1. VEKSHEGONOV, V.YA.; PATRIKEY, N.M.

2. USSR (600)

4. Windbreaks, Shelterbelts, Etc.

7. Renew and extend shelterbelts according to plan. Les.i step' 4 no.10, 1952.

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

1. VEKSHEGONOV, V.Ya.
2. USSR (600)
4. Afforestation
7. Improving over-all mechanization in afforestation work, Les.khoz. 6 no. 3, 1953.

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

1. VEKSHEGONOV, V.Ya.

2. USSR (600)

4. Agricultural Machinery

7. Improving over-all mechanization in afforestation work, Les.khoz. 6 no. 3, 1953.

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

ACC NR: AP6017955 (A) SOURCE CODE: UR/0413/66/000/010/0018/0018

AUTHOR: Vekshin, B. S.

ORG: None

TITLE: A stamp for implementing a method of reverse pressing with lateral hydrostatic pressure on the workpiece. Class 7, No. 181601

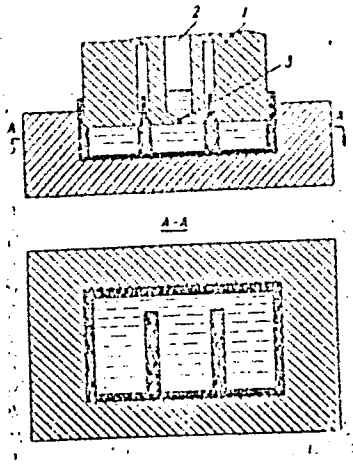
SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 10, 1966, 18

TOPIC TAGS: metal pressing, hydrostatic pressure

ABSTRACT: This Author's Certificate introduces a stamp for implementing a method of reverse pressing with lateral hydrostatic pressure on the workpiece. Provision is made for outlet of the fluid from the working region and for maintaining the necessary optimum fluid pressure by a compensation cavity in the punch with a calibrated channel for passage of the fluid.

Card 1/2 UDC; 621.777.24.073

ACC NR: AP6017955



1--punch; 2--compensating cavity; 3--calibrated channel

SUB CODE: 13/ SUBM DATE: 27Jul63

Card 2/2

VEKSHIN, G.; SEMIN, N.; CHISTYAKOV, M.

Soviet-Czechoslovak economic cooperation is growing stronger.
Vnesh. torg. 29 no.12:12-17 '59. (MIRA 12:12)
(Russia--Foreign economic relations--Czechoslovakia)
(Czechoslovakia--Foreign economic relations--Russia)

VEKSHIN, G.

Czechoslovakia extends its economic ties with the entire world [with summary in English p.31]. Vnesh.torg. 26 no.6:1-5 Je '56. (MLRA 9:9)

(Czechoslovakia--Foreign economic relations)

BALEK, A. [Bálek, Alexej]; DANEK, S. [Daněk, Stanislav], inzh.; FOFF, A. [Foff, Arthur], inzh.; KOLVODA, Ya. [Kalvoda, Jan], doktor; SHMID, Y. [Schmid, Josef], inzh.; SHKVOR, I. [Škvor, J.], doktor; VAYTTS, A. [Waitz, Antonín], inzh.; ROMASHKIN, N.I. [translator]; VEKSHIN, G.K. [translator]; TKACHEVA, T.K. [translator]; OSTROUMOVA, V.S., red.; SEMENOVA, N.Kh., red.; KAPRALOVA, A.A., tekhn.red.

[General inventory of fixed assets in Czechoslovakia] General'naia inventarizatsiia osnovnykh fondov v Chekhoslovakii. Moskva, Gos. statist.izd-vo, 1959. 101 p. (MIRA 13:2)
(Czechoslovakia--Inventories)

ZOLOTAREV, V.I.; PEKSHEV, Yu.A.; AVSENEV, Yu.M.; KAPRANOV, I.A.; KISVYANTSEV, L.A.; SHVETSOV, N.I.; TELEGIN, Ya.I.; POTAPOV, V.I.; KISVYANTSEV, L.A.; ZYKOV, A.A.; NETRUSOV, A.A.; SENIN, V.P.; MAKSIMOVA, A.P.; NIKOLAYENKO, Zh.I.; VOLKOV, N.V.; KALASHNIKOV, A.A.; PLAKSIN, S.V.; POPOV, N.N.; KARSHINOV, L.N.; YAKIMOVA, T.A.; BASHKANIKHIN, I.K.; KETKOVICH, A.Ya.; SHALASHOV, V.P.; VORONKOV, F.N.; VEKSHIN, G.K.; CHISTYAKOV, M.A.; IVANOV, N.I., red.; SLADKOVSKIY, M.I., red.; LEPNIKOVA, Ye., red.; MOSKVINA, R., tekhn.red.

[Economic development of the people's democracies] Razvitie ekonomiki stran narodnoi demokratii; obzor za 1957 g. Pod red. N.I. Ivanova i dr. Moskva, Izd-vo sots.-ekon.lit-ry, 1958. 619 p. (MIRA 12:7)

1. Moscow. Nauchno-issledovatel'skiy kon"yunkturnyy institut. (Economic conditions)

VEKSHIN, G.K. [translator]; SEMENOV, I.I. [translator]; OS'MOVA, M.N., red.; ALEKSEYEV, I.G., red.; IOVLEVA, N.A., tekhn.red.

[Czechoslovakia in the world economy] Mesto Chekhoslovakii v mirovoi ekonomike. Moskva, Izd-vo inostr.lit-ry, 1958. 239 p. (Translated from the Czech). (MIRA 12:10)
(Czechoslovakia--Economic conditions)

GRUZINOV, V.P.; VEKSHIN, G.K.; KRASAVIN, M.V., red.; PONOMAREVA, A.A., tekhn.red.; GERASIMOVA, Ye.S., tekhn.red.

[Development of the national economy of Czechoslovakia; statistical collection] Razvitie narodnogo khoziaistva Chekhoslovakii; statisticheskii sbornik. Moskva, Gosplan-izdat, 1959. 243 p. (MIRA 12:11)
(Czechoslovakia--Statistics)

VEKSHIN, G K

ZOLOTAREV, V.I.; AVSENEV, Yu.M.; KAPRANOV, I.A.; KISVYANTSEV, L.A.; PEKSHEV, Yu.A.; SHVETSOV, N.I.; TELEGIN, Ya.I.; POTAPOV, V.I.; KISVYANTSEV, L.A.; ZYKOV, A.A.; METHUSOV, A.A.; SENIN, V.P.; MAKSIMOVA, A.P.; NIKOLAYENKO, Zh.I.; VOLKOV, N.V.; KALASHNIKOV, A.A.; PLAKSIN, S.V.; POPOV, N.N.; KARSHINOV, L.N.; YAKIMOVA, T.A.; BASHKANIKHIN, I.K.; KETKOVICH, A.Ya.; SHALASHOV, V.P.; VORONKOV, F.N.; VEKSHIN, G.K.; CHISTYAKOV, M.A.; IVANOV, N.I., red.; SLADKOVSKIY, M.I., red.; LEPNIKOVA, Ye., red.; MOSKVINA, R., tekhn.red.

[Development of the economy of the people's democracies; a survey for 1957] Razvitie ekonomiki stran narodnoi demokratii; obzor za 1957 g. Pod red.N.I.Ivanova i dr. Moskva, Izd-vo sotsial'no-ekon. lit-ry, 1958. 610 p. (MIRA 12:2)

1. Moscow. Nauchno-issledovat. kon"yunkturnyy institut.
(People's democracies) (Ecenomic conditions)

OSADCHIY, L.K.; SYRKIN, Yu.G., inzh.tekhnolog; VEKSHIN, K.D., mashinist elektrovoza, Geroy Sotsialisticheskogo Truda; ONOPRIYENKO, L.N., mashinist elektrovoza; SHAROV, M.S.; MARKOVICH, I.A., mashinist-instruktor

"Electric networks of the VL23 electric locomotive." Elek. i tepl. tiaga 5 no.6:44-45 Je '61. (MIRA 14:10)

1. Depo Dnepropetrovsk (for Syrkin). 2. Depo Barabinsk Zapadno-Sibirskoy dorogi (for Sharov).
(Electric locomotives)

VEKSHIN, V.I.

Metal overflow in die casting. Lit. proizv. no.9:20-22 S '61. (MIRA 14:9)

(Die casting)

ACC NR: AP7003156 SOURCE CODE: UR/0368/66/005/006/0798/0800

AUTHOR: Kudryashiv, L. I.; Zhemkov, L. I.; Vekshin, V. S.; Belostotskiy, B. R.

ORG: none

TITLE: Thermal regime of the active element of a laser of finite length

SOURCE: Zhurnal prikladnoy spektroskopii, v. 5, no. 6, 1966, 798-800

TOPIC TAGS: laser, laser rod, laser active body, laser rod geometry, laser rod length, laser rod length effect

ABSTRACT:
The analysis of pulse-type operation proceeds from the physical character of the heat exchange and the geometry of the body. An equation describing the temperature fields in a circular cylinder of finite dimensions is obtained. An analysis is also made of the cooling phase of the operational cycle. An equation is derived to describe the temperature field with constant cycle duration and duty factor, for any number of successive cycles. The theoretical findings are applied to a real case of two cylindrical bodies, one with a length equal to its radius, the other with a length-to-radius ratio of 10:1; the results show a much weaker effect of the end surfaces in the latter case. Orig. art. has: 22 formulas.

SUB CODE: 20/ SUBM DATE: 31Jan66/ ORIG REF: 004/ ATD PRESS: 5112

UDC: 535.89

Card 1/1

L 15983-66 EPF(n)-2/EWA(h)/EEC(k)-2/EWT(l)/FBD/ETC(f)/T/EWP(k)/EWG(m)

ACC NR: AP6005468 SOURCE CODE: UR/0368/66/004/001/0012/0019

AUTHOR: Kudryashev, L. I.; Belostotskiy, B. R.; Zhemkov, L. I.; Vekshin, V. S.

ORG: none

TITLE: Approximate solution for the problem of nonstationary heat exchange in the active element of a laser

SOURCE: Zhurnal prikladnoy spektroskopii, v. 4, no. 1, 1966, 12-19

TOPIC TAGS: laser pulsation, laser optics, heat transfer, solid state laser

ABSTRACT: The processes of nonstationary heat exchange which takes place during the operation of a pulsed laser are mathematically analyzed. The active element of the laser is assumed to be a solid cylinder with a ratio of length to diameter of approximately 10. The problem is described by a system of four equations. This system of equations is simplified by assuming that the coefficient of thermal conductivity, specific heat and density of the active element are independent of temperature. The system is solved by the variational method for an isolated cycle of laser operation. A formula is derived for the temperature field inside the active element

Card 1/2 UDC: 535.89

L 15983-66

ACC NR: AP6005468

in the case of continuous laser operation assuming an arbitrary number of cycles with a constant prf. Expressions are derived for the basic factors which determine heat exchange of the active element: thermophysical characteristics, pumping duration and power, the length of a cycle, the pulse repetition frequency and the total operating time of the laser. Equations are given in dimensionless form which may be used in practical engineering problems for analyzing various operating cycles of pulsed lasers and the dimensions of active elements. Orig. art. has: 1 figure, 45 formulas.

SUB CODE: 20/ SUBM DATE: 29Jun65/ ORIG REF: 005/ OTH REF: 000

Card 2/2

VEKSHIN, V.V.

Freon compressors with low refrigeration. Standartizatsiia 25 no.6:60-61 Je '61. (MIRA 14:6)
(Refrigeration and refrigerating machinery)

VEKSHIN, V.V.

Diesel turbocompressors. Standartizatsiia 25 no.8:48-49 Ag '61. (MIRA 14:7)

(Turbomachines--Standards)

VEKSHIN, V.V.

Airtight compressors. Standartizatsiia 28 no.1:41-42 Ja '64.
(MIRA 17:1)

VEKSHIN, V.V.

Fuel pumps and diesel nozzles. Standartizatsiia 28 no.9:58 S '64. (MIRA 18:2)

VEKSHIN, V.V.

