COUNTRY

CATEGORY

ABS. JOUR. : RZhKhim., No 17, 1959, No. 61616

AUTHOR :

TITLE

ORIG. PUB.

ABSTRACT Con'd added 30gr Na₂SO₄, 30gr MgCl₂, 20gr of finely ground magnesite and 50gr of cement. It is also possible to add Glauber's salt, aluminum alum, or a solution of borax to water. Effects of water/gy-psum ratio and of vacuuming G-mix during its manufacture on the quality of G-forms are also reviewed. The qualities of molds (porosity, of from [sic], diffusion coefficient, growth at the setting and others) are affected considerably by the mixing time of G with water and by the wetting time. Depending on the properties of G-molds, desired, it is possible to establish the necessary conditions

Card:

2/4

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28116 Z/013/61/000/002/002/006 D006/D102

15 2610

AUTHOR: Syska, Zbygniew, Engineer

TITLE: Increasing the green mechanical strength of ceramic bodies

PERIODICAL: Sklar a keramik, no. 2, 1961, 35-39

TEXT: Green strength of porcelain bodies can be increased by the addition of highly plastic clays which, however, frequently contain considerable quantities of discoloring oxides (Fe₂O₃). To increase the whiteness of

porcelain products, clays of poorer plastic properties but with a lower content of discoloring oxides are sometimes used. In such case, certain additives have to be admixed to increase the green mechanical strength of the body. The paper presents some results obtained by the ceramics industry in Poland concerning the various means of increasing the mechanical strength of ceramic bodies with special attention to the influence of aging, mixing water, addition of plastic clays and bentonites as well as organic additives. Aging over a certain period of time produces a uniform distribution of the meisture and increases the plasticity of the body. According to Govorov, the mechanical strength of bodies consisting of kaolinite-halloysite clay Card 1/4

28116 2/013/61/000/002/002/006 D006/D102

Increasing the green mechanical...

and quartz increases with aging, while the strength of montmorillonite-illite base bodies decreases. Tests with bentonite showed that the Ca-bentonite (the only type found in Polish deposits) does not noticeably improve the mechanical strength unless added in a proportion of 10% or higher. Nabentonite, gained by activating Ca-bentonite with NaCl, produces much better results, but since Na-bentonite production would require the development of special methods, further experiments with Na-bentonite were discontinued. As to the various organic compounds used in industry to increase the plasticity and strength of ceramic bodies, tests with sulfite liquor, humic acid and carboxymethylcellulose produced the following results: An addition of 5% of a 10%-sulfite liquor resulted in a strength increase from 8.8 kg/cm² to 24.9 kg/cm². The liquor can not be used in slip casting because it clogs the plaster molds. Tests with the addition of humic acid from the Jerisov Abstracter's note: The exact Polish spelling of this location could not be determined deposit showed that the mechanical strength of the green porcelain body increased 48-49% with the addition of 5% of humic acid. At higher humic-acid proportions the strength again decreases. Therefore, soda was added in various proportions. As a result, the humic acid was neutralized, the grinding time reduced by 16%, and the mechanical strength con-Card 2/4

28116 2/013/61/000/002/002/006 D006/D102

Increasing the green mechanical...

Card 3/4

siderably increased. Best results, namely a breaking-strength increase from 7.5 kg/cm² to 38.4 kg/cm², were achieved at a pH value of 8.0 with 4% of humic acid and 0.87% of soda. On the other hand, addition of humic acid and soda fluidizes the paste and causes the nonplastic components to segregate and form a sediment which can be agitated only with difficulty. To prevent this sedimentation, tests with various coagulating agents such as HCl, Ca(OH)₂, sulfite liquor and commercial-grade CaCl₂ were made. Of these, commercial-grade CaCl₂ proved most successful.

with the addition of 0 - 0.5% of carboxymethylcellulose (trademarked Gly-kocel) showed that the green mechanical strength of the body increased 30 - 100%, and similar results were also obtained under production conditions. It was also found that in slip casting Glykocel is not absorbed by the plaster molds but remains in the body. The results obtained with the addition of Glykocel can be summarized as follows: (1) The use of Glykocel in ceramic, porcelain, earthenware and other bodies increases the green mechanical strength of the bodies. (2) When added to porcelain bodies, Glykocel permits the use of less plastic clays with a lower content of discoloring oxides; reduces the breakage between operations; and lowers the weight of

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28116 z/013/61/000/002/002/006 D006/D102

Increasing the green mechanical ...

the body. (3) The use of Glykocel in glazes, paints and enamels increases their adhesion to the body or base. Research on its further applications is being continued. There are 8 tables and 12 references: 5 Soviet-bloc and 7 non-Soviet-bloc. The references to the four most recent English and 7 non-Soviet-bloc. The references to the four most recent English language publications read as follows: R.W. Grimshaw, Trans. Brit. Ceram. Soc., vol. 57, no. 6, 1958, 340-348; E.E. Werral, "The Organic Matter in Clays", Trans. Brit. Cer. Soc., 1956, no. 11, 589; E.E. Werral, C.V. Green, Trans. Brit. Ceram. Socs., 52, 528 (1953); and S.J. Speil: J. Amer. Cer. Soc., 1940, 23, 33.

V

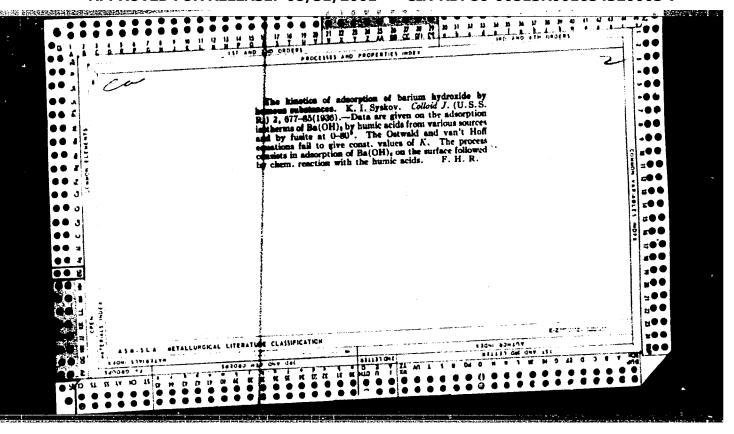
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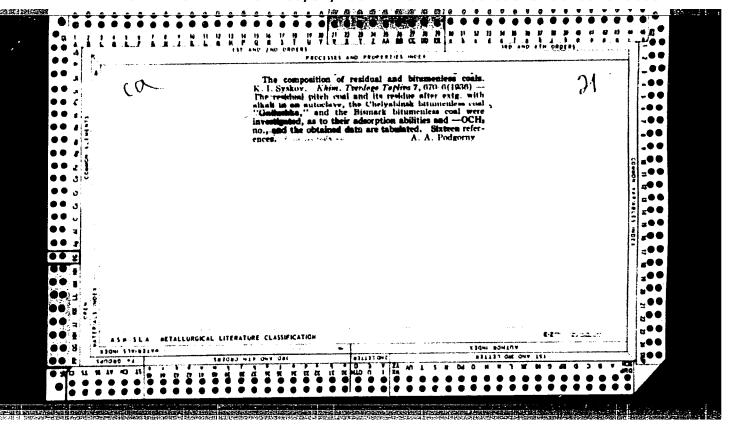
SYSKI, B.

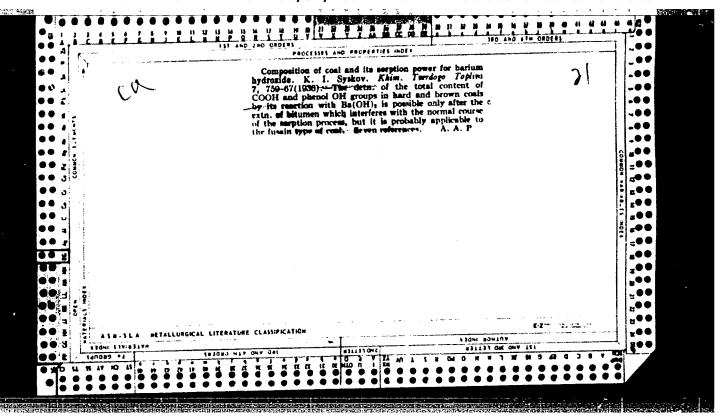
A simple model of the stochastic process of learning. p. 73.

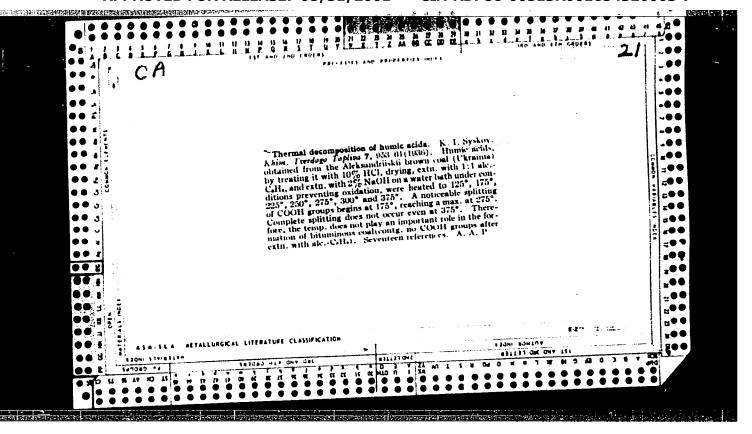
SZFLO I CYCAMIKA. (Centralne Zarzady Przemyslu Sklarskiego i Cerzmicznego oraz Stowarzyszenie Naukowo-Techniczne Inzynierow I Technikow Przemyslu Chemicznego) Warszawa, Poland. Vol. 10, no. h, Apr. 1959.

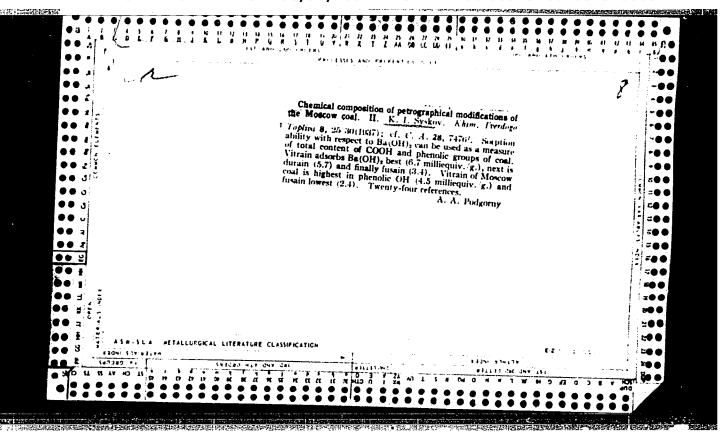
Monthly list of East European Accessions (EEAI) LC, Vol. 8, no. 7, July 1959. Uncl.

