, 1959, 2645

Sovkhoz yielded 3,220 kg of milk with a fat content of 3.94%, and their average live weight was 585 kg. The corresponding indexes for the two-breed hybrids (n = 51) amounted to 2,869 kg, 3.93% and 593 kg, respectively. In the Kosikhinskiy Sovkhoz, the three-breed hybrids (n = 22) had, after first lactation, a milk yield of 3,132 kg at a fat content of 3.69%, while for two-breed hybrids (n = 36) the corresponding figures were 3,190 kg and 3,66%. Jersey three-breed hybrids (n = 4) proved superior with respect to the fat content of milk - 4.4% compared with 3.88% in the Siberian-Simmenthaler hybrids (first lactation cows). -- K.M. Lyutikov

Card 2/2

FILIPSON, Ye.; BORISEVICH, N.; KALIGOZHIN, M.

Production of national varieties of horse-meat sausages and smoked products. Mias. ind. SSSR 32 no.3:23-24 '61.
(MIRA 14:7)

1. Kazakhskiy filial Vsesoyuznogo nauchno-issledovatel'skogo instituta myasnoy promyshlennosti (for Filipson, Borisevich).
2. Semipalatinskiy myasokombinat (for Kaligozhin).
(Kazakhstan--Horse meat)

1. FILIPSON, Ye.
2. USSR (600)
4. Potatoes
7. Effective use of potato [illegible] stillation, Mias. ind. 24, No. 1, 1953.

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

FILIPSON, Ye.A.

Efficient utilization of fresh potato stillage in fattening cattle. Trudy VNIIMS no.6:164-170 '54. (MLRA 10:8)
(Potatoes) (Cattle--Feeding and feeding stuffs)

FILIPSON, Ye.A.

New method of ensiling potato stillage for fattening cattle. Trudy VNIIMS no.6:171-176 '54. (MLRA 10:8)
(Potatoes) (Cattle--Feeding and feeding stuffs)

FILIPSON, [redacted]

Fattening cattle on potato stillage treated with chemical preparation No.2. Trudy VNIIMS no.6:177-180 '54. (MLRA 10:8)
(Potatoes) (Cattle--Feeding and feeding stuffs)

FILIPSON, E.

Using wastes of cotton processing industry for fattening sheep. Mias. ind. SSSR 27 no.6:33-34 '56. (MLRA 10:2)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut myasnoy promyshlennosti.

(Cottonseed) (Sheep--Feeding and feeding stuffs)

FILIPSON, Ye.

Advantages of twice-a-day feeding. Mias. ind. SSSR 28 no.6:42-43 '57. (MIRA 11:1)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut myasnoy promyshlennosti.

(Cattle--Feeding and feeding stuffs)

Country : USSR
Category : Farm Animals. Q
Cattle.
Abs. Jour : Ref Zhur-Biol., No 21, 1958, 96890

Author : Filipson, Ye.; Karpenko, A.; Ganus, S.
Institut. :
Title : Feeding Cattle Twice and Three Times Daily when Fattening with Pulp.

Orig Pub. : Molochn. i myasn. zhivotnovodstvo, 1958, No 1, 32-34
Abstract : When cattle was fattened with siloed pulp, it was distributed twice daily and this assured the complete consumption of the daily fodder ration and satisfactory daily weight gains which amounted to 1215 g whereas 825 g were planned for, as well as saved 23 percent of the time necessarily needed for the feeding of the animals as compared to a food distribution taking place three times daily.

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11(2)

SOV/31-59-3-6/14

AUTHORS: Li, A.B., Chakabayev, S.Ye., Filip'yev, G.P.

TITLE: On Gas Layers in the Ili Depression (O gazoproyavleniyakh v Iliyskoy vpadine)

PERIODICAL: Vestnik Akademii nauk Kazakhskoy SSR, 1959, 15 Nr 3, pp 51-53 (USSR)

ABSTRACT: This article deals with gas layers recently discovered in oil well drilling in Iliyskaya and Karkarinskaya depressions (Iliyskaya i Karkarinskaya vpadiny). Most of the layers were found in the Iliyskaya depression, where the data supplied by careful investigation of a prospecting well on the right bank of the Ili river three km east of the Borokhudzir Ferry (Borokhudzirskaya pereprava), are of foremost importance. As to composition, the gases of the Iliyskaya and Karkarinskaya depressions can be roughly subdivided into nitrogen and nitrogen-methane gases. Typical examples of nitrogen gases are the gases of the Ili prospecting well, associated in the main with Pliocene deposits. All the other gas layers exclusively associated

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with Miocene sand-clay deposits can be referred to as the second type. The appearance of nitrogen-methane gases has been observed in sections of tectonic disturbances, in the majority of cases. This apparently explains their scarity and the small volume of concentration. It is assumed that the gas layers of the younger strata of the Ili depression owe their origin to powerful Jurassic carbonaceous and bituminous deposits. The gas layers of the Karkarinskaya depression may have been formed by Miocene-Oligocene bituminous slates. The low content of organic matter in the Pliocene and also the Miocene rocks suggests that the burning gases contained in these deposits are genetically connected with deeper horizons of the mesozoic era and tertiary deposits. The disjunctive disturbances, apparently play the role of migration routes. The assumption that the gases migrated from deeper horizons is underlined by the presence of helium in some gases. Helium was recently ascertained in a number of "Krelius wells" ("kreliusnyye skvazhiny")

on the Dzhambyl-Bastauskaya Structure (Dzhambyl-Bastauskaya struktura). The gas layers of the tertiary strata are of no practical interest. They can be considered as positive symptoms of the possible existence of gas layers in mesozoic deposits.

CHAKABAYEV, S.Ye., LI, A.B., FILIP'YEV, G.P.

Conditions governing pool formation and the chemistry of waters of Cenozoic sediments of the Koyby structure zone. Vest.AN Kazakh.SSR 16 no.7:51-58 Jl '60. (MIRA 13:8)
(Ili Valley--Water, Underground)

AVROV, P.Ya.; DITMAR, V.I.; FILIP'YEV, G.P.; SHALABAYEV, S.A.; LI, A.B.; SHAKHOV, R.A.; MAYLIBAYEV, M.M.; TSIREL'SON, B.S.

Gas bearing capacity of the Usharal structure in the Chu Depression. Vest. AN Kazakh. SSR 21 no.1:69-73 Ja '65. (MIRA 18:7)

FILIP'YEV, G.P.; RABKIN, F.S.

Neocene deposits in the Ili Depression. Vest. AN Kazakh. SSR 18 no.6:63-67 Je '62. (MIRA 15:9)
(Ili Valley--Geology, Stratigraphic)

NOVIKOV, A.G.; SINITSYN, F.Ye.; FILIP'YEV, G.P.;

Tectonics of troughs in southern Kazakhstan in relationship with oil and gas potentials. Izv.AN Kazakh.SSR. Ser.geol.nauk no.4:3-14 '63. (MIRA 16:9)

1. Yuzhno-Kazakhstanskoye geologicheskoye upravleniye Ministerstva geologii i okhrany nedr KazSSR, g. Alma-Ata.

DITMAR, V.I.; LI, A.B.; FILIP'YEV, G.P.

Concerning the gas potential of the middle Upper-Paleozoic sediments of southern Kazakhstan. Neftegaz.geol. i geofiz. no.12:8-10 '64. (MIRA 18:3)

1. Yuzhno-Kazakhstanskaya nefterazvedochnaya ekspeditsiya i Institut geologii i razrabotki goryuchikh iskopayemykh AN SSSR.

VARENTSOV, M.I.; DITMAR, V.I.; LI, A.B.; MAYLIBAYEV, M.M.; FILIP'YEV, G.P.

Structure of the central part of the Chu-Sarysu Depression. Dokl. AN SSSR 166 no.3:671-673 Ja '66.

(MIRA 19:1)

1. Institut geologii i razrabotki goryuchikh iskopayemykh; Institut geologicheskikh nauk im. K.I.Satpayeva AN KazSSR i Yuzhno-Kazakhstanskaya nefterazvedochnaya ekspeditsiya. 2. Chlen-korrespondent AN SSSR (for Varentsov). Submitted October 21, 1965.

FILIP'YEV, I. D.

USSR / Cultivated Plants. Cereals. M

Abs Jour : Ref Zhur - Biol., No 8, 1958, No 34591

Author : Filip'yev, I. D.
Inst Not given
Title : Effect of Fertilizers on the Yield of Field Crops in South-Western Ukraine.

Orig Pub : Udobreniye i urozhaiy, 1956, #12, 26-30.

Abstract : Results of the experiments by the Izmail'skiy Experimental Field with Southern black earth, involving the use of fertilizers for cereal crops and calculating their actual effectiveness as observed in collective farms of the South-Western Ukraine. According to average data collected over a period of 3 years, (experiments conducted from 1951 to 1953), the use of 20 tons of manure rot has produced the following average

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USSR / Cultivated Plants. Cereals. M

Abs Jour : Ref Zhur - Biol., No 8, 1958, No 34591

increases in yield (all increases expressed in hundredweight per hectare): winter wheat 3.5; millet 2.8; corn (according to four year data: 1950-54) 2.7; use of $N_{30}P_{30}K_{30}$ increased the yields of these same cultures correspondingly by 3.2, 2.2 and 1.6. No difference in the amount and cost of required plowing and cultivation could be observed as a result of the use of mineral fertilizers. Best results were obtained by spreading the fertilizers along the rows and into the seed holes. The spreading into rows of 25 to 30 kg per hectare of granulated P_c increased the yield of winter wheat by 3.6, of millet by 1.8, of barley by 1.7, of sunflower by 2.2, and that of corn cobs by 3.9 hwt/h.

