"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723220004-1

KLUS, T.

The importance of forests in water economy. p. 25.

SYLWAN. (Wydzial Nauk Rolniczych i Lesnych Polskiej Akademii Nauk i Polskie Towarzystwo Lesne) Warszawa, Poland (journal on forestry issued by the Section of Agricultural and Forestry Sciences, Polish Academy of Sciences; and the Polish Society of Forestry; with English and Russian summaries. Includes supplements; Biuletyn Instytutu Badawczego Lesnictwa, bulletin of the Forest Research Institute; Biuletyn Instytutu Technologii Drewna, bulletin of the Institute of Wood Technology; Przeglad Dokumentacyjny Drzewnictwa, documentation of the Institue of Wood Technology; and Przeglad Dokumentacyjny Lesnictwa, documentation of the Forest Research Institute. Monthly)
Vol. 101, no. 6, June 1957

Monthly List of East European Accessions Index (EEAI), LC, Vol. 8, no. 6, June 1959
Uncl.

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723220004-1"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723220004-1

KIUS, T.

"Strengthening Mountain Streams", P. 475, (GOSPODARKA WODNA, Vol. 14, No. 12, December 1954, Warsaw, Poland)

SO: Monthly List of East European Accessions (EEAL), LC, Vol. 4, No. 3, March 1955, Uncl.

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723220004-1"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723220004-1

KLUS, Tadeusz

Activities of the Regional Cooperation Committee of the Chief Technical Organization in Walbrzych. Przegl techn 84 no.16:5 21 Ap '63.

1. Sekretarz Rejonowego Komitetu Porozumiewawczego Naczelnej Organizacji Technicznej, Walbrzych.

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723220004-1"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723220004-1

KLUS, Tadeusz, dr

Activities of the Polish Forestry Association in water management. Gosp wodna 23 no. 8/9:350-352 Ag-S '63.

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723220004-1"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723220004-1

KLUSACEK, I.; (vc).

"Improved electronic timers." P. 152.

SEDLOVACI TECHNIKA. (Ministerstvo strojirenstvi). Praha, Czechoslovakia, Vol. 7, No. 4, Apr. 1959.

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

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723220004-1"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723220004-1

KLUSACKOVA, R.

"New Technology Day at the Synthesis Factory." p. 451 (Chemicky Prumysl. Vol. 3, no. 12, Dec. 1953. Praha.)
"How the expert technological book helps me." p. 452.

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

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KLUSAK, Vl.; MORAVEC, O.

Our experience with conservative therapy of scolioses. Acta chir. orthop. traum. cech. 29 no.4:324-327 Ag '62.

1. Detska lecebna orthopedickych vad, Lipnice nad Sazavou Ortopedicke oddeleni OUNZ, Jihlava.

(SCOLIOSIS)

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723220004-1"

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CZECHOSLOVAKIA

KLUSAK, V.

Children's Orthopedic Hospital (Detske lecebny ortopedickych), Lipnic

Bratislava, Lekarsky obzor, No 6, 1963, pp 349-351

"Conservative Treatment of Scoliosis."

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"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723220004-1

1. KLUSHANTSEV, B. V., Eng.

2. USSR (600)

4. Stone and Ore Breakers

7. Selection of the size of the angle of grab for stone crushing machines, Mekh. stroi., 10, No. 1, 1953.

9. Monthly List of Russian Accessions, Library of Congress, April, 1953, Uncl.

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723220004-1"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723220004-1

KLUSHANTSEV, B.V., inshener.

Data on the investigation of jaw crushers designed on the basis of a new kinematic principle. Mekh.stroi. 13 no.10:9-11 O '56.
(MLRA 9:11)

(Crushing machinery)
(Machinery, Kinematics of)

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723220004-1"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723220004-1

KLUSHANTSEV, B.V., inzhener.

Designs and standard sizes of modern jaw crushers abroad. Stroi. i dor. mashinostr. 2 no.4:31-37 Ap '57. (MLRA 10:6)
(Crushing machinery)

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723220004-1"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723220004-1

KLUSHANTSEV, B.V.