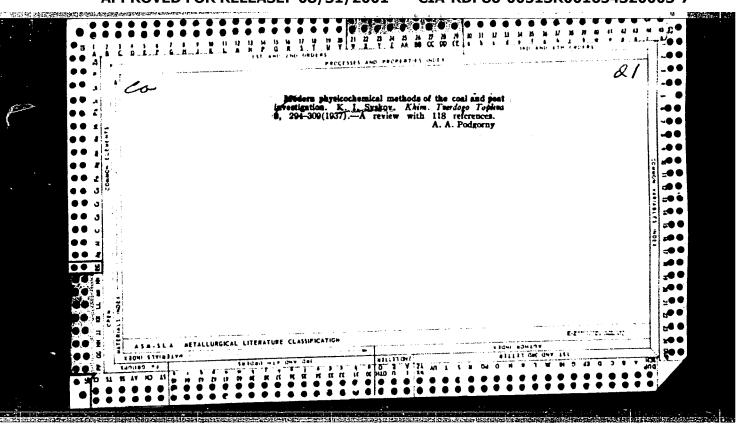


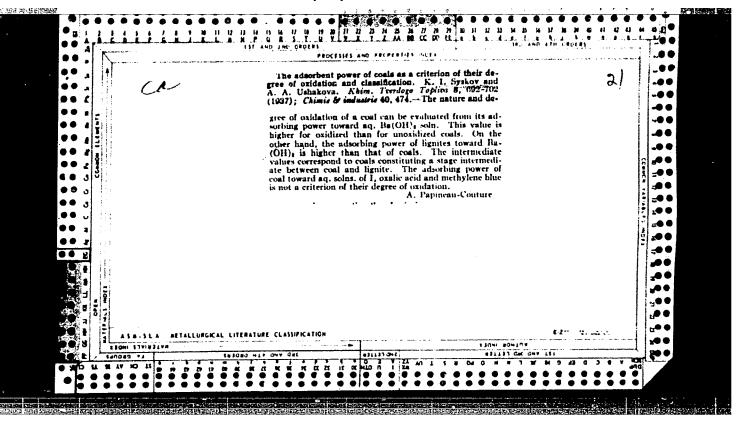


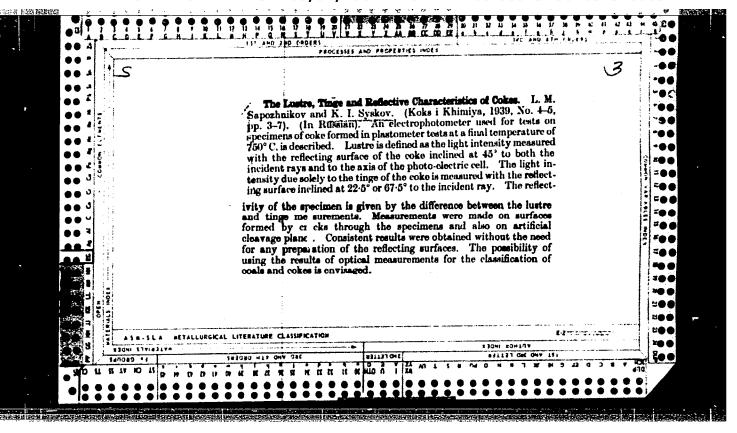










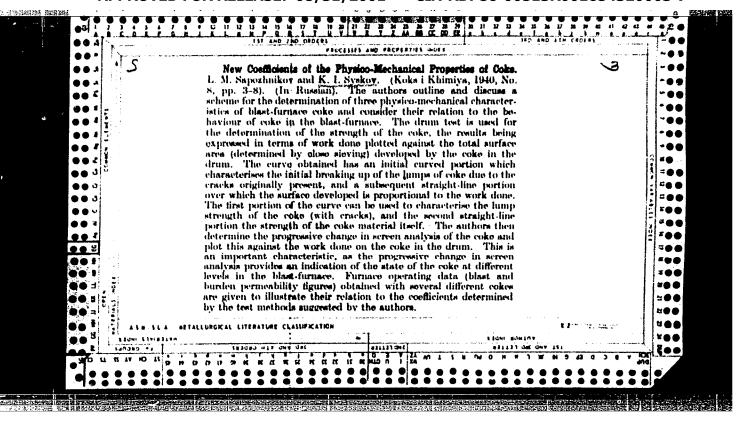


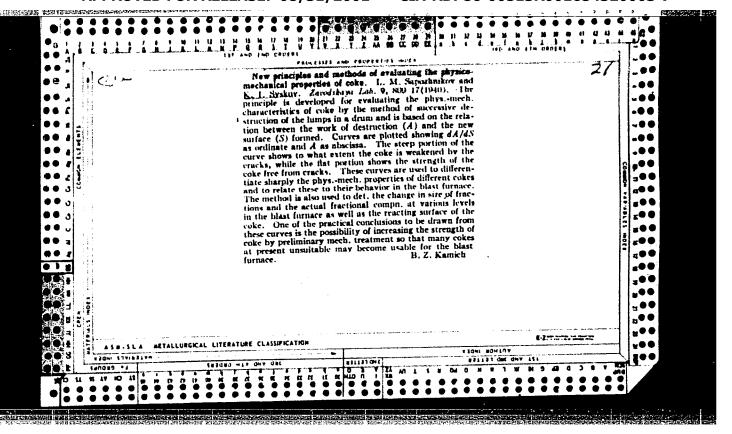
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- 1. SYSKCV, K. I.
- 2. USSR (600)

"Analytic Expression and Determination of the Strength of Lump (Kuskovykh) Material," Iz Ak. Nauk. SSSR, Otdel. Tekh. Nauk, No. 2, 1940. Institute of Mineral Fuels Academy of Sciences USSR.

9. Report U-1530, 25 Oct 1951





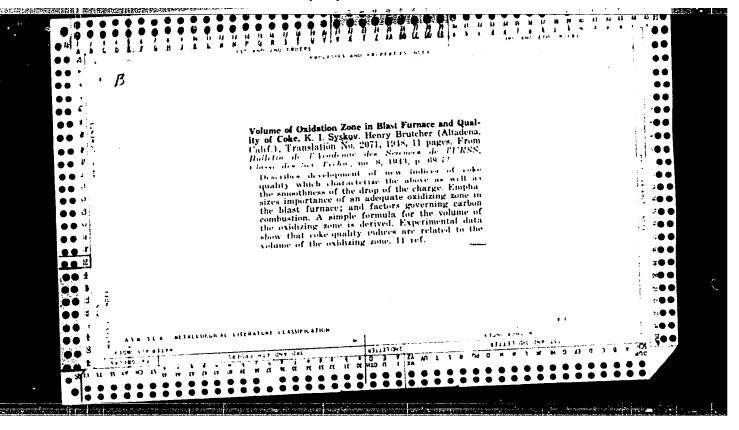
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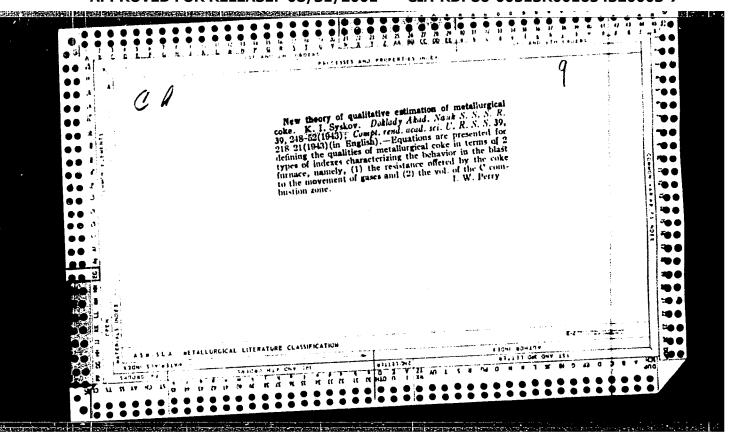
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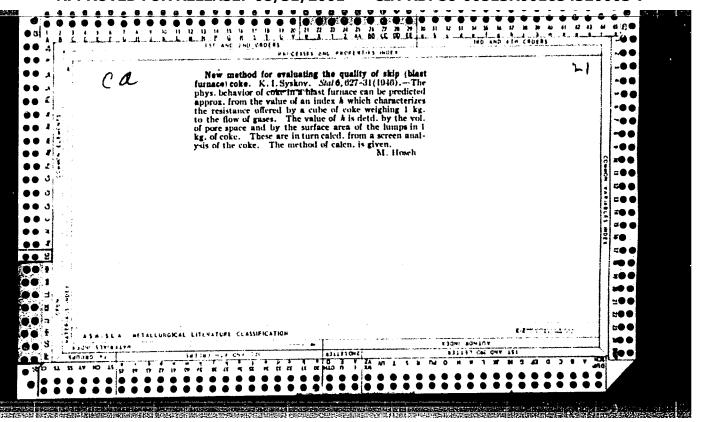
- 1. SYSKOV, K. I.
- 2. USSR (600)

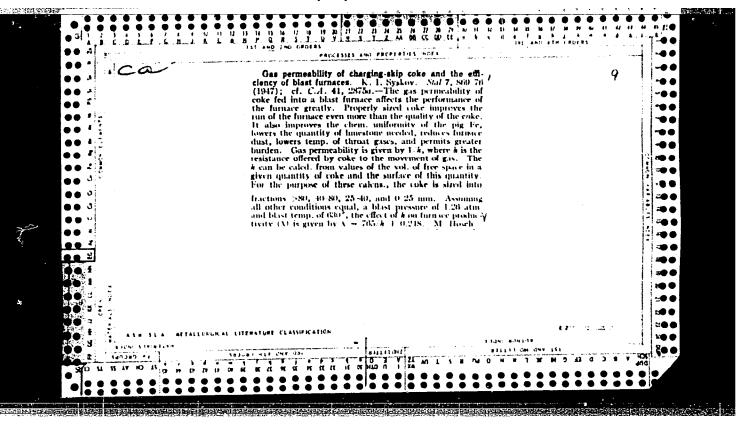
"Quality of Blast Furnace Coke and Process of its Disintegration," IZ. Ak. Nauk SSSR, Otdel, Tekh. Nauk, No. 3, 1941. Institute of Mining, Academy of Sciences USSR Laboratory of Chemistry and Coking Coal, submitted 15 Jul 1940.