Card 2/3

FILIP'YEV, I.D.

YUKHNO, G.Ya., kandidat sel'skokhozyaystvennykh nauk; VOROB'YEV, N.Ye.; FILIP'YEV, I.D.

Chemical weed control in fields. Agrobiologiia no.2:132-133 Mr-Ap '57. (MLRA 10:5)

1.Izmail'skoye opytnoye pole.
(Odessa Province--Weeds)
(Herbicides)

FILIP'YEV I.D.

Country : USSR M
CATEGORY : Cultivated Plants. Grains.

ABS. JOUR. : RZBiol., No. 21, 1958, No. 95913

AUTHOR : Filip'yev,I.
INST. : Odessa Sci. Society for the Dissemination of*
TITLE : Use of Fertilizers Under Winter Wheat

ORIG. PUB. : Byul. sil'skogospod. inform. Odes'k. vid. T-va dlya poshir. polit. nauk. znan', 1957,**
ABSTRACT : No abstract

* Political and Scientific Knowledge
** No.3, 14-15

CARD: 1/1

FILIP'YEV, I. D. Cand Agr Sci -- (diss) "Methods of raising the effectiveness of manure and mineral fertilizers when using them under grain crops under conditions of the Danube-area steppe." [Kishinev] 1959. 15 pp (Min of Agr USSR. Kishinev Agr Inst), 150 copies (KL, 46-59, 139)

FILIP'YEV, I.D.

Characteristics of the daily growth of plants in connection with the local application of superphosphate. Fiziol. rast. 8 no.4:501-505 '61. (MIRA 14:11)

1. Izmail Experimental Station of All-Union Scientific-Research Institute, Mirnopolye, Odessa Region.
(Growth(Plants))
(Phosphates)

FILIP'YEV, I.D., kand.sel'skokhozyaystvennykh nauk; BIYENKO, A.I.

Applying fertilizers to wheat in the fall. Zemledelie 24 no.10:49-51 O '62. (MIRA 15:11)

1. Izmail'skaya opytnaya stantsiya Vsesoyuznogo nauchno-issledovatel'skogo instituta kukuruzy.
(Izmail District—Fertilizers and manures)

FILIP'YEV, I.D., kand. sel'skokhoz. nauk

Fertilizers for winter wheat. Zemledelie 26 no.8:42-44 Ag '64.
(MIRA 17:11)

1. Izmail'skaya opytnaya stantsiya Vsesoyuznogo nauchno-issledovatel'skogo instituta kukuruzy.

FILIP'YEV, I.D., kand. sel'skokhoz. nauk

Effect of fertilizers on the germinative and productive capacities of seed. Zemledelie 27 no.7:84-87 Jl '65.

(MIRA 18:7)

1. Izmail'skaya opytnaya stantsiya Vsesoyuznogo nauchno-issledovatel'skogo instituta kukuruzy.

FILIP'YEV, I.N. [deceased].

A new hairworm Parachordodes barabashi Filipjev, sp.n.(Nematomorpha) from Mednyy Island (Komandorskiy Islands) [with German summary in insert]. Zool.zhur.35 no.12:1906-1907 D '56. (MLRA 10:1)

1. Zoologicheskiy institut Akademii nauk SSSR.
(Mednyy Island--Nematomorpha)

FILIP'YEV, Kharkov Gipr

"Investigation of Cooling Conditions of Refrigeration and Health Bottom of Blast Furnaces by the Electrical Analogy Method."

Report presented at the Conference on Heat and Mass Transfer. Minsk, USSR, 5-10 June 61

The cooling of elements of blast furnaces is investigated by the method of electrical analogy. The influence of various constructional parameters and thermal work of a furnace on the temperature distribution in the furnace coolers is determined. Rational designs of coolers are proposed which provide good cooling of all the parts of an ingot. The obtained data may be applied when building new large blast furnaces.

FILIP'YEV, N. N.

New species of leaf rollers of the subfamily Tortricinae(Lepidoptera, Tortricidae) from the U.S.S.R. Trudy Zool. inst. 30: 369-381 '62. (MIRA 15:10)

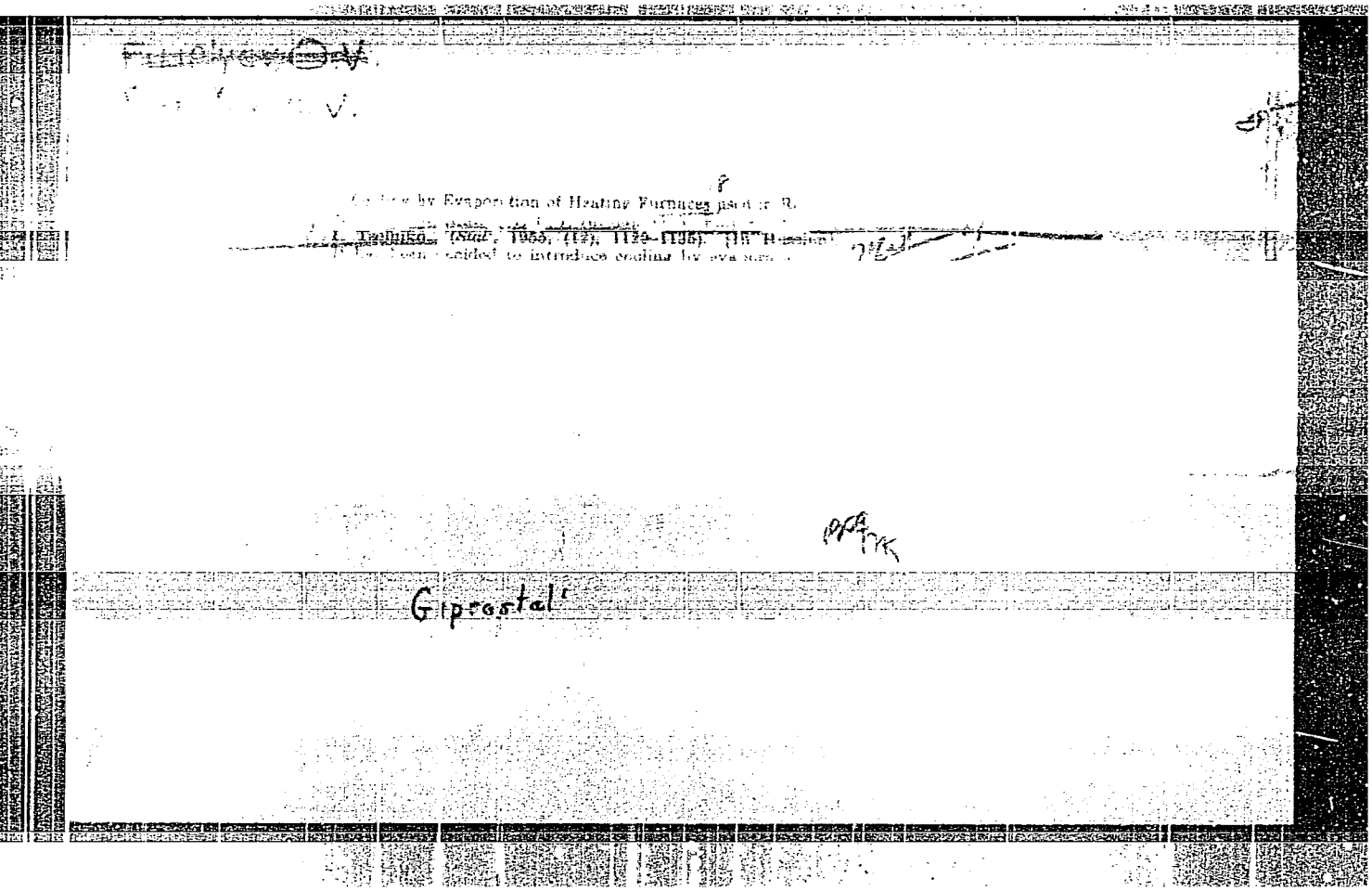
(Leaf rollers)

Filip'yev, O.V.

ANDON'YEV, S.M., kandidat tekhnicheskikh nauk; FILIP'YEV, O.V., inzhener; POPOVA, Ye.V.

A new method for estimating the mixture of two flows in furnace heat engineering. Stal' 15 no.1:74-76 Ja '55. (MLRA 8:5)

1. Giprostal'.
(Heat engineering) (Metallurgical furnaces)



Giprostal'

FILIP'YEV, OLEG VLADIMIROVICH

ANDON'YEV, Sergey Mikhaylovich, kandidat tekhnicheskikh nauk; RAYKOVSKIY, Yuriy Borisovich, inzhener; FILIP'YEV, Oleg Vladimirovich, inzhener; SHINDAREVA, Klara Yakovlevna, inzhener; KOROTETSKIY, D.N., otvetstvennyy redaktor; LIBERMAN, S.S., redaktor izdatel'stva; SINYAVSKAYA, Ye.K., redaktor izdatel'stva; ANDREYEV, S.P., tekhnicheskiy redaktor

[Evaporative cooling of open-hearth furnaces; fundamentals of cooling and principles of design] Isparitel'noe okhlazhdenie martenovskikh pechei; osnovnye polozheniia sistemy okhlazhdeniia i printsipy ee proektirovaniia. Pod obshchei red. S.M.Andon'eva. Khar'kov, Gos. nauchno-tekhn. izd-vo lit-ry po chernoi i tsvetnoi metallurgii, 1957. 356 p. (MLRA 10:6)
(Open-hearth process) (Evaporating appliances)

Filipyev, O.V.