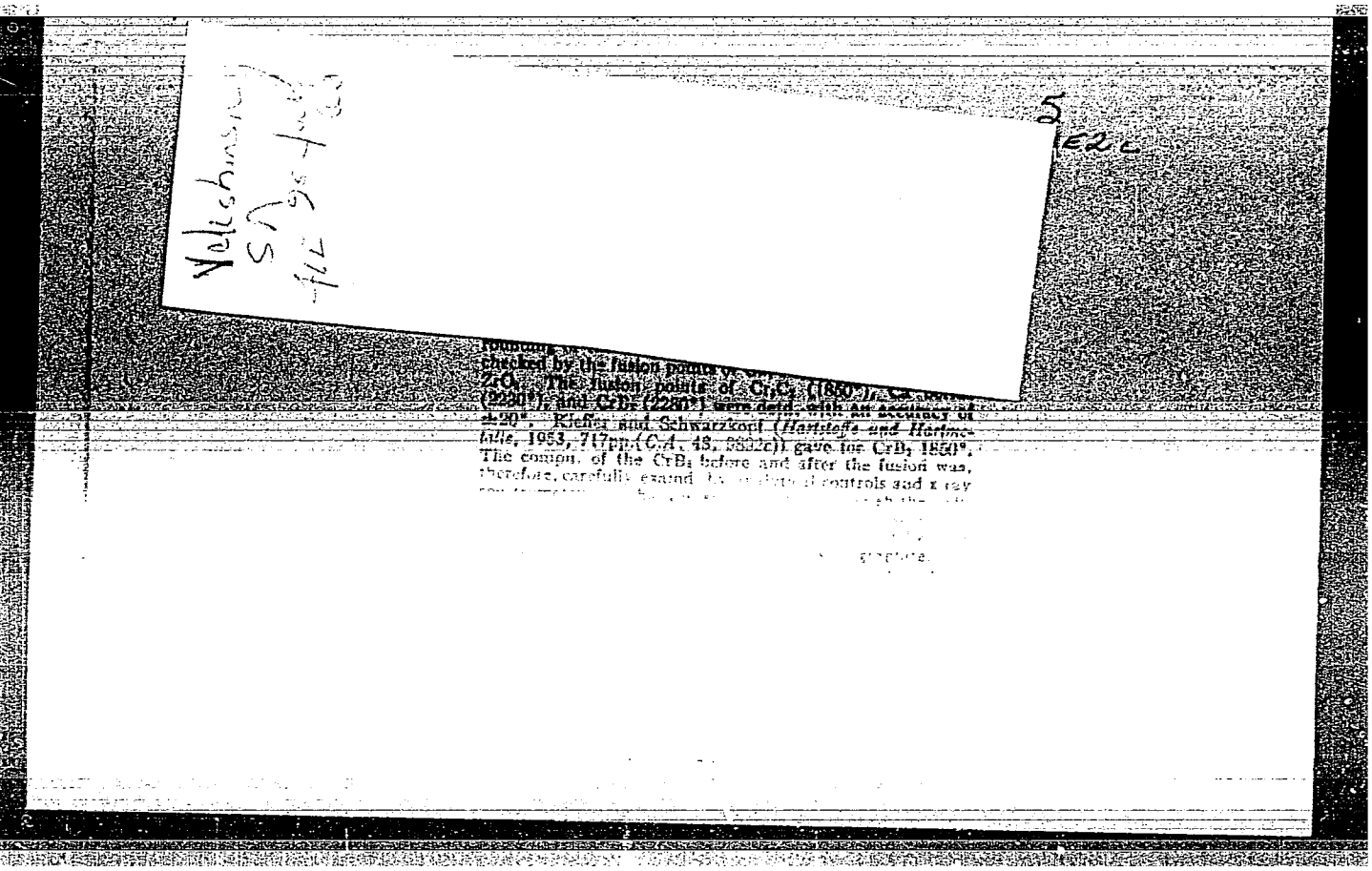
Cylinder diameters and piston rings of compressors for general use. Standartizatsiia 24 no.11:36 N '60. (MIRA 13:11)
(Compressors--Standards)

VEKSHIN, V.V.

Freon refrigeration units. Standartizatsiia 26 no.4:43-44 Ap '62. (MIRA 15:3)

(Freons)

(Refrigeration and refrigerating machinery--Standards)



checked by the fusion points of CrC_2 (1850°), CrB_2 (2230°), and CrB_4 (2280°) were detd. with an accuracy of ±20°. Kieffer and Schwarzkopf (*Hartstoffe und Hartmetalle*, 1953, 717pp.; *C.A.*, 48, 8832c)) gave for CrB_2 1850°. The compn. of the CrB_2 before and after the fusion was, therefore, carefully examd. by means of controls and x ray

MARKOVSKIY, L.Ya.; VEKSHINA, N.V.

Production of alkaline earth metal borides by means of carbon reduction of their oxides. Zhur. prikl. khim. 31 no.9:1293-1299 S '58. (MIRA 11:10)

1.Gosudarstvennyy institut prikladnoy khimii.
(Alkaline earth borides)

22521

S/080/61/034/001/002/020
A057/A129

5.2400 1043, 1208, 1273

AUTHORS: Markovskiy, L.Ya., Vekshina, N.V.

TITLE: On Diborides of Alkaline Earth Metals

PERIODICAL: Zhurnal Prikladnoy Khimii, 1961, Vol. 34, No. 1, pp. 16-20

TEXT: At the 3rd Conference for Physicochemical Analysis, L. Ya. Markovskiy and Yu.D. Kondrashev, ZhNKh, 2, 34 (1957), Ref.1, are quoted to have demonstrated that with reference to certain metals of the 2nd and 3rd groups of the periodical system of elements the different borides of the same metal generally decrease in chemical activity with increasing content of boron in the new boride phase. This is explained by the formation of a more stable skeleton in hexaborides. In the present work, borides of Ca, Sr, and Ba were synthesized and the hydrolysis of the obtained products was studied, including the evolution of boranes in this process. It has to be mentioned that diborides of Ca, Sr, and Ba were obtained for the first time, as claimed by the authors, while so far only the hexaborides of these elements were known. In addition to chemical analysis, x-ray analysis of the obtained products was

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On Diborides of Alkaline Earth Metals

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carried out and the presence of MeB_2 (Me stands here for Ca, Sr, Ba) was determined. The pulverized metal was mixed with elemental boron (containing less than 0.1% Mg, since through chemical reaction between boron and Mg boranes can also be formed), briquetted and fired in an argon atmosphere at 900°C-1,100°C, a temperature range covering optimum temperatures for each of the three elements. The borides were analyzed. They were separated from free metal by boiling them in diluted HCl; ions of metal and boron were determined in the filtrate and borane in the gaseous phase. The borane yield from CaB_2 was 1.5-3% by weight (as compared with the total initial B), i.e., it was identical with the borane yield from the decomposition of MgB_2. Analytical data for the reaction between Ca and B are presented in Tab.2. Optimum conditions for the formation of CaB_2 are: 950°C, holding time 1 hr, Ca:B ratio = 1:2, resulting in a 45% yield of CaB_2 (the remainder is CaB_6 and some B). X-ray analysis (made by Yu.D. Kondrashev) showed the presence of the new phase of CaB_2, but the latter could not be isolated in a pure state. The results concerning the reaction between Ba, as well as Sr and B, are given in Tab.3 and demonstrate that formation of BaB_2 occurs at 1,100°C (with a yield of 20.2%) and of SrB_2 at 950°C (with a yield of 11.2%). The diborides are more easily formed if an excess of the metal is present. Formation of

On Diborides of Alkaline Earth Metals

diborides takes place within a sharply defined temperature range, above which a dissociation into the constituent elements occurs. Simultaneously with the diborides, hexaborides are formed whose relative rate of formation increases with an increase in the atomic weight of the metal. Hence the yield of SrB_2 and BaB_2 is lower than that of MgB_2 and CaB_2. The investigated borides are easily hydrolyzed by acids with liberation of boranes in amounts corresponding to those obtained by MgB_2 hydrolysis (Tab.4). There is 1 figure, 4 tables and 8 references: 5 Soviet-bloc and 3 non-Soviet-bloc. The reference to the English-language publication reads as follows: L. Lafferty, J.Appl.Phys., 22,299 (1931).

ASSOCIATION: Gosudarstvennyy institut prikladnoy khimii (State Institute of Applied Chemistry)

SUBMITTED: June 4, 1960

X

25382
S/080/61/034/002/001/025
A057/A129

15.2240 also 2209

AUTHORS: Markovskiy, L.Ya., Vekshina, N.V.

TITLE: On ternary compounds in the system "alkaline earth metal - boron - carbon"

PERIODICAL: Zhurnal Prikladnoy Khimii, v 34, no 2, 1961, 242-248

TEXT: In the present work preliminary investigations of ternary compounds between alkaline earth metal (especially calcium), boron, and carbon were made. The composition and formation conditions were studied to determine syntheses of pure (carbon-free) hexaborides of alkaline earth metals. These borides are of interest because of their chemical and thermal resistance and their special heat-emitting properties. In the simplest preparation method, i.e., reduction with carbon, formation of polymeric organic compounds occurs, which contaminate the product. It is demonstrated in the present investigations that formation of organic compounds is due to

25302
S/080/61/034/002/001/025
AC57/A129

the presence of the above-mentioned ternary compounds in reduction products. The formation of a single compound with an approximate formula CaC_2B was also determined. The experiments were carried out by heating (1hr at 1300°C in argon atmosphere) tabletted mixtures of carbon, boron, and the respective alkaline earth metal varying the molal ratio. After heating the product was treated with water to determine MeC_2 (Me = metal) and with hydrochloric acid demonstrating the presence of organic substances by a strong exothermic reaction. The acid-soluble products ($CaCl_2$, H_3BO_3, and liquid organic substances) were separated from insoluble metal hexaborides, free boron and carbon, and solid organic substances by filtration. The primary heating product, gaseous and liquid products of hydrolysis, and the non-soluble residue, as well as the final products obtained after roasting (300°-400°C) of the solid organic substances were investigated by X-ray and/or chemical analysis. Results obtained by varying ratios of the components demonstrate (Tab. 2) that in all experiments formation of CaB_6 occurs, and formation of organic compounds is not caused by $CaCl_2$, but by another substance which hardly reacts with water and decomposes quickly with hydrochloric acid. Data obtained by hydrolytic decomposition (Tab. 3)

On ternary compounds ...

indicate that the molal ratio Ca : C : B is 1 : 2 : 1 in the hydrolyzed product, thus the substance in question has apparently the formula of a boron carbide CaC_2B. The latter was also determined by X-ray analysis (see Tab. 2) and is called phase α by the present authors. No other boron carbides could be determined. It was observed that with increasing carbon content in the initial mixture the yield in CaB_6 decreases, while CaC_2B and CaC_2 are formed together. Increase in boron content increases CaB_6 formation and decreases correspondingly the CaC_2 and CaC_2B content. Experiments with strontium and barium were carried out in the ratio Me : C : B = 1 : 2 : 2 which was found to be the optimum ratio for calcium compositions. It can be seen from experimental results (Tab. 6) that corresponding to data for calcium a considerable amount of organic substances is formed and the formula for the ternary compound is MeC_2B. Preliminary results concerning properties of the organic compounds demonstrate that with acid decomposition of boron carbides metal chlorides, boric acid and liquid non-saturated hydrocarbons with open chain are formed. These hydrocarbons do not contain acetylene triple bonds, but a non-saturated

Card 3/7

S/080/61/034/002/001/025
A057/A129

On ternary compounds ...

double bond. With continuing polymerization the main part of liquid organic substances changes into solid substances. The composition of organic substances depends on conditions of hydrolysis, but the carbon/hydrogen ratio remains approximately 1 : 2. The organic substances are best soluble in tetrahydrofurane and acetone. Infrared spectral analyses demonstrated that the liquid and solid polymers contain CH_2- and CH- groups in the open chain. Addition of H_2O_2 to the liquid polymers effects (similar to butadiene polymerization) formation of a white flocculent precipitate. It can be assumed that the liquid products of hydrolysis of boron carbides contain two double bonds, but composition and properties of these organic substances have to be investigated in further experiments. The authors thank Yu.D. Kondrashev for taking the X-ray patterns in the present investigations. There are 7 tables and 6 references: 3 Soviet-bloc and 3 non-Soviet-bloc. The references to the English-language publications read as follows: P. McKenna, Ind. Eng. Chem., 28,767 (1936), H. Blumenthal, Powder Metall. Bull., 7,79 (1956).

SUBMITTED: September 26, 1960

Card 4/7

27911
S/080/61/034/010/003/016
D258/D301

15.2670

AUTHORS: Vekshina, N. V., and Markovskiy, L. Ya.

