

Improvement of the Melting Technology of Resistance Alloys in Electric  
Furnaces SOV/130-58-9-5/23

(Table 2). For the chromal alloy, the old procedure involved melting a fresh charge in 20-ton basic electric furnaces with an oxygen boil, alloying by adding low-carbon ferrochromium and primary lump aluminium during the refining period and adding aluminium-calcium and aluminium-barium alloys and cerium before tapping. The new method is based on: melting 1 500 kg carbon-containing scrap with 1620 kg type 45 steel scrap in a 5-ton furnace at full power with an ore boil and addition of chromium-aluminium alloy during refining; preliminary deoxidation of the bath with lump aluminium; the addition of metallic titanium (10 kg) or the corresponding amount of titanium containing scrap 5 min. before tapping; the use of carbon tetrachloride to protect the alloy from oxidation during bottom-pouring (tapping temperature 1 580 - 1 620 °C). Comparative data (Table 3) show the advantages of the new method.

There are 1 figure and 3 tables.

Card 3/4

Improvement of the Melting Technology of Resistance Alloys in  
Electric Furnaces

SOV/130-58-9-5/23

ASSOCIATION: Zavod "Elektrostal'" im. I.F. Tevosyana  
("Elektrostal'" Works imeni I.F. Tevosyan)

Card 4/4

1. Corrosion resistant alloys--Production 2. Industrial  
production--USSR 3. Electric furnaces--Applications

LEYZEROVA, M.M.

137-1958-3-5049

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 3, p 84 (USSR)

AUTHORS: Leyzerova, M. M., Naysh, B. N.

TITLE: Electric Heating of Valve Stock Replaces Heating in Flame Furnaces (Elektronagrev zagotovok klapanov vzamen nagreva v plamennykh pechakh)

PERIODICAL: Tekhnol. transp. mashinostroyeniya, 1957, Nr 8, pp 19-23

ABSTRACT: A description of a process in which valve stock, made of Kh9S2 steel, is heated by inductive methods in a standard KIN-20 forge heater. The flame-heated forgings have a medium-acicular martensite structure with an  $R_c$  of 52-55, whereas induction-heated forgings have a fine-acicular martensite structure with an  $R_c$  of 56-58. The introduction of the induction-heating method produced a 25 percent increase in the production, increased the durability of the dies by 17 percent, effected a 5 percent saving of metal, and reduced the total cost of heating the stock by 31 percent. Experiments were carried out in which the heating of stock for tempering purposes was combined with heating operations intended to prepare the metal for die forging. The mechanical properties of metal treated in this fashion are comparable to

Card 1/2

137-1958-3-5049

Electric Heating of Valve Stock Replaces Heating in Flame Furnaces

those of metal treated in the standard manner, whereas the strength characteristics are even somewhat higher. Sorbitic structure is observed in both cases. In the future separate heating operations for tempering may be eliminated.

I. G.

Card 2/2

Translation from: Referativnyy zhurnal. Metallurgiya, 1959, Nr 3, p 281 (USSR) SOV/137-59-3-6887

AUTHORS: Naysh, B. N., Leyzerova, M. M.

TITLE: HF Induction Heating Replaces Flame Furnaces in the Manufacture of Valve Stampings (Perevod shtampovki klapanov s nagreva v plamen-nykh pechakh na elektronagrev)

PERIODICAL: V sb.: Chelyabinsk. kuznetsy v bor'be za tekhn. progress. Chelyabinsk, 1958, pp 57-73

ABSTRACT: The introduction of an HF induction heating (H) installation at the plant made it possible to: a) Obtain a homogeneous structure of the blanks; b) perform H without scaling, which increased the durability of the dies and resulted in a monthly economy of ~1700 kg of metal; c) increase the hardness of the valve after stamping in conjunction with HF-induction H, thus eliminating an additional operation of heating prior to quenching.

Ye. L.

Card 1/1

SOV/137-59-5-11413

Translation from: Referativnyy zhurnal, Metallurgiya, 1959, Nr 5, p 276  
(USSR)

AUTHOR: Leyzerova, M.M. ✓

TITLE: The Development in the Use of Induction Heating

PERIODICAL: Tekhn.-ekon. byul. Sovnarkhoz. Chelyab. ekon. adm. r-na, 1958,  
Nr 7, pp 51 - 52

ABSTRACT: Information is given on the extended use of induction heating at the Chelyabinsk Tractor Plant. Induction heating is used for high-frequency/current quench hardening (instead of carburizing) of "45" steel camshafts. Methods were developed for two-side high-frequency/current quench hardening of track link bushings made of "65 G" steel. Original inductor designs were developed for quench hardening parts of complicated configuration. Power frequency currents are used in induction heating for forging and stamping blanks of  $> 150$  mm in diameter. For blanks of

Card 1/2

The Development in the Use of Induction Heating

SOV/137-59-5-11413

40 - 50 mm in diameter 2,500 cycles were selected as optimum current frequency. A method was introduced consisting in the centrifugal casting of bimetallic bushings with high frequency current heating. This produces an even bronze layer of 0.25 - 5.0 mm and more. The enumerated methods are economically effective. ✓

V.R.

Card 2/2

CHERNETSKIY, N.S., kand. tekhn. nauk; PETROSYAN, R.A.;  
LEYZEROVICH, A.Sh., inzh.; VOLKOV, I.I.

Determination of technical and economic indices of the operation  
of a 200 Mw. block using a control computer. Teploenergetika 11  
no.7:20-24 J1 '64. (MIRA 17:8)

1. Vsesoyuznyy teplotekhnicheskiy institut.



LEYZERQVICH, A.Sh., inzh.; TRUBILOV, M.A., kand.tekhn.nauk; PROKHOROV, S.A.,  
inzh.; KULICHIKHIN, V.V.

Buckling of steam turbine housings due to thermal stresses.  
Teploenergetika 12 no.10:57-62 0 '65.

(MIRA 18:10)

1. Vsesoyuznyy teplotekhnicheskii institut.

PROCESSES AND PROPERTIES INDEX

9

*Co*

Treating sulfur-containing ores. G. YA. LEZHNEVICH AND M. I. GUTMAN. Russ. 27,192, July 9, 1928. Metals, oxides and slags are obtained by blowing disintegrated ores, with or without addns. such as flux, fuel and other reagents, into a preliminarily heated reaction chamber. The powd. mist. is blown across the melt accumulated on the bottom of the chamber for the purpose of placing it in thin layers.

A 50-51A METALLURGICAL LITERATURE CLASSIFICATION

E-2

191 AND 192 INDEX

ALPHABETIC INDEX

SYMBOLIC INDEX

GROUPS

MATERIALS INDEX

COMMON ELEMENTS

PROCESSES AND PROPERTIES INDEX

1ST AND 2ND CROERS

9

*ca*

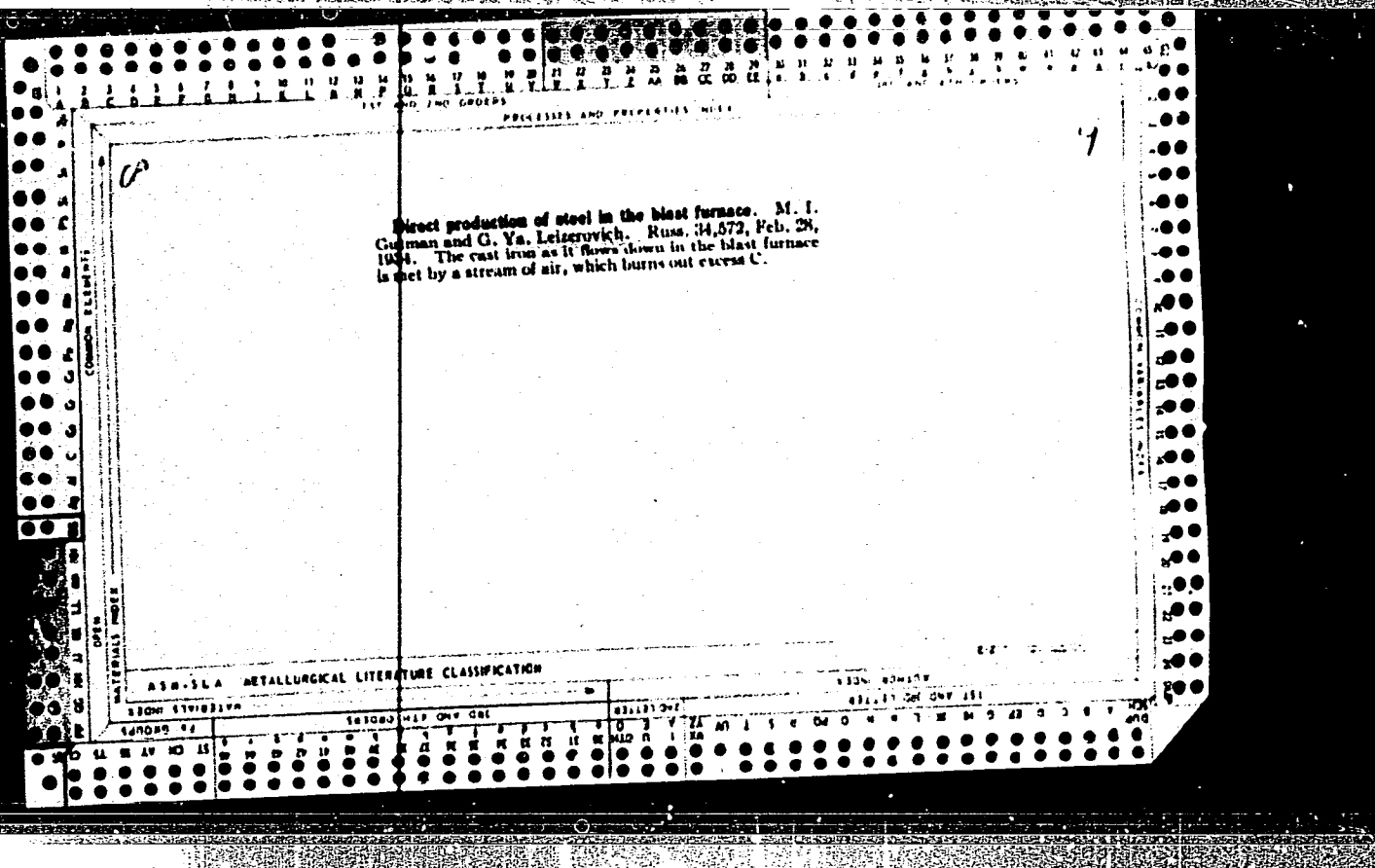
Treating sulfur-containing ores. G. YA. LEIZEROVICH and M. I. GUTMAN. Russ 27,183, March 6, 1929. The mixt. described in the preceding abstract is blown into the combustion chamber of a boiler against the water preheating section or against the refractory lining to obtain an agglomeration of non-volatile products and a cooled gas free from dust.