ANDON'YEV, S.M., kandidat tekhnicheskikh nauk.; FILIP'YEV, O.V., inzhener.; VOLKOV, V.F., inzhener.; SIRENKO, B.M., inzhener.

Air-cooled valve gate of new design. Metallurg 2 no.3:40 Mr '57. (MIRA 10:4)

1. Giprostal'.
(Open hearth furnaces)

Filip'yev, O.V.

133-8-2/28

AUTHORS: Andon'yev, S.M. (Cand.Tech.Sci.), Filip'yev, O.V. and Kudinov, G.A. (Engineers).

TITLE: An investigation of the wear of blast furnace hearths and the choice of design for their air cooling system. (Issledovaniye razgara leshchadey i vybor konstruktsiy dlya ikh vozdushnogo okhlazhdeniya).

PERIODICAL: "Stal'" (Steel), No.8, 1957, pp.685-690 (USSR).

ABSTRACT: In previous investigations on the determination of the temperature distribution in a blast furnace hearth the heat conductivity of the refractory lining was assumed as being constant. However, in fact the hearth lining in time becomes saturated with iron, so that its conductivity increases 4-5 times. The hearth of the No.2 furnace in "Svobodnyy Sokol" Works after blowing out of the furnace was investigated, its lines are shown in Fig.1 and the results of tests carried out on samples of refractories are given in Table 1 (the work was carried out by the All Union Institute of Refractories in Kharkov). The heat conductivity of the refractory bricks affected by service depends strongly on their porosity and iron content (Fig.2). In order to obtain the distribution of temperatures in a blast furnace hearth taking into consideration the heat conductivities of affected refractories the authors carried

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An investigation of the wear of blast furnace hearths and the choice of design for their air cooling system. (Cont.)

out an investigation using electrical resistance modelling (TsINN, MChM, Information No.443, Metallurgizdat, 1956). The following engineers participated in the work: B.I.Birman and V.K.Maystrenko. The temperature on the boundary of liquid iron and lining was assumed 1400 C and that on the boundary and coolers 20 C. For simplification the lining was divided into two layers - layer affected by service and unaffected layer; the boundary temperature was assumed 1150 C. The following heat transfer coefficients were taken: chamotte lining - 1.5; affected chamotte lining 4.3; carbon blocks 6.0 and concrete 1.0. The design of 4 types of furnace hearths were studied: No.2 furnace (volume 600 m^3) on the "Svobodnyy Sokol" Works, No.4 furnace on the Magnitogorsk Combine (volume 1180 m^3), a typical furnace of 1033 m^3 and a typical furnace of 1386 m^3. The results of investigations are given in Tables 2 and 3 and Figs. 3 and 4. It is pointed out that indications of thermocouples placed in the hearth of typical furnaces (Fig.4) on the boundary with the furnace foundations (i.e. 7-8 m from the top of lining) are not suitable for the assessment of the wear of the lining. Thermo-

An investigation of the wear of blast furnace hearths and the choice of design for their air cooling system. (Cont.)

couples should be placed on the boundary of the heat resistance concrete, no more than 4 m from the top of the hearth. The dependence of the temperature measured at a distance of 4.2 m from the top of the hearth along its axis on the wear of lining for various furnaces is shown in Fig.5. For the determination of the wear of lining on the basis of temperature at a given point in the hearth the following empirical formula is proposed:

$$x = \frac{1400 - T}{350 - 0.1\,V}$$

where x = thickness of the remaining lining, m; T = temperature on the axis of the hearth at a depth of 4.2 m, °C; V = volume of the furnace, m^3. The comparison of calculated and determined temperatures for No.4 MMK furnace, illustrating the applicability of the above formula is given in Table 4. The wear of the above hearth on blowing out of the furnace is shown in Fig.6. A nomogram for calculating the wear of lining in hearth from indications of thermocouples for the above furnace is shown in Fig.7. On the basis of the results obtained it is concluded that air cooling of the hearth will decrease the

An investigation of the wear of blast furnace hearths and the choice of design for their air cooling system. (Cont.)

penetration of iron. Two designs of air cooling, shown in Figs.8 and 9 are proposed. The amount of air required for cooling is 36 000 m^3/hr.

There are 4 tables and 9 figures.

ASSOCIATION: Giprostal'.

AVAILABLE: Library of Congress

Card 4/4

KHODAKOVSKIY, V.V.; YEFIMOV, V.A., kand. tekhn. nauk, starshiy nauchnyy rabotnik; KOSENKO, P.Ye., kand. tekhn. nauk; KAZAKEVICH, S.S.; LAPITSKIY, V.I., prof., doktor tekhn. nauk; FILIP'YEV, O.V.; STROGANOV, A.I., kand. tekhn. nuk, dots.; DEMIDOVICH, A.V.; BORNATSKIY, I.I., kand. tekhn. nauk; MEDZHIBOZHSKIY, M.Ya., dots.; KOCHO, V.S., prof., doktor tekhn. nauk; RYN'KOV, V.I.; LOMAKIN, L.M., mladshiy nauchnyy sotrudnik; KOKAREV, N.I., dots.; KLYUCHAREV, A.P.; PLYUSHCHENKO, Ye.A.; KAPUSTIN, Ye.A., kand. tekhn. nauk, dots.; KOBEZA, I.I., kand. tekhn. nauk, nauchnyy sotrudnik; SHIROKOV, G.I.; UMRIKHIN, P.V., prof., doktor tekhn. nauk; LEZHAVA, K.I.; ZHIGULIN, V.I.; MOROKOV, P.K.; KHLEBNIKOV, A.Ye., prof., doktor tekhn. nauk, starshiy nauchnyy sotrudnik; TARASOV, N.S.; NIKOLAYEV, A.G.

Discussions. Biul. TSNIICHM no.18/19:40-66 '57. (MIRA 11:4)

1. Starshiy inzhener Glavspetsstali Ministerstva chernoy metallurgii SSSR (for Khodakovskiy). 2. Institut gaza (for Yefimov). 3. Direktor Dneprodzerzhinskogo metallurgicheskogo instituta (for Kosenko). 4. Nachal'nik laboratorii Leningradskogo instituta ogneuporov (for Kazakevich). 5. Zaveduyushchiy kafedroy metallurgii stali Dnepropetrovskogo metallurgicheskogo instituta (for Lapitskiy). 6. Nachal'nik laboratorii Giprostali (for Filip'yev). 7. Chelyabinskiy politekhnicheskiy institut (for Stroganov). 8. Nachal'nik teplotekhnicheskoy laboratorii Severskogo metallurgicheskogo zavoda (for Demidovich). 9. Zamestitel' nachal'nika TSentral'noy zavodskoy laboratorii Makeyevskogo metallurgicheskogo zavoda (for Bornatskiy).

(Continued on next card)

KHODAKOVSKIY, V.V.---(continued) Card 2.

10. Sibirskiy metallurgicheskiy institut (for Medzhibozhskiy). 11. Zaveduyushchiy kafedroy metallurgii stali Kiyevskogo politekhnicheskogo instituta (for Kocho). 12 Ispolnyayushchiy obyazannosti glavnogo inzhenera Beloretskogo metallurgicheskogo kombinata (for Ryn'kov). 13. Vsesoyuznyy nauchno-issledovatel'skiy institut metallurgicheskoy teplotekhniki (for Lomakin). 14. Ural'skiy politekhnicheskiy institut (for Kokarev). 15. Zamestitel' nachal'nika teplotekhnicheskoy laboratorii Nizhne-Tagil'skogo metallurgicheskogo kombinata (for Klyucherov). 16. Nachal'nik teplotekhnicheskoy laboratorii TSentral'noy zavodskoy laboratorii zavoda im. Voroshilova (for Plyushchenko). 17. Zhdanovskiy metallurgicheskiy institut (for Kapustin). 18. Institut metallurgii im. Baykova AN SSSR (for Kobeza). 19. Nachal'nik laboratorii martenovskikh pechey Vsesoyuznogo nauchno-issledovatel'skogo instituta metallurgicheskoy teplotekhniki (for Shirokov). 20. Zaveduyushchiy kafedroy metallurgii stali Ural'skogo politekhnicheskogo instituta (for Umrikhin). 21. Nachal'nik metallurgicheskoy laboratorii TSentral'noy zavodskoy laboratorii Zakavkazskogo metallurgicheskogo zavoda (for Lezhava). 22. Zamestitel' glavnogo inzhenera zavoda im. Petrovskogo (for Zhigulin). 23. Nachal'nik martenovskogo tsekha Kuznetskogo metallurgicheskogo kombinata (for Morokov). 24. Institut metallurgii im. Baykova AN SSSR (for Khlebnikov). 25. Glavnyy inzhener Petrovsk-Zabaykal'skogo metallurgicheskogo zavoda (for Tarasov). 26. Nachal'nik tsekha Magnitogorskogo metallurgicheskogo kombinata (for Nikolayev).