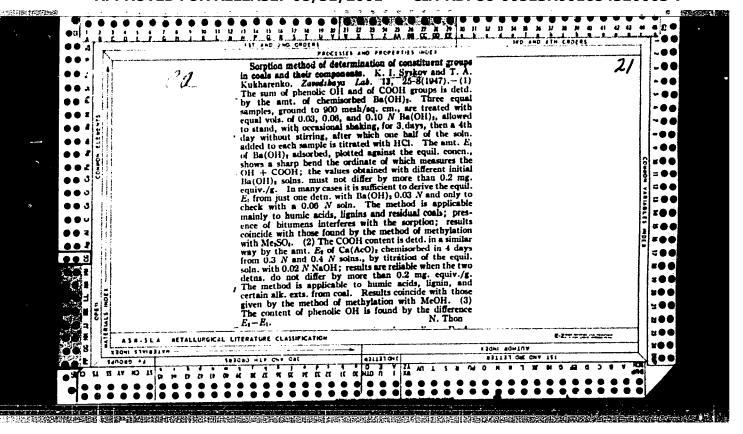
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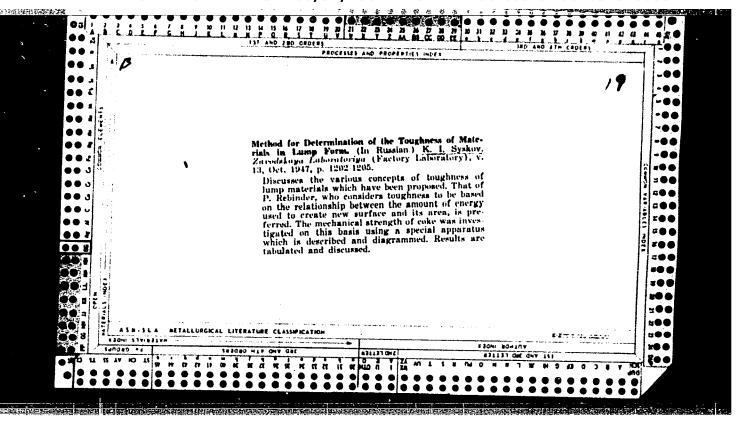


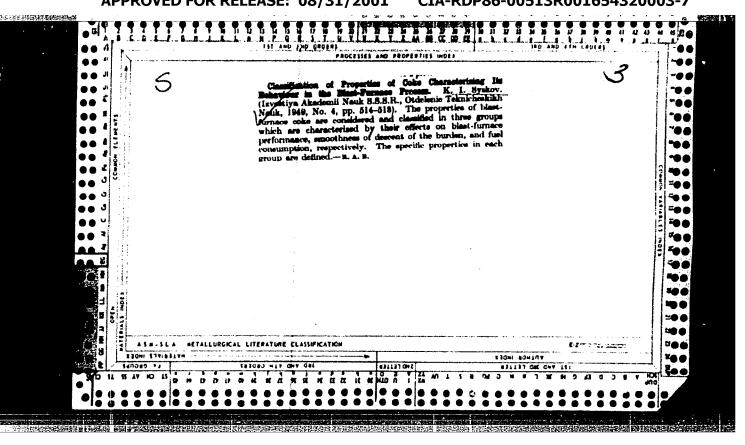


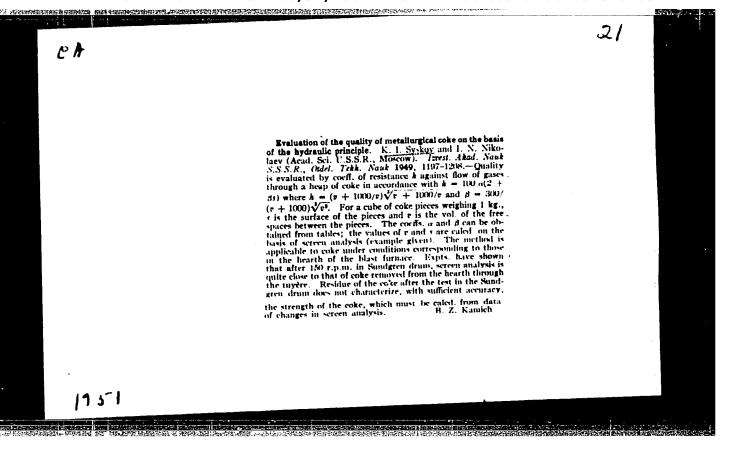


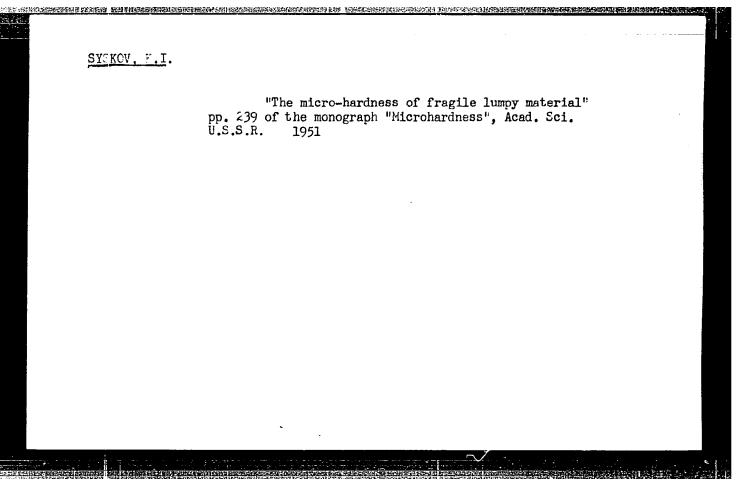


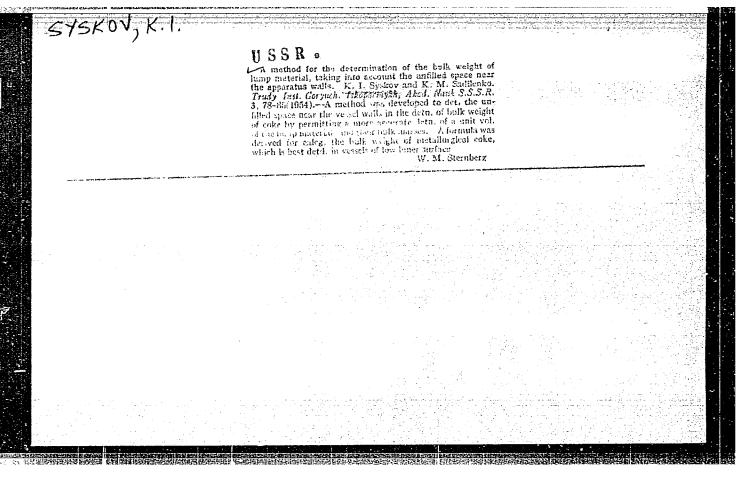












USSR/Scientific Organization

FD-1105

Card 1/2

Pub. 41-17/17

Author

: Syskov, K. I., and Kusakin, N. D. (1), Kupriyanov, V. P. (3)

The state of the s

Title : In scientific establishments of the Department of Technical Sciences

of the Academy of Sciences of the U.S.S.R.

Periodical

: Izv. AN SSSR. Otd. tekh. nauk 4, 154-160, Apr 1954

Abstract

: Describes activity of various scientific institutions in four articles:
(1) "Seminar of the Institute of Mineral Fuels, Commemorating Academician N. P. Chizhevskiy" -- a report on a seminar held 14 May 1954 on the subject of IGI (Institute of Mineral Fuels) coke ovens developed (1948) on the basis of research done by N. P. Chizhevskiy. (2) "Conference on the Problem of the Mechanics of Cloth" -- a report on conference held March 1954, at Institute of Mechanics of the Academy of Sciences of the USSR, on construction, technology, and durability of

cloth.

。 1985年,1988年,1988年,1988年,1988年,1988年,1988年,1988年,1988年,1988年,1988年,1988年,1988年,1988年,1988年,1988年,1988年,1988年,1

USSR/Scientific Organization

FD-1105 & 1106

Card 2/2

Pub. 41-17/17

Abstract

: (3) "Conference on use of Local Building Materials for Agricultural Construction" -- a report on conference held March 1954 by Commission on Construction Problems and the All-Union Scientific and Technical Society of the Silicate Industry on ways of increasing the use of binding materials from local sources as slag, ashes, gypsum, and lime.

(4) "Works of the Institute of Mineral Fuels, Published in 1953" -- a report, including chapter titles, on two publications of the Academy of Sciences of the USSR: "An Investigation of Contemporary Principles for Coal Coking" (Issledovaniye sovremennykh printsipov koksovaniya ugley), Works of the Institute of Mineral Fuels, Vol. 1, Issue 1, 1953, 64 pp. "The Chemistry and Origin of Solid Mineral Fuels" (Khimiya 1 genezis tverdykh goryuchikh iskopayemykh), Works of the First All-Union conference, 1950, Institute of Mineral Fuels, All-Union Chemical Society imeni D. I. Mendeleyev, 420 pp.

Periodical

: Izv. AN SSSR. Otd. tekh. nauk 4, 154-160, Apr 1954

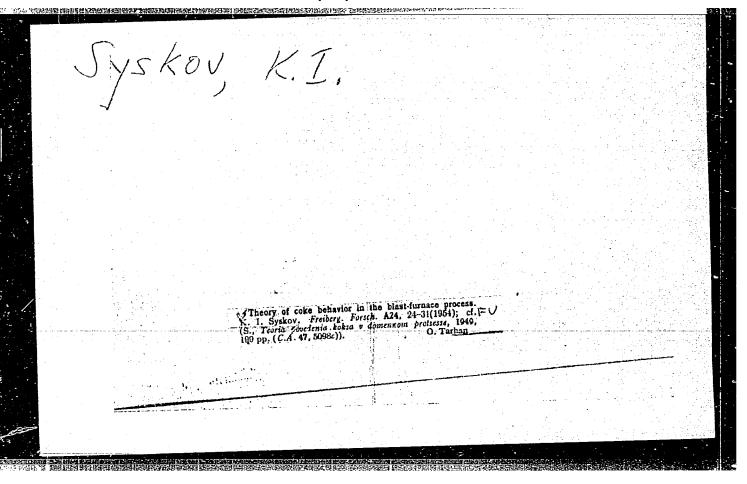
Institution:

Submitted

SYSKOV, K.

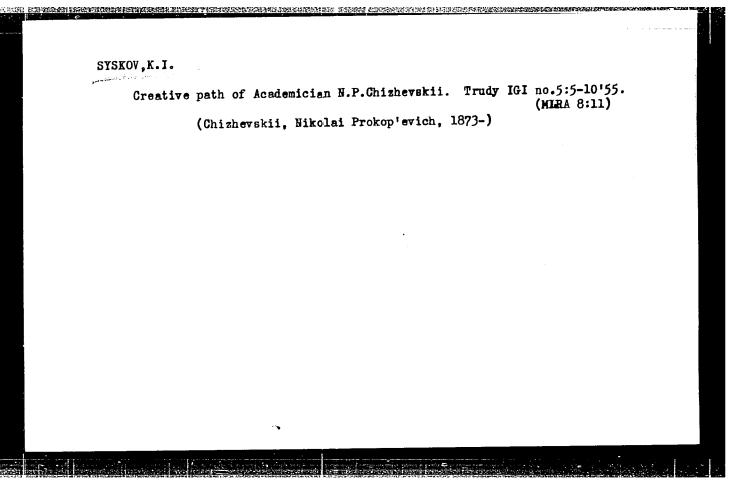
"Scientific Pases for Improving the Quality of Coke." Tr. from the Pelish. p. 146, Praha, Vol. 34, no. 6, June 1954.