Using hydraulic drives for jaw crushers. Obog. rud. 8 no.2:20-22 '63. (MIRA 17:2)

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723220004-1"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723220004-1

DUDKO, A.A., insh.; KLUSHANTSEV, B.V., insh.

Mobile crushing and grading plants with percussion crushers. Stroi. mat. 9 no.4:38-40 Ap '63. (MIRA 16:5)
(Crushed stone industry—Equipment and supplies)

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723220004-1"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723220004-1

KLUSHANTSEV, B.V., insh.; VOLCHEK, V.I., insh.

Some trends in the construction of modern foreign jawbreakers. Stroi. i dor. mash. 10 no.8 28-31 Ag '65. (MIRA 18:9)

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723220004-1"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723220004-1

KLUSHANTSEV, Pavel Vladimirovich; POVALYAYEV, A., kand.tekhn.nauk, nauchnyy red.; NEUYMINA, N.K., otv.red.; LEONT'YEVA, L.B., tekhn.red.

[Toward other planets] K drugim planetam. Leningrad, Gos. izd-vo detskoi lit-ry M-va prosv.RSFSR, 1959. 60 p. (MIRA 13:4)

(Interplanetary voyages)

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723220004-1"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723220004-1

KLUSHANTSEV, P.V.

[“Moon” Station] Stantsiia "Luna." Leningrad, Detskaia literatura, 1965. 63 p.
(MIRA 18:2)

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723220004-1"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723220004-1

ACCESSION NR: AP4043689 S/0109/64/009/008/1520/1522

AUTHOR: Rapoport, G. N.; Klushin, A. A.

TITLE: Evaluating the locking-in bandwidth in a backward-wave oscillator synchronized by a modulated electron beam

SOURCE: Radiotekhnika i elektronika, v. 9, no. 8, 1964, 1520 - 1522

TOPIC TAGS: oscillator, backward wave oscillator, synchronized backward wave oscillator

ABSTRACTS: Based on E. A. Asch's (Proc. IEE, 1958, 105, pt.B, 10, 588) and H. R. Johnson's (Proc. IRE, 1955, 3, 4, 684) theory of weak-signal synchronization, formulas are developed for evaluating the lock-in bandwidth. The modulation is performed by the synchronizing stage which operates as a lower-than-starting-current backward-wave amplifier. It is shown that, for a given lock-in bandwidth, the effective gain of a 2-stage circuit is 10-15 db higher than that of a BWO synchronized by a signal applied to the collector end of the delay system. Orig. art. has: 3 figures and 8 formulas.

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ACCESSION NR: AP4043689

ASSOCIATION: none

SUBMITTED: 27Jun63 ENCL: 00

SUB CODE: EC NO REF SOV: 003 OTHER: 003

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"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723220004-1

KLUSHIN, A.V.

GONCHARUVICH, I.F., kandidat tekhnicheskikh nauk; KLUSHIN, A.V., inzhener.

Conference on problems of vibrational haulage. Gor.zhur. no.6:76 Je '57. (MLRA 10:8)

(Mine haulage)

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723220004-1"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723220004-1

Klushin, A. V.

OCHCHARNVICH, I.F., kandidat tekhnicheskikh nauk; KLUSHIN, A.V., inzhener.

All-union scientific coordination conference on mine transportation. Ugol' 32 no.1:44-45 Ja '57. (MLRA 10:2)
(Mine railroads)

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723220004-1"

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BAYKONUROV, O.A.; BELYAYEV, A.I.; BOGOMOLOV, V.I.; VANYUKOV, V.A.; GAZARYAN, L.N.; GLEK, T.P.; GORYAYEV, M.I.; KARCHEVSKIY, V.A.; KLUSHIN, D.N., KUNAYEV, D.A.; LEBEDEV, B.N.; LISOVSKIY, D.I.; LOSKUTOV, F.M.; MITROFANOV, S.I.; MOLCHANOV, A.A.; MOSKVITIN, I.N.; OL'KHOV, N.P.; OSIPOVA, T.B.; PLAKSIN, I.N.; PONOMAREV, V.D.; RUMYANTSEV, M.V.; SOKOL'SKIY, D.V.; SOKOLOV, M.A.; SPASSKIY, A.G.; STRIGIN, I.A.; SUSHKOV, K.V.; SHAKHNAZAROV, A.K.; YASYUKEVICH, S.M.