(Open-hearth process)

ANDON'YEV, Sergey Mikhaylovich; FILIP'YEV, O.V., otvetstvennyy red.; LIBERMAN, S.G., red. izd-va; ANDRIYEV, S.P., tekhn. red.

[Apparatus for cooling by evaporation of open hearth furnaces; manual for maintenance personnel] Ustroistvo i ekspluatatsiia isparitel'nogo okhlazhdeniia martenovskikh pechei; rukovodstvo dlia obsluzhivaiushchego personala. Izd.2., ispr. i dop. Khar'kov, Gos. nauchno-tekhn. izd-vo lit-ry po chernoi i tsvetnoi metallurgii, 1958. 258 p. (MIRA 11:7)

(Open-hearth furnaces--Cooling)

Sov/133/58-9-2/29

AUTHORS: Andon'yev, S. M. (Cand.Tech.Sciences), Kudinov, G. A. (Engineer), Filip'yev, O. V. (Engineer)

TITLE: Some New Designs of Cooling Systems for Blast Furnaces (Novyye konstruktsii dlya okhlazhdeniya domennoy pechi)

PERIODICAL: Stal', 1958, Nr 9, pp 776-780 (USSR)

ABSTRACT: On the basis of a large experimental and design work (not specified) carried out by Giprostal', some new designs of cooling systems for blast furnaces are outlined. The designs were prepared for a typical furnace of 1033 m^3 working volume. Characteristic features: Cooling of the blast furnace stack is proposed in two modifications: 1) cooling with continuous vertical plate coolers with ring supports in each row (for supporting lining). A thin stack lining with a proportional widening of the bottom part of the furnace and the throat is recommended. This can increase the working volume of the furnace by 25-30%. Coolers are joined into vertical sections (four tubes are cast in each plate cooler - Fig.2A); 2) cooling with vertical plate coolers (Fig.2B) with supporting rings in order to give a firm support to the lining (Fig.3). The coolers are placed in a check pattern, 24 in a row, and together with supporting rings

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Some New Designs of Cooling Systems for Blast Furnaces

divide the lining into independent sectors. Supporting rings are placed at an angle of 5-10° to the horizontal plane, so that the descending burden will prevent falling out of the individual bricks and partially fill up burned out sections of brickwork (self-lining furnace). The bosh is cooled with plate coolers with ribs (Fig.4) forming cells which on erosion of the lining can be filled with the slagged burden materials. A special L-shaped cooler is also proposed for the protection of the lintel (Fig.5). Coolers are joined in vertical sections. Tuyere cooling: the cooling space is divided by a plate into two longitudinal sections, communicating at the tuyere nozzle. Screw-like ribs are welded to the dividing plate (Fig.6). In this way the speed of water current can be increased to 1.5-2.0 m/sec as against 0.05-0.10 m/sec in the tuyeres used at present.
Hearth: Some modifications in the construction of the hearth bottom are outlined (Figs.7, 8). Air cooling of the bottom of the hearth is recommended. The overall cooling

Some New Designs of Cooling Systems for Blast Furnaces

of the furnace is shown in Fig.1: A - with a thick stack lining, B - with a thin stack lining. There are 8 figures and no references.

ASSOCIATION: Giprostal'.

FILIP'YEV, O. V.: Master Tech Sci (diss) -- "Development of a method of hydraulic modeling of installations for the evaporative cooling of metallurgical furnaces". Khar'kov, 1959. 6 pp (Min Higher Educ Ukr SSR, Khar'kov Construction Engineering Inst), 150 copies (KL, No 9, 1959, 115)

18(5)

SOV/128-59-4-8/27

AUTHORS: Andon'yev, S.M., Doctor of Technical Sciences, Filip'yev, O.V., and Radionova, Ye.A., Engineers

TITLE: Vapor-Cooling System for Cupolas

PERIODICAL: Liteynoye Proizvodstvo, 1959, Nr 4, pp 14-15 (USSR)

ABSTRACT: In the course of an intensification of the cupola melting process of cast iron, it is very important to improve the cooling of the housing, in order to raise the durability of the inner fireproof casing and to enlarge the diameter of the melting belt. Water cooling of the cupola melting belt is already introduced in the Moscow Likhachev Auto Plant, in the Rostov agricultural machine works, and in a number of other big plants. With a decrease in thickness of the inner casing, the consumption of fireproof material is reduced, although more heat is lost in the cooling water, which means a raise in coke consumption. The specific losses of heat through water cooling amount to 14,800 kcal/t, if the inner casing is missing. They only total 1,200 kcal/t, if there

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is an inner casing. With a cupola efficiency of 30%, the additional coke consumption resulting from the cooling amounts to 7.5 kg/t, Water cooling makes it possible to increase the dimensions of the cupolas and to raise their output. This cooling system, however, is deficient in several respects: the water consumption is very considerable, which is unprofitable in the engine building plants; minerals are precipitated from the cooling water and form sediments and deposits with the result, that the housing warps and burns through. At the present time the metallurgic industry mainly uses evaporative cooling. The general idea of this method is, that the heat abstracted through the cooling water is used for its evaporation. Since the vaporization heat amounts to about 540 kcal/kg, the water consumption for the cooling is reduced to a large extent, and it is possible to use chemically purified water which does not cause an incrustration of boiler scale. A project for evaporative

cooling of a group of four cupolas is just being put into practice. Current can be saved with evaporative cooling because the pumping of the cooling water becomes unnecessary. There are 3 tables and 2 diagrams.

SOV/133-59-6-12/41

AUTHORS: Andon'yev, S.M., Doctor of Technical Sciences, Filip'yev, O.V., Engineer and Popova, Ye.V., Engineer

TITLE: An Investigation of Ports of Open Hearth Furnaces Fired with Gas with a Supply of Compressed Air and Oxygen (Issledovaniye golovok gazovykh martenovskikh pechey s podachey kompressornogo vozdukha i kisloroda)

PERIODICAL: Stal', 1959, Nr 6, pp 509-512 (USSR)

ABSTRACT: In view of the increasing importance of choosing the most suitable designs of ports for large open hearth furnaces, Giprostal' carried out laboratory investigations of a number of ports on models of typical 220 and 500 ton open hearth furnaces (scale 1:20) during which the following factors were determined: a) the direction of streams in the working space and hydraulic resistance in the port of the furnace during the passage of gas and fumes; b) zone of mixing fuel with air. The experimental procedure is outlined. The designs of ports tested for 220 ton and 500 ton furnaces are shown in Fig 1 and 2 respectively and the results obtained in tables 1 and 2 respectively. It was

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An Investigation of Ports of Open Hearth Furnaces Fired with Gas with a Supply of Compressed Air and Oxygen

found that: 1) Using water models and hydrochemical oscillographic methods of investigation it is possible to establish the hydrodynamic characteristics of the flame and the quality of mixing of fuel and air as well as to determine the influence of: the coefficient of excess air; additions of compressed air; oxygen; changes in the shape of the port and working space. This facilitates the choice of rational designs for industrial testing. 2) The laboratory investigations indicated that the designs of ports used in open hearth furnaces can be improved by enlarging the outlet (up to 50%) and supplying, in the top part, compressed air and oxygen in the bottom part; whereupon the resistance of the port decreases by a factor of 5. This permits: an improvement in the heating of gas checkers; an increase in the intensity of the flame volume up to 50%. It will be advantageous to decrease the length of the port by 30% which will allow

An Investigation of Ports of Open Hearth Furnaces Fired with Gas with a Supply of Compressed Air and Oxygen

increasing the surface area of the bath.
3) It is advantageous to make the port lining of a thickness of 150 mm with a thermal insulation of 20 - 30 mm and metallic shell of the port of a size not exceeding 150 mm. In this way at the beginning of operation the lining will protrude 20 - 30 mm. When using metallic shell 230 - 260 mm at a high thickness of the lining the heat efficiency decreases by a factor of two after 80 - 100 heats (Fig 3).
The following is recommended for industrial testing:
a) port of a normal length with increased by 50% cross-section area of the outlet and with a supply of additional compressed air through nozzles situated in the metallic shell of the outlet. It would be advantageous to supply oxygen also (compressed air through top nozzles, oxygen through bottom nozzles);
b) a shortened port with the length of the bottom of 2000 mm with a corresponding increase in the length of the bath and a decrease in its depth (by 80 - 100 mm).

An Investigation of Ports of Open Hearth Furnaces Fired with Gas with a Supply of Compressed Air and Oxygen

Using designed parameters of the port of a typical 500 ton furnace one cannot expect complete combustion of fuel in the working space, therefore, the designed thermal performance cannot be achieved without using means of flame turbulisation (compressed air or oxygen). There are 3 figures, 2 tables and 10 Soviet references.

FILIP'YEV, O.V.

ANDON'YEV, S.M.; ZHLOBINSKIY, Ye.I.; YUR'YEV, M.A.; STRUGATSKIY, L.F.; YELISEYEV, B.V.; TSELUYKO; Yu.I.; SUVOROV, A.I.; FILIP'YEV, O.V.; KALASHNIKOV, P.A.; L'VOV, V.N.; SULOYEV, V.A.