ASB-SLA REF. SURGICAL LITERATURE CLASSIFICATION

19000 180000



1ST AND 2ND ORDERS																									
PROCESSES AND PROPERTIES INDEX																									
Treatment of pulverized materials. M. Gutman and G. Laisanovich. <i>Trans. VI Mendeleev Congr.</i> 1932, II, 1, 608-20(1932).—A review of existing technical trends in the treatment of pulverized raw materials in the non-ferrous metal industry and of recent progress in the industry of the U. S. & W. H. R. Stefanowsky																									
A13-11A METALLURGICAL LITERATURE CLASSIFICATION																									
4TH ORDER INDEX																									
1ST AND 2ND LETTERS																									



1ST AND 4TH LETTERS

PROCESSES AND PROPERTIES INDEX

ea

National preparation of copper smelter charge. G. Ya. Lejzovich. ~~Metall. 1935, No. 3, 78~~  
Results of expts. showed advantages of the use of finely ground quartz flux (less than 1 m.m.) and its proper mixing with the charge of Cu concentrates. B. N. Daniloff

9

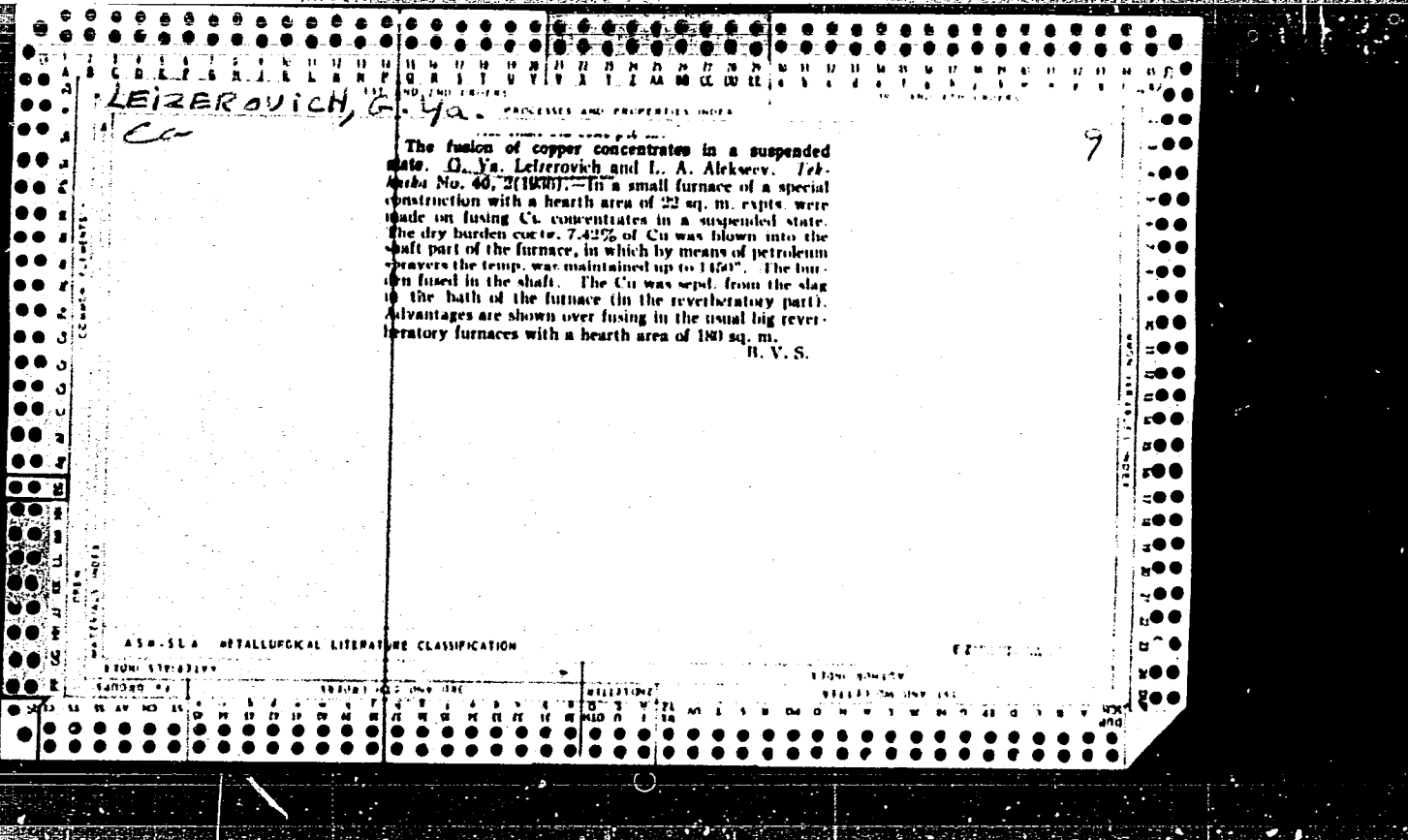
COMMON ELEMENTS

OPEN MATERIALS INDEX

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

1ST AND 4TH LETTERS

1ST AND 4TH LETTERS





1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

2ND AND 3RD ORDERS

10

9

Recovery of copper from converter slag. G. Ya. Leizerovich, Russ. 60,790, March 31, 1937. From converter slag is blown with carbonaceous or hydrocarbon reducing agent, and fine quartz sand is continuously fed into this stream of the slag being discharged from the ladle.

COMMON ELEMENTS

OPEN

WATERWAYS INDEX

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

1ST AND 2ND ORDERS

3RD AND 4TH ORDERS

1ST AND 2ND ORDERS

3RD AND 4TH ORDERS

LEYZEROVICH, G.Ya., kand.tekhn.nauk.

Principles of roasting in a fluidized bed. TSvet.met. 27 no.6:72-78  
N-D '54. (MIRA 10:10)

(Ore dressing) (Fluidization)

ЛЕЙЗЕРОВИЧ, Г. Я.  
LEYZEROVICH, G. Ya.; BABINA, I. V.; SEREBRENNIKOVA, E. Ya.

Roasting copper concentrates in a fluidized bed. TSvet.met. 28  
no.6:12-15 N-D '55. (MIRA 10:11)

1. Gintsvetmet. (Copper--Metallurgy) (Fluidization)

LETZEROVICH, G. Ya.  
LEYZEROVICH, G. Ya., kand. tekhn. nauk.

Furnaces and reactors based on roasting in a fluidized bed.  
TSvet.met. 28 no.2:71-77 Mr-Ap '55. (MIRA 10:10)  
(Furnaces, Heat-treating) (Fluidization)

LEYZEROVICH, G.Ya.

Gold agglomeration of concentrates. TSvet.met. 28 no.5:35-42  
S-0 '55. (MIRA 10:10)

1. Gintsvetmet.

(Ore dressing)

LEYZOROVICH, G.Ya., kandidat tekhnicheskikh nauk; SEREBRENNIKOVA, E.Ya.,  
inzhener.

Roasting pyrites in boiling media. Bum.prom. 30 no.12:9-13 D '55.  
(MLRA 9:3)

1. Gosudarstvennyy nauchno-issledovatel'skiy institut tsvetnykh  
metallov.

(Pyrites)

137-52-4-6435

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 4, p 14 (USSR)

AUTHOR: Leyzerovich, G. Ya.