TITLE: Some chemical properties of the alkaline-earth hexaborides

PERIODICAL: Zhurnal prikladnoy khimii, v. 34, no. 10, 1961, 2171-2175

TEXT: The authors studied the chemical reactivity of CaB_6, BaB_6, and SrB_6 produced in the course of an investigation of methods for their preparation (Ref. 11: Zhur. prikladnoy khim. 31, 1958, 1293). The tests employed consisted in treating these compounds with acids and bases and heating them separately with oxygen, nitrogen and carbon. Of these tests, only the oxidation was studied previously. The hexaborides were used in a powdery form (particle size $\leq 4\mu$) and analyzed as follows: CaB_6 - 38.2% Ca, 61.9% B; SrB_6 - 57.4% Sr, 42.8% B; BaB_6 - 67.8% Ba, 31.9% B.

(a) Treatment with acids and bases. The boride (10 g) was added to the

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Some chemical properties...

reagent (250 ml) and the mixture was allowed to stand at room temperature without stirring. The results are given in tabulated form:

Boride	Reagent	Percentage of dissolution after:					
		1 hr.	2 hrs.	1 day	2 days	4 days	10 days
CaB_6	HCl, d = 1.19	0.5	0.5	1.7	1.8	1.3	1.5
"	H_2SO_4, d = 1.84	did not decompose					
"	HNO_3, d = 1.42	91.5	97.3	100.0	-	-	-
"	NaOH, 50%	2.2	2.2	2.0	2.4	2.2	2.6
"	Na_2CO_3, 50%	0.3	0.4	0.4	0.2	0.3	0.5
SrB_6	HCl, d = 1.19	0.7	0.8	1.4	1.5	1.2	1.5
"	H_2SO_4, d = 1.84	did not decompose					
"	HNO_3, d = 1.42	98.5	100.0	-	-	-	-

(Table is continued on Card 3)

Some chemical properties...

SrB_6	NaOH, 50%	0.8	1.2	1.6	1.4	1.9	1.9
"	Na_2CO_3, 50%	-	-	1.3	1.5	1.5	1.5
BaB_6	HCl, d = 1.19	0.8	1.1	1.6	2.0	2.9	3.0
"	H_2SO_4, d = 1.84		d i d	n o t	d e c o m p o s e		
"	HNO_3, d = 1.42	94.0	98.8	100.0	-	-	-
"	NaOH, 50%	1.2	1.2	1.9	1.7	1.8	1.9
"	Na_2CO_3, 50%	0.6	1.2	1.4	1.2	1.2	1.4

No hydrolysis occurred on treating the borides with boiling dil. HCl and no boranes evolved. (b) Stability on heating with O_2. The compounds were placed in a quartz boat and heated at 500°C to 1200°C in a stream of dry O_2. Experiments with CrB_2, TiB_2 and ZrB_2 were included for comparison. Fig. 3 shows a fair rate of oxidation at 650°C and over. Experiments

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Some chemical properties...

conducted at 900°C showed that the oxidation is proceeding at a fair rate during the first 30 min. but attains a limiting value after 2 hours (39% for CaB_6, 42% for SrB_6, and 46% for BaB_6). This was explained by the formation of a protective film of borates which, however, vanishes at higher temperatures. (c) Stability of heating with carbon and with nitrogen. 1 : 1 mixtures of borides with graphite were heated at 1700°C to 2000°C; also, borides were heated in a stream of N_2 at 800, 1000, 1200 and 1400°C. The products were analyzed by chemical and X-ray analysis. No nitrides or boron carbides were shown to be formed. Conclusions: The hexaborides of Ca, Sr and Ba are shown to be even more inert than the borides of transition metals. This fact is said to confirm the author's previously expressed view (Ref. 15: Zhur. neorg. khim. 34, 1957, 2) that the stability of a boride increases with the number of boron atoms contained. There are 3 figures, 1 table and 15 references: 7 Soviet-bloc and 8 non-Soviet-bloc. The reference to the English-language publication reads as follows: H. Moissan, A. Williams, C. r., 125, 629 (1897).

Card 4/5

27911
S/080/61/034/010/003/016
D258/D301

Some chemical properties...

ASSOCIATION: Gosudarstvennyy institut prikladnoy khimii (State Institute of Applied Chemistry)

SUBMITTED: February 28, 1961

Fig. 3. Dependence of the rate of boride oxidation on temperature

A - rate of oxidation (% of oxidized boride within 1 hr.); Б - temperature of calcination (°C).

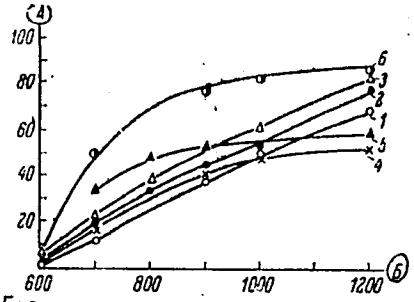

Fig. Рис. 3. Зависимость скорости окисления боридов от температуры.

(А) — скорость окисления (% окислившегося борида за 1 час), (б) — температура прокаливания (°С).
1 — CaB_6, 2 — SrB_6, 3 — BaB_6, 4 — CrB_2, 5 — TiB_2, 6 — ZrB_2.

Card 5/5

5 2410
15.2260

32392
S/080/62/035/001/002/013
D245/D304

AUTHORS: Vekshina, N. V. and Markovskiy, L. Ya.

TITLE: Study of reactions taking place during the preparation of hexaborides of alkaline-earth metals by reduction with carbon

PERIODICAL: Zhurnal prikladnoy khimii, v. 35, no. 1, 1962, 30-37

TEXT: Using chemically pure materials, the authors made a detailed series of studies of the reactions which occur during the preparation of Ca, Ba and Sr hexaborides by heating mixtures of varying composition of the oxides with graphite and B. The primary sinter, liquid and gaseous products of hydrolysis and insoluble residues were analyzed. The possible interactions are discussed. Using a charge of optimum composition ($CaO + 3B_2O_3 + 5C$), it was found that, up to 1500°C, the only reaction was between the metal oxide and boron to form borates. Reduction with C commenced at 1700° but, at this temperature, the products were boron carbide and graphite. The optimum temperature for the formation of hexaborides was found

Card 1/2

32392
S/080/62/035/001/002/013
D245/D304

Study of reactions ...

to be 1900°C. The tendency to form MC_4B_2 increases from Ca to Sr to Ba. Optimum conditions for obtaining nearly stoichiometric yields of the hexaborides are shown in tabulated form. There are 1 figure, 4 tables and 8 references: 5 Soviet-bloc and 3 non-Soviet-bloc. The references to the English-language publications read as follows: H. Blumenthal, Powd. Metal. Bull., v. 7, 79, 1956; A. Stock, 'Hydrides of Boron and Silicon' (1933); P. Blum and F. Bertaut, Acta Cryst., v. 7, 81, (1954).

ASSOCIATION: Gosudarstvenny institut prikladnoy khimii (State Institute of Applied Chemistry)

SUBMITTED: April 5, 1961

Card 2/2

S/080/62/035/009/011/014
D287/D307

AUTHORS: Markovskiy, L.Ya., Vekshina, N.V., and Pron', G.F.

TITLE: The formation of boron carbides during the reduction of rare earth metal oxide mixtures and of boron with carbon

PERIODICAL: Zhurnal prikladnoy khimii, v. 35, no. 9, 1962, 2090 - 2091

TEXT: The present work is a continuation of earlier investigations carried out by the authors on the formation of lanthanide borides and on metal - boron - carbon systems. Experiments on the C-reduction of mixtures containing CeO_2 or La_2O_3 and B_2O_3 were carried out at temperatures between 1900 and 2000°C, under the conditions described earlier. The reduction products were found to contain a considerable quantity of a chemically unstable product; hydrolysis of the latter induced the following reactions: B and the metal went into solution, C and a certain percentage of B formed polymeric organic compounds. These results, as well as x-ray data from preliminary investigations, proved that boron carbides were formed in the

Card 1/2

The formation of boron carbides ...

systems Ce-B-C and La-B-C and that the properties of the compounds were similar to the characteristics of boron carbides of alkaline earth metals. There is 1 table.

SUBMITTED: December 18, 1961

Card 2/2

FERROVSKIY, L.Ya.; VEKSHINA, N.V.

Some chemical properties of alkaline earth borocarbides and of their hydrolysis products. Zhur. prikl. khim. 37 no.10: 2120-2126 O '64.

Alkaline earth borocarbides. Ibid.:2126-2133.

(MIRA 17:11)

1. Gosudarstvennyy institut prikladnoy khimii.

L 23518-65 EPF(c)/EPF(n)-2/EPR/EWP(j)/EWT(m)/EWP(b)/T/EWP(e)/EWP(t) Pc-4/ Pr-4/Ps-4/Pu-4 IJP(c)/RPL AT/RM/WH/WW/JD/JG

ACCESSION NR: AP4047117 S/0080/64/037/010/2120/2126

AUTHOR: Markovskiy, L. Ya.; Vekshina, N. V.

TITLE: Certain chemical properties of the alkaline earth metal borocarbides and products of their hydrolytic decomposition

SOURCE: Zhurnal prikladnoy khimii, v. 37, no. 10, 1964, 2120-2126

TOPIC TAGS: alkaline earth borocarbide, hydrolytic decomposition, hydrolysis, organoboron compound

ABSTRACT: The properties of the alkaline earth borocarbides MeC_4B_2 were studied, especially their hydrolysis and their high temperature reactions with oxygen, carbon, nitrogen, boron and boron anhydrides. These borocarbides did not react with carbon and nitrogen at 1700-2000C. They started to oxidize at 1000C under atmospheric pressure, and were burned completely at 1300C to form the molten borates. At 1900C they reacted with B and with B_2O_3: $MeC_4B_2 + B \rightarrow MeB_6 + B_4C + 2C$, and $MeC_4B_2 + B_2O_3 + C \rightarrow MeB_6 + B_4C + CO$. The

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L 23518-65
ACCESSION NR: AP4047117

3

alkaline earth borocarbides hydrolyse slowly in water and faster in dilute acids to form complex organoboron compounds which polymerize to hard amorphous materials which were soluble only in acetone and tetrahydrofuran. The liquid organic compounds, comprising only C, B, O and H, were unsaturates, with a C: H ratio of C_nH_{2n-2}, but contained no acetylenic bonds; the unsaturation was probably dienic. Hydrolytic rupture of the borocarbides was believed to have been at the C-B or B-B bonds. The presence of B in the polymeric products was attributed either to addition of BH_3 radicals to fragments of the unsaturated hydrocarbon chains, or to polymerization of chain segments containing the B-C bond. The alkaline earth borocarbides were oxidized by concentrated HNO_3 and H_2SO_4, reducing them to the lower nitrogen oxides and SO_2. Orig. art. has: 7 tables and 1 figure

ASSOCIATION: Gosudarstvenny*y institut prikladnoy khimii (State Institute of Applied Chemistry)

SUBMITTED: 04Nov62 ENCL: 00

SUB CODE: IC, GC NO REF SOV: 004 OTHER: 000

Card 2/2

L 27619-65 EWP(e)/EWP(w)/EWT(m)/EPF(c)/EWA(d)/EWF(n)-2/EWP(t)/T/EWP(j)/EPR/EWP(b)
Pc-4/Pr-4/Ps-4/Pu-4 IJP(c /RPL JD/WW/JG/AT/RM/WH
ACCESSION NR: AP5005563 S/0080/65/038/002/0245/0251

AUTHOR: Markovskiy, L. Ya.; Vekshina, N. V.; Pron', G. F.