Evaporation cooling of rolling-mill heating furnaces in open-hearth-furnace plants and complex utilization of secondary power resources. Prom. energ. 14 no.1:37-39 Ja '59. (MIRA 12:1)
(Furnaces, Heating) (Boilers)

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SOV/133-60-1-6/30

AUTHORS: Andon'yev, S. M. (Doctor of Technical Sciences), Kudinov, G. A., Filip'yev, O. V. (Engineers)

TITLE: Study of Performance of Blast Furnaces With Stack Coolers of Various Designs

PERIODICAL: Stal', 1960, Nr 1, pp 23-28 (USSR)

ABSTRACT: A report concerning the 1958 investigation by the State Institute for the Design and Planning of Steel Industry (GIPROSTAL'), with participation of plant personnel of three metallurgical plants (not identified): I (furnaces IA-ID), II (furnaces IIA and IIB), and III (furnace IIIA) of following volume (m^3): furnace IA-943; IB-1386; IV-1386; IG-1386; ID-1386; IIA-1033; IIB-1033; IIIA-1386. The methods of cooling the stacks of these furnaces is shown in Fig. 1. The design features of the furnaces; measuring the heat losses by the stack with water cooling; the effect of coolers on the temperature of gas flow; the analysis of furnace performance with coolers of various designs; the selection of cooler's design and the

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thickness of stack lining are discussed. A recommended optimum design of a typical blast furnace is given in Fig. 4. The authors arrived at the following conclusions: (1) The vertical peripheral coolers of stack, installed as continuous belts tight against blast furnace shell, are recognized to be the best. Though the stack heat losses with these coolers (with maximum burning out of the lining) in the average are 20% higher than that in the case of horizontal or "bracket type" coolers, the analysis of furnace performance showed no negative effect of plate type coolers on coke consumption and furnace output. (2) The peripheral plate type coolers are reliable and protect the blast furnace shell from heating, which eliminates the necessity of external spraying (in the case of continuous belts, set tight against the furnace shell, without gaps). Their life is 4 to 5 times higher than that of horizontal or "bracket type" coolers. (3) The thickness of stack lining, when plate type coolers are installed, should be reduced to 575 mm. (4) In the event the coolers are equipped with

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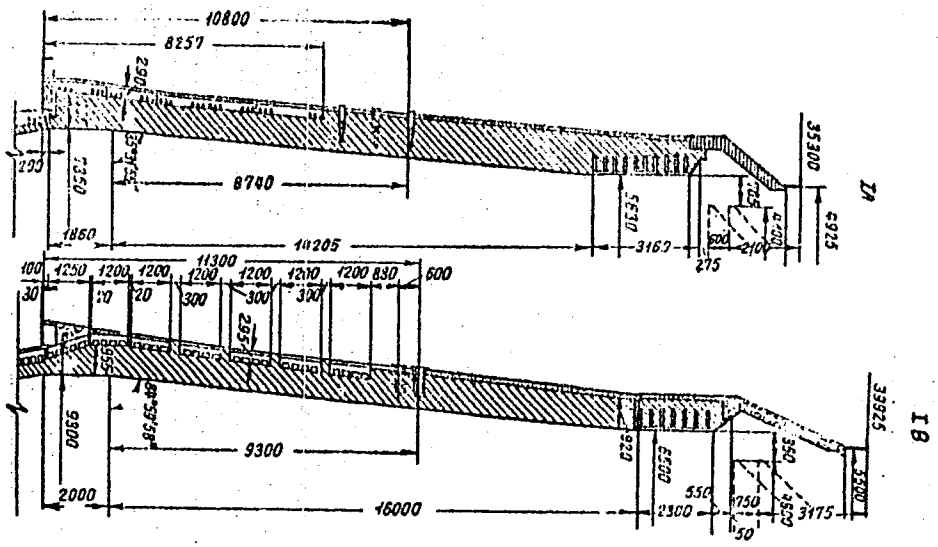

Fig. 1 (cont'd)

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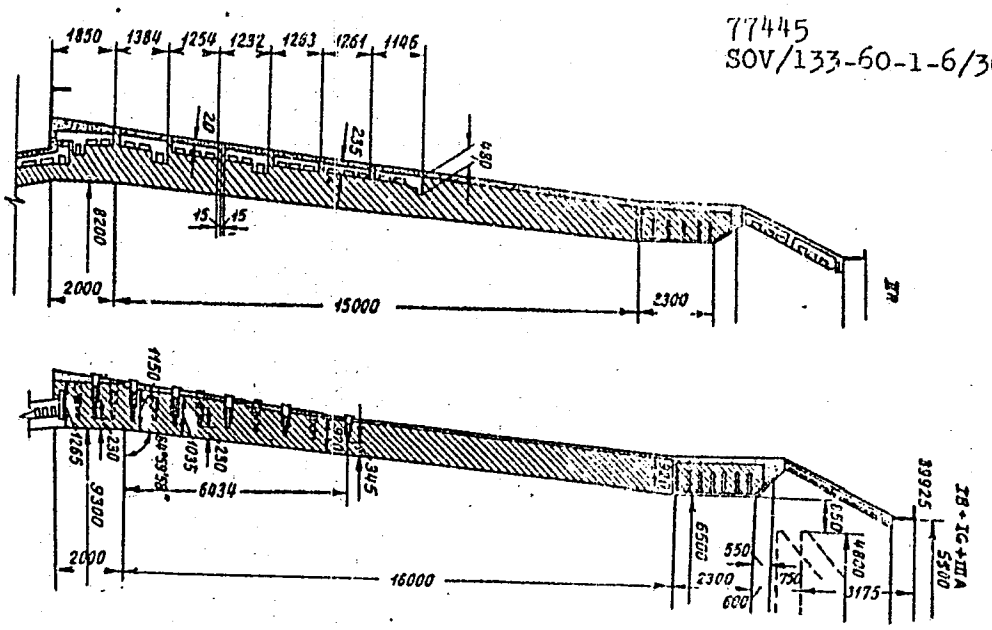

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Fig. 1 (cont'd)

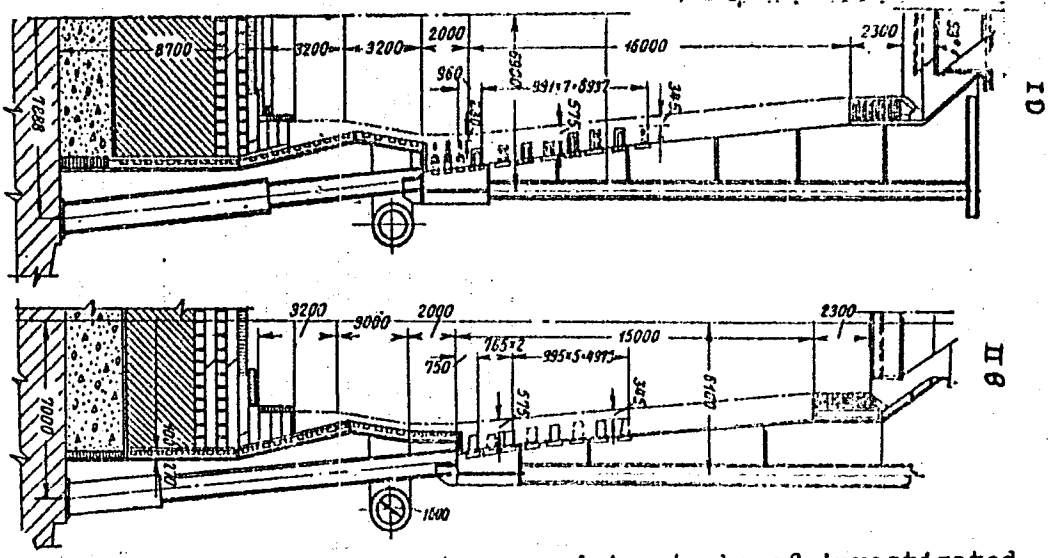

Fig. 1. The cooling systems used in stacks of investigated blast furnaces.