Khosrov Kurginovich Avetisian, obituary. TSvet.met.27 no.3:66-68 My-Je '54. (MIRA 10:10)
(Avetisian, Khosrov Kurginovich, 1900-1954)

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GRANOVSKIY, B.L.; DITKV, N.P.; ZUBAREV, V.I.; KARCHEVSKIY, V.A.; KLUSHIN, D.N.; MAKOVSKIY, G.M.; MIRONOV, A.A.; OL'KHOV, N.P.; PARFANOVICH, B.V.; USHAKOV, K.I.; SHAKHNAZAROV, A.K.

Electric smelting for matte in copper metallurgy; a reply to L.M.Gazarian. TSvet.met. 28 no.1:33-41 Ja-F '55. (MIRA 10:10)
(Copper--Electrometallurgy) (Gazarian, L.M.)

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723220004-1"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723220004-1

BAKAKIN, V.P.; BUBOK, K.G.; BUGAREV, L.A.; BUNIN, A.I.; VOROB'YEV, K.V.
DROZDOV, V.V.; DOROKHOV, M.S.; ZUBRILOV, S.V.; IGNAT'YEV, L.A.
KARGOPOLOV, I.G.; [illegible]; KOMAROV, A.M.; KURILOV, M.S.;
LOMAKO, P.F.; MIKULENKO, A.S.; MIKHAYLOV, M.M.; NEMCINOV, B.A.;
OL'KHOV, N.P.; OSIPOVA, T.V.; PAKHOMOV, Ya.D.; PLAKSIN, I.N.;
PODCHAYNOV, S.F.; PUSTYL'NIK, I.I.; ROZHKOV, I.S.; SAVARI, Ye.A.;
SEMYNIN, A.P.; SPIVAKOV, Ya.N.; STRIGIN, I.A.; SUSHKEVTSOV, S.N.;
SYCHEV, P.S.; TROITSKIY, A.V.; USHAKOV, K.I.; KHARLAMOV, A.Ye.;
SHEMYAKIN, N.I.

Nikolai Konstantinovich Chaplygin. TSvet. met. 28 no.2:57-58
Mr-Ap '55. (MIRA 10:10)
(Chaplygin, Nikolai Konstantinovich, 1911-1955)

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723220004-1"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723220004-1

KLUSHIN, D.N.; VELLER, R.L.

Brief account of twenty-five years' activity of the State Research Institute of Nonferrous Metals. TSvet.met. 28 no.3:1-5 My-Je '55. (MIRA 10:11)

(Nonferrous metals--Research)

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"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723220004-1

KLUSHIN, D.N.

KLUSHIN, D.N.; YAGUDIN, R.S.

Scientific session of the State Research Institute of Nonferrous Metals. Tsvet.met. 28 no.5:75-77 S-O '55. (MIRA 10:10)
(Nonferrous metals)

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"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723220004-1

YEGOROV, S.M.; KLUSHIN, D.N.; FISHER, A.Ya.; SHESTERNIN, P.S.

Vacuum desincing of brass. TSvet.met. 28 no.6:32-36 N-D '55. (MIRA 10:11)

(Brass) (Zinc) (Metallurgical furnaces)

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723220004-1"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723220004-1

KLUSHIN, D. N.