TITLE: Results of Large-scale Laboratory Investigations by Gintsvetmet of the Roasting of Various Materials Encountered in the Non-ferrous Metals Industry: Copper, Iron, Nickel, Cobalt and Lead Sulfides (Resul'taty issledovaniy Gintsvetmeta v laboratornom mashtabe po obzhigu razlichnykh materialov tsvetnoy metallurgii: sul'fidov medi, zheleza, nikelya, kobal'ta i svintsa)

PERIODICAL: Tr. Tekhn. soveshchaniya po obzhigu materialov v kipyash-chem sloye. Moscow, Metallurgizdat, 1956, pp 57-71

ABSTRACT: The investigations of the roasting processes of all these materials were conducted in a small continuous roasting furnace under identical methods of control and temperature adjustment. Relative to the roasting of Cu concentrates it is established that they can be processed in the presence of a high Zn content, wherein 95 percent of the Zn undergoes oxidation. The percentage of SO<sub>2</sub> in the roasting gases attains 14-16 percent. In roasting pyrite tailings (27 percent S) from Pb-Zn ore concen-

Card 1/2

137-58-4-6435

Results of Large-scale Laboratory Investigations (cont.)

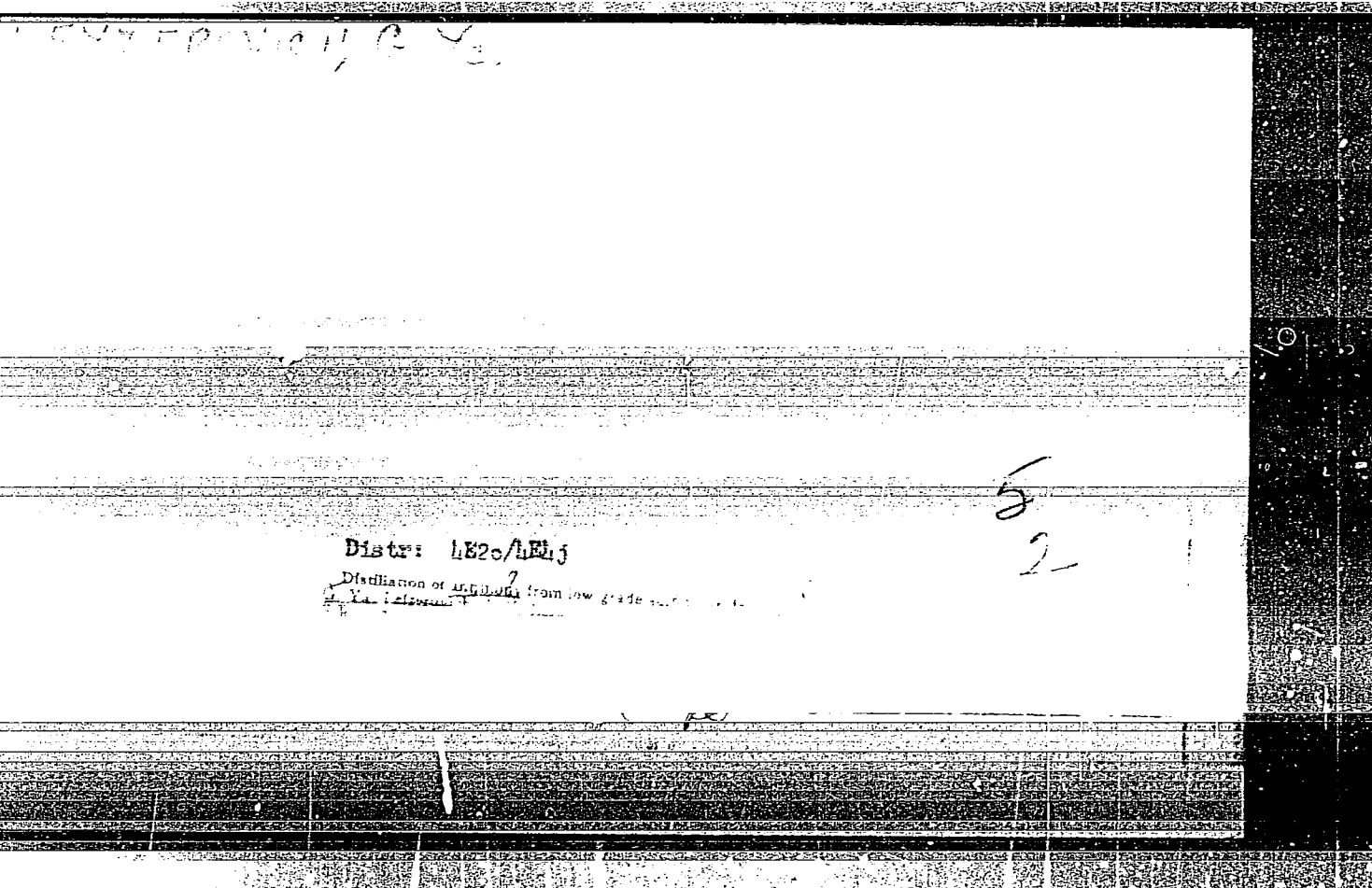
tration, it was established that the process proceeds without any complications whatever, and the resultant gas has a high SO<sub>2</sub> content (10-14 percent). Experiments in FluoSolid roasting in converter matte (75.37 percent Ni and 20.0 percent S, size: 27 percent-200 mesh) revealed an increase in the viscosity of the FluoSolid layer and the sintering of the pyrite cinders within 3-3.5 hours. The S content of the pyrite cinders fluctuated between 2.65 and 10 percent. The SO<sub>2</sub> content of the gases was appx. 5 percent. The experiments established that sulfating FluoSolid roasting of rich Pb concentrates, with attainment of 67.5 percent sulfating, is possible. Roasting of Co concentrate of the following percent composition: Co 0.56, Ni 0.12, Fe 36.0, and 38.5, was conducted with the object of transforming the Co into a water-soluble sulfate for subsequent aqueous leaching. The experiments showed the best results in the leaching of Co (better by 10/15 percent) and in the unit productivity per hearth area (>29 times 1490 kg instead of 51 kg).

A. P.

1. Minerals--Roasting processes

Card 2/2





Distr: LK20/LK43  
Distillation of argolite from low grade ...  
Y. ...

5  
2

LEZROVICH, F. I.

3  
The powder material and H<sub>2</sub>SO<sub>4</sub> are fed separately  
into a reactor and the resulting

LEYZEROVICH, G. YA.

136-9-4/14

AUTHORS: Leyzerovich, G. Ya., Lonskiy, I. S. and Charnyy, V. Z.

TITLE: Sulphatizing Roast of sulphides of non-ferrous metals in a fluidized bed. (Sul'fatiziruyushchiy obzhig sul'fidov tsvetnykh metallov v kipyashchom sloye).

PERIODICAL: Tsvetnyye Metally, 1957, No.9, pp. 19-25 (USSR).

ABSTRACT: The authors discuss work on fluidized bed sulphatizing roasting of sulphide minerals in various countries. They give details of investigations by the Gintsvetmet organization. They show the apparatus used (Figs. 2 and 3) and give results obtained with copper (34% Cu, 15.1% S, 7.23% Fe, 3.73% Al<sub>2</sub>O<sub>3</sub>, 0.69% MgO, 1.54% CaO, 2.09% Zn, 2.39% Pb, 23.06% SiO<sub>2</sub>, 0.6 g/ton Au and 180 g/ton Ag) and copper-zinc (8.87% Cu, 9.4% Zn, 24.44% Fe and 38.33% S) concentrates. High degrees of sulphatization of copper and zinc in both these materials were obtained by fluidized-bed roasting, in agreement with experimental and full-scale work abroad. The enlarged laboratory-scale apparatus developed was found to be suitable for studying the process for various materials and on the basis of the results obtained the authors recommend the wide use of fluidized bed roasting in Soviet industry.

Card 1/1 There are 7 figures and 11 references, all of which are Russian.

ASSOCIATION: Gintsvetmet.

1. Sulphides-Minerals 2. Instrumentation 3. Heat-Processes

ALEKSEYEV, B.D.; ALAVERDOV, A.I.; BALIN, I.D.; SIDNEV, A.I.; BUROVOY, I.A.;  
GUSOV, A.V.; IVANOV, V.I.; KAYDAK, A.M.; LEYZEROVICH, G.Ya.; HUPPUL',  
V.K.; SEREBRYANNIKOV, B.Ya.; SHTEYNGARDZ, G.M.