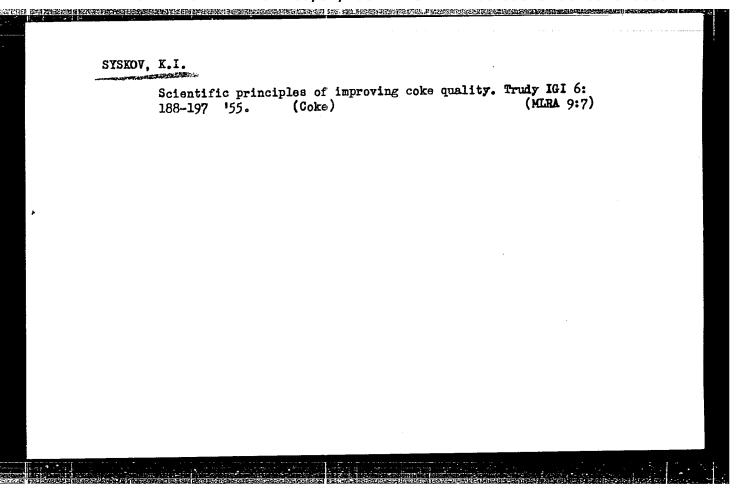
SO: East European Accessions List, Vol. 3, No. 9, September 1954, Lib. of Congress



USSR/ Scientists - Metallurgy Card Pub. 124 - 14/40 Authors Plaksin, I. N., Memb. Corresp., Acad. of Sc., USSR; Petrov. D. A.; Sudoplatov, A. P.; and Syskov, K. I., Dr. of Techn. Sc. Mining and metallurgy in the German Democratic Republic Title Periodical : Vest. AN SSSR 1, 69-71, Jan 1955 Abstract Briefs are presented of the special scientific meeting called by the Freiberg Mining Academy for Sept. 29 - Oct. 2, 1954. The meeting was devoted to the 50-th anniversary of the death of the famous German chemist and metallurgist. Klemens Winkler (1838-1904). A progress report of the Bergakademie (Mining Academy) for 1954 was presented. Names of personalities attending the meeting are listed. Institution :

Submitted





no.6:74-78 157.	from Irkutak basin coal.	(MLRA 10:9)	
1. Institut goryuck	ikh iskopayenykh Akademii (irkutak regionCoke)	nauk SSSE.	

68-7-7/16

A Comparative Evaluation of Methods of Testing Metallurgical Coke.

92-93% of 3 to 0 mm. Leaning components were additionally ground to 80-100% to 2 to 0 mm. The influence of stamping charges, oven width and heating practice on the coke quality were also tested. The results indicating the influence of the composition of coal blends, degree of crushing, method of charging and coking conditions on the coke quality are given in Tables 1, 2, 3 and 4 respectively. It was found that each method of testing coke gives different results for the individual quality indices which makes the comparison of the coke quality difficult. Changes in the composition of coal blend, methods of preparation and coking conditions cause a regular change in a number of coke quality indices in opposite directions. Indices of the amount of coke left in the standard drum test, mean coke sizes X mean and X' mean according to the usual and modified UXMN method, as well as indices of the yield of sizes above 40 mm in the Micum drum according to the UHNN-4 epmet method and in the standard drum usually reflected the initial size distribution of coke which did not characterise the coke quality completely. The evaluation of coke on the basis of the coefficient of permeability of the UFW method gives a real determination of the changes in the coke

Card 2/3.

68-7-7/16

A Comparative Evaluation of Methods of Testing Metallurgical Coke.

quality with changes in the composition of the coal blend and coking conditions (proposed grouping of the experimental cokes according to indices obtained by WTM test is given in Table 5). The use of the MTM method for the evaluation of the quality of coke produced from blends containing coals more readily available and under different coking conditions indicates that the coke quality can be improved with simultaneous broadening of the range of coals utilised for the production of blast furnace coke. There are 5 tables.

ASSOCIATION: IGI AN SSSR.

AVAILABLE: Library of Congress Card

3/3

是一个人,我们就是一个人,我们就是一个人,我们就是一个人,你不是一个人,你不是一个人,你不是一个人,你不是一个人,你是一个人,你是一个人,我们们就是我们的一个人

SYSKUY, K. L.

24-7-14/28

AUTHORS: Annenkova, V. Z., Dmitriyev, G.N., Syskov, K.I. and

Strukov, A.N. (Moscow, Irkutsk).

TITLE: Metallurgical coke produced from the coal of the Irkutsk-

Cheremkhov Basin. (Metallurgicheskiy koks iz ugley

Irkutsko-Cheremkhovskogo Basseyna).

PERIODICAL: "Izvestiya Akademii Nauk, Otdeleniye Tekhnitcheskikh Nauk" (Bulletin of the Ac.Sc., Technical Sciences Section), 1957, No.7, pp.113-115 (U.S.S.R.)

ABSTRACT: Enormous deposits of coal are available in Western Siberia.

For producing coke from this coal it is necessary to add lean coal, since without such addition the produced coke is full of cracks. As a result of this the various research institutes controlled by the Ferrous-Metallurgy Ministry have proposed the use of coking charges containing up to 40% of coal from the Kuzbas. In this paper attempts are described of obtaining coke directly from the Irkutsk-Cheremkhov coal using as an admixture semicoke produced from the same coal. Laboratory tests by IGI during recent years established the possibility of obtaining metallurgical coke from coal of this origin; in coking charges of this coal with an addition of 15% semicoke a strong coke was obtained which had high quality indices during tests in a drum

Metallurgical coke produced from the coal of the Irkutsk-Cheremkhov Basin. (Cont.) proposed by Nikolayev, I.N. (1). For confirming the laboratory results coking was effected in the semi-coking plant in Cheremkhov where an experimental coking furnace with a charge capacity of 500 kg is installed. operation with the Irkutsk Geological Directorate (Irkutskoye Geologicheskoye Upravleniye) and the Vostsibugol' Combine, coal was chosen which was extracted from the most promising deposits of the Irkutsk-Cheremkhov Basin. Table 1 gives the analyses of the various coals which were used in the experiments. Table 2 gives the composition of individual charges and the yield of various grades of coke. Table 3 gives the sieve analysis of cokes from eight series of experiments, whilst Table 4 gives quality data of coke obtained in the various series of experiments. The results of the experiments are favourable and the authors recommend further experiments on pilot plant scale and larger scale for the purpose of solving finally the problem of producing coke from this coal alone. There are four tables and 5 references, all of which are

Slavic. SUBMITTED: September 22, 1956.

AVAILABLE:

2/2

68-9-7/15

Coking of Blends Containing a Considerable Proportion of Gas Coals from the Kuznetsk Basin.

temperature on the coke quality increases with increasing volatile content of the blends. It was also established that a good metallurgical coke can be obtained from blends containing a large proportion of gas coals from the Kuznetsk Basin, by using an appropriate crushing technique and coking practice. Coke quality indices, obtained from the Micum test, can be well correlated with the standard drum test. It was found that with preferential crushing a more uniform blend, in respect to the distribution of petrographic components and mineral substances in various size fractions, can be obtained. This, in turn, improves the coke quality. The following participated in the work:

A.B.Gorbunov, M.P.Zabrodskiy, A.I.Rychenko and E.A.Detkova (from Novo Tagil'sk Coke Oven Works). There are 4 tables, 1 figure and 7 references, including 6 Slavic.

ASSOCIATION: Moscow Institute of Chemical Technology imeni D.I.Mendeleyev (Moskovskiy Khimiko-Tekhnologicheskiy Institut im. D.I.Mendeleyeva).

AVAILABLE: Library of Congress.

Card 2/2

是是一种的人,但是一种的人,但是一种的人,但是一种的人,也是一种的人,但是一种的人,但是一种的人,但是一种的人,但是一种的人,但是一种的人,但是一种的人,也是一种

SYSKOV, KI

AUTHOR: None Given.

24-12-24/24

TITLE:

Jubilee Sessions of the Scientific Institutes of the Technical Sciences Division. (Yubileynyye nauchnye zasedaniya Institutov Otdeleniya Tekhnicheskikh Nauk)

PERIODICAL: Izvestiya Akademii Nauk SSSR, Otdeleniye Tekhnicheskikh Nauk, 1957, No.12, p.100. (USSR)

ABSTRACT: In October-November, 1957 various scientific sessions were held commemorating the 40th anniversary of the

Soviet Revolution.

Institute of Mining. Academician L. D. Shevyakov read a paper on the mining science in the U.S.S.R. during the

last forty years;
A. P. Sudoplatov read a paper on "Development of the Technology of Underground Coal Mining in the U.S.S.R.";
N. V. Mel'nikov read the paper "Development of Open Cast Mining in the Soviet Union";

M. I. Aroshkov read the paper "Scientific and Technical Progress in the Soviet Union during the Last Forty Years in the Field of Working Ore Deposits";

I. N. Plaksin read the paper "Beneficiation of Useful Minerals in the Soviet Union".

Card 1/5

24-12-24/24

Jubilee Sessions of the Scientific Institutes of the Technical Sciences Division.

Institute of Mined Fuels. N. G. Titov read the paper "Forty Years of Soviet Science Relating to Solid Fuel"; K. I. Syskov read the paper "Soviet investigations of coking coal";

N. V. Lavrov read the paper "Soviet Research on Combustible Gases";

T. A. Kukharenko read the paper on the "Successes of Soviet Scientists in Studying the Chemical Structure and the Origin of Solid Mined Fuels";

the Origin of Solid Mined Fuels";
N. M. Karavayev read the paper "Successes of Soviet Science in Obtaining Chemical Products and Liquid Fuel from Solid Fuel".

Institute of Mechanical Engineering. After the opening address of A. A. Blagonravov, Academician V.I.Dikushin dealt with "Automation of Technological Processes in Engineering";

F. S. Dem'yanyuk dealt with "Fundamental Problems of Automation of Technological Processes";

A. Ye. Kobrinskiy dealt with "Work of the Institute of Mechanical Engineering, Ac.Sc. U.S.S.R. in the Field of Programmed Control of Metal Cutting Machine Tools";

N. I. Levitskiy dealt with "The Theory of Synthesis of Card 2/5 Mechanisms".

24-12-24/24

Jubilee Sessions of the Scientific Institutes of the Technical Sciences Division.