MG 62

(2)

Vacuum Method for Removing Zinc from Brass. D. N. Klushin, I. A. Bibina, and K. G. Bogatina (Ekor. Prikl. Khim., 1955, 28, (11), 1243-1246).—(In Russian). K. et al. investigated the vacuum distancing of 70 : 30 brass (30·0% Zn), a silicon brass (Cu 79·5, Zn 16·2, Si 0·2, Pb 0·5, Sn 0·2%), and a leaded brass (Cu 82·0, Zn 14·0, Pb 2·0, Sn 0·2%), at 0·3-0·6 mm. Hg and temp. of 1150°-1200° C., and for periods of 5-150 min. The results are tabulated and shown graphically. The max. loss of Zn occurred in the first 20-30 min.; further removal was very slow, 98·0-99·0% of the Zn could be removed, leaving a residual content of 0·6-0·2% in the Cu, which was suitable for making bronze. The condensate contained 95-99% Zn, plus some Cu and Pb, and was suitable for use in hot-dip galvanizing or for preparing brass. 45-50% of the Pb appeared in the condensate.—G. V. R. T.

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"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723220004-1

KLUSHIN, D.N.; REZNIK, I.D.; BOCHKAREV, L.M.

Prospects for using oxygen in nonferrous metallurgy. TSvet.met. 29 no.4:12-16 Ap '56. (MLRA 9:8)
(Nonferrous metal industries) (Oxygen)

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723220004-1"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723220004-1

BIBINA, I.A.; VETRENKO, Ye.A.; DIYEV, N.P.; YELISEYEV, I.S.; KLUSHIN, D.M.; KUSAKIN, P.S.

Speeding up the bessemer process of converting copper matte by oxygen-enriched air. TSvet. met. 29 no.7:10-17 Jl '56.
(MLRA 9:10)

(Copper--Metallurgy) (Bessemer process)

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723220004-1"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723220004-1

KLUSHIN, D. N.

Solidification of tin containing substances and the distillation of tin sulfide in vacuum. D. N. Klushin and [illegible] Nadinskaya. [illegible] Prikled [illegible]

[illegible] and 0.55% Sn were [illegible] [illegible] at 950, 1000, [illegible] [illegible] mm Hg. The percentage [illegible] [illegible] up to 1100° and [illegible] [illegible] the residue was higher at [illegible] This was attributed to the fact that at [illegible] charge caked, whereas at 1100° it was molten. [illegible] excess of sulfide from the theoretical ([illegible] + 3 [illegible]O) from 50 to 100% increased the [illegible] of Sn. At 100° with a 100% excess [illegible] [illegible] as the vacuum increased. But no appreciable [illegible] [illegible] a vacuum below [illegible] [illegible] and 100% (up to 500 [illegible]

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"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723220004-1

KLUSHIN, D.N., kandidat tekhnicheskikh nauk.

Using oxygen-enriched air in smelting Mansfeld copper-slate ore in shaft furnaces. Kislorod 10 no.2:37-42 '57. (MLRA 10:9)
(Germany, East--Copper--Metallurgy)

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723220004-1"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723220004-1

Klushin D.N.

137-1958-3-4881

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 3, p 60 (USSR)

AUTHORS: Klushin, D. N., Nadinskaya, O. V., Botatina, K. G.

TITLE: How to Work Lean Stanniferous Substances (K voprosu pererabotki bednykh olovosoderzhashchikh materialov)

PERIODICAL: Sb. nauchn. tr. Gos. n.-i. in-t tsvetn. met., 1957, Nr 13, pp 211-216

ABSTRACT: The sulfidization process of Sn-bearing materials was investigated on a laboratory scale. It is established that 97-98 percent of Sn may be extracted in the form of sulfides from lean Sn-bearing materials by heating the latter under a vacuum to a temperature of 1050°. The sublimates are easily collectible (up to 70-85 percent are collected); they constitute pure monosulfide of Sn.

G. S.

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"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723220004-1

AUTHOR: Klushin, D. 136-7-21/22

TITLE: Method for the separation of a zinc-magnesium alloy in a vacuum. (Metod razdeleniya tsinkovo-magniyevogo splava v vakuume).

PERIODICAL: "Tsvetnyye Metally", 1957, 30 No.7, pp. 94-95 (USSR).