Roasting zinc concentrate in a gas fired boiling fuel bed. Prom.  
energ. 13 no.8:19-20 Ag '58. (MIRA 11:10)  
(Zinc--Metallurgy)

AZOS, S.; AREF'YEV, A.; ARTAMONOV, I.; BABINA, I.; BEREGOVSKIY, V.; BLOZHKO, V.;  
BRAVERMAN, A.; BYKHOVSKIY, Yu.; VINOGRADOVA, M.; GALANKINA, Ye.;  
GIL'DENGERSH, F.; GLCBA, T.; GREYVER, N.; GORDON, G.; GUL'DIN, I.;  
GULYAYEVA, Ye.; GUSHCHINA, I.; DAVYDOVSKAYA, Ye.; DAMSKAYA, G.;  
DERKACHEV, D.; YEVDOKIMOVA, A.; YEGUNOV, V.; ZABELYSHINSKIY, I.;  
ZAYDENBERG, B.; AZMOSHNIKOV, I.; ITKINA, S.; KARCHEVSKIY, V.;  
KLUSHIN, D.; KUVINOV, Ye.; KUZNETSOVA, G.; KURSHAKOV, I.;  
LAKHERNIK, M.; LEYZEMROVICH, G.; LISOVSKIY, D.; LOSKUTOV, F.;  
MALEVSKIY, Yu.; MASLYANITSKIY, I.; MAYANTS, A.; MILLER, L.;  
MITROPANOV, S.; MIKHAYLOV, A.; MYAKINENKOV, I.; NIKITINA, I.;  
NOVIN, R.; OGNEV, D.; OL'KHOV, N.; OSIPOVA, T.; OSTRONOV, M.;  
PAKHOMOVA, G.; PETKER, S.; FLAKSIN, I.; PLETENEVA, N.; POPOV, V.;  
PRESS, Yu.; PROKOP'YEVA, Ye.; PUCHKOV, S.; REZKOVA, F.; RUMYANTSEV, M.;  
SAKHAROV, I.; SOBOL', S.; SPIVAKOV, Ya.; STRIGIN, I.; SPIRIDONOVA, V.;  
TIMKO, Ya.; TITOV, S.; TROITSKIY, A.; TOLOKONNIKOV, K.; TROPIMOVA, A.;  
FEDOROV, V.; CHIZHIKOV, D.; SHEYN, Ya.; YUKHTANOV, D.

Roman Lazarevich Veller; an obituary. TSvet. met. 31 no.5:78-79  
My '58. (MIRA 11:6)

(Veller, Roman Lazarevich, 1897-1958)

LEYZEROVICH, Grigoriy Yakovlevich; BABINA, Irina Vladimirovna;  
SEREDENNIKOVA, Esfir Yakovlevna; CHUMAK, Z.V., inzh.,  
retsensent; POPOV, N.A., inzh., retsentsent; TSETLIN, V.M.,  
red.; MISHARINA, K.D., red.isd-va; ISLENT'YEVA, P.G.,  
tekh.red.

[Roasting zinc concentrates in a fluidized bed] Obzhig  
tsinkovykh kontsentratov v kipiashchem sloe. Pod red.  
Leizerovicha. Moskva, Gos.nauchno-tekh.isd-vo lit-ry po  
chernoi i tsvetnoi metallurgii, 1959. 222 p. (MIRA 12:8)  
(Zinc--Metallurgy)

LEYZEROVICH, G. Ya.; ORIONOV, A.A.

Preparation of uniform dry granules from moist concentrates.  
Sbor. nauch. trud. GINTSVETMET no.15:310-318 '59. (MIRA 14:4)  
(Sintering)

MIKHAYLOV, V.K.; LEYZEROVICH, G. Ya.

Volatilization of mercury in a fluidized bed. Sbor. nauch. trud.  
GINTSVETMET no.15:341-351 '59. (MIRA 14:4)  
(Mercury--Metallurgy)  
(Fluidization)



S/137/62/000/001/026/237  
A060/A101

AUTHORS: Leyzerovich, G. Ya., Lonskiy, I. S.

TITLE: Sulfation roasting of pyrite-cobalt concentrate

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 1, 1962, 12, abstract 1092  
("Sb. tr. Gos. n.-i. in-t tsvetn. met.", 1959, no. 15, 352-359)

TEXT: By means of experiments carried out on an enlarged laboratory installation, relating to the sulfation roasting in a fluidized bed of a pyrite-cobalt concentrate, consisting of 70 - 75% pyrite and pyrrhotine, and containing 0.6 - 0.9% Co sulfide, 1.3 - 2.1% chalcopyrite, and 1.1 - 1.5% petlandite, the optimal schedule for the process was established: temperature  $600 \pm 10^{\circ}\text{C}$ ; linear velocity of air 10 cm/sec; air-excess over the calculated quantity 80%; furnace productivity with respect to the concentrate 3.9 tons  $\text{m}^2 \cdot 24$  hours;  $\text{SO}_2$  content in roasting gases 7.35% by volume; height of fluidized bed 1.5 m. Roasting in the fluidized bed makes it possible to dissolve 86.7% Co with the use of aqueous lixiviation; this is 40% greater than in roasting in multi-hearth furnaces, at a higher productivity (by a factor of 7 - 8). The elimination of a major portion of Cu, Zn, and S together with the Co from the cinder

Card 1/2

Sulfation roasting of pyrite-cobalt concentrate

S/137/62/000/001/026/237  
A060/A101

makes it possible to utilize the remainder for blast furnace smelting. The SO<sub>2</sub> concentration in the roasting gases makes possible their utilization in H<sub>2</sub>SO<sub>4</sub> production.

B. Zastenker

[Abstracter's note: Complete translation]

Card 2/2

SHVARTSMAN, Yakov Naumovich; LEYZEROVICH, G. Ya., kand. tekhn. nauk, retsenzent; BABINA, I. V., inzh., retsenzent; NEYMAN, M. N., inzh., retsenzent; KUZNETSOV, N. N., inzh., red.; MISHARINA, K. D., red. izd-va; KARASEV, A. I., tekhn. red.

[Fluid bed roasting of zinc concentrates] Obzhig tsinkovykh kontsentratov v kipiashchem sloe; uchebnoe posobie dlia podgotovki i povysheniia kvalifikatsii masterov i rabochikh. Moskva, Gos. nauchno-tekhn. izd-vo lit-ry po cherno i tsvetnoi metallurgii, 1960. 92 p. (MIRA 13:9)  
(Ure dressing) (Zinc) (Fluidization)

ZAK, M.S., inzh.; LEYZEROVICH, G.Ya., kand.tekhn.nauk; GEL'PERIN, N.I.,  
doktor tekhn.nauk, prof.

Study of a cold model of a double-chamber reactor for roasting  
in a fluidized bed. Khim.mashinostr. no.3:8-12 My-Je '63.  
(MIRA 16:11)

ZABRODSKIY, S.S.; LEYZEROVICH, G.Ya.; RASHKOVSKAYA, N.B.; EL'PERIN, I.T.

All-Union seminar on the fluidized bed. Inzh.-fiz. zhur. 7 no.5:  
121-124 My '64. (MIRA 17:6)

LEYZEROVICH, L. [Leizerovich, L.], inzh.-stroitel'

Report on monolithic tamped walls made with a sand-shell aggregate. Sil'. bud. 11 no.9:14 S '61. (MIRA 14:11)

1. Belozerskiy rayonnyy otdel "Sel'khoztekhniki" Khersonskoy oblasti.

(Concrete walls)  
(Aggregates (Building—Materials))

LEYZEROVICH, M.Ya.; FAYNGERSH, Yu.Ya.

Machine for the forming of covers for the platform sole of  
womer.'s shoes. Kozh.-obuv.prom. no.7:37 J1 '59.  
(MIRA 12:11)

(Shoe machinery)

BOGAYCHUK, V.G. [Bohaichuk, V.H.]; YUSIM, F.M. [IUsym, F.M.]; LEYZEROVICH,  
M.Ya.; ZIL'BERGLETT, I.S.

Proposals of efficiency promoters of the Odessa Shoe Factory  
No. 2. Leh.prom. no.1:88-92 Ja-Mr '62. (MIRA 15:9)  
(Odessa—Shoe industry—Technological innovations)



YUSIM, F.M. [IUsym, F.M.]; LEYZEROVICH, M.Ya.; CHUMAK, V.S.; BRENER, L.G.,  
[Brener, L.G.]

Proposals of the efficiency promoters of the Odessa Shoe Factory No.2.  
Leh.prom. no.3:59-61 Je - Ag '62. (MIRA 16:2)  
(Odessa—Shoe manufacture—Technological innovations)

LEYZEROVICH, Sh. L.

AID P - 3509

Subject : USSR/Power Eng  
Card 1/1 Pub. 26 - 3/30  
Author : Leyzerovich, Sh. L., Eng.  
Title : ~~On lengthening the between-repairs period of steam turbine operation~~  
Periodical : Elek sta., 9, 8-11, S 1955  
Abstract : The article discusses the possibility of operating turbines for longer periods of time between overhaul periods, and even between small-repairs. The first period is extended to 2 years. A table shows the number of hours turbines stood idle in 1953 and 1954 and also the type of repair work performed.  
Institution : None  
Submitted : No date

LEYZEROVICH, Sh.L., inzh.