Institute of Metallurgy imeni A. A. Baykov. I. P. Bardin dealt with the "Technical Progress of Ferrous Metallurgy"; D. M. Chizhikov dealt with "Forty years of Soviet Metallurgy". Institute of Mechanics. P. Ya. Kochin dealt with the "Development of the Theory of Filtration in the Soviet Union"; V. Z. Vlasov dealt with "Modern Investigations in the Field of the Theory of Shells and Their Importance in Engineering and Civil Engineering"; A. A. Movchan dealt with "Auto-oscillation of plates in a flow"; Kh. A. Rakhmatulin dealt with "Investigation of Sectionally Stationary Wave Processes in Continuous Media"; V. V. Sokolovskiy dealt with "The Present State of the Statics of Loose Media and its Application to Technical

Problems".

Oil Institute. N. I. Titkov dealt with the "Scientific Results of the Activity of the Oil Institute"

Card 3/5

24-12-24/24 the Technical

Jubilee Sessions of the Scientific Institutes of the Technical Sciences Division.

是这个人,我们就是这个人,我们就是我们的人,我们就是我们的人,我们就是这个人,我们就是我们的人,我们就是这个人,我们就是我们的人,我们就是我们的人,我们就是这些的人

Academician S. I. Mironov dealt with "Development of Oil Geology During the Last Forty Years"; M. F. Mirchink dealt with the "Increase of the Oil Resources of the Soviet Union During the Last Forty Years"; Academician A. V. Topchiyev dealt with "Certain Problems of the Oil-Chemical Synthesis"; A. P. Krylov dealt with the "Fundamental Principles of a Rational Working of Oil Deposits". Institute of Radio Engineering and Electronics.
The Vice Minister for Telecommunications, Z. V. Topuria dealt with the "Development of Communications During the Forty Years of Soviet Rule", whilst Yu. I. Kaznacheyev dealt with "Wide-band long distance communications on wave guides of circular cross section". Power Institute imeni G. M. Krzhizhanovskiy.
V. I. Veyts dealt with "Power Generation as a Factor of Developing the National Economy"; Academician M. A. Mikheyev dealt with the "Development of the Science of Heat Transfer During the Last Forty Years";

Card 4/5

CHIZHEVSKIY, Nikolay Prokop'yevich, akademik; KUSAKIN, N.D., kand.tekhn.
nauk, scstavitel; toma; BARDIN, I.P., akademik; SAMARIN, A.M.;
SYSKOV, K.I., doktor tekhn.nauk; TSYLEV, doktor tekhn.nauk;
CHERNYSHEV, D.M., red. izd-va; PRUSAKOVA, T.A., tekhn.red.

[Selected works] Izbrannye trudy. Moskva, Izd-vo Akad. nauk SSSR. Vol.2. 1958. 425 p. (MIRA 12:1)

1. Chlen-korrespondent AN SSSR (for Samarin).
(Coke) (Metallurgy)

CHIZHEVSKIY, Nikolay Prokop'yevich, akad.; KUSAKIN, N.D., kand. tekhn, nauk,;

BARDIN, I.P., akad., otv..red.; SAMARIN, A.M., red. SYSKOY, K.I.,doktor
tekhn. nauk,red.; TSYLEV, L.M., doktor tekhn. nauk, red.; SHAPOVALOV,
I.K.; red.izd-va,: PRUSAKOVA, T.A., tekhn. red.

[Selected works] Izbrannye trudy. Moskva, Izd-vo Akad. nauk SSSR.
Vol. 1. 1958. 439 p.

(MIRA 11:11)

1. Chlen-korrespondent AN SSSR(for Samarin)

(Metallurgy)

(Coke)

(Fuel)

AUTHORS: Syskov, K. I. and Angelova, G. K. 68-58-4-7/21

TITLE: The Behaviour of Sulphur in Coals During the Process of Their Thermal Treatment (Povedeniye sery kamennykh ugley v protsesse ikh termicheskoy obrabotki)

PERIODICAL: Koks i Khimiya, 1958, Nr 4, pp 23-27 (USSR)

ABSTRACT: The dynamics of evolution of the total and organic sulphur of various coals of different rank during coking were investigated. The evolution of sulphur was studied during heating 2 g samples of coals in a small glass retort. The properties of coals tested are given in Table 1 and the curves representing the course of sulphur evolution - Fig.1. In order to determine the influence of the individual forms of sulphur on the rate of its evolution during cartonisation, pyritic and sulphate sulphur was removed by treating coals with hydrogen (concentrated hydrochloric acid in the presence of zinc and insignificant quantities of chromium ions). The properties of coals before and after this treatment are shown in Table 2. This treatment had no influence on the dynamics of the evolution of sulphur (Fig.2). The relation-

68-58-4-7/21

The Behaviour of Sulphur in Coals During the Process of Their Thermal Treatment

Card 2/2

the proportion of sulphur removed during carbonisation (S volatile/sulphur total, %) is shown in Fig.3. It is concluded that processes of evolution of volatile sulphur compounds are related to processes taking place in the organic mass of coals during their carbonisation (changes in the structure of the coal substance). These processes and not the proportion of pyritic and organic sulphur, appear to be the main factor determining the degree of desulphurisation of coals during coking. It was established that the evolution of sulphur with coking products is independent from the ratio of the individual forms of sulphur in coal but dependent on its rank. There are 2 tables, 2 figures and 15 references, 4 of which are Soviet, 4 English and 7 German.

ASSOCIATION: Moskovskiy khimiko-tekhnologicheskiy institut im.

D. I. Mendeleyeva (Moscow Institute of Chemistry and Technology imeni D. I. Mendeleyev)

1. Coal--Heating 2. Coal--Properties 3. Sulfur--Temperature factors

CIA-RDP86-00513R001654320003-7 "APPROVED FOR RELEASE: 08/31/2001

Syskov, K. I (Moscow) SOV/24-58-5-24/31 AUTHOR:

On the Process of Coking and Preparation of Coking of TITLE: Coal by Selective Crushing (O protsesse koksovaniya i

podgotovke k nemu ugley izbiratel nym drobleniyem)

PERIODICAL: Izvestiya Akademii Nauk SSSR, Otdeleniye Tekhnicheskikh Nauk, 1958, Nr 5, pp 128-129 (USSR)

ABSTRACT: In Lorraine (France) use of this method enables utilising up to 50 to 70% of gas and long flame coal as raw material In this paper some Russian work on this subject for coke. carried out within the framework of the general theory of formation of lump coke is described. Existing methods of selective crushing are aimed essentially at eliminating from the coking particles exceeding 3 or 2 mm so as to increase the total surface of the coal particles to be This results in obtaining a coke of a lower coked. strength and a higher porosity. In order to obtain high quality coke from lean coal containing a considerable proportion of gas coal which has poor coking qualities, it is necessary to combine selective crushing with measures aimed at increasing the caking of the charge Card 1/3 during the coking. This can be done by preliminary

SOV/24-58-5-24/31

On the Process of Coking and Preparation of Coking of Coal by Selective Crushing

densification of the coal as suggested by N. S. Gryaznov, I. L. Lazovskiy and M. G. Felibrin or by increasing the speed of coking or by a combination of the two. Solely the application of a combination of the here mentioned three factors permits extending considerably the availability of raw materials for coking and using gas coal in larger quantities. Coking of coal particles and strengthening of the formed coke is accompanied by the formation of internal stresses and thus of cracks in the solid coke mass. Selective crushing of the coal particles favours a suppression of the process of crack formation during coking. This is due to the fact that in such charges the particle size does not exceed 3 mm and the coal mass is more uniform from the petrographical point of view as well as from the point of view of its chemical composition. Some of the data are given of the process of selective crushing of coal from a mine in Kuzbass and it can be seen that the greatest divergence in composition is obtained for the larger fractions. The lower quality of the coke produced in Eastern coking

Card 2/3 plants is attributed to a great extent to the non-uniform

SOV/24-58-5-24/31

On the Process of Coking and Preparation of Coking of Coal by Selective Crushing

的现在分词 100 minutes (10 minutes) 10 minutes) 10 minutes (10 minutes) 10 minutes

petrographic composition of Kuznets coal as compared to Donets coal; the quality was improved by increasing the degree of crushing of the coal particles (94% passed through a 3 mm sieve). However, it is not considered advisable to increase the degree of crushing since this would reduce the caking ability down to the limit permissible values. Further improvement in the coke quality should be attained by increasing the coking speed, by preliminary densification (damping) and also by adding fat coal combined with selective crushing. There are 1 table and 2 Soviet references.

SUBMITTED: July 16, 1957

Card 3/3

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001654320003-7"

68-58-7-9/27

AUTHORS: Verbitskaya, O. V., Candidate of Technical Science and

Syskev, K. I., Doctor of Technical Science

TITLE: On Thermal Stability of Coke (O termicheskoy ustoychivosti

koksa)

PERIODICAL: Koks i Khimiya, 1958, Nr 7, pp 30-33 (USSR)

ABSTRACT: The ability of lumps of coke to withstand destruction during heating to high temperatures is called the thermal stability of coke. The results of investigation of thermal stability of 10 samples of coke produced on the Kharkov coke oven works during experimental coking is described. The composition of experimental blends and their coking conditions are given in Table 1. The method of investigation was as follows: from 60-40 mm fraction of each coke type two samples were made from the same number of pieces of the same degree of readiness and of approximately the same degree of surface fissuring. One of each pair of samples was heated to 900°C at a rate of 10°/min and from 900 to 1400°C at a rate of 5°/min. At 1400°C the sample was soaked for 30 min. During heating, air was excluded by an 80-100 mm high layer of

Card 1/5 a carbonaceous material placed on top of the furnace

On Thermal Stability of Coke

68-58-7-9/27

cover. Changes in the following factors before and after heating of each coke sample were measured: size distribution, surface fissuring, shrinkage and strength of coke (Tables 2 and 3). It was found that: the number of lumps in a sample after heating did not change, the degree of surface fissuring of the majority of cokes did not increase and linear shrinkage after reheating to 1400°C was not observed. The strength of coke was determined by dropping it onto a plate from a height of 1.8 m with subsequent screening into 50, 40, 25, 10 and 5 mm fractions after 2, 4, 8 and 12 droppings. It was found that a decrease in the mean diameter of coke due to thermal action was insignificant in comparison with changes caused by mechanical action. Changes in the mean coke size on heating were somewhat higher for cokes made from blends containing non-caking components. The strength of the coke material itself (free from fissure) after reheating generally increases. There were two exceptions in which it somewhat decreased. The hardness of the coke material increased after heating in all cases. As one of Card 2/5 the possible factors causing some differences in the

On Thermal Stability of Coke

68-58-7-9/27

behaviour of various cokes on reheating could be the differences of the expansion coefficients of blend components, the linear expansion of specimens of laboratory coke produced from various types of coals at 1000°C was measured. On the basis of the value of linear expansion at 900°C and of the mean coefficient of linear expansion in the temperature range 0 - 900°C the cokes studied were divided into 4 groups (Table 4). The mean coefficient of linear expansion in the extreme cases differed by a factor 5-7. Thus, the value of stresses appearing in coke on secondary reheating depends on the differences in the expansion coefficients of the individual components of the blend. By finer grinding of high ash and non-caking components of a blend, the value of stresses generated on reheating can be reduced. The nature of fissuring depends strongly on the rate of reheating. The influence of the rate of reheating was demonstrated on laboratory samples of semi-coke obtained from various coal types at 500°C. Samples were divided into pairs and one of each pair was heated at a rate of Card 3/53°/min while the other one was shock heated by placing it

On Thermal Stability of Coke

68-58-7-9/27

into a furnace heated to 1350°C. It was found that the appearance of fissuring and its extent in the same coke specimen depended on the rate of heating (Fig.). Shock heating of industrial cokes caused in all cases the appearance of new fissures. Conclusions: Thermal stability of coke is determined to a considerable extent by the relationship of two factors: the strengthening process of the coke substance itself, which has a positive effect on the preservation of its size, and weakening of lump coke due to the formation of micro and macro cracks which lead to a change in its size distribution. In respect of thermal stability cokes can be divided into two groups of a higher and lower thermal stability, associated with monolithic and conglomerate structure of coke respectively. Heating of coke samples to 1400°C indicated that the thermal destruction of coke is insignificant in comparison with its destruction by mechanical forces and therefore differentiating of monolithic cokes according to their Card 4/5 thermal stability is of no practical importance for the

On Thermal Stability of Coke

68-58-7-9/27

blast furnace process. There are 4 tables and 1 figure.