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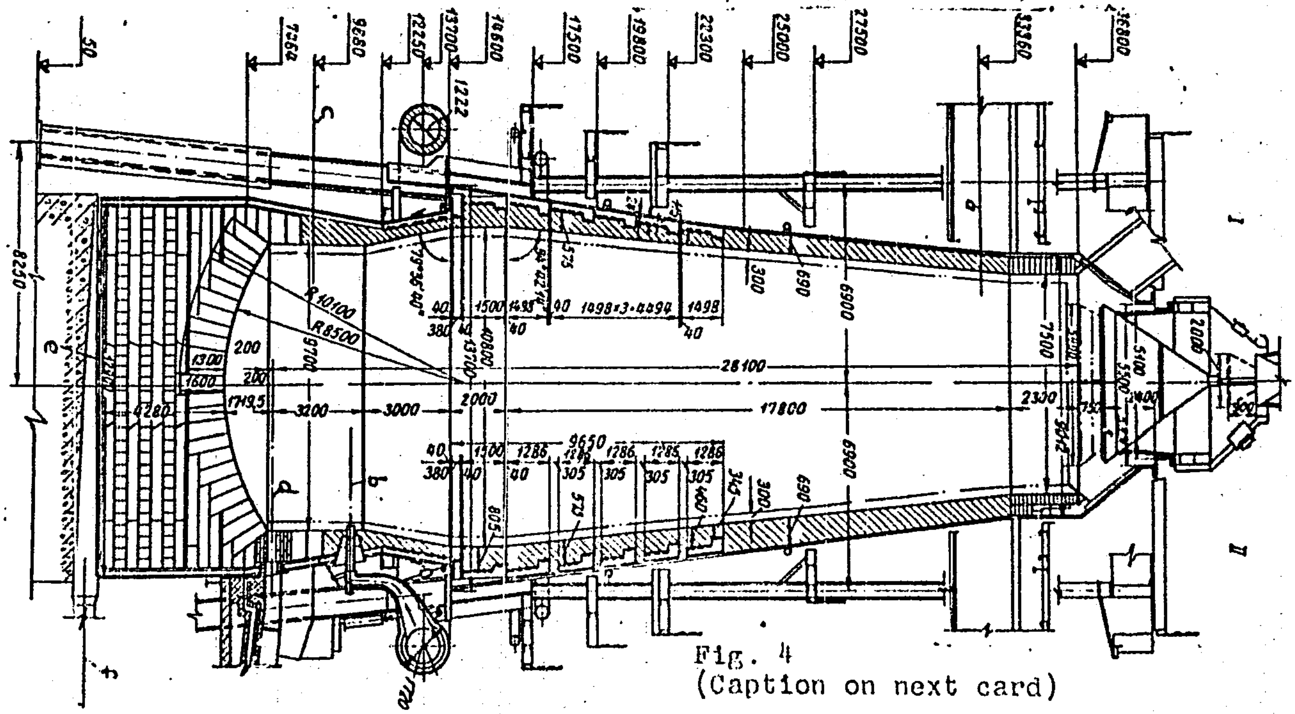

Fig. 4
(Caption on next card)

Caption to Fig. 4.

Fig. 4. Recommended design for the increase of working volume of a typical blast furnace from 1719 to 1960 m^3. (I) an alternate design showing an installation of plate type coolers (continuous belts); (II) an alternate design showing an installation of coolers with gaps along the height; (a) axis of pipe for taking gas amples; (b) axis of air tuyere; (c) axis of slag notch; (d) axis of iron notch; (e) metal stock; (f) ventilating blast.

supporting shelves, the life of lining should increase. (5) Due to the fact that plate type coolers work under difficult conditions of slag hardened on the walls of blast furnace, it is recommended to cast them from the alloyed, growth resistant cast iron of ZhChKh -2,5 type. Following dimensions of plate type coolers are recommended: thickness of ribbed portion of cooler--115 to 150 mm; thickness of the main metal part of cooler--120 mm. The poured-in fire clay should not occupy more than 55% of cooler's surface. For cooling of the bosh the ribbed coolers without poured fire clay are recommended. The height of the rib should be about 75 mm. The ribs of the plate type coolers should have the longitudinal and transverse slots for the relief of thermal stresses. There are 4 figures; and 5 tables.

ANDON'YEV, S.M.; FILIPP'YEV, O.V.; ZHITOMIRSKIY, I.S.

New method for simulating the mixing of fuel, air, and oxygen in open-hearth furnaces. Inzh.-fiz.zhur. no.1:25-29 Ja '60. (MIRA 13:4)

1. Gosudarstvennyy nauchno-issledovatel'skiy i proyektnyy institut metallurgicheskoy promyshlennosti, "Giprostal," Khar'kov.
(Open-hearth furnaces)

Filipyev O.V.

ANDON'YEV, Sergey Mikhaylovich, doktor tekhn. nauk. Prinimali uchastiye: BELAN, F.I., inzh.; MALAMUD, Ye.A.; TSELUYKO, Yu.I., inzh.; KERZHNER, S.M., inzh.; SIRENKO, B.M., inzh.; FILIP'YEV, O.V., inzh.; KOCHO, V.S., doktor tekhn. nauk, prof., retsenzent; NITSKEVICH, Ye.A., red.; YEZDOKOVA, M.L., red. izd-va; DOBUZHINSKAYA, L.V., tekhn. red.

[Evaporation cooling of metallurgical furnaces] Isparitel'noe okhlazhdenie metallurgicheskikh pechei; osnovnye polozheniia. Moskva, Gos. nauchno-tekhn. izd-vo lit-ry po chernoi i tsvetnoi metallurgii, 1961. 447 p. (MIRA 14:10)

(Metallurgical furnaces—Cooling)

NITSKEVICH, Ye.A., dots.; KIREVSKIY, G.N., inzh., nauchnyy red.; FRIDMAN, I.M., inzh., nauchnyy red.; SAZANOV, B.V., dots., nauchnyy red.; MUSHKOV, S.B., inzh., nauchnyy red.; FILIP'YEV, O.V., kand. tekhn. nauk, nauchnyy red.; VESELKOV, N.G., inzh., nauchnyy red.; TARNAVSKIY, I.L., inzh., nauchnyy red.; IVANOVA, A.N., inzh., red.; ZABAZLAYEVA, E.I., red.; LANOVSKAYA, M.R., red. izd-va; DOBUZHINSKAYA, L.V., tekhn.red.

[Heat engineering]Teploenergetika [By]E.A.Nitskevich. Pod red. A.N.Ivanova. Moskva, Metallurgizdat, 1962. 348 p. (MIRA 16:2)

1. Moscow. TSentral'nyy institut informatsii chernoy metallurgii. (Metallurgical furnaces) (Power engineering)

ANDON'YEV, S.M., doktor tekhn.nauk; FILIP'YEV, O.V., kand.tekhn.nauk; KUTSYKOVICH, D.B.; GOL'DIN, Sh.L., inzh.

Evaporative cooling of cupola furnaces. Prom. energ. 19 no.3:21-26 Mr '64. (MIRA 17:4)

OSIPOVICH, V.; FILIP'YEV, P.

Reorganization of raw leather shops. Mias.ind.SSSR 33 no.5:24-26 '62. (MIRA 15:12)

1. Dnepropetrovskiy myasokombinat.
(Hides and skins)

FILIP'YEV, V. I.: Master Tech Sci (diss) -- "Investigation of the problem of the use of the shield system in steep seams less than 2.5 meters thick in the Prokop'yevsk-Kiselevsk area of the Kuzbass". Tomsk, 1958. 15 pp (Tomsk Order of Labor Red Banner Polytech Inst im S. M. Kirov), 150 copies (KL, No 12, 1959, 129)

S/128/60/000/001/005/007
A133/A127

AUTHORS: Mel'man, Ya. I., Filip'yev, V. P.

TITLE: Annealing of castings directly in the mold

PERIODICAL: Liteynoye proizvodstvo, no. 1, 1960, 40

TEXT: The authors describe in detail the technological scheme for the casting and subsequent annealing directly in the mold of a turntable, 2,600 mm in diameter and 25 mm thick, for a pilot plant model of an assembly crane. Four of such turntables had to be cast. The scheme of the mold, formed by template and a system of cores, the gating assembly and the flask arrangement are illustrated in Figure 1. The cores were made of a chemically solidifying waterglass mixture. The supporting structure consisted of a frame, 3 x 3 m, welded from I-beam No. 30 sections and a steel ring, 2,100 mm in diameter and 300 mm high, made from a 5 mm steel sheet. Steel was poured at 1,490°C, after 30 minutes the shrink head was freed from the flask (5) and the cores (4), the ring (2) was removed and

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Annealing of castings directly...

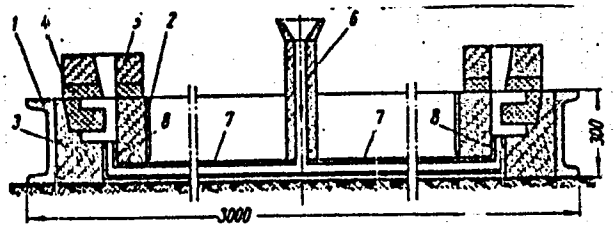
all gatings (7) around the riser (6) were cut off to ensure free diametrical shrinkage and eliminate hot cracks. All shrink heads were removed by gas cutting. The molding sand was removed from the interior and lower parts of the casting and the casting was prepared for annealing according to the scheme illustrated in Figure 2. A tubular ring (4), made of 75-mm tubing with 10-12-mm holes drilled at regular intervals of 150 mm on its circumference, was placed in the mold (2). Then, firebricks (3) were arranged in the mold and covered with 5-mm steel plates on top (6). Hot generator gas was fed through a corrugated hose to the tubular ring and lighted. The combustion products left through the holes in the ring. The inner part of the mold was covered with molding sand and the casting was cooled down to 500°C. Samples for mechanical testing were placed at the body of the casting. The heating and holding of the casting at 860°C lasted approximately 6 hrs. The temperature of the casting during the annealing process was periodically measured with a thermocouple with the gas turned off. After holding at 860°C during 1.5 hrs the gas was turned off and the holes were covered with molding sand, and the casting was left for cooling, completely

Annealing of castings directly...

isolated from air. The mean results of testing the mechanical properties of the four melts were indicated by the following values: σ_b = 60.7 kg/mm^2; σ_s = 32.7 kg/mm^2; δ = 19.5%; ψ = 31.2%; (with the following chemical composition of the steel: 0.38% C;, 0.85% Mn; 0.32% Si; 0.032% S; 0.035% P). There were no buckling phenomena whatsoever. There are 2 figures.