Modernization of the VK-100-2 turbine. Elek.sta. 29 no.11:  
73-74 N '58. (MIRA 11:12)

(Turbines)

14(6)

SOV/91-59-5-9/27

AUTHOR: Leyzerovich, Sh.L., Engineer

TITLE: Change of Structure of the Fastening of the Encasement of the Front Sealing of High Pressure Cylinder Turbines (Izmeneniye konstruktsii krepleniya kamina perednego uplotneniya Ts.V.D. turbin)

PERIODICAL: Energetik, 1959, Nr 5, pp 19-21 (USSR)

ABSTRACT: When a high-pressure VK-100\_2 turbine was down for overhaul, it was found that the membrane of the whole elastic ring (Figure 2), connecting the front part of the cylinder with the encasement of the front sealing, had numerous cracks and had to be replaced, since all attempts to have it welded failed. There being no spare ring, it was decided to change the structure of fastening of the encasement of the front sealing and have the elastic ring replaced by a rigid ring. The results proved to be good and another similar turbine was subjec-

Card 1/2

SOV/91-59-5-9/27

Change of Structure of the Fastening of the Encasement of the Front Sealing of High Pressure Cylinder Turbines.

ted to the same reconstruction the next year. The subsequent two-year long operation of both turbines proved the good result of the reconstruction. In 1958, in another power plant, the elastic ring of a VK-100-2 turbine was replaced by a split rigid ring, consisting of two halves (Figure 4). The same replacement was made on another VK-100-2 turbine, on two VK-50-1 turbines, one VT-25-4 turbine and two SVK-150-1 turbines. The results were good. It is now planned to introduce the split rigid rings into all other turbines of the above mentioned types used within the system of the Mosenergo. Disconnection of the lower part of the encasement from the bed of the front bearing and the securing of a gap between them, in connection with installation of the above-named ring, was made as depicted in Figure 5, There are 4 sketches, 1 cross section.

Card 2/2

SOV/91-59-10-5/29

8(6), 14(6)

AUTHORS: Leyzerovich Sh.L., and Mart'yanov V.M., Engineers

TITLE: Reconstruction of Turbine Condenser

PERIODICAL: Energetik, 1959, Nr. 10, pp 13-14, (USSR)

ABSTRACT: A condensation turbine of the firm Esher-Viss, 5000 kw capacity, 1500 r.p.m., 12 atm. pressure at 320° was installed at an electric power station. The turbine condenser is of a four-stroke type; condenser pipes 25/23 mm in diameter pass through the openings of 25.5 mm in diameter made in the pipe boards, and are packed at each end by two rubber rings (Fig. 1). During the last two and a half years, the turbine was not used. In 1959, it was necessary to put the turbine into operation. Inspection of the turbine condenser disclosed that the rubber gaskets had become dry and broken, while in the condenser pipes under the gaskets, openings of 2-3 mm in diameter were formed. Otherwise, the pipes between the boards remained in a good condition. Taking into consideration the absence of spare condenser pipes at the electric power station in question, it was decided to

Card 1/2

SOV, '91-59-10-5/29

### Reconstruction of Turbine Condenser

shorten the condenser body by 60-65 mm, to utilize the existing pipes, and to supersede the gaskets by rolling the pipes on both sides. For this purpose, both water chambers were disconnected and dismantled from the condenser body. The openings in the boards were cleaned from the rubber rests by using a home-made pipe-shaped milling cutter (Fig. 2), and a reversible pneumatic drilling machine I-118 manufactured at the Sverdlovsk Plant imeni Ordzhonikidze. After cleaning of the openings, the pipes were removed from the condenser. The openings were increased from 25.5 to 30.5 mm in diameter (Fig. 3). In the power house workshop, the required number of bushings was made; they were then pressed by means of special device (Fig. 4) into the openings in the pipe boards. The cutting of condenser pipe ends was performed by a disc-saw; the rolling of pipes was done by mechanical rollers and the reversible drilling machine I-118. There are 6 diagrams.

Card 2/2

LEYZEROVICH, Sh.L., inzh.

General overhaul and modernization of the blading of the VK-50-1  
turbine. Elek.sta. 34 no.2:81-84 F '63. (MIRA 16:4)  
(Steam turbines)



LEYZEROVICH, Sh.L., inzh.

Improvement in the operation of the drive mechanism of the control  
valves of VK, VT and VPT turbines. Energetik 11 no.8:11 Ag '63.  
(MIRA 16:10)

LEYZEROVICH, S.Ya., inzh.

Submergence diagram of a carrier floating dock. Sudostroenie  
28 no.1:62-64 Ja '62. (MIRA 16:7)

(Dry docks)

LEYZEROVICH, Ye.Ye.

Economic geography and several problems of the industrial development of southern Turkmenistan. Izv. Vest. geog. ob-va  
96 no.3:206-212 '64 (MIRA 17:8)

LEYZEROVSKAYA, V. G.

"Problem of the Use of Penicillin in Pulmonary  
Suppuration," Terap. Arkhiv., No. 4, 1949. Cand.  
Medical Sci., Faculty Therapeutics Clinic, 1st Moscow  
Order Lenin Med. Inst., -c1949-.

LEYZEROVSKAYA, E. G.

"Bronchoscopic Treatment of Abscesses in the Lungs." Sub 12 Feb 51, First  
Moscow Order of Lenin Medical Inst.

Dissertations presented for science and engineering degrees in Moscow  
during 1951.

SO: Sum. No. 480, 9 May 55.

LEYZHOVSKAYA, E.G., kandidat meditsinskikh nauk.

Bronchoscopic therapy of pulmonary abscesses. Terap.arkh. 25 no.6:  
40-48 E-D '53. (MLRA 7:1)

1. Iz fakul'tetskoy terapevticheskoy kliniki (direktor - deystvitel'nyy  
chlen Akademii meditsinskikh nauk SSSR professor V.N.Vinogradov) i  
Moskovskogo ordena Lenina meditsinskogo instituta.  
(Bronchoscope and bronchoscopy) (Lungs--Abscess)

LEYZEROVSKAYA, E.G.

~~LEYZEROVSKAYA, E.G.~~

Bronchoscopy in the clinical practice in nonspecific pulmonary diseases. Terap.arkh. 29 no.3:89-95 Mr '57. (MLRA 10:8)

1. Iz fakul'tetskoy terapevticheskoy kliniki (dir. - deystvitel'nyy cheln AMN SSSR prof. V.N.Vinogradov) i Moskovskogo ordena Lenina meditsinskogo instituta imeni I.M.Sechenova.

(LUNG DISEASES, physiology,  
bronchoscopy (Eng))

(BRONCHOSCOPY, invar. dis.  
lung dis. (Rus))

LEIZEROVSKAYA, E.G. (Moskva)

"Complications arising during drug therapy". G.L. Alexander. Reviewed  
by E.G. Leizerovskaya. Fel'd i akush 24 no.2:60-62 Fe '59 (MIRA 12:3)  
(DRUGS--PHYSIOLOGICAL EFFECT)  
(ALEXANDER, G.L.)



LEYZEROVSKAYA, E.G., kand.med.nauk

Significance of the bronchoscopic method in hemoptysis. Sov.med.  
24 no.3:48-52 Mr '60. (MIRA 14:3)

1. Iz kafedry fakul'tetskoy terapii (zav. - deystvitel'nyy chlen  
AMN SSSR prof. V.N.vinogradov) lechebnogo fakul'teta I Moskovskogo  
ordena Lenina meditsinskogo instituta imeni I.M.Sechenova.  
(HEMORRHAGE) (BRONCHOSCOPY)

LEYZEROVSKAYA, E.G.; FEKLISOVA, M.Ye.

Treatment of patients with bronchiectasis with antibiotics  
associated with bronchoscopy. Terap.arkh. 33 no.4:49-54 '61.

(MIRA 14:5)

1. Iz fakul'tetskoy terapevticheskoy kliniki (dir. - deyst-  
vitel'nyy chlen AMN SSSR prof. V.N. Vinogradov) I Moskovskogo  
ordena Lenina meditsinskogo instituta imeni I.M. Sechenova.

(BRONCHIECTASIS)

(ANTIBIOTICS)

NEPORENT, M.I.; LEYZEROVSKAYA, E.G.

Some characteristics of the clinicoroentgenological picture of suppurative processes in the bronchi of patients treated with antibiotics. Sov. med. 28 no.4:38-42 Ap '64. (MIRA 17:12)

1. Fakul'tetskaya terapevticheskaya klinika (direktor - prof. V.N. Vinogradov) I Moskovskogo ordena Lenina meditsinskogo instituta imeni I.M. Sechenova.

LEYZERUKOV, M. A.

Melanoma of the urethra. Urologia no.2:62-63 '62. (MIRA 15:4)

1. Iz urologicheskogo otdeleniya (zav. A. G. Bekkerman) Moskovskoy gorodskoy bol'nitsy No. 53.

(URETHRA--TUMORS)

LEYZERUKOV, M.A.

Morphology of age-related changes in human testes. Urologia  
no.4:34-37 '64. (MIRA 19:1)

1. Urologicheskoye otdeleniye (zav. M.A. Leyzerukov, nauchnyy  
rukovoditel' - prof. L.I. Dunayevskiy) 53-y gorodskoy bol'nitsy,  
Moskva.