ASSOCIATION: IGI AN SSSR

1. Coke--Thermal properties

Card 5/5

AUTHORS: Syskov, K. I., Verbitskaya, O. V. SOV/32-24-10-20/70

TITLE: A Pycnometric Method for the Determination of the Apparent

Specific Gravity of Coke (Piknometricheskiy metod opredeleniya kazhushchegosya udel'nogo vesa koksa)

PERIODICAL: Zavodskaya Laboratoriya, 1958, Vol 24, Nr 10,

pp 1224 - 1226 (USSE)

ABSTRACT: The apparent specific gravity usually is determined

according to the volume of the weighed sample or according to the weight of the displaced fluid. The present method is based upon the direct reading of the values of the apparent specific gravity on the scale of a respectively graded pycnometer. A figure showing the pycnometer with the grading, and a description of the mode of operation are given. In the case of samples of equal weight and constant volume of the fluid contained in the pycnometer the level in the neck of the pycnometer will only depend on the amount of

the apparent specific gravity of the coke. If the quantity

of fluid is changed the volume computation can be applied for any interval of the apparent specific

Card 1/3

A Pycnometric Method for the Determination of the Apparent Specific Gravity of Coke

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507/32-24-10-20/70

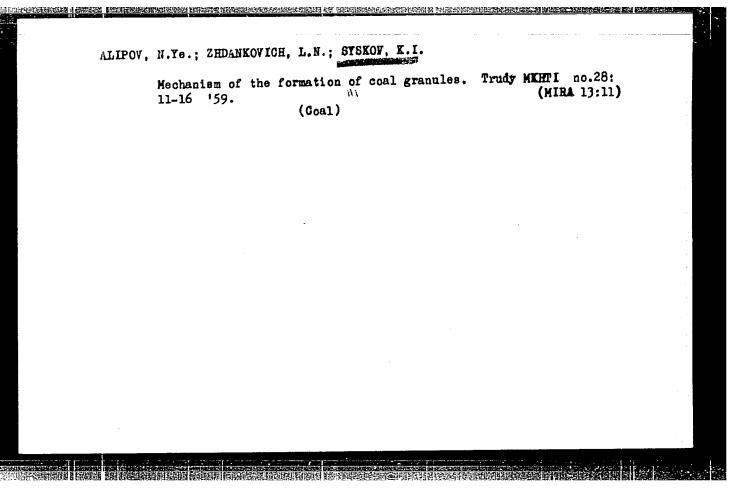
gravity. In the description of the method of measuring it is mentioned that for coke of the dimension 6 - 13 mm which has been sifted and subjected to a determination of the moistness and to drying, 50 g can be taken with an accuracy of + 0,01 g. To judge the described method comparative determinations according to the paraffin method (Ref 1) and to the method by Ye.M. Tayts (Ref 2) were carried out; the results are given in tables. The investigations on the reproducibility showed that the standard deviation amounts to 0,0031. There are 1 figure, 2 tables, which are Soviet. and 2 references;

ASSOCIATION: Institut goryuchikh iskopayemykh Akademii nauk SSSR (Institute of Mineral Fuels; AS USSR)

Card 2/3

ANGELOVA, C.K.; SYSKOV, K.I.

Effect of the organic sulfur content on the properties of coals.
Trudy MEHTI no.28:3-10 '59. (MIRA 13:11)
(Coal--Testing) (Sulfur--Analysis)



DVORIN, S.S.; ZHITOV, B.N.; LERNER, R.Z.; MAKAROV, G.N.; SAZONOV, S.A.;

SYSKOV, K.I.

Coking of preheated coals as a method of intensifying the production of coke and improving its quality. Trudy MKHTI no.28:28-37 '59.

(MIRA 13:11)

(Coal--Carbonization)

STSKOV, K.I.; CHZHU TSZY-TSYAN' [Chu Tz'ù-ch'ien]

Selection of temperature conditions in the laboratory coke test.

Trudy MKHTI no.28:46-50 '59. (MIRA 13:11)

(Coke) (Coal--Testing)

Study of the possibility of des			
Study of the possibility of desulfurizing coals coking by the action of hydrogen. Trudy MKHTI		in the process of no.28:51-57 '59. (MIRA 13:11)	
(CoalCarbonization)	(Sulfur)	(HIMA 1):11)	
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SYSKOV, K.I.; POMIN, A.P.

Determination of the ease of breakage and abradability of coke.

Trudy MKHTI no.28:84-88 '59. (MIRA 13:11)

(Coke)

5(2), 11(7) AUTHORS:

Angelova, G. K., Syskov. K. I.

sev/156-59-1-43/54

TITLE:

Investigation of the Possibility of Converting the Organic Sulphur of Coals Into Calcium Sulphide on Their Coking With the Addition of Calcium Hydride (Izucheniye

Coking With the Addition of Calcium hydride (International Vozmozhnosti perevoda organicheskoy sery ugley v sul'fid kal'tsiya

pri koksovanii ikh s dobavkoy gidrida kal'tsiya)

PERICDICAL:

Nauchnyye doklady vysshey shkoly. Khimiya i khimicheskaya

tekhnologiya, 1959, Nr 1, pp 166 - 168 (USSR)

ABSTRACT:

Papers by other authors dealt with the desulphurization of coal by the addition of CaO, CaCO, or dolomite on coking. All of these procedures result in a high ash content of the coke. Calcium hydride, however, is quantitatively converted

into sulphide without forming excess calcium oxide. At 400-600°, CaH, is decomposed into atomic hydrogen and calcium. In the experiments the CaH, additions were between 2.5 and 30% with respect to coal. Additions of more than 3.5%, however, proved to be ineffective. After coking the overall sulphur content and the sulphide sulphur content were

Card 1/2

determined. A table shows that the coals behaved differently,

Investigation of the Possibility of Converting 50V/156-59-1-43/54 the Organic Sulphur of Coals Into Calcium Sulphide or Their Coking With the Addition of Calcium Hydride

according to their individual deposits. One coal type yielded a high sulphide sulphur content after coking, and a corresponding decrease of organic sulphur (Diagram). The other type, however, resisted conversion. The organic sulphur content fell but little. Probably CaH₂ reacted only with sulphur which is set free in the temperature interval 400-600 by the pyrolysis of coal from little stable compounds. Compounds that are not decomposed at these temperatures do not set free their sulphur. There are 1 figure, 1 table, and 6 references, 3 of which are Soviet.

ASSOCIATION:

Kafedra tekhnologii pirogennykh protsessov Moskovskogo khimiko-tekhnologicheskogo instituta im. D. I. Mendeleyeva (Chair of the Technology of Pyrogenic Processes of the Moscow Institute of Chemical Technology imeni D. I. Hendeleyev)

SUDMITTED:

June 28, 1958

Card 2/2

VERBITSKAYA, O.V.; SYSKOV, K.I.

Comprehensive investigation of shrinkage and liberation of volatile matter in the thermal treatment of carboniferous materials. Trudy IGI 8:229-238 '59. (MIRA 13:1) (Coal--Carbonisation)

ZHDANKOVICH, L.N.; KOMAROVA, T.N.; SYSKOV, K.I.; BALASHENKO, V.A.

Possibility of producing granulated fuel for the power industry from Irkutsk coal. Izv.Sib.otd.AN SSSR no.11: 32-37 '59. (MIRA 13:4)

1. Vostochno-Sibirskiy filial Sibirskogo otdeleniya AN SSSR. (Coal)

SYSKOV, K.I.; TSZI LYAN [Chi Liang]

Investigating the segregation of ore and coal mixtures.
Koke i khim. no.2:5-9 '60. (MIRA 13:5)

1. Moskovskiy khimiko-tekhnologicheskiy institut in.D.I.Mendeleyeva. (Coal preparation)

ANGELOVA, G.; SYSKOV, K.

Regarding the possible forms of organic sulfur in coal. Izv Inst khim BAN 7:67-73 *60. (EEAI 10:9)

1. Moskovski khimikotekhnologicheski institut "D. I. Mendeleev" i khimicheski institut pri BAN.

(Sulfur) (Coal) (Organic compounds)

ANGELOVA, G.; SYSKOV, K.

Influence of organic sulfur on the properties of black coal. Isy
Inst khim BAN 7:75-84, '6Q. (EEAI 1019)

(Sulfur) (Goal) (Organic compounds)

YENIK, G.I.; DMITRIYEV, G.N.; BRESLER, A.Ye. [deceased]; SYSKOV, K.I.

Coke from Irkutak and Krasnoyarsk coals. Izv. Sib. otd.
AN SSSR no. 10:28-34 '60. (MIRA 13:12)

1. Institut goryuchikh iskopayemykh AN SSSR.
(Coke)

VERBITSKAYA, O.V.; PUT'KO, Yu.S.; SYSKOV, K.I.

Crushing of coal for coking. Koks i khim. no.1:18-21 '61.

(MIRA 14:1)

1. Institut goryuchikh iskopayemykh AN SSSR (for Verbitskaya, Put'ko). 2. Moskovskiy khimiko-tekhnologicheskiy institut im. Mendeleyeva (for Syskov).

(Coal preparation)

TANDURA, I., kand.tekhn.nauk; SYSKOV, L., inzh.