Legend to Figure 1:

(1) I-beam frame, 3 x 3 m
(2) support ring
(3) cores
(4) auxiliary cores
(5) flask
(6) riser
(7) gaitings
(8) vertical gaitings



Фиг. 1.

Card 3/4

FILIP'YEV, V.P.

Open-hearth furnace smelting of steel. Lit. proisv. no.12:2-3 D '61. (MIRA 14:12)

(Open-hearth process)

FILIP'YEV, V.S.; SMOLYANINOV, N.P.; FESENKO, Ye.G.; BELYAYEV, I.N.

Preparation of $BiFeO_3$ and determination of its unit cell.
Kristallografiia 5 no. 6:958-959 N-D '60. (MIRA 13:12)

1. Rostovskiy-na-Donu gosudarstvennyy universitet.
(Bismuth ferrate)

FILIP'YEV, V.S.; FESENKO, Ye.G.

Production and determination of the elementary cell of some compounds of the type $A_2B^{I}B^{II}O_6$. Kristallografiia 6 no.5:770-772 S-O '61. (MIRA 14:10)

1. Rostovskiy-na-Donu gosudarstvennyy universitet.
(Ions) (Crystals—Growth)

BEIYAYEV, I.N.; FILIP'YEV, V.S.; FESENKO, Yu.G.

Preparation and structure of some tungstates of the type M_3WO_6. Zhur.strukt.khim. 4 no.5:719-723 S-O '63. (MIRA 16:11)

1. Rostovskiy gosudarstvennyy universitet.

FILIP'YEV, V.S.; KUPRIYANOV, M.F.; FESENKO, Ye.G.

Production and analysis of complex compounds of the type $A_2B^{I}B^{II}O_6$. Kristalografiia 8 no.5:790-791 S-O '63. (MIRA 16:10)

1. Rostovskiy gosudarstvennyy universitet.

L 11602-63 EWT(1)/EWP(q)/EWT(m)/BDS AFFTC/ASD/ESD-3 JD/JG/IJP(C)
ACCESSION NR: AP3000768 S/0070/63/008/003/0356/0362

AUTHOR: Kupriyanov, M. F.; Filip'yev, V. S. 61 59

TITLE: X-ray studies of minor deformations in complex perovskites

SOURCE: Kristallografiya, v. 8, no. 3, 1963, 356-362

TOPIC TAGS: perovskite structure, x-ray powder photograph, unit cell, superlattice

ABSTRACT: The authors examined a method of determining minor distortions in perovskite structure for the purpose of finding optimal conditions for photographing these distortions. They propose a method of determining type of distortion by relative width of lines on powder diagrams. The method was employed in the study of a number of complex perovskites with the general formula Sr sub 2 B sup I B sup II O sub 6, where B sup I represents Ta and Nb and B sup II represents Fe, Mn, Y, Yb, Pr, Sm, Nd, and La. The parameters of these compounds were determined by reciprocal photography with a RKE camera. The camera was focused on lines with N = 10 for chromium radiation and with N = 20 for cobalt. The precision of measuring the parameters of the perovskite amounted to 0.001 kX for linear values and 2' for angular values. For the high-temperature photographs a RKOSET type camera was employed. High-temperature phase transitions with insignificant distortions of the perovskite cell are a characteristic feature of

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ACCESSION NR: AP3000768

the investigated compounds. The authors conclude that appreciable differences in transition temperatures of compounds containing rare earths and compounds with iron are probably due to differences in the transition mechanism. Orig. art. has: 4 figures and 5 tables.

ASSOCIATION: Rostovskiy-na-Donu gosudarstvennyy universitet (Rostov State University)

SUBMITTED: 09Jul62 DATE ACQ: 21Jun63 ENCL: 00

SUB CODE: 00 NO REF SOV: 005 OTHER: 001

Card 2/2

ACCESSION NR: AP4024999 S/0070/64/009/002/0293/0295

AUTHORS: Filip'yev, V. S.; Fesenko, Ye. G.

TITLE: Structural changes and anomalies in electrical properties during phase transitions in Pb_2CoWO_6

SOURCE: Kristallografiya, v. 9, no. 2, 1964, 293-295

TOPIC TAGS: crystal structure, superlattice, electrical property, phase transition, Pb_2CoWO_6, Pb_2MgWO_6, monoclinic distortion, tetragonal distortion, orthorhombic symmetry, perovskite, perovskite cell

ABSTRACT: This is a continuation of work carried out by V. S. Filip'yev, M. F. Kupriyanov, and Ye. G. Fesenko (Kristallografiya, 8, 790, 1963). Synthesis of Pb_2CoWO_6 was accomplished in three stages of heating $PbWO_4$ with carbonates of Co and Pb: 600C for 20 hours, 750C for 20 hours, and 980C for 4 hours. Heating at higher temperature was considered inadvisable because of incongruent melting of Pb_2CoWO_6. Primary structural determination was made by x-ray studies with Cu and Fe radiation. Splitting of lines on the powder diagram (t <20C) may be explained

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ACCESSION NR: AP4024999

by tetragonal distortion of the perovskite lattice, with a>c. But greater resolving power indicates that the distortion is monoclinic, though it also appears that a = c and that the true symmetry of the compound is orthorhombic. The nature of the perovskite-cell distortion is similar to that in Pb_2MgOO_6, for which a phase transition may be observed at 39C, and which is interpreted as antiferroelectric. But, in contrast to this compound, Pb_2CoWO_6 exhibits no superlattice in connection with antiparallel displacement of ions. This does not exclude the possibility that such displacements actually occur. They may be small, and this would mean that the intensity of sublattice lines would also be small. Because of the peak in ε at the point of phase transition and because of similarity with Pb_2MgWO_6, the authors conclude that Pb_2CoWO_6 is ferroelectric or antiferroelectric. Orig. art. has: 2 figures and 1 table.

ASSOCIATION: Rostovskiy-na-Donu gosudarstvennyky universitet (Rostov-on-Don State University)

SUBMITTED: 07Jun63 DATE ACQ: 16Apr64 ENCL: 00

SUB CODE: PH NO REF SOV: 004 OTHER: 001

Card 2/2

548.736

...lip yev, V. S.; Pesenko, Ye. G.

...he synthesis and structure of complex perovskites ... type

SOURCE: Kristallografiya, v. 10, no. 3, 196..., 297-302

TOPIC TAGS: perovskite, crystallography

ABSTRACT: A group of compounds with a general formula ... where B' are Ta^{5+} ... while B" are different trivalent cations, were synthesized ... of the com- ... perovskite type structure with ... of ... the true symmetry is ... The ... with the symmetry ...

... cells there is an inversion of the ... exchange of B" and Ca cations. The ...

L 57586-65
ACCESSION NR: AP5013711

ASSOCIATION: Rostovskiy gosudarstvennyy universitet (Rostov State University)

SUBMITTED: 04Mar64 ENCL: 00 SUB CODE: SS, MM

NO REF SOV: 005 OTHER: 005

FILI?'YEV, V.S.; FESENKO, Ye.G.

Synthesis and structure of complex perovskites of the type $Ca_2B'B''O_6$. Kristallografiia 10 no.3:297-302 My-Je '65. (MIRA 18:7)

1. Rostovskiy gosudarstvennyy universitet.

FILIP'YEV, V.S.; FESENKO, Ye.G.

Phase transitions in $Pb_2Cd\ WO_6$. Izv. AN SSSR. Ser. fiz. 29 no.6: 894-895 Je '65. (MIRA 18:6)