LEYZERZON, B. S.

"The Effect of a Cervical Novocaine Yagosympathetic Blockade on Patients With Bronchial Asthma or a Thoracic Injury." Sub 29 May 51, Central Inst for the Advanced Training of Physicians.

Dissertations presented for science and engineering degrees in Moscow during 1951.

SO: Sum. No. 480, 9 May 55.

LEYZERSON, B. S.

Cervical vago-sympathetic novocain block in costal fractures.  
Klin. med., Moskva 30 no.4:83-84 Apr 1952. (CML 22:2)

1. Candidate Medical Sciences. 2. Moscow.

LEYZERZON, Mikhail Semenovich; PETROV, V.P., red.; BORUNOV, N.I.,  
tekhn. red.

[Synthetic mica] Sinteticheskaia sliuda. Moskva, Gosenergo-  
izdat, 1962. 191 p. (Polimery v elektroizolatsionnoi tekhnike, no.2)  
(Mica) (Synthetic products) (MIRA 15:9)



LEYZERZON, M.S.

109-8-14/17

AUTHOR: Leyzerzon, M.S.

TITLE: ~~Синтетическая слюда~~ Synthetic Mica and its Application in  
New Electrical Insulating Materials. (~~Синтетическая слюда и ее применение в новых электроизоляционных материалах~~)  
(Sinteticheskaya slyuda i yeye primeneniye v novykh elektroi-  
zolyatsionnykh materialakh)

PERIODICAL: Radiotekhnika i Elektronika, 1957, Vol.II, Nr 8,  
pp.1077-1081 (USSR)

ABSTRACT: This is principally a review paper describing the physical properties, the technology and the electrical characteristics of American synthetic micas such as Micalex. The developments in this field in the USSR are also discussed. It appears that the first attempts in the USSR at producing a synthetic mica were conducted at the Leningrad Mining Institute under Prof. D. P. Gregoriev and in the Institute of Crystallography of the Soviet Academy of Sciences. Since 1955 the work on the synthesis on a larger scale has been conducted at Vniasbesttsement (MPSM SSSR). Two types of mica were developed: the so-called Ftorflogopit, having the formula  $KMg_3(Si_3AlO_{10})F_2$  and lithium mica

Card 1/2

LEYZERZON, M. S.

Leyzerzon, M.S. Synthetic Mica and New Electrical Insulating Materials  
Made From IT

(The Physics of Dielectrics; Transactions of the All-Union Conference on the Physics of Dielectrics) Moscow, Izd-vo AN SSSR, 1958. 245 p. 3,000 copies printed.

This volume publishes reports presented at the All-Union Conference on the Physics of Dielectrics, held in Dnepropetrovsk in August 1956, sponsored by the "Physics of Dielectrics" Laboratory of the Fizicheskiy institut imeni Lebedeva AN SSSR (Physics Institute imeni Lebedev of the AS USSR), and the Electrophysics Department of the Dnepropetrovskiy gosudarstvennyy universitet (Dnepropetrovsk State University).

SOV/81-59-5-16140

Translation from: Referativnyy zhurnal, Khimiya, 1959, Nr 5, p 347 (USSR)

AUTHOR: Leyzerson, M.S.

TITLE: Synthetic Mica and Its Application in the Production of New  
Electric and Heat Insulating Materials.

PERIODICAL: Tr. Vses. n.-i. in-ta asbesta, slyudy, asbestotsementn. izdeliv  
i proyektir. str-va predpriyatij slyud. prom-sti, 1958, Nr 9,  
pp 88 - 110

ABSTRACT: The general situation is dealt with regarding the synthesis of mica and the results of work carried out in this direction in 1955 by the VNIAsbesttsement laboratory of natural and artificial mica. The data submitted indicate that the synthetic mica developed and materials produced on its base have high electric and thermal insulating properties and that they can be used at higher temperatures and endure severe thermal impacts. It is pointed out that synthetic mica and materials based on it can be widely applied in the electric engineering, radio-engineering and aircraft industries.

Card 1/1

G. Maslennikova

SOV/81-59-5-16139

Translation from: Referativnyy zhurnal, Khimiya, 1959, Nr 5, p 347 (USSR)

AUTHORS: Leyzerzon, M.S., Levina, V.L.

TITLE: The Problem of the Physico-Chemical Methods of Mica Processing<sup>15</sup>

PERIODICAL: Tr. Vses. n.-i. in-ta asbesta, slyudy, asbestotsementn. izdelyi i proyektir. str-va predpriyatiy slyud. prom-sti, 1958, Nr 9, pp 127 - 162

ABSTRACT: Data are given on the investigation of the process of mica cleavage, as well as on the testing of various methods for the processing of mica and micanites. The effectiveness was established of applying the physico-chemical processing of mica, phlogopite and muscovite prior to mechanical pinching. It is pointed out that the physico-chemical processing of mica in combination with the mechanical separation of the crystals practiced in the Bulgarian People's Republic, enables one to produce standard micanites, avoiding the stage of obtaining standard pinched mica by means of manual cleavage.

Card 1/1

G. Maslennikova

SOV/70-4-3-24/32

AUTHORS: Zevin, L.S. and Leyzerzon, M.S.

TITLE: On the Question of the Position of the Potassium Ion in the Structure of Mica

PERIODICAL: Kristallografiya, 1959, Vol 4, Nr 3, pp 422-423 (USSR)

ABSTRACT: An electron density synthesis:

$$\rho_z = \sum_l F_{00l} \cos 2\pi l z$$

was made for three specimens of phlogopite. Two were Aldan phlogopites (hard and hydrated) and the other a synthetic fluor-phlogopite. The 000 $l$  intensities were measured with a URS-50I diffractometer. Absorption corrections were included. Test syntheses with  $F_c$  values were also made for the two cases: 1) K atoms half-way between silicate sandwiches ( $z_k = 0.50$ ) and 2) K atoms in between the O atoms of the upper and lower sandwiches ( $z_k = 0.42$  and  $0.58$ ). The object of the

Card 1/2

On the Question of the Position of the Potassium Ion in the Structure of Mica <sup>SOV/70-4-3-24/32</sup>

exercise was to distinguish experimentally between these hypotheses. In case 1) the K-O distances are all about 3.1 Å, which is larger than the sum of the ionic radii (2.7 Å), whereas in case 2) the K ion would be in close contact with the O atoms on one side. The results showed quite decisively that  $z_K = 0.50$ . The considerable series termination effects do not affect this conclusion. There are 1 figure and 5 references, 4 of which are Soviet and 1 French.

ASSOCIATION: NII ASBESTTSEMENT

SUBMITTED: December 19, 1958

Card 2/2

PHASE I BOOK EXPLOITATION

SOV/6274

Leyzerzon, Mikhail Semenovich.

Sinteticheskaya slyuda (Synthetic Mica). Moscow, Gosenergoizdat, 1962. 191 p.  
(Series: Polimery v elektroizolyatsionnoy tekhnike, vyp. 2). 6500 copies  
printed.

Editorial Board: Chief Ed.: K. A. Andrianov, K. I. Zabyrina, V. I.  
Kalitvyanskiy, Yu V. Koritskiy, A. V. Khval'kovskiy, and L. A.  
Epshteyn; Ed.: V. P. Petrov; Tech. Ed.: N. I. Borunov.

**PURPOSE:** This book is intended for scientific and engineering personnel working  
in the fields of radioelectronics, aeronautical and defense engineering, and  
electrical engineering.

**COVERAGE:** The book deals with the preparation of synthetic mica with better  
characteristics than those of natural mica. This state-of-the-art text is  
based on the results of Soviet research and on Western sources.

Card 1/3

Synthetic Mica

SOV/6274

New trends in Soviet mica technology are described. The following personalities are mentioned: Doctors of Geology and Mineralogy, Professors D. P. Grigor'yev, V. P. Petrov, and G. G. Lemmleyn; Candidates of Technical Sciences O. L. Feofilov, and V. L. Levina; Candidates of Physics and Mathematics I. M. Gol'dman and I. I. Yamzin; and S. I. Sokol'skiy, Engineer. References follow chapters.

TABLE OF CONTENTS:

Preface	3
Introduction	5
Ch. I. Development of Mica Synthesis	7
Ch. II. Physicochemical Principles of Mica Synthesis	32
Ch. III. Technology of Mica Synthesis	72
Card 2/3	



Synthetic Mica

SOV/6274

Ch. IV. Physical, Chemical, and Technical Properties of Synthetic Mica Crystals	107
Ch. V. New Electric and Thermal Insulation. Materials Based on Synthetic Mica	138
Ch. VI. Possible Areas for the Application of Synthetic Mica and New Materials Based on Synthetic Mica	181
Conclusion	187

AVAILABLE: Library of Congress TN933, L38

SUBJECT: Electronics

Card 3/3

BN/clb/mas  
5-6-63

PHASE I BOOK EXPLOITATION

SOV/6274

Leyzerzon, Mikhail Semenovich.