Investigating methods for the preheating of engines. Avt.transp. 40 no.2:18-19 F *62. (MIRA 15:2)

1. Sibirskiy avtomobil'no-dorozhnyy institut.

(Motor vehicles--Cold weather operation)

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3	W., h: That als of increasing cold resistance and reducing saturation time in the pelaction of townbest." All-Union Order of Lenin Academy of Agricultural Sciences imeni V. I. Lenin. All-Union Inst of Flant Growing. Leningrad, 1956. (Discertations for the begrue of Cambidate in Agricultural Sciences).
S0:	Knishmaya lebopis' No. 22, 1957

USSR/Cultivated Mants - Potatoes, Vegetables, Melons.

11.

Abs Jour

: Nor Mrus - Biol., No 10, 1950, 44115

这些现在这种情况 他的话,我们就是我们的一个人,我们就是我们的是我们的是我们的是我们的人,我们就是我们的人,我们就是我们的人,我们也是不是一个人,我们就是我们的 第一章

Author

: Sysko:a, H.V.

Inst Title : The Millet of Temperature During the Formation and Ripon-

ing of Memato Seeds on Increased Resistance to Cold Suc-

cooding Concrations.

Oris Pub

: Tr. po prikl. botan., Konov. i sclektsii, 1957, 31, No 2,

102-110

Abstract

: Completing the ripening of the fruit of 15 varieties at the temperature of 6-70 contributed to the germination of the seeds from these fruits at temperatures of 7-90. A similar effect was observed when using seeds from the fruit of late periods of ripening at the average ten-day temperature of 8-100. In the succeeding generation the greatest effect of lower temperature was shown on the unformed seeds

Card 1/2

- 61 -

Compara cold re	tive evaluation of tomato sistance. Trudy po prikl	varieties on the basis of their bot., gen. i sel. 32 no.3:181-192 (MIRA 14:5)	
•576	(Tomatoes—Varieties)	(Plants—Frost resistance)	
		·	

MATISEN, V.A. kand.pedagogicheskikh nauk; SYSKOVA, M.V.

Conducting an excursion on the topic "Field weeds." Biol. v shkole.
no.3:17-20 My-Je 162. (MIRA 15:7)

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l. Leningradskiy pedagogicheskiy institut imeni A.I. Gertsena. (Weeds) (School excursions)

PRULLOTE

P/015/61/000/002/001/002 A107/A126

AUTHOR:

Mieczysław Sysło

TITLE:

Determination of porosity by the gas flow measuring method at

low pressure

PERIODICAL:

Szkło i Ceramika, no. 2, 1961, 39 - 41

TEXT: The author describes the histroy of the theories of H. Darcy, Dupuit, Poiseuille, Hagen, Dalton, Boltzmann, Claisius, Maxwell and Smolukhovskiy. Because of difficulties in the kinetic-molecular theory the research was based on the empiric way of floating mechanics. The actual state of science in this field could be found in papers of L. Prandtl, Carman, Arzanikov, Maltsev and others. The author stresses the common feature appearing in nearly all formulae, the coefficient of proportion, obtained in experimental way, which is nearly static, and quoting a series of possibilities of choice of proper values related to each situation. This procedure is unsatisfactory but unavoidable. The new theory of similiarity grows in importance, is simple and clear. This way ehables the classification of theoretical models used in fluid mechanics. A model based on functional conjunction and related to gas flow under lower pressure is described. This model

Card 1/3

P/015/61/000/002/001/002 A107/A126

Determination of porosity by the gas flow ...

consists of straights put parallel to the capillar flow. The equations are no more series of possibility coefficients. Flow conditions are used to establish certain static data of materials for testing purposes, to be applicable as measurement values of each given trial unit. Verifications of those equations were worked out on fine-grained sand samples. Microscopic measurements showed a satisfactory conformity of these tests. For dry air a unit of 29.3 atomic mass is applicable. For establishment of the surface and porosity the following values are necessary: mass of gas particles, its pressure before and after tests, amount of gas flow through the test sample during I see expressed in milliliters, over temperature T and pressure p, cross-sectional surface of the test sample, and length of the cuvette. The test was carried out in the following way: during the work of pumps the gas flow was controlled by aid of microcrane according to

$$V < \Delta S \cdot K \cdot \frac{T}{p} \cdot P$$

where V= gas quantity expressed in ml under mentioned conditions; and \triangle S= cross-sectional surface of the sample; K= fixed value equal to

$$1/3 \sqrt{\frac{2R\pi}{3M}}$$

Card 2/3

P/015/61/000/002/001/002 A107/A126

Determination of porosity by the gas flow ...

where R =fixed gas value (in CGS system), and M =mass particle of the gas flow expressed by______

$$P = \frac{\frac{2}{p1}}{\frac{T}{1}} \left[\sqrt{\frac{T}{1}} \sqrt{\frac{\frac{2}{p1}}{\frac{p2}{p2}} - \frac{\frac{2}{p2}}{\frac{p2}{2}}} - (\frac{\frac{T1}{\sqrt{T1}}}{p1} + \frac{T2\sqrt{T2}}{p2}) \right]$$

where, p_1 = gas pressure before the test, p_2 = gas pressure after the test, T_1 = gas temperature after the test and T_2 = gas temperature before the test. More complicated are formulae for nonisothermic flow (T_1 = T_2) but they enable the introduction of static values of the material. If the difference of temperatures before and after tests is not surpassing 10^{-30} C, the flow is isothermic. These flows are subject of a special paper. The anisotropy is not existing in sand bodies porosity and is independent from the direction of measurements. There is 1 figure and 10 references: 3 Soviet-bloc and 7 non-Soviet-bloc. The reference to the English-language publication reads as follows: P. C. Carman - Flow of gases through porous media. London 1956.

Card 3/3

SYSLO, M.

P/015/61/000/002/002/002 A107/A1**2**6

AUTHOR:

Mieczysław Sysło

TITLE:

Theoretical investigations of foam glass macrostructures

PERIODICAL:

Szkło i Ceramika, 1961, No. 2, pp. 44 - 45

TEXT: Foam glass is an elastic structure, whose pore spaces are formed by gas bubbles. There are three types of porous structures formed by: 1) spherical gas bubbles and divided by glass mass; 2) kidney-shaped gas bubbles originating from perforation of neighbour glass walls; and 3) gas bubbles of various size united in various directions forming capillary "endless channels". The investigations are based on the quantity and quality functions of spherical pore space units of $1\ m^3$ volume expressed by

units of 1 m³ volume expressed by
$$n(\lambda) = \frac{\lambda^2 + 2r\lambda + 4r^2}{6\pi^2 (\lambda - 2r)\lambda^3} \left[\frac{2\lambda^2 - r\lambda - 6r^2}{2\lambda} + \frac{3\lambda^2 + 7r\lambda - 2r^2}{3\lambda^2} \sqrt{\lambda(\lambda - 2r)} + 2r\ln \frac{2[\lambda - r] - \sqrt{\lambda(\lambda - 2r)}}{\lambda} \right]$$
(1)

Card 1/3

P/015/61/000/002/002/002 A107/A126

Theoretical investigations of foam glass ...

where: n = number of spheres with a radius r on 1 m³ and λ = average distance between the sphere centers. The above initial structure represents the type 1 from which types 2 or 3 are developed. The density of foam glass d₀ and the density of glass d_m is d₀ < d_m and can be expressed by

$$d_0 = \frac{m(1 - \frac{4}{3} \cdot \widetilde{\pi}_r^3 n)}{V} = d_m \cdot (1 - \frac{4}{3} \cdot \widetilde{\pi}_r^3 n)$$

where r = mean radius of bubbles and n = quantity of bubbles on 1 cm³. For the given d the result r^3n is constant, whereas r can be different. At higher r values n should be lower so that r^3n remains constant and equal to $\frac{3(d_m-d_o)}{4\pi}$. At excessive growth of r, the system is no more foam glass. The $\frac{4\pi}{4\pi}$ quantity of gas bubbles on 1 cm³ depend on the values r and r and therefore are depending on the unification ability i.e. the transformation of structure 1 to structures 2 or 3. The limits of the porosity r of the structure type 1 are based at 0 < c < 0.25 in Eq. 1 and can be expressed by

$$\lim_{\lambda \to 2\mathbf{r}} \mathbf{n}(\lambda) = \frac{3}{16 \, \text{if } \mathbf{r}^3} \tag{2}$$

This equation determines the maximum theoretical glass foaminess of the structure

Card 2/3

Theoretical investigations of foam glass ...

P/015/61/000/002/002/002 A107/A126

1. If the quantity of gas bubbles on 1 cm³ $\frac{3}{16 \, \text{Jr} \, \text{7}}$ is multiplied by the volume of one bubble i.e. $\frac{4 \, \text{mr}^{3}}{3}$ the result $\frac{3}{16 \, \text{Jr}^{3}}$ shows the total volume

 $\frac{3}{16\pi r^3} \cdot \frac{3}{4\pi r^3} = 1/4 \text{ cm}^3$

This shows that in structure type 1 maximum one forth of the total glass volume is formed by gas bubbles, i.e. the maximum porosity is $\mathcal{E}=0.25$. If the quantity of bubbles exceeds the limits given in Eq. 2, the function $n(\lambda)$ is no more valid, because the porosity would reach $\mathcal{E}=0.52$ which increase causes the unification of bubbles, i.e. the formation of structures type 2 or 3. As the structure does not increase the porosity, but minimizes their mechanical capacity, structures type 3 should be obtained without the medium of reaching structure type 2. High mechanical capacity, but low porosity is reached by structure type 1 at a specific weight lower than 3/4 dm. For the quantity of bubbles

 $\frac{3}{16\,\pi\,\mathrm{r}^3} \quad \text{to} \quad \frac{1}{8\,\mathrm{r}^3} \quad \text{dn 1 m}^3 \quad \text{the porosity is 0.25 to}$ 0.52 and the specific weight from 3/4 d to (1 - $\frac{\pi}{6}$) d \approx 0.48 d $_\mathrm{m}$. Only structure 3 guarantees high porosity ($\varepsilon > = 0.52$) and low specific weight.

Card 3/3

SYSLO, Mieczyslaw

Form coefficient of spatial bodies. Geodezja AGH no.4:23-34 '63.