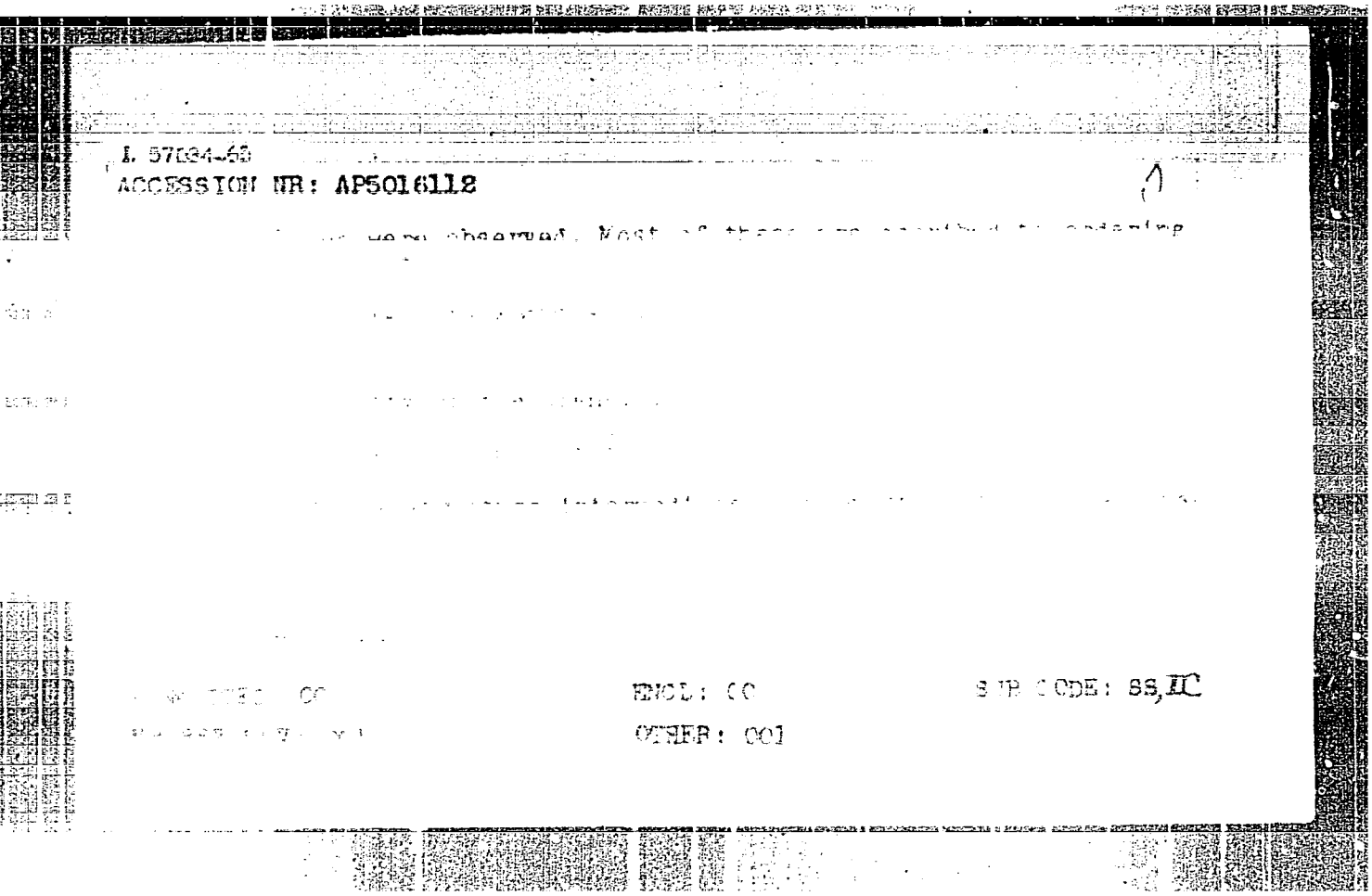
Filip'yev, V.S.; Fesenko, Ye.G.

Investigation of a phase transition in [illegible] All-Union Conference on Ferroelectricity, Rostov-on-the-Don 12-

SOURCE: AN SSSR. Izvestiya. Ser.fizicheskaya, v.29, no.6, 1965, 894-895

[illegible] antiferroelectric material, phase transition [illegible]

This paper reports a continuation [illegible] and a collaborator on PbZrO3 (Zh.strukt.khimii 4, 719, 1963). [illegible] a moderate temperature [illegible] showed the material to be a single phase [illegible] ture having the following parameters: [illegible] a = 4.156 ± 0.002 Å, b = 4.074 ± 0.002 Å, β = [illegible] per



L 57694-65
ACCESSION NR: AP5016112

ENCL: 00 SUB CODE: SS, IC

OTHER: 001

L 4273-66 EWT(1)/T IJP(c) GG

ACC NR: AP5024546 UR/0070/65/010/005/0626/0629
548.736

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37
B

AUTHOR: Filip'yev, V. S.; Fesenko, Ye. G.

TITLE: Symmetry and lattice parameters of certain perovskites of complex composition

SOURCE: Kristallografiya, v. 10, no. 5, 1965, 626-629

TOPIC TAGS: crystal lattice parameter, crystal symmetry, crystal unit cell

ABSTRACT: The article gives a table of the symmetry, unit cell parameters, form of perovskite cell, and parameters of perovskite cell of 49 compounds having the general formula $A_2B'B''O_3$, where A = Ba, Sr; B' = Ta, Nb in combination with various trivalent cations B'', or B' = W and B'' = Sr, Ca, Mg. For most compounds, these data are published for the first time. The compounds were synthesized by a two-stage ceramic process (firing for 20 hr at 1200C and 4 hr at 1400C) from stoichiometric mixtures of oxides or carbonates of the corresponding metals. X-rays structural analyses were carried out on powder patterns obtained with RKD-57, RKE, and RKU-114 cameras using Cu-, Co-, Fe-, and Cr-radiation. In all of the compounds, a superstructure related to the alternation (along the three directions) of various cations occupying octahedral positions was observed. In noncubic compounds, the superstructure may also be related to a displacement of ions. The unit cell of rhombohedral compounds contains 1 formula unit; that of tetragonal compounds, 2 units; and that of cubic compounds, 4 units. Orig. art. has: 1 table.

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L 4273-66

ACC NR: AP5024546

3

ASSOCIATION: Rostovskiy gosudarstvennyy universitet (Rostov State University) 44, 55

SUBMITTED: 09Feb65 ENCL: 00 SUB CODE: SS, GC

NO REF SOV: 005 OTHER: 006

Card 2/2

FILIP'YEV, V.S.; FESENKO, Ye.G.

Pseudotriclinic distortion of the cell in a perovskite-type structure. Kristallografiia 10 no.3:411-414 My-Je '65. (MIRA 18:7)

1. Rostovskiy gosudarstvennyy universitet.

FILIP'YEVA, V. A.

"Effect of the Nerves of the Diaphragm on the Small Intestines and the Functional Characteristics of These Nerves." Cand Med Sci, Dnepropetrovsk Medical Inst, Dnepropetrovsk, 1953. (RZhBiol, No 1, Sep 54)

SO: Sum 432, 29 Mar 55

ACCESSION NR: AP4030641 S/0048/64/028/004/0669/0674

AUTHOR: Fesenko, Ye.G.; Filip'yev, V.S.; Kupriyanov, M.F.

TITLE: Concerning the crystallochemistry of perovskites of complex composition /Report, Symposium on Ferromagnetism and Ferroelectricity held in Leningrad 30 May to 5 June 1963/

SOURCE: AN SSSR. Izv. Ser.fiz., v.28, no.4, 1964, 669-674

TOPIC TAGS: perovskite, complex perovskite, complex perovskite lattice parameter, complex perovskite superstructure

ABSTRACT: A large number of perovskites with the complex composition $A_2BB'O_6$ were synthesized and some of their properties are discussed. In the general formula A represents a divalent cation and B and B' represent cations, the sum of whose valences is eight. Among the compounds synthesized are the 112 in which A is Ba or Sr, and either B is Ta or Nb and B' is any one of 20 trivalent ions, or B is W or Mo and B' is any one of 8 divalent ions. Synthesis of the 56 analogous compounds in which A is Pb was attempted, but most of the resulting materials did not have the perovskite structure. The syntheses were performed with analytic grade reagents and employing

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ACCESSION NR: AP4030641

conventional ceramic techniques. The structures were determined by x-ray powder diffraction photographs. In addition to the above compounds, a number of perovskites in which A is Ba or Sr and B is Re, Os or U are included in the discussion. The properties of these compounds were taken from work of A.W.Sleight, R.Ward and J.Longo (J. Amer.Chem.Soc.83,1088,1961; Inorg.Chem.1,245,1962; Ibid.790,1962). The mean lattice parameter a (the cube root of the volume of the unit cell) was plotted against the radius $R_{B'}$ of the B' ion. For fixed A and B, the points lay close to a straight line, and the several lines for the different A and B ions all had the same slope $da/dR_{B'} = 0.55$. In order to obtain smooth curves, it was necessary to employ the radii given by L.H.Ahrens (Geochim.et cosmochim.acta,2,3,155,1952) for all the ions except Sc^{3+} and Mg^{2+}; for these two ions the common radius 0.75 A was required, which differs by about 10% (in both directions) from the accepted radii of these ions. For large values of $R_{B'}$ ($R_{B'}/R_A > 0.8$), the points fell below the line and the materials had the more closely packed structure of $(NH_4)3AlF_6$. The structure is metastable in the transition region, and it is possible to obtain materials with either structure, depending on the conditions of synthesis. Superstructure lines were observed in the patterns of all the compounds for which either the valences of the B and B' ions differed by more than two, or the radii of the B and B' ions differed by more than 9%. This sufficient condition on the ion radii for the appearance of superstructure

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ACCESSION NR: AP4030641

is consistent with findings of F.Galasso and W.Darby (J.Phys.Chem.66,1,131,1962). The nature of superstructure in perovskite and in the $(NH_4)_3AlF_6$ structure is discussed, and it is concluded that several tungstenates assigned to the latter structure by S.C.Steward and H.P.Rooksby (Acta crystallogr.,4,503,1961) are in fact perovskites. Orig.art.has: 1 formula and 4 figures.

ASSOCIATION: none

SUBMITTED: 00 DATE ACQ: 30Apr64 ENCL: 00

SUB CODE: IC NR REF SOV: 017 OTHER: 012

Card 3/3

FILIP'YEV, Yuriy Aleksandrovich; LAVRETSKIY, A., doktor fil. nauk, otv. red.; KLYAUS, Ye.M., red.izd-va; MATYUKHINA, L.I., tekhn. red.

[Creativity and cybernetics] Tvorchestvo i kibernetika. Moskva, Izd-vo "Nauka," 1964. 78 p. (MIRZ 17:3)