TITLE: Lanthanum borocarbides

SOURCE: Zhurnal prikladnoy khimii, v. 38, no. 2, 1965, 245-251

TOPIC TAGS: rare earth borocarbide, lanthanum borocarbide, high temperature borocarbide, borocarbide preparation, borocarbide hydrolysis, borocarbide thermal dissociation

ABSTRACT: The preparation and physicochemical properties of the high-temperature phase of lanthanum borocarbide, LaC_4B_2, have been studied because of the importance of the rare-earth compounds with boron and carbon for various processes such as the formation of polymerizable organoboron compounds by hydrolysis of borocarbides. A product containing 93—96% LaC_4B_2 was prepared by sintering in reducing atmosphere at 1900C the following mixtures: 1) lanthanum metal, boron, and carbon; or 2) boron carbide, carbon, and lanthanum metal, lanthanum oxide, or lanthanum carbide; or 3) lanthanum carbide, carbon, and boron or boron oxide (B_2O_3). Thermal reduction with carbon of a mixture of lanthanum and boron oxides produced either a mixture of LaC_4B_2 (up to 70%) and LaB_6, or pure LaB_6. The products of all reactions studied

Card 1/3

L 27619-65

ACCESSION NR: AP5005563

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:ere determined by elemental and phase chemical analysis and x-ray powder diffrac-
:ion. The analytical methods were described. The phase determination was made by
analyzing the solution, residue, and gas produced by hydrolysis (with hydrochloric
acid) of the sintered products. The products of sintering were composed of boro-
carbides, lanthanum hexaboride (LaB_6), carbon, and, occasionally, lanthanum carbide
(LaC_2) or boron carbide (B_4C). The optimum La:C:B ratio in the starting mixture
producing LaC_4B_2, exclusive of other borocarbide phases, was found to be 1:4:2.
Other [unspecified] borocarbide phases were detected in the sintered mass obtained
with different La:C:B ratios. Pure LaC_4B_2 was a polycrystalline cake which decom-
posed on heating up to its melting point (over 2000C) and was completely hydrolyzed
by HCl with the formation of solid, liquid, and gaseous organic compounds, as in
the hydrolysis of alkaline earth borocarbides. Experimental data confirmed the
existence of the cerium, praseodymium, neodymium, samarium, europium, and gadolinium
borocarbides, analogous to lanthanum borocarbide and alkaline earth borocarbides,
which are completely dissociated at high temperature in vacuum. Orig. art. has:
2 figures and 5 tables. [JK]

ASSOCIATION: none

Card 2/3

L 27619-65
ACCESSION NR: AP5005563

SUBMITTED: 18Jan63

NO REF SOV: 009

ENCL: 00

OTHER: 000

SUB CODE: GC, MT

ATD PRESS: 3190

Card 3/3

L 16051-66 EWP(e)/EWT(m)/EWP(t) IJP(c) JD/JG

ACC NR: AP6005515 SOURCE CODE: UR/0080/66/039/001/0013/0020

AUTHOR: Markovskiy, L. Ya.; Vekshina, N. V.; Kondrashev, Yu. D.; Stroganova, I. M.

ORG: none

TITLE: Ternary compounds in the beryllium-boron-carbon system

SOURCE: Zhurnal prikladnoy khimii, v. 39, no. 1, 1966, 13-20

TOPIC TAGS: beryllium compound, boron compound, carbide, crystal structure

ABSTRACT: To study the reaction of beryllium with boron and carbon, powder mixtures of the components were sintered at 1200-2000°C, and the products were subjected to x-ray and chemical phase analysis. The data showed the existence of two beryllium borocarbides, BeC_2B_2 and BeC_2B_{12}. The structure of BeC_2B_2, (studied by the single crystal method) is characterized by a hexagonal system, Laue class $\frac{6}{m}mm$, and lattice constants a = 10.84 and c = 6.18. The structure of BeC_2B_{12}, (studied by the powder method) belongs to the $B_4C(B_{12}C_3)$ structural type. The lattice constants are a = 5.615, c = 12.28 Å, c/a = 2.187. It is shown that in contrast to alkaline earth and rare earth borocarbides, beryllium borocarbides are chemically stable compounds and

UDC: 546.45'27'26

Card 1/2

L 16051-66

ACC NR: AP6005515

do not undergo hydrolytic decomposition. Ternary compounds of beryllium with boron and carbon form from the elements and also as a result of the reaction of beryllium borides, beryllium carbide Be_2C, and boron carbide with one another as well as with elemental carbon, boron, and beryllium respectively. Orig. art. has: 1 figure and 6 tables.

SUB CODE: 07/ SUBM DATE: 07Oct63/ ORIG REF: 011/ OTH REF: 009

Card 2/2

L 04733-67 EWT(m)/EWP(t)/ETI IJP(c) JD

ACC NR: AP6027008 SOURCE CODE: UR/0080/66/039/005/0973/0977

AUTHOR: Markovskiy, L. Ya.; Vekshina, N. V.; Kondrashev, Yu. D. 32

ORG: none B

TITLE: Chromium borocarbide

SOURCE: Zhurnal prikladnoy khimii, v. 39, no. 5, 1966, 973-977

TOPIC TAGS: chromium compound, chromium carbide, boron compound, carbon compound, phase composition, X ray diffraction pattern

ABSTRACT: The phase compositions of the reaction products of chromium with boron and carbon in the Cr-B-C system were studied. The existence of the ternary compound, chromium borocarbide, Cr_7BC_4 was established: rhombic, a = 2.86Å, b = 9.22Å, c = 6.95Å. Powder pattern data is given. When the molar ratio of Cr in Cr:B:C is small, CrB and CrB_2 are formed; as Cr content is increased the carbides Cr_3C_2 and Cr_7C_3 are formed. It was established that all chromium carbides react with boron and with borides forming either solid solutions based on Cr_7C_3 or Cr_3C_2 or the borocarbide Cr_7BC_4. Chromium mono- and diborides are characterized by high stability with respect to carbon. The lower borides, Cr_2B in particular, are converted in the presence of carbon at

UDC: 546.271

Card 1/2

L 41347-65 EWT(m)/EWP(e)/EWG(m)/EPF(n)-2/EWP(t)/EWP(b)/EPR Ps-4/Pu-4
IJP(c) JD/JG/AT/WH

ACCESSION NR: AP4047118 S/0080/64/037/010/2126/2133

AUTHOR: Markovskiy, L. Ya.; Vekshina, N. V.

TITLE: Alkaline earth metal borocarbides

SOURCE: Zhurnal prikladnoy khimii, v. 37, no. 10, 2126-2133

TOPIC TAGS: alkaline earth borocarbide, synthesis, property, thermal stability, hydrolysis, organoboron compound

ABSTRACT: The conditions for making Ca, Sr and Ba borocarbides and properties of these MeC_4B_2 borocarbides were investigated. The alkaline earth metals form with B and C a low temperature phase borocarbide MeC_2B, and a high temperature (1900-2000C) phase having the composition MeC_4B_2. The MeC_4B_2 compounds crystallize as shiny dark cinnamon colored grains, melt in the 2200 ± 100C range, are thermally stable in atmospheric oxygen to 200C, and decompose at higher temperatures (or at reduced pressure at 1300C) to the borides, boron carbide and carbon. They hydrolyse in moist air and more rapidly in water, and

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L 41347-65
ACCESSION NR: AP4047118

decompose completely in acid to form liquid and solid polymeric organoboron compounds containing up to 10% B, saturated and unsaturated hydrocarbons and boron hydrides and hydrogen. In addition to elemental synthesis, the alkaline earth borocarbides were formed under all other conditions when reaction between B, C and the alkine earth metals is possible: by reaction of the MeC_2 carbides with B_2O_3, elemental B or boron carbide; by the reduction of the Ca, Sr, or Ba oxides with boron carbides and carbon; or by the thermal carbon reduction of a mixture of boron oxides and the alkaline earth metal. "The authors thank Yu. D. Kondrashev for conducting the x-ray analysis of the borocarbide samples."
Orig. art. has: 6 tables and 7 equations.

ASSOCIATION: None

SUBMITTED: 04Nov62 ENCL: 00

SUB CODE: IC, GC NO REF SOV: 011 OTHER: 001

Card 2/2

L 10992-66 EWT(m)/ETC(F)/EWG(m)/EWP(t)/EWP(b) IJP(c) RDW/JD/JG

ACC NR: AP6000680 SOURCE CODE: UR/0080/65/038/009/1945/1949

AUTHOR: Markovskiy, L. Ye.; Vekshina, N. V.

ORG: State Institute for Applied Chemistry, Leningrad (Gosudarstvennyy institut prikladnoy khimii)

TITLE: A new boride phase with a high metallic content in the lanthanum-boron system

SOURCE: Zhurnal prikladnoy khimii, v. 38, no. 9, 1965, 1945-1949

TOPIC TAGS: lanthanum compound, boron compound, phase analysis

ABSTRACT: The article describes the use of hydrolytic separation for the discovery of new boride phases of lanthanum. Reaction of lanthanum and boron was carried out by the sintering of a pressed mixture of their powders at temperatures from 800 to 1300°. The powders used were prepared from ingots containing 99.8% lanthanum and 99% pure finely crystalline boron obtained by the refining of amorphous boron in vacuum at 2000°. The reaction products were subjected to x-ray examination and to chemical phase analysis. Experiments showed that LaB_4 and LaB_6 are practically insoluble in very dilute hydrochloric acid, and that only lanthanum tetraboride is dissolved during boiling. Lanthanum hexaboride

Card 1/2 UDC: 546.654'261'271

ACC NR: AP6000680

(like LaB_4) is readily soluble in nitric acid. Based on this fact, samples were treated for about one hour in dilute hydrochloric acid (1:10) until the dissolving stopped. The solid residue obtained was further treated with boiling concentrated hydrochloric acid and the product, insoluble in the hydrochloric acid, was treated with strong nitric acid. The solutions obtained were analyzed for boron and lanthanum. The experiments showed that, during the reaction with weak hydrochloric acid of a number of samples obtained by the sintering of metallic lanthanum with boron, there is observed an energetic reaction accompanied by the evolution of boron hydrides. The experimental data indicate that the amounts of lanthanum and boron in the solution correspond to the ratio La:B = 2:1. This ratio is maintained over a wide range of lanthanum and boron concentrations in the original charge. Analysis indicates that, in addition to the known borides--LaB_4 and LaB_6, there exists also a lower boride of the composition La_2B. In distinction from the hexaboride, this compound is readily soluble in very dilute hydrochloric acid with the evolution of a large amount of boron hydrides up to 8%. It has been established that, in the series La_2B-LaB_4-LaB_6, the chemical stability of the borides increases with the boron content in the boride phase. The highest boride content, La_2B, in the melts is attained with a ratio in the reaction mixture equal to La:B = 1:2 and a calcining temperature of 800°. Orig. art. has: 1 figure and 4 tables.

SUB CODE: 07/ SUBM DATE: 02Aug63/ ORIG REF: 006/ OTH REF: 006

Card 2/2

VEKSHINA, V.N.

New data concerning the communication which existed between the West Siberian Sea Basin and the seas of southern Europe during the Campan (?) - Maastricht time. Dokl. AN SSSR 110 no.6:1057-1059 O '56. (MLRA 10:2)

1. Vsesoyuznyy neftyanoy nauchno-issledovatel'skiy geologo-razvedochnyy institut.
(Siberia, Western--Geology, Stratigraphic)

VEKSHINA, V.N.

Maestrichtian coccolithophorids in the West Siberian Plain. Trudy SNIIGGIMS no.2:56-82 '59. (MIRA 12:11)
(West Siberian Plain--Flagellata)

VEKSHINA, V. N., Cand Geolog-Mineralog Sci (diss) -- "The stratigraphy of the Mesozoic and Paleogenic deposits of the west Siberian lowland and the paleogeography of the ancient basins of western Siberia (Based on data from the analysis of aqueous microflora: diatoms, silica flagellates,and coccolithophorides)". Tomsk, 1960. 17 pp (Siberian Sci Res Inst of Geol, Geophys, and Mineral Raw Materials SNIIGGIMS), 150 copies (KL, No 15, 1960, 132)

VEKSHINA, V.N.

Diatoms in Upper Jurassic sediments of the West Siberian Plain.
Trudy SNIGGIMS no.8:160-162 '60. (MIRA 15:9)
(West Siberian Plain--Diatoms)

VEKSHINA, V.N.

New genus and new species of diatoms from Cretaceous and Peleogene sediments in the West Siberian Plain. Trudy SNIGGIMS no.15:89-96 '61. (MIRA 15:9)

(West Siberian Plain--Diatoms)

VEKSHINA, V.N.

Zone with Ebria antiqua Schultz in the lower Oligocene of the West Siberian Lowland. Dokl.AN SSSR 136 no.5:1176-1179 F '61. (MIRA 14:5)

1.Sibirskiy nauchno-issledovatel'skiy institut geologii, geofiziki i mineral'nogo syr'ya. Predstavleno akad. A.L.Yanshinym.
(Siberia, Western--Geology, Stratigraphic)

VEKSHINA, V.N.