ABSTRACT: Account of the report presented by N. Zelinger at the colloquium held at the Non-Ferrous Metals Institute of the Freiberg Mining Academy in October 1956. (Bergakademie, 1957, No.2, p.86).

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There are 4 figures.

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"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723220004-1

KLUSHIN, D.N.; BENUNI, A.A.

Recovering tin from poor ore products. Biul. TSIIN tsvet. met. no. 11:14-18 '58. (MIRA 11:7)

(Tin--Metallurgy)

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723220004-1"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723220004-1

AZOS, S.; AREF'YEV, A.; ARTAMONOV, I.; BABINA, I.; BEREGOVSKIY, V.; BLOZHKO, V.; BRAVERMAN, A.; BYKHOVSKIY, Yu.; VINOGRADOVA, M.; GALANKINA, Ye.; GIL'DENGORSH, F.; GLOBA, 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.; LAKERNIK, M.; LEYZEROVICH, G.; LISOVSKIY, D.; LOSKUTOV, F.; MALEVSKIY, Yu.; MASLYANITSKIY, I.; MAYANTS, A.; MILLER, L.; MITROFANOV, S.; MIKHAYLOV, A.; MYAKINEYKOV, I.; NIKITINA, I.; NOVIN, R.; OGNEV, D.; OL'KHOV, N.; OSIPOVA, T.; OSTROMOV, M.; PAKHOMOVA, G.; PETKER, S.; PLAKSIN, I.; PLETNEVA, N.; POPOV, V.; PRESS, Yu.; PROKOF'YEVA, Ye.; PUCHKOV, S.; REFKOVA, F.; RUMYANTSEV, M.; SAKHAROV, I.; SOBOL', S.; SPIVAKOV, Ya.; STRIGIN, I.; SPIRIDONOVA, V.; TIMKO, Ya.; TITOV, S.; TROITSKIY, A.; TOLOKONNIKOV, K.; TROFIMOVA, 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)

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"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723220004-1

AUTHOR: Klushin, D.N. SOV/136-59-1-10/24

TITLE: The Desirability of Using Oxygen-Enriched Air in the Sintering of Sulphide Lead Mixes (K voprosu tseleso-obraznosti primeneniya vozdukha, obogashchennogo kislorodom pri aglomeratsii svintsovykh sul'fidnykh shikht)

PERIODICAL: Tsvetnyye Metally, 1959, 32, Nr 1, pp 40-44 (USSR)

ABSTRACT: From laboratory experiments in 1949-1950, S.M. Anisimov and N.P. Dashkov concluded that there was no advantage in using oxygenated air for sintering sulphide lead mixes. This conclusion was not accepted by V.I. Milent'yeva (Ref 1) nor G.I. Gnatyshenko who, after a joint investigation (Ref 2) maintained that oxygenation was desirable both technically and economically. The present author disagrees with this on the general grounds that ordinary air contains a considerable excess of oxygen over that of process requirements. He examines data in Ref 2 and suggests that the claims of those authors that oxygenation would greatly increase yields of good sinter are not supported by the small strength increases they obtained. He also maintains that the yield of good sinter is

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"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723220004-1

SOV/136-59-1-10/24

The Desirability of Using Oxygen-Enriched Air in the Sintering of Sulphide Lead Mixes

already satisfactory in view of return-load requirements. The higher sinter sulphur-contents obtained with oxygenation are, the author shows, to be expected since it promotes formation of lead sulphate. The use of oxygen-enriched air would be entirely unapplicable to Pb-rich mixes since fusion and lead formation would result. The author considers that up-draught sintering, selective gas removal, better mix preparation (including pelletization) and automation are the best measures for sintering while oxygenation should be reserved for other metallurgical processes (Ref 5). An editorial note in general agrees with the author's views but recommends that investigation on the use of oxygen-enriched air in sintering should not be discontinued. There are 1 figure and 5 references, 4 of which are Soviet and 1 English.

Card 2/2

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"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723220004-1

SOV/80-32-2-6/56

AUHTORS: Klushin, D.N., Nadinskaya, O.V., Bogatina, K.G.