Sinteticheskaya slyuda (Synthetic Mica). Moscow, Gosenergoizdat, 1962. 191 p.  
(Series: Polimery v elektroizolyatsionnoy tekhnike, vyp. 2). 6500 copies  
printed.

Editorial Board: Chief Ed.: K. A. Andrianov, K. I. Zabyrina, V. I.  
Kalitvyansky, Yu. V. Koritskiy, A. V. Khval'kovskiy, and L. A.  
Epshteyn; Ed.: V. P. Petrov; Tech. Ed.: N. I. Borunov.

**PURPOSE:** This book is intended for scientific and engineering personnel working  
in the fields of radioelectronics, aeronautical and defense engineering, and  
electrical engineering.

**COVERAGE:** The book deals with the preparation of synthetic mica with better  
characteristics than those of natural mica. This state-of-the-art text is  
based on the results of Soviet research and on Western sources.

Card 1/2

Synthetic Mica

SOV/6274

New trends in Soviet mica technology are described. The following personalities are mentioned: Doctors of Geology and Mineralogy, Professors D. P. Grigor'yev, V. P. Petrov, and G. G. Lemmleyn; Candidates of Technical Sciences O. L. Feofilov, and V. L. Levina; Candidates of Physics and Mathematics I. M. Gol'dman and I. I. Yamzin; and S. I. Sokol'sky, Engineer. References follow chapters.

TABLE OF CONTENTS:

Preface	3
Introduction	5
Ch. I. Development of Mica Synthesis	7
Ch. II. Physicochemical Principles of Mica Synthesis	32
Ch. III. Technology of Mica Synthesis	72

Card 2/9 ✓

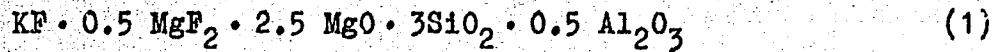
S/564/57/000/000/020/029  
D258/D307

AUTHORS: Yamzin, I. I., and Leyzerzon, M. S.  
TITLE: Synthetic micas, their properties and application  
SOURCE: Rost kristallov; doklady na Pervom soveshchanii po rostu kristallov, 1956 g. Moscow, Izd-vo AN SSSR, 1957, 277-286

TEXT: The present work is concerned with some results of the studies on the crystallization of fluorophlogopite and teniolite, carried out in Laboratoriya morfologii kristallov Instituta kristallografi (Laboratory of Crystal Morphology of the Crystallography Institute) on 50 - 100 g melts. Some results are given of analogous work on 1 - 5 kg melts, carried out at Laboratoriya prirodnoy i iskusstvennoy slyudy VNII-asbesttsementa (Laboratory of Natural and Artificial Mica of the VNII of Asbestos Cement). The optimum charge compositions were

Card 1/3

Synthetic micas...

S/564/57/000/000/020/029  
D258/D307

for fluorophlogopite and



for teniolite. These compositions gave crystals free from glass, forsterite, mullite, etc. The best results were obtained when (a) fluorophlogopite was heated rapidly to 1380°C, held at this temperature to complete the fusion, and slowly cooled to below crystallization temperature; (b) teniolite was heated rapidly to 1210°C, held until molten and slowly cooled. These heating regimes avoided losses of volatile components. The resulting crystals were up to 10 cm<sup>2</sup> x 1.5 mm, and were of sufficient quality for some of their physical, chemical, electrical and mechanical properties to be measured and compared with those of natural micas. The crucible-less method of fusion was successfully tried. To prepare ceramic products, the synthetic micas were ball-milled,  
Card 2/3

Synthetic micas...

S/564/57/000/000/020/029  
D258/D307

bonded with 10 - 15% of 85%  $H_5PO_4$ , pressed at  $700 \text{ kg/cm}^2$ , and heated for 1 1/2 hrs at  $950 - 1000^\circ\text{C}$ . Some applications of synthetic micas in electrical, radio, and aircraft industries are mentioned. The following workers assisted in the work: G. G. Lemmleyn, V. A. Timoreyeva, V. V. Vernikovskiy, T. I. Shashkina, Ye. N. Belova, and N. V. Glik (Crystallography Institute, and Yu. N. Ul'ko, S. I. Sokol'skiy, O. L. Feofilova, A. S. Naletov, and I. M. Gol'dman (VNII of Asbestos Cement). There are 7 figures and 2 tables.

Card 3/3

LEYZERSON, N. A.

25904. LEYZERSON, N. A. Lechenie i profilaktika keratokon" yunktivitov  
krupnogo rogatogo skota. Veterinariya, 1949, No. 8, S. 41-42.

So. Letopis' Zhurnal'nykh Statey, Vol. 34, Moskva, 1949

"Treatment and Prophylaxis of Kerat<sup>a</sup>o-Conjunctivitis of Cattle"

LEYZERTON, N. A.

Feeding and Feeding Stuffs

Feeding chaff to horses. ("Preparation of feed stuffs for feeding." Prof. M. F. Tomme, E. I. Simon; "Organize the preparation of feed stuffs on every farm." V. Kondyrev, S. Kabozov, A. Berezovskiy. Reviewed by N. A. Leyzerson). Konevodstvo 22 no. 3, 1952.

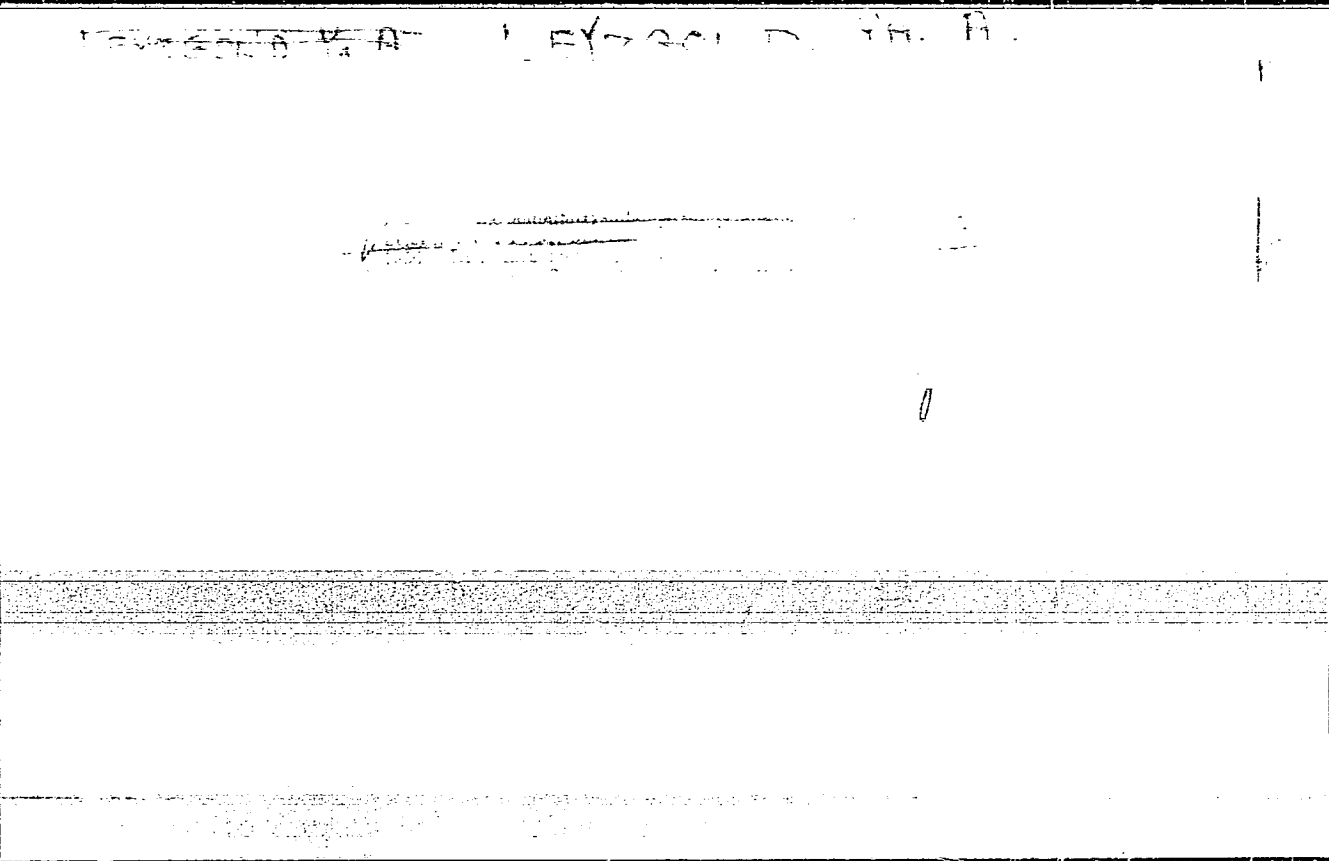
Monthly List of Russian Accessions. Library of Congress. November 1952. UNCLASSIFIED



LYZHEN, N.A.