1. Department of Inorganic Chemistry, School of Mining and Metallurgy, Krakow.

STRUCTIN, K.G., kand. med. nauk

Treatment of keloid cleatrices with eltrs.oft X-rays. Vest.
derm. 1 ven. 38 no.8:61-64 Ag '5a. (MENA 18.8)

1. Institut vrachebnoy kesmet - (dir. A.F. Akhabadze)
Miniserstva zdravookhraneniy RSFSR, Moakva.

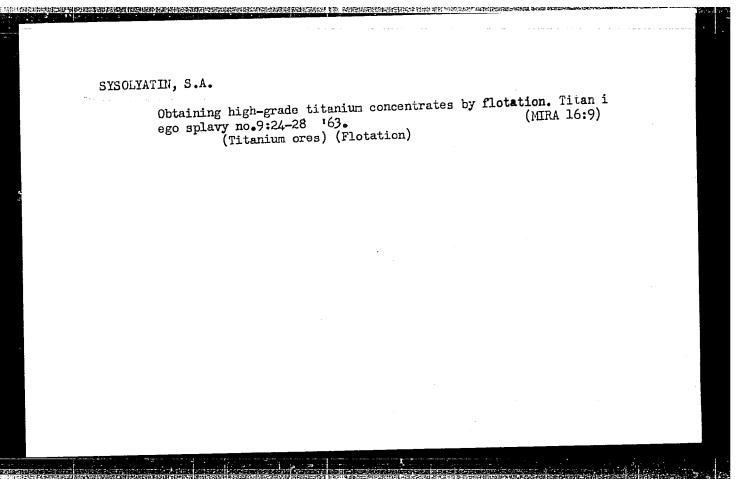
SYSOLIN, P.V., inzh.

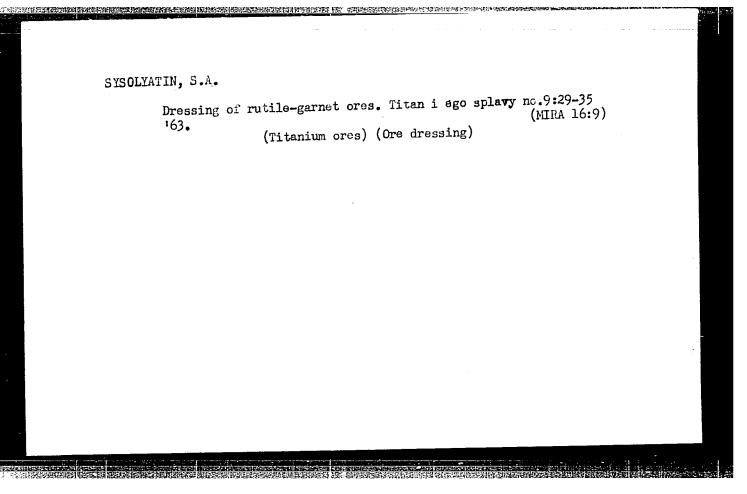
Investigating fertilizer spreaders operating on the principle of a free outflow of fertilizers. Mekh. i elek. sots. sel'khoz. 21 no.5:48 '63. (MIRA 17:1)

1. Khar'kovskiy institut mekhanizatsii i elektrifikatsii sel'skogo khozyaystva.

PERSHUKOV, A.A.; SAFONOV, S.V.; Prinimali uchastiye: SYSOLYATIN, S.A.;
CHAPLYGINA, Ye.M.

Dressing of titanium-zirconium sands. Titan i ego splavy no.8:
8-13 '62.
(MIRA 16:1)
(Titanium ores) (Zircon) (Ore dressing)





的人,我们就是一个人的人,我们也是一个人的人,我们们就是一个人,我们们的一个人,我们们的一个人,我们们们的一个人,我们们是一个人,我们们们们的一个人,我们们们们

S/137/62/000/004/181/201 A154/A101

AUTHORS:

Glizburg, I.L., Kitaygorodskiy, Yu.I., Krasnov, I.I.,

Radzeyevskaya, Ye.V., Sysolin, O.V.

TITLE:

Ultrasonic welders

PERIODICAL:

Referativnyy zhurnal, Metallurgiya, no. 4, 1962, 71, abstract 4E398 (Sb. "Primeneniye ul'trazvuka v tekhnol. mashinostr."

1960, 162 - 170) no. 2, M.,

A detailed examination was made of the design of the following TEXT: ultrasonic welders: the V3CF1-1 (UZSM-1) for spot-welding sheet metal; the V2CA-3 (UZSA-3) for welding sheet parts in structures with large planes or profiled surfaces; the V3(A -4 (UZSA-4) for spot-welding sheet parts in large items; the \300 (UZSM-2) for seam-welding sheet metal. The technical characteristics of each welder are given.

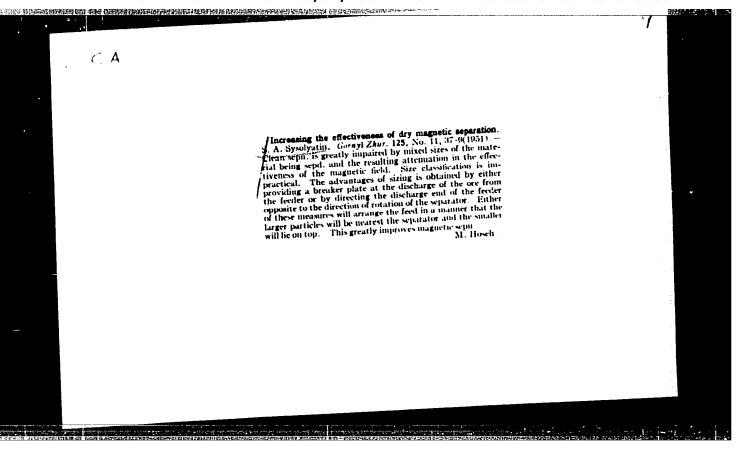
V. Tarisova

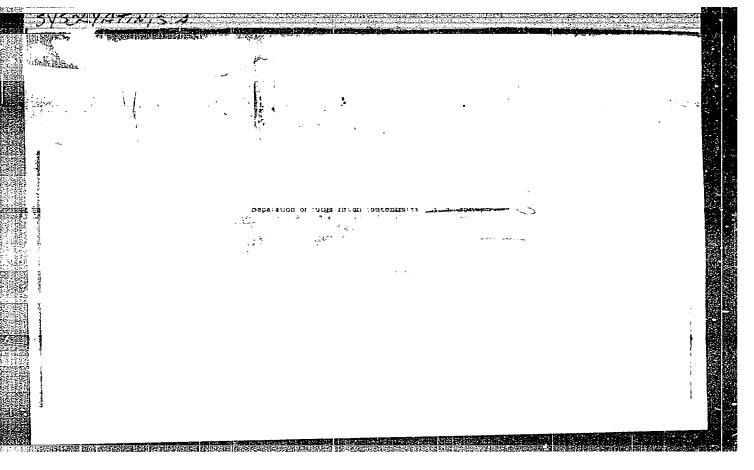
[Abstracter's note: Complete translation]

Card 1/1

SYSOLIN, Konstantin Georgiyevich, kandidat meditsinskikh nauk; PLOSHTEYN, Ye.A., redaktor; SACHEVA, A.I., tekhnicheskiy redaktor.

[How to preserve the beauty of skin, face and hair] Kak sokhranit' krasotu kozhi litsa i volos. Moskva, Gos.izd-vo med.lit-ry, 1956.
55 p. (Beauty, Personal) (MIRA 9:6)





SOV/137~58~11~21870

Translation from Referativnyy zhurnal, Metallurgiya, 1958, Nr 11, p 4 (USSR)

Sysolyatin, S. A. AUTHOR:

Results of Concentration of Titaniferous Ores (Rezultaty oboga-TITLE:

shcheniya titansoderzhashchikh rud)

公共公司的经验的特别<mark>或有证据,是一种企业的企业的企业的企业,</mark>是是一种企业的企业的企业,但是一种企业的企业的企业的企业的企业的企业的企业的企业的企业的企业。

PERIODICAL: Tr. N. "i. i proyektn. in-ta "Uralmekhanobr", 1957, Nr 1, pp 106-115

The following concentration flowsheets have been developed: 1) Magnetic separation with coarse grinding yielding a bulk titanium-magnetite ABSTRACT: concentrate; 2) magnetic separation with secondary separation after

comminution to 0.1 or 0.2 mm undersize, yielding an Fe-V concentrate and a Ti intermediate; 3) flotation of the Ti intermediate yielding a conditioned Ti concentrate after two secondary separations. Selectivity is assured by employing an acid medium and fluoride reactants. Rutile is recovered in a separate concentrate by grinding the ore to 0.1 mm, concentration on the table, and secondary magnetic separation of the gravitation concentrate (at 7000 oersteds). The concentrate contains

96% TiO2, 40% of the TiO2 being extracted, and the concentrate yield being 0.9%. The sands of placer deposits contain useful minerals in the 0.2 mm undersize. The sands may be concentrated by washing

Card 1/2

SOV/137-58-11-21870

Results of Concentration of Titaniferous Ores

and concentration on the table, the result being a bulk concentrate (ilmenite, rutile, zircon). A method of selective flotation yielding Ti and Zr concentrates is developed. The Ti concentrate may subsequently be magnetically separated into ilmenite and rutile. This procedure yields a rutile concentrate with 90 /0 TiO₂, of which 30% is recoverable, an ilmenite concentrate with 52% TiO₂, of which 60% is recoverable, and a Zr concentrate containing 64% ZrO₂, with 80% of the ZrO₂ recoverable.

Card 2/2

18(5)

SOV/127-59-2-15/21

AUTHÓRS:

Visloguzov, V.M., Engineer, and Sysolyatin, S.A.,

Engineer (Uralmekhanobr, Sverdlovsk)

TITLE:

On the Recovery of Titanium in the Dressing Process of the Titanium-Magnetite Ores of the Deposits at Kachka-

nartone (Izvlecheniye titana pri obogashchenii

titano-magnetovykh rud Kachknarskogo mestorozhdeniya)

PERIODICAL:

Gornyy zhurnal, 1959, Nr 2, pp 65-68 (USSR)

ABSTRACT:

The authors show how experiments, carried out in the Uralmekhanobr proved that it is possible to obtain titanium concentrate from the titanium-magnetite iron-ore of Kachkanar, by applying the method of stage enrichment. Only a certain quantity of the second-stage tailings containing ilmenite is processed. The gradual grinding of the ore went thru the following stages: 1 to 0 mm, 0.5 to 0 mm, 0.2 to 0 mm, 0.1 to 0 mm. The first separation supplies 2 kinds of dust: a) magnetite (ferro-

Card 1/3

vanadium); b) ilmenite tailings containing titanium. A shaking table separated out the titanium concen-

SOV/127-59-2-15/21

On the Recovery of Titanium in the Dressing Process of the Titanium-Magnetite Ores of the Deposits at Kachkanar

trate, which in its turn was lead into a separator having a 6,000 oersted - strong magnetic field. The final products were: Fe (63.0%), TiO₂ (24.8%) and V₂O₃ (53.20%). The authors admit that the industrial level, the flotation method will probably be necessary to obtain high-grade titanium concentrate. A flotation method suitable for ilmenite has been successfully developed in the Kusinskiy orecreasing plant. A flotation method suitable for recovering titanium from poor titanium ores, was used in this industrial experiment; of where 400 tons of ore from the 2nd local deposit area were processed. The ore contained 1.88% rutile. The concentrate had 80% rutile. The refuse contained only 0.25 to 0.30% rutile. F.K. Solomonova, a scientist working in the mineralogical laboratory

Card 2/3