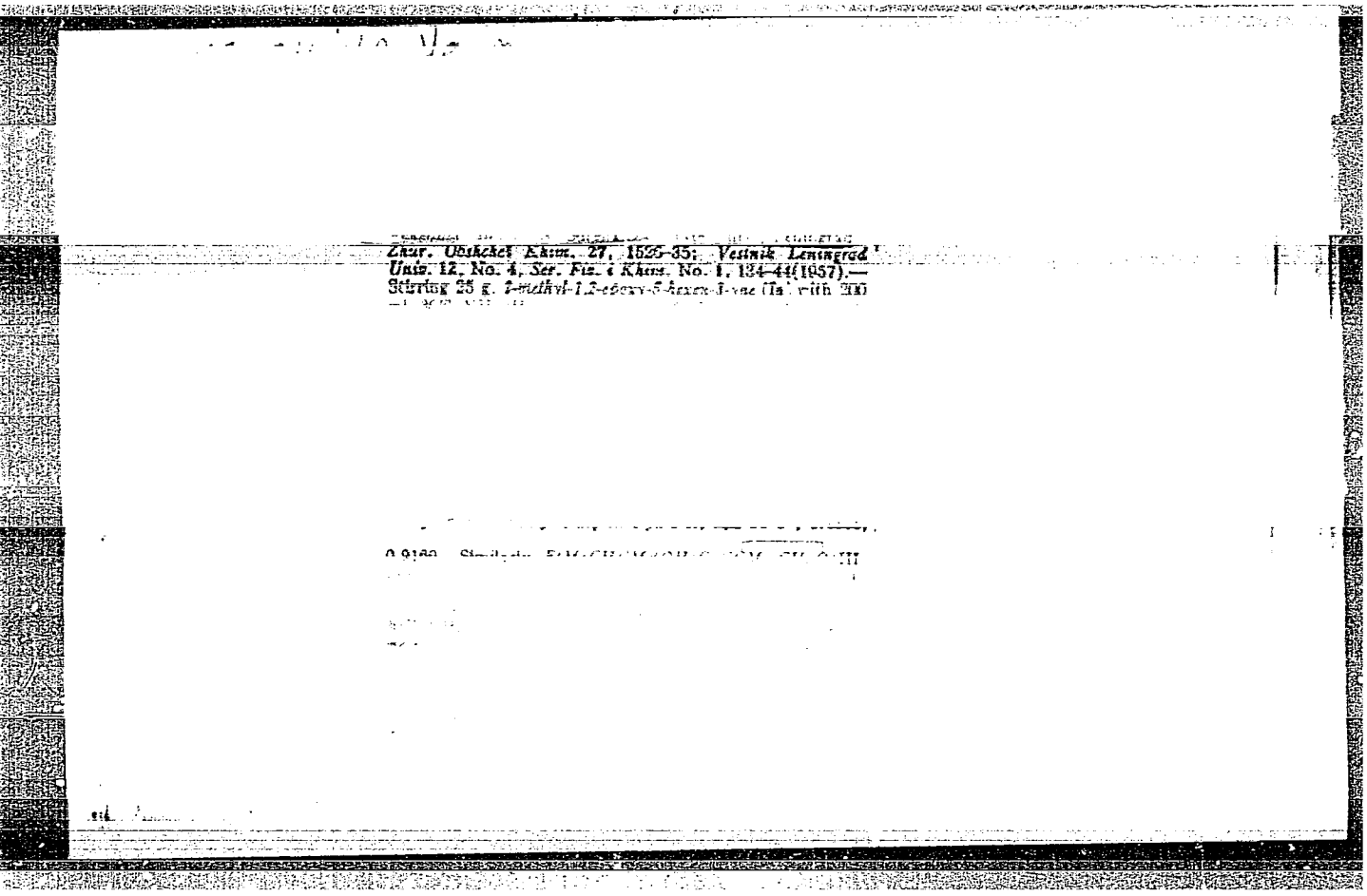
Coccolithophorids of the Mar'yanovskaya series in the West Siberian Plain. Trudy SNIIGGIMS no.23:101-103 '62. (MIRA 16:9)
(West Siberian Plain--Coccolithophoridae, Fossil)

VEKSHINA, V.N.

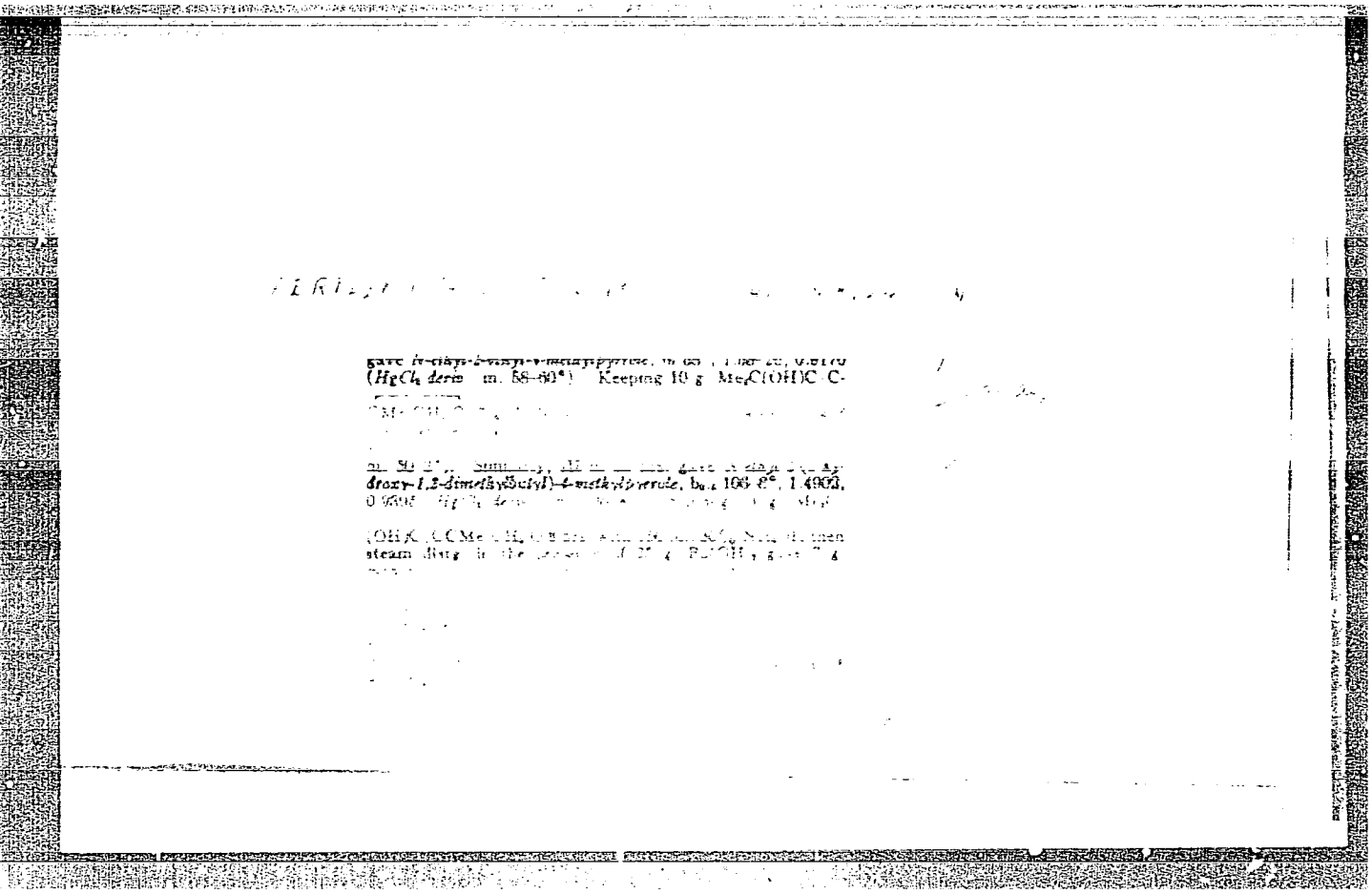
Elements of the paleography of the Mesozoic and Paleogene in the West Siberian Plain based on data from the analysis of diatoms and Coccolithophoridae. Trudy SNIIGGIMS no.26:48-61 '62. (MIRA 16:3)
(West Siberian Plain--Paleogeography)

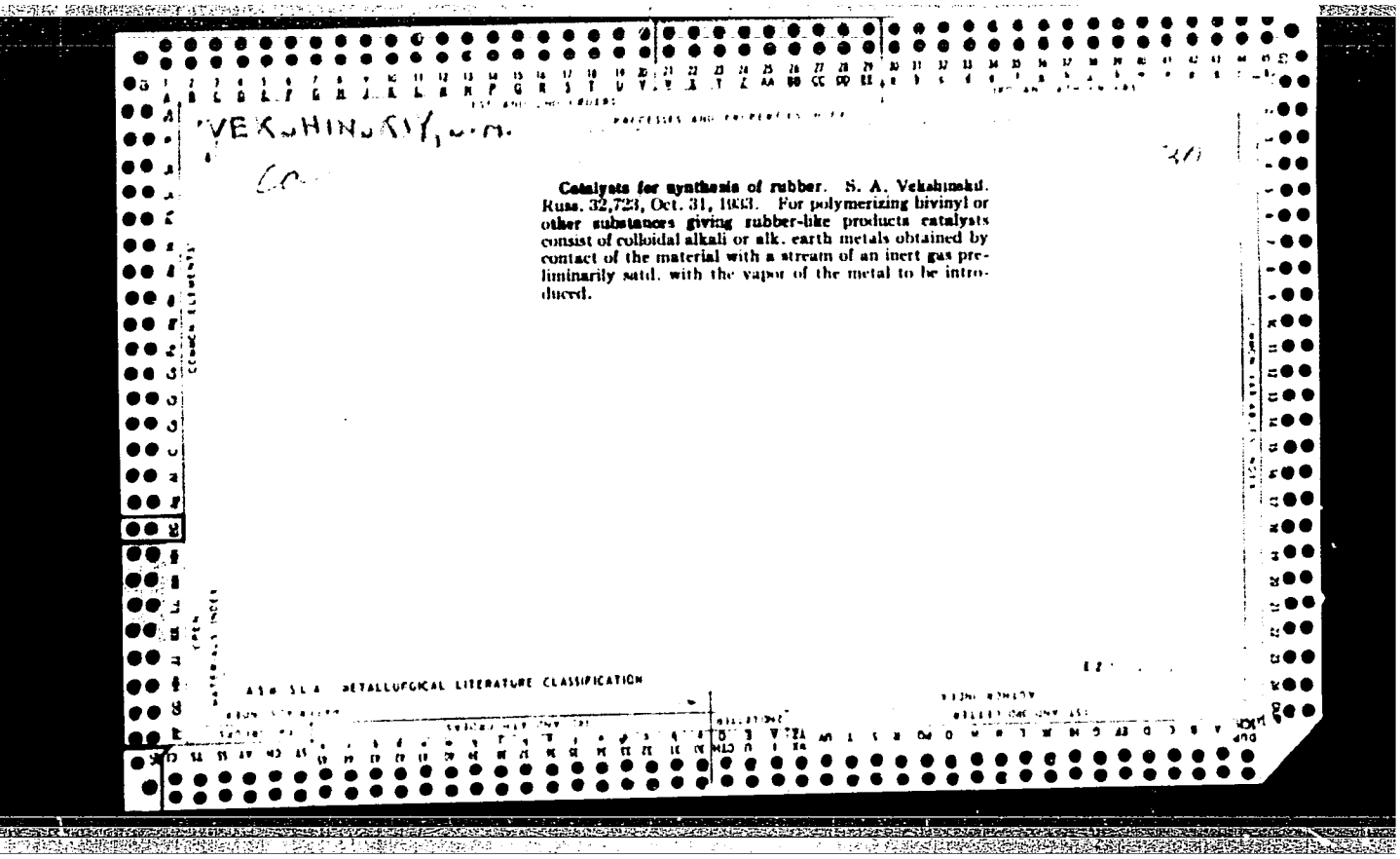
PERVEYEV, F.Ya.; VEKSHINA, Ye.M.; SURENKOVA, L.N.