Lejaerson, N.A. (Lithuanian Veterinary Academy)  
"On the Technique of Introduction of the Stomach Probe in a Goat,"

SO: Veterinariya, Vol 31, No 7, pp 45-50, 1954.





NESTEROV, V.M.; LNYZGOL'D, Ya.A.

Acylation of 2-aminothiazole. Med.prom. 14 no.4:37-38 Ap '60.  
(MIRA 13:6)

1. Anzhero-Sudzhenskiy khimiko-farmatsevticheskiy zavod.  
(THIAZOLE)

LEYZIN, A., inzh.; YASTREMSKAYA, L., inzh.; SINEV, O., inzh.

Unified series of standard designs of automated cement storage silos.  
Mekh. stroi. 20 no.11:17-20 N '63. (MIRA 17:1)

LEYZIN, A.A., inzhener

Selection of a jaw crusher for grading and crushing plants of  
average capacity. Mekh. stroi. 12 no.5:30 My '55.  
(Crushing machinery) (MLRA 8:6)

LEZAL, D.

Indium arsenide preparation and refining. El tech cas 15 no.3:  
182-189 '64

POLIVKA, P.; LEZAL, D.

Contribution to the preparation of thin layers of indium  
arsenide by vacuum steaming. El tech cas 15 no.3:189-190  
'64.



LEZAL, D.; POLIVKA, P.

Preparation of crystallization layers of semiconductor materials.  
El tech cas<sup>15</sup> no. 9:564-568 '64.

LEZAL, Dimitrij, inz.

Gold soldering of contacts and supply leads. Slaboproudy obzor  
25 no.3:168-169 Mr '64.

LEZAL, Dinitrij; POLIVKA, Pavel

Purification of indium to semiconductor purity. Chem listy  
58 no. 7:823-826 JI '64.

1. Laboratory of Semiconductors, Ceskomoravska-Kolben-Danek  
National Enterprise, Prague.

I 34673-66 EWP(t)/BTI IJP(c) JD

ACC NR: AF6025867

SOURCE CODE: CZ/0043/65/000/008/0620/0627

AUTHOR: Lezal, Dimitrij--Lezhal, D. (Engineer; Candidate of sciences; Prague);  
Polivka, Pavel (Engineer; Prague)ORG: Laboratory of New Semiconductor Materials, Factory for the Production of Semi-  
conductors, CKD, Prague (CKD, Zavod Polovodice, Laborator navych polovodicovych  
materialu)TITLE: Preparation of high purity arsenic (As) 46  
B

SOURCE: Chemické zvesti, no. 8, 1965, 620-627

TOPIC TAGS: chemical purity, arsenic, sublimation, hydrogen, chemical reduction,  
distillation, spectrographic analysis, indium compound, chemical production

ABSTRACT: The As is first sublimed in a stream of hydrogen, the product is then burned in an oxygen stream, the oxide is crystallized from a 6M solution of hydrochloric acid, and the crystals are sublimed in a hydrogen stream, in which a simultaneous reduction to metallic As takes place. Traces of S, Se, and Te are removed by distillation from liquid lead. The purity of the product was determined by spectrographic methods, and by electric parameters of Indium/arsenide prepared from the purified As. The method yields As with a 99.999% to 99.9999% purity/starting with commercial As. This purity is satisfactory for the production of semiconductors. The authors thank Graduate Chemist M. Zisk for carrying out the analysis. Orig. art. has: 3 figures and 2 tables. /JPRS/

SUB CODE: 07 / SUM DATE: 28JUN65 / ORIG REF: 004 / SOV REF: 002 / OTH REF: 010  
Card 1/1 LS

LEZAL, D.; POLIVKA, P.

Contribution to the epitaxial growth of silicon. El tech  
cas 16 no.1:55-58 '65.

LEZANSKI, T.

Lezański, T. Sur les fonctions multiplicatives. *Studia Math.* 14 (1953), 13. *ibid.* 15 (1954).

If  $\mathfrak{H}$  is a linear normed ring,  $\Phi(A)$  is a linear function on  $\mathfrak{H}$ , and a set of functions  $a_n(A)$  and operations  $U_n(A)$  on  $\mathfrak{H}$  to  $\mathfrak{H}$  are defined sequentially by the conditions

$$a_0(A) = 1, \quad U_1(A) = A, \quad U_n(A) = a_{n-1}(A) \cdot A - U_{n-1}(A)A, \\ a_n(A) = n^{-1}\Phi(U_n(A)),$$

then  $D_\lambda(A) = \sum_{n=0}^{\infty} \lambda^n a_n(A)$  and  $U_\lambda(A) = \sum_{n=0}^{\infty} \lambda^n U_n(A)$  are generalized Fredholm determinants [see T. Lalesco, *Théorie des équations intégrales*, Hermann, Paris, 1912, pp. 25, 26].

It is proved that if  $A_1 A_2 = A_2 A_1$  and  $\|A_i\| < 1/5$ ,  $i = 1, 2$ , then  $D(\lambda(A_1 + A_2)) = D(\lambda A_1) D(\lambda A_2)$ . This result is applied to the Fredholm determinants defined in an earlier paper [Studia Math. 13, 244-276 (1953); these Rev. 15, 535].

T. H. Hildebrandt (Ann Arbor, Mich.).

*Integral eqns*

LEZANSKI, T.

3000

Lezański, T. On a representation of the resolvent.  
 Studia Math. 15 (1956), 144-147  
 To solve the equation  $Ax = y_0$ , for a fixed  $y_0$  of a Banach  
 space  $X$  with  $A$  a linear continuous transformation on  $X$   
 to  $X$ , the author sets  $\exp A = \sum_{n=0}^{\infty} A^n/n!$  ( $A^0 = I$ , the  
 identity) and  $U(t, A) = \int_0^t \exp(-sA) ds$ . If

math

$$\lim_{t \rightarrow \infty} U(t, A)y_0 = x_0$$

weakly in  $X$ , then  $Ax_0 = y_0$ ; if  $\lim_{t \rightarrow \infty} U(t, A) = U$  weakly  
 in the space of linear continuous transformations on  $X$  to  
 $X$ , then  $UA = AU = I$ . If  $V = \int_0^t \exp(-sA) ds$ ,

$$V(A) = \int_0^t \exp(-sA) A ds$$

then  $V + A + AV = V + A + VA$ , provided

$$\lim_{t \rightarrow \infty} V(t, A) = V$$

weakly. The last two results are shown to be valid in a  
 Banach algebra, with and without unit respectively.

*W. H. Hildebrandt, Ann Arbor, Mich.*

smw

BRANSKI, J.

Letanski, J. Approximate calculation of the minimum of a convex functional. Bull. Acad. Polon. Sci. Cl. III 5 (1957), 7-9, II (Russian summary)

2  
I-FW

Let  $\varphi(x)$  be a function on a Hilbert space  $\mathcal{H}$ , real valued, continuous, and bounded from below. Define  $\text{grad } \Phi(x)$  by  $\Phi(x+h) - \Phi(x) = \text{grad } \Phi(x) \cdot h + R(x, h)$  where  $R(x, h) = O(\|h\|^2)$ . Assume that  $\text{grad } \Phi(x) = 0$  at  $x_0$  and that  $\text{grad } \Phi(x) \neq 0$  for  $x \neq x_0$ . Then  $x_0$  is a minimizing point for  $\varphi$ .

minimizing point for  $\varphi$

R. E. Fullerton



S/044/62/000/012/025/049  
A060/A000

AUTHOR: Leżański, T.

TITLE: On the minimum problem of functionals in Banach spaces

PERIODICAL: Referativnyy zhurnal, Matematika, no. 12, 1962, 80, abstract 12B369  
(Bull. Acad. polon. sci. Sér. sci. mat. astron. et phys., 1962, v. 10, no. 2, 107 - 110; German; summary in Russian)

TEXT: Let  $\Phi$  be a continuous functional defined on a Banach space  $X$ . It is assumed that  $\Phi$  is bounded from below in the sphere  $\|x - x_0\| \leq r$  (i.e.,  $\Phi^* = \inf_{\|x-x_0\| \leq r} \Phi(x)$  is finite) and possesses a continuous weak gradient satisfying the inequality  $\|\text{grad } \Phi(x)\| \geq f(\Phi(x) - \Phi^*)$ , where  $f$  is a real increasing function such that

$$\Phi(x_0) - \Phi^* \int_0^{\frac{ds}{f(s)}} < r.$$

Card 1/2

LEZANSKI, T.

On the perturbation of the region for differential equations of the second order. *Bul Ac Pol math* 12 no.11:715-713 '64.

A new definition of the differentiation of abstract functions. *Ibid.*:719-721

1. Institute of Mathematics of Polish Academy of Sciences, Warsaw. Submitted September 5, 1964.

LEZANSKI, T.

On the minimum problem of functionals in Banach spaces. Bul Ac  
Pol mat 10 no.2:107-110 '62.

1. Instytut Matematyczny, Polska Akademia Nauk, Warszawa. Presented  
by S.Mazur.

ZIE NEZAROV, A.G.

Astrobotany. Prir i znanie 17 no.7:5-7 S'64.