Interreaction of ammonia and amines with α-oxides and hydroxyoxides of acetylenic and vinylacetylenic series. Synthesis of alkyl, -vinyl, -phenylpyrroles and pyrrole-carbinols [with summary in English, p.154]. Vest. Len. un. 12 no.4:134-144 '57. (MLRA 10:4)
(Pyrroles) (Methanol)



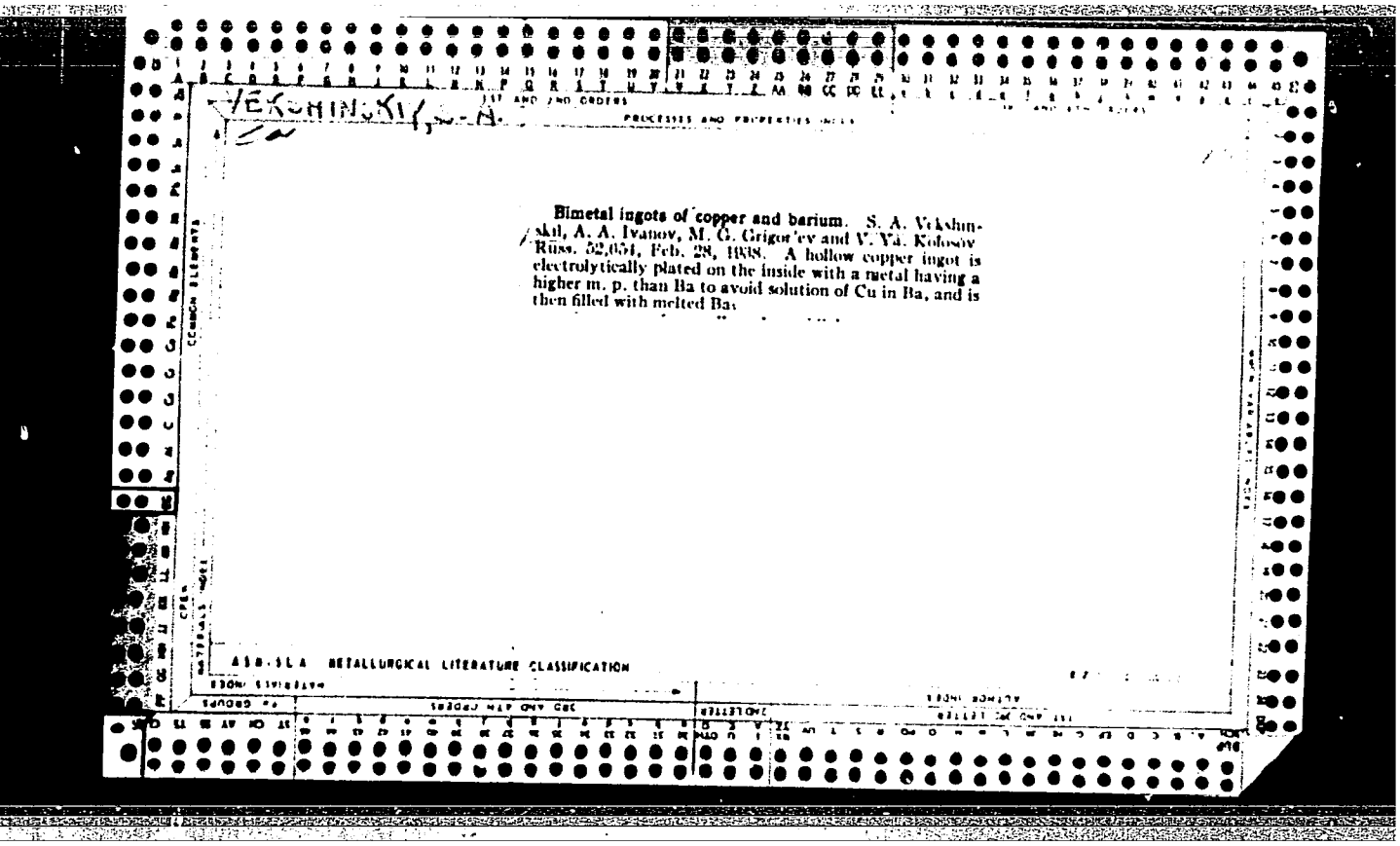
Zhur. Obshchei Khim. 27, 1525–35; Vestnik Leningrad Univ. 12, No. 4, Ser. Fiz. i Khim. No. 1, 134–44(1957).—Stirling 25 g. 2-methyl-1,2-epoxy-3-hexene-1-ol (Ia) with 210





VEKSHINSKII, S.A.

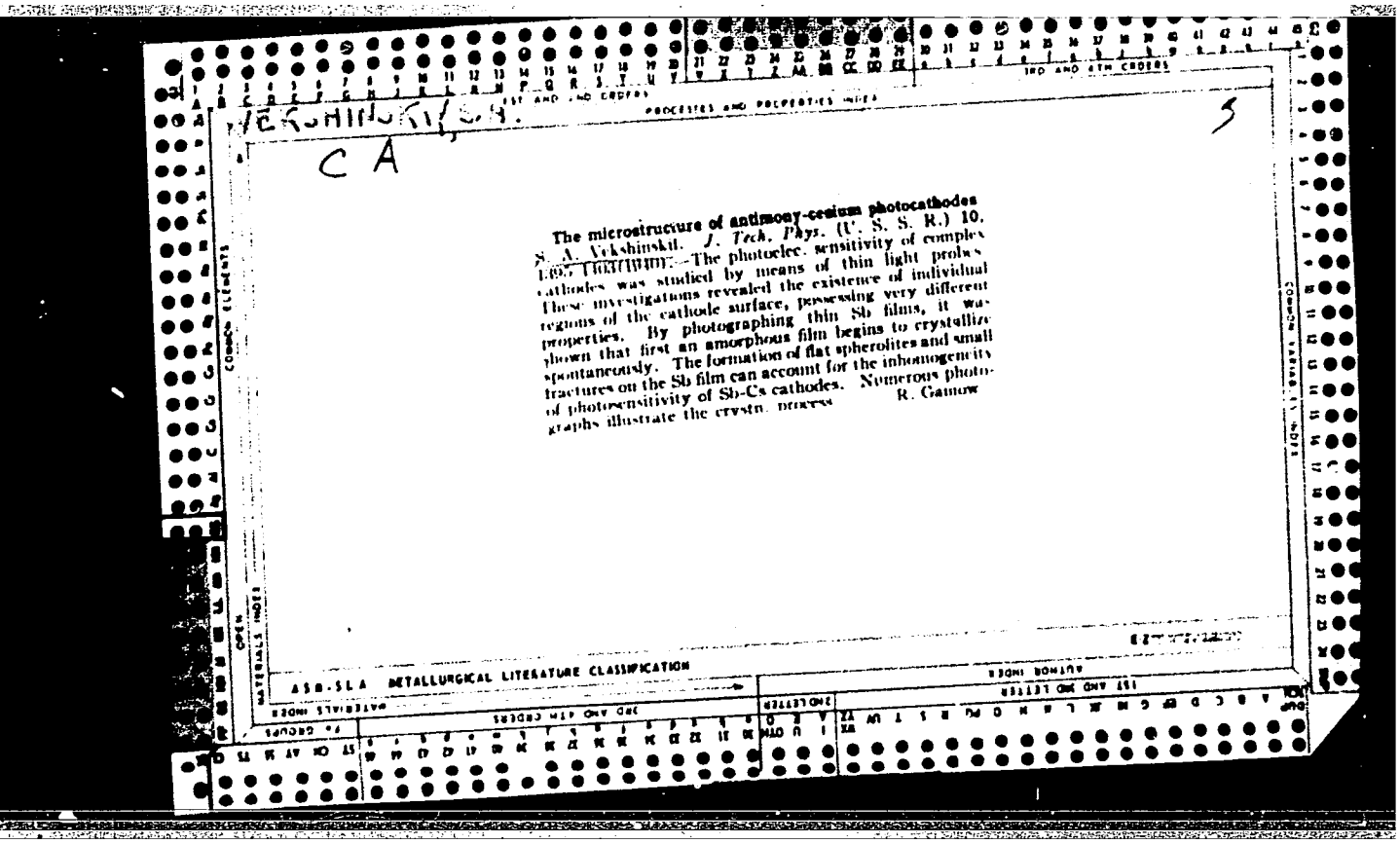
Catalysts for synthesis of rubber. S. A. Vekshinskii. Russ. 32,723, Oct. 31, 1933. For polymerizing bivinyl or other substances giving rubber-like products catalysts consist of colloidal alkali or alk. earth metals obtained by contact of the material with a stream of an inert gas preliminarily satd. with the vapor of the metal to be introduced.



VERKHINSKIY, S. A.

Bimetal ingots of copper and barium. S. A. Vrkshinskil, A. A. Ivanov, M. G. Grigor'ev and V. Ya. Kolosov. Russ. 52,051, Feb. 28, 1938. A hollow copper ingot is electrolytically plated on the inside with a metal having a higher m. p. than Ba to avoid solution of Cu in Ba, and is then filled with melted Ba.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



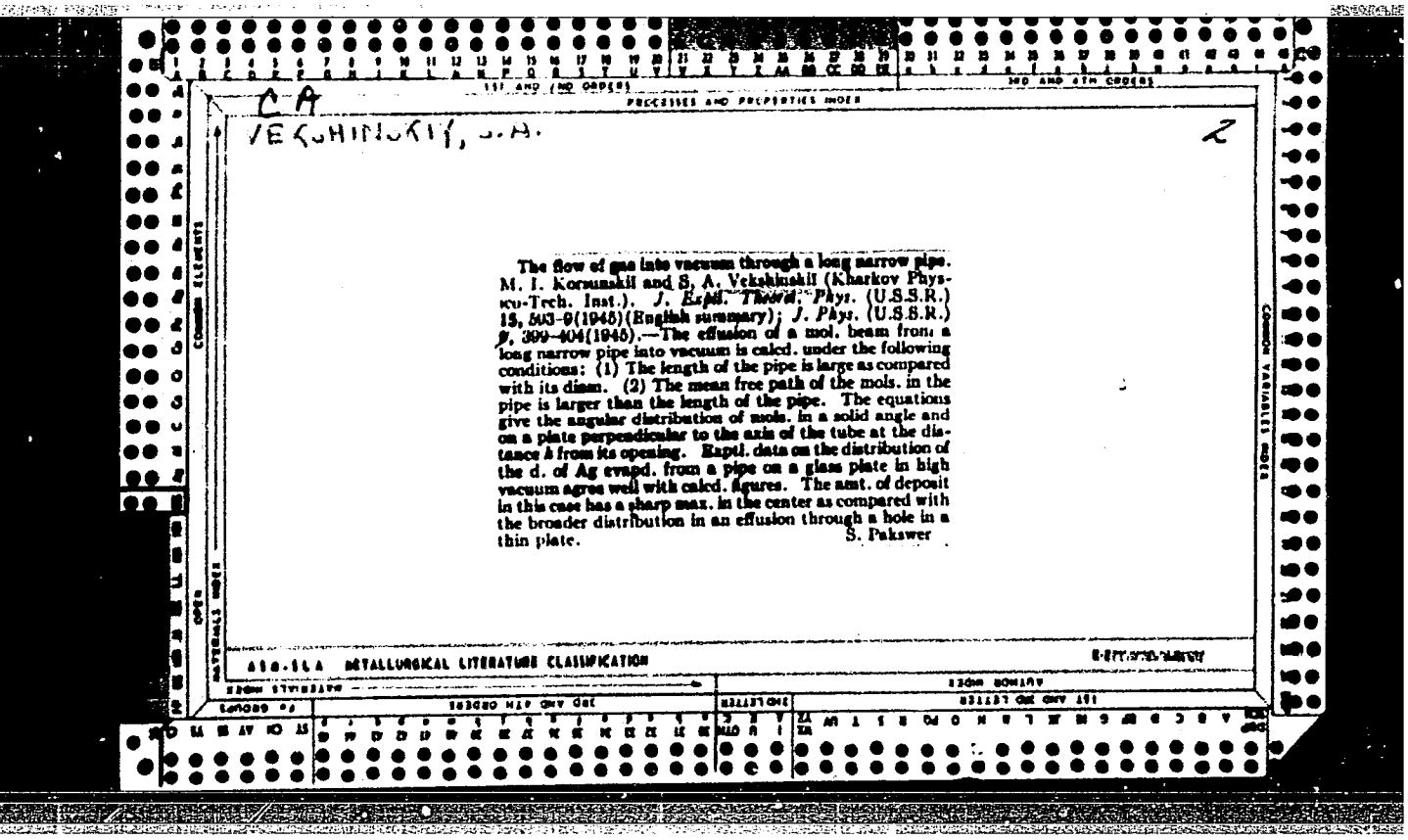
VERSHINSKII, S.A.

C A

5

The microstructure of antimony-cesium photocathodes
S. A. Vekshinskii. *J. Tech. Phys.* (U. S. S. R.) 10, 1665-71(1940).—The photoelec. sensitivity of complex cathodes was studied by means of thin light probes. These investigations revealed the existence of individual regions of the cathode surface, possessing very different properties. By photographing thin Sb films, it was shown that first an amorphous film begins to crystallize spontaneously. The formation of flat spherolites and small fractures on the Sb film can account for the inhomogeneity of photosensitivity of Sb-Cs cathodes. Numerous photographs illustrate the crystn. process. R. Gamow

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION



CA

VEKSHINSKIY, S.A.

2

The flow of gas into vacuum through a long narrow pipe. M. I. Korsunskii and S. A. Vekshinskii (Kharkov Physico-Tech. Inst.). *J. Exptl. Theoret. Phys.* (U.S.S.R.) 15, 503-9(1945)(English summary); *J. Phys.* (U.S.S.R.) 9, 399-404(1945).—The effusion of a mol. beam from a long narrow pipe into vacuum is calcd. under the following conditions: (1) The length of the pipe is large as compared with its diam. (2) The mean free path of the mols. in the pipe is larger than the length of the pipe. The equations give the angular distribution of mols. in a solid angle and on a plate perpendicular to the axis of the tube at the distance *h* from its opening. Exptl. data on the distribution of the d. of Ag evapd. from a pipe on a glass plate in high vacuum agree well with calcd. figures. The amt. of deposit in this case has a sharp max. in the center as compared with the broader distribution in an effusion through a hole in a thin plate.

S. Paksaver

VEKSHINSKIY, Sergey Arkad'yevich

"A New Method for the Metallographic Study of Alloys," 1944. This book sets forth the results of the author's attempt to develop a new method for obtaining and studying metal alloys. In 1946 this work was awarded the Stalin Prize.

Bol'shaya Sovetskaya Entsiklopediya, Vol. VII, 2nd ed., Moscow, 1949

107-57-1-2/60

AUTHOR: Academician A.I. Berg, Academician B.A. Vvedenskiy, Academician S.A. Vekshinskiy, Academician V.A. Kotel'nikov, Corresponding Member AS USSR A.L. Mints, ~~Corresponding~~ Member AS USSR A.A. Pistol'kors, Corresponding Member AS USSR V.I. Siforov

TITLE: Search, Dare, Create (Ishchite, derzayte, tvorite)

PERIODICAL: Radio, 1957, Nr 1, p 1 (USSR)

ABSTRACT: This is an open letter, an appeal to radio amateurs to experiment boldly, to create new designs, to promote new ideas in application of radio and electronics in industry, farming, transportation, and communication. The role of radio amateurism as a preparatory school for radio specialists in industry is noted. Achievements of radio and electronics are considered as a basis of development of all sciences, production, and even planning. Radio amateurs are urged to search, to dare, and to create.

AVAILABLE: Library of Congress

Card 1/1

VEKSHINSKIY, S.A., akademik

Electronics revolutionize technology. Tekh.mol. 29 no.9:24 '61. (MIRA 14:10)

(Electronics)

L 3462-66 EWT(l)/EWP(e)/EWT(m)/EWP(l)/EWP(e)/EWP(b) IJP(c) WW/RM/WH

ACCESSION NR: AP5017208 UR/0020/65/162/006/1281/1283

AUTHORS: Shelyubskiy, V. I.; Vekshinskiy, S. A. 42 B

TITLE: Investigation of the refraction of light by poly-alkaline silicate glasses by the method of samples of variable composition

SOURCE: AN SSSR. Doklady, v. 162, no. 6, 1965, 1281-1283

TOPIC TAGS: refractive index, optic glass, silicate glass, glass property

ABSTRACT: To investigate the influence of the poly-alkaline effect on the refraction of light, the authors studied binary sections of 4-component systems R_2O-R^1_2O-CaO-SiO_2, with constant content (19.1 molar per cent) of the two alkaline oxides, CaO (4.5 molar per cent) and SiO_2 (76.4 molar per cent), and binary sections of the five-component system Li_2O-Na_2O-K_2O-CaO-SiO_2 with the same constant content of the sum of the three alkaline oxides, CaO, and SiO_2. The method used

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L 3462-66

ACCESSION NR: AP5017208 O

to prepare the variable-composition samples is described. The refractive index was measured accurate to $\pm$ 5 x 10^{-4} with an Abbe type refractometer. The results for the constant- and variable-composition samples were compared with the refractive indices of the initial samples and of specially prepared constant-composition samples. The results show that the simultaneous presence of two or three alkaline substances does not lead to any nonlinearity in the dependence of the refractive index on the composition, so that it can be concluded that there is no poly-alkaline effect in complex silicate glasses. This report was presented by S. A. Vakshinskiy. Orig. art. has: 2 figures.

ASSOCIATION: None

SUBMITTED: 30Nov64 ENCL: 00 SUB CODE: OP, MT

NR REF SOV: 012 OTHER: 002

Card 2/2 Df

ACC NR: AP7003644 SOURCE CODE: UR/0020/67/172/001/0069/0072

AUTHOR: Vekshteyn, G. Ye.; Zaslavskiy, G. M.

ORG: none

TITLE: Contribution to the theory of relaxation under the influence of an external random field

SOURCE: AN SSSR. Doklady, v. 172, no. 1, 1967, 69-72

TOPIC TAGS: relaxation process, monochromatic radiation, quantum generator, phase equilibrium, random process

ABSTRACT: The authors investigate the behavior of a two-level system under the influence of a monochromatic wave with randomly varying phase in a case close to resonance. The main purpose is to describe the relaxation process of the system in the case when the balance equations are not valid. The problem is solved in general form with few limitations on the random law governing the phases of the field. The solution is based on using the equations for the components of the density matrix describing the behavior of the two-level system under the influence of the field and treating the phase as a series of δ-functions. The solutions go over in certain limiting cases to the already known solutions obtained by means of the balance equations. The results can be readily generalized to other forms of the random phase variation. The authors thank S. T. Belyayev and V. G. Zelevinskiy for useful criticism. This report was presented by Academician G. I. Budker 10 March 1966.

UDC: 53: 519.25

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ACC NR: AP7003644

Orig. art. has: 21 formulas.

SUB CODE: 20,07,12/ SUBM DATE: 10Mar66/ ORIG REF: 004/ OTH REF: 002

Card 2/2

KLIMENKO, A.P.; STEPANOV, A.V.; VEKSHTEYN, L.M.

Using the pressure drop of natural gas. Trudy Inst.isp.gaza AN USSR 9:97-102 '61. (MIRA 15:9)
(Gas, Natural) (Steam turbines)

STEMPKOVSKAYA, L.A.; VIKSHTEYN, M.A.

Simplified tracing of DDT by the Schechter and Haller method.
Vop. pit. 24 no. 6:17-20 N-D '65 (MIRA 19:1)

1. Laboratoriya po razrabotke metodov opredeleniya yadokhimikatov v pishchevykh produktakh (zav. - kand. khim. nauk L.A. Stempkovskaya) Ukrainskogo nauchno-issledovatel'skogo instituta pitaniya, Kiyev.

ACCESSION NR: AP4043646 S/0056/64/047/002/0678/0688

AUTHOR: Vekshteyn, Ye. G.

TITLE: Radiative corrections to the photoproduction of electron-positron pairs

SOURCE: Zh. eksper. i teor. fiz., v. 47, no. 2, 1964, 678-688

TOPIC TAGS: pair production, radiation effect, Coulomb field, fine structure, photoproduction

ABSTRACT: The S-matrix method is used to calculate radiative corrections to the effective cross section for photoproduction of an electron-positron pair in the Coulomb field of a nucleus. The relative magnitude (compared with the Bethe-Heitler formula) of these corrections is proportional to the first power of the fine-structure constant. The radiative-correction components calculated correspond to the electron self-energy part, the vertex parts, the photon self-

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ACCESSION NR: AP4043646

energy part, and the matrix element for other fourth-order processes. It is shown that in the ultrarelativistic region $\omega \gg m$, when the angle m/ω between the photon momentum and the electron (positron) is small, the relative correction is proportional to $(\omega/m)^2$ if the pair is symmetrically emitted relative to the photon momentum (m -- mass, ω -- energy). The energy and angular widths of this region of anomalously large radiative corrections is investigated. It is pointed out that inclusion of terms proportional to the square of the fine structure constant may give a fractional radiative correction which can exceed at high energies the correction obtained here. The accuracy of the results is compared with that of results obtained by others. Orig. art. has: 3 figures and 47 formulas.

ASSOCIATION: Odesskiy gosudarstvenny*y universitet (Odessa State University)

SUBMITTED: 22Sep63 ENCL: 00

SUB CODE: NP NR REF SOV: 003 OTHER: 000

Card 2/2

VEKSHTEYN, Ye.G.

Radiation corrections to the photoproduction of electron—positron pairs. Zhur. eksp. i teor. fiz. 47 no.2:678-688 Ag '64. (MIRA 17:10)

1. Odesskiy gosudarstvennyy universitet.

SKARIC, D.; SKARIC, V.; TURJAK-ZEBIC, V.; VEKSIL, Z.

2-phenyl-4,5,6,7-tetrahydroindazol-3-one-carboxylic acids. I. Synthesis and properties. Croat chem acta 34 no.2:75-83 '62.

1. Institute "Ruder Boskovic", Zagreb, Croatia, Yugoslavia.

S/148/61/000/006/013/013
E193/E480

AUTHORS: Sokolov, L.D., Shirokov, V.N., Grebenik, V.M., Veksin, I.N., Baklushin, I.L., Lyulenkov, V.I., Sabantsev, V.P.

TITLE: Experimental and analytical determination of forces in cold rolling

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Chernaya metallurgiya, 1961, No.6, pp.191-193

TEXT: In the course of an earlier investigation carried out by the present authors (Ref.1: Izvestiya vysshikh uchebnykh zavedeniy, Chernaya metallurgiya, 1959, 8), large discrepancies were found between the laboratory results and the operational data on forces acting on the rolls during cold rolling. It was revealed, however, in the course of further tests that in many cases the roll chocks had become worn (in some places to a depth of 0.4 mm) and it was postulated that this factor may have affected the load cell readings. In an attempt to find a way of eliminating this source of error, both during the calibration of the load cells and later in use, the effect of lead washere approximately 2 mm thick, placed under the dynamometers, was investigated. Fig.1 shows the

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experimental conditions: a - an annular washer supporting the load cell along its periphery; б - a solid washer under the central part of the load cell; в - no washer; г - a solid washer of the size equal to that of the load cell. On the right-hand side of Fig.1, the calibrating force is plotted against the load cell readings; most consistent results were obtained when a large solid washer was used (graph г). The latter method was employed in roll force measurements and the results compared with roll force values, calculated according to A.I.Tselikov and A.A.Korolev (Ref.2: Prokatnyye stany, Metallurgizdat, 1958). The results are tabulated. It will be seen that the difference reached occasionally 30 or even 37%, the experimental values being always lower than the calculated figures. One possible explanation of this effect is provided by the fact that the temperature of cold rolled metal increases. Although the strength of the carbon steels and constructional alloy steels increases on heating between 20 and 400°C, this increase takes place during cold rolling at certain rolling speeds only. According to M.I.Manjoine (Ref.5: Journal of the Iron and Steel, v.150, p.3, VI, 1947, 380),

Experimental and analytical ...

the "ageing peak" is shifted towards higher temperatures when the steel is rolled at high rolling speeds, so that under these conditions the strength of steel between 0 and 400°C decreases with increasing temperature. Consequently, if the temperature attained by the metal during cold rolling at high speeds is 300°C, its resistance to deformation (particularly at heavy drafts) decreases, which explains the discrepancy observed. There are 2 figures, 1 table and 5 references: 4 Soviet and 1 non-Soviet. The reference to an English language publication reads as follows: M.I.Manjoine, Journal of the Iron and Steel, v.150, p.3, VI, 1947, 380.

ASSOCIATION: Sibirskiy metallurgicheskiy institut
(Siberian Metallurgical Institute)

SUBMITTED: March 30, 1960

Card 3/6

ALEYNIKOV, A.I.; BAKLUSHIN, I.L.; VEKSLIN, I.N.; GREBENIK, V.M.; LYULENKOV, V.I.; SABANTSEV, V.P.; SEREGIN, S.A.; SOKOLOV, L.D.; SHIROKOV, V.N.

Investigating the mechanism of the rotation process of ferroalloy furnace baths. Izv. vys. ucheb. zav.; chern. met. no.8:181-187 '60. (MIRA 13:9)

1. Sibirkiy metallurgicheskiy institut.
(Rotary hearth furnaces) (Iron alloys)

VEKSIN, I. N. Cand Tech Sci -- "Dynamics of the mechanism of locomotion of the walking excavator of the Ural[redacted]." Sverdlovsk, 1961 (Min of Higher and Secondary Specialized Education RSFSR. Ural Polytechnic Inst im S. M. Kirov). (KL, 4-61, 195)

BAKLUSHIN, I.L., inzh.; VEKSIN, I.N., inzh.; GREBENIK, V.M., dots., kand.tekhn.nauk; LYULENKOV, V.I., inzh.; SABANTSEV, V.P., inzh.; SOKOLOV, L.D., prof., doktor tekhn.nauk; SHIROKOV, V.N., prof.

Investigating the 740 cold rolling mill for thin sheets. Izv. vys.ucheb.zav.; chern.met. 2 no.8:143-148 Ag '59. (MIRA 13:4)

1. Sibirskiy metallurgicheskiy institut. Rekomendovano kafedroy mekhanicheskogo oborudovaniya metallurchiskikh zavodov Sibirskogo metallurgicheskogo instituta.
(Rolling mills)

BAKLUSHIN, I.L., inzh.; VEKSIN, I.N., inzh.; GREBENIK, V.M., dotsent, kand. tekhn. nauk; LYUBENKOV, V.I., inzh.; SABANTSEVM, V.P.; SOKOLOV, L.D., prof., doktor tekhn. nauk; SHIROKOV, V.N., prof.

Hydraulic calibration of 1500-ton power presses. Izv. vys. ucheb. zav.; chern. met. 2 no.4:113-121 Ap '59. (MIRA 12:8)

1.Sibirskiy metallurgicheskiy institut. Rekomendovano kafedroy mekhanicheskogo oborudovaniya metallurgicheskikh zavodov Sibirskogo metallurgicheskogo instituta.
(Hydraulic presses) (Calibration)

SOV/137-58-10-20859

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 10, p 73 (USSR)

AUTHORS: Veksin, I.N., Grebenik, V.M., Sokolov, L.D., Shirokov, V.N.

TITLE: An Investigation of the Bearing Capacity of a Nr 425 Cold-rolling Sheet Mill (Issledovaniye nesushchey sposobnosti listovogo stana 425 kholodnoy prokatki)

PERIODICAL: Izv. vyssh. uchebn. zavedeniy. Chernaya metallurgiya, 1958, Nr 1, pp 160-178

ABSTRACT: The methods and results of measurements of rolling forces, stresses in the housings, and torque moments of the electric motor in cold rolling on a 425 sheet mill. The major measurements were taken on 2 stands. The electrical characteristics were taken simultaneously at 3 stands and the coiler. Measurement of the forces of rolling steel-strip grades 2, 10 SP, 85, 65, E3A, 50, U7A, U10A, 08PS, and 08KP in the cold and hot conditions is made by hydraulic capsules with wire strain gages. The hydraulic capsules are placed only under the left screwdowns (S). Measurement of stresses in the housings is made by wire resistance strain gages at 9 points which are shown by analysis to take the maximum stresses. In

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An Investigation of the Bearing Capacity (cont.)

investigating the electric drives, measurement was made of armature current, field current, and the voltage on the armature of the rolling-mill motors, coilers, and screwdowns. The S stresses do not exceed 80 t, and the stresses in the housings do not exceed the permissible level. The mean stressing of rolling-mill motors in terms of current, moment, and power is 30-50%.

M.Z.

1. Rolling mills--Performance 2. Rolling mills--Electrical properties
3. Rolling mills--Test methods

SOKOLOV, L.D., prof., doktor tekhn.nauk; SHIROKOV, V.N., prof.; GREBENIK, V.M., dots., kand.tekhn.nauk; BAKLUSHIN, I.L., inzh.; VEKSIN, I.N., inzh.; LEDENEV, Yu.N., inzh.; SABANTSEV, V.P., inzh.

Investigation of rolling mill stands. Izv.v.ys.ucheb.zav.; chern. met. no.8:135-140 Ag '58. (MIRA 11:11)

1. Sibirskiy metallurgicheskiy institut.
(Rolling mills) (Strains and stresses)

BAKLUSHIN, I.L.; VEKSIN, I.N.; LYULENKOV, V.I.; SABANTSEV, V.P.; SOBOLEV, A.P.; SOKOLOV, L.D.; SHIROKOV, V.N.

Analyzing the reserve strength of the 1100 blooming mill stand in the Kuznetsk Metallurgical Combine. Izv. vys. ucheb. zav.; chern. met. 7 no.2:205-212 '64. (MIRA 17:3)

1. Sibirskiy metallurgicheskiy institut.

VEKSIN, I.N., inzh., kand.tekhn.nauk, dots.; GREBENIK, V.M., doktor tekhn. nauk, prof.; SOKOLOV, L.D.; SHIROKOV, V.N., prof.

Investigating the carrying capacity of 425 sheet mills for cold rolling. Izv. vys. ucheb. zav.; chern. metal no.1:160-178 Ja '58. (MIRA 11:5)

1.Sibirskiy metallurgicheskiy institut.
(Rolling mills)

VEKSIN, I.N., inzh.

Characteristics of the motion of the ESh UZTM excavator during hydraulic braking. Izv.vys.ucheb.zav.;mashinostr. no. 12:140-149 '63. (MIRA 17:9)

1. Mogilevskiy mashinostroitel'nyy institut.

SOKOLOV, L.D.; SHIROKOV, V.N.; GREBENIK, V.M.; VEKSIN, I.N.; BAKLUSHIN, I.L.; LYULENKOV, V.I.; SABANTSEV, V.P.

Experimental and rated determination of forces in cold rolling. Izv.vys.ucheb.zav.; chern.met. 4 no.6:191-193 '61. (MIRA 14:6)

1. Sibirskiy metallurgicheskiy institut.
(Rolling (Metalwork))

SOKOLOV, L.D.; SHIROKOV, V.N.; GREBENIK, V.M.; VEKSIN, I.N.; BAKLUSHIN, I.L.; LYULENKOV, V.I.; SABANTSEV, V.P.; KAZANTSEV, A.A.

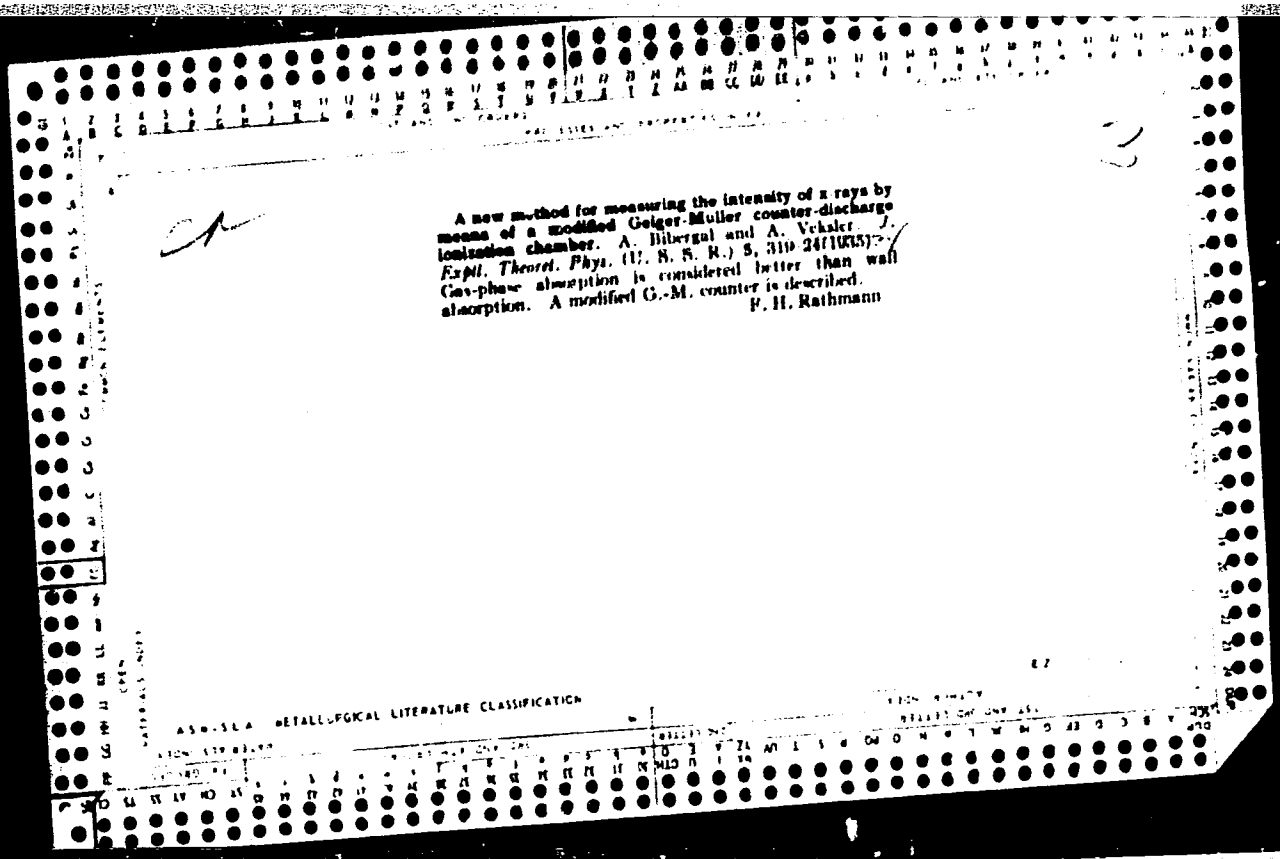
Investigating stresses in models of steel pouring ladles. Izv. vys. ucheb. zav.; chern. met. 4 no.10:147-156 '61. (MIRA 14:11)

1. Sibirskiy metallurgicheskiy institut.
(Smelting furnaces--Equipment and supplies)
(Thermal stresses--Models)

ALEYNIKOV, A.I.; BAKLUSHIN, I.L.; VEKSIN, I.N.; VOSKRESENSKIY, V.A.; GONCHAROV, O.M.; LYULENKOV, V.I.; SHIROKOV, V.N.

Investigating the throw mechanism of a charging machine on ferroalloy furnaces. Izv. vys. ucheb. zav.; chern. met. 6 no.6:204-208 '63. (MIRA 16:8)

1. Sibirskiy metallurgicheskiy institut.
(Metallurgical furnaces--Equipment and supplies)



A new method for measuring the intensity of x rays by means of a modified Geiger-Müller counter-discharge ionization chamber. A. Bilergal and A. Veksler. J. Expil. Theoret. Phys. (U. S. S. R.) 8, 319-24[1938]. Gas-phase absorption is considered better than wall absorption. A modified G.-M. counter is described.
F. H. Rathmann

VEKSLER, A.A.; GRIGOR'YEVA, A.M?; KUL'CHITSKAYA, V.S.; LUTSENKO, A.I.; PEREL'ZON, R.A.; TRYASUNOVA, M.V.; SLEMZIN, A.A., redaktor; FOMICHEV, P.M., tekhnicheskiy redaktor

[Soviet live stock in numbers; a statistical manual] Chidlennost' skota v SSSR; statisticheskii sbornik. Moskva, Gos.stat.izd-vo, 1957. 618 p. (MLRA 10:8)

1. Russia (1923- U.S.S.R.) TSentral'noye statisticheskoye upravleniye.
(Stock and stockbreeding--Statistics)

VEKSLER, ... G., nauchnyy sotrudnik

At the walls of the Belyi Gorod. Nauka i zhizn' 28 no.1:56-57 Ja '61. (MIRA 14:1)

1. Muzey istorii i rekonstruktsii Moskvy.
(Moscow—Excavations (Archaeology))