TITLE: The Problem of the Interaction of Lower Oxide and Oxide of Tin With Tin Sulfide (K voprosu o vzaimodeystvii zakisi i okisi olova s sul'fidom olova)

PERIODICAL: Zhurnal prikladnoy khimii, 1959, Vol XXXII, Nr 2, pp 273-280 (USSR)

ABSTRACT: At temperatures between 600 - 1,100°C an interaction of sulfide and the lower oxide of tin in a neutral atmosphere does not take place. In an atmosphere of nitrogen the lower tin oxide is decomposed at these temperatures. At 600 - 950°C the reaction $3SnO \rightarrow Sn + Sn_2O_3$ prevails, at 950 - 1,100°C the reaction $2SnO \rightarrow Sn + SnO_2$. In the temperature interval 750 - 1,100°C an interaction of sulfide with tin oxide does not take place. At temperatures above 950°C the lower tin oxide and the sulfide form a eutectic structure. The above-mentioned investigations are important for the concentration of poor tin ores.

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SOV/80-32-2-6/56

The Problem of the Interaction of Lower Oxide and Oxide of Tin With Tin Sulfide

There are 5 tables, 4 graphs, 1 diagram, and 6 references, 4 of which are Soviet and 2 German.

SUBMITTED: July 26, 1957

Card 2/2

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18(5)

SOV/80-32-3-3/43

AUTHORS: Klushin, D.N., Nadinskaya, O.V.

TITLE: The Investigation of the Interaction of Tin Sulfide With Sulfur Dioxide (K issledovaniyu vzaimodeystviya sul'fida olova s sernistym gazom)

PERIODICAL: Zhurnal prikladnoy khimii, 1959, Vol XXXII, Nr 3, pp 482-485 (USSR)

ABSTRACT: The article continues the investigations of [Ref 1-3] concerning the extraction of tin from poor ores. Sulfur dioxide was passed over tin sulfide at a rate of 500 cm^3/min. The temperature ranged from 550 to 1,100°C. The date of Table 1 and Figure 2 shows that the maximum weight increase is at 700°C. In the interval between 550 and 800°C the reacting substance consists of tin oxide, sulfate, sulfides and metallic tin. Above 800°C the tin sulfate is practically absent. This corresponds to the results published in [Ref 4] that SO_2 oxidizes metal sulfides and reduces sulfur at the same time. At low temperatures prevail sulfates, at higher temperatures oxides.

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SOV/80-32-3-3/43

The Investigation of the Interaction of Tin Sulfide With Sulfur Dioxide

There are 2 tables, 1 diagram, 1 graph, 1 photo and 4 references, 3 of which are Soviet and 1 German.

SUBMITTED: September 6, 1957

Card 2/2

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"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723220004-1

S/078/60/005/007/015/043/XX
B004/B060

AUTHORS: Klushin, D. N., Chernykh, V. Ya.

TITLE: A Study of the Dependence of Vapor Pressure of Tin Sulfide on Temperature

PERIODICAL: Zhurnal neorganicheskoy khimii, 1960, Vol. 5, No. 7, pp. 1409 - 1412

TEXT: The authors attempted to work out a method of extracting tin from poor ores. It was necessary for this purpose to determine the vapor pressure of SnS_2 at different temperatures. The determination of the vapor pressure of SnS_2 between 816° and 1100°C is described here. SnS_2 was prepared from metallic tin and pure sulfur by a method suggested by N. N. Murach (Ref. 11). Measurements were made in an apparatus schematically depicted in Fig. 1. The vessel with the weighed portion was evacuated to $7 - 8 \cdot 10^{-2}$ mm Hg, residual air was expelled by purified nitrogen, and the boiling point and vapor pressure were then measured at

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A Study of the Dependence of Vapor Pressure of Tin Sulfide on Temperature

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B004/B060

nitrogen pressure stepwise increased by 10 - 15 mm Hg each time, and at different temperatures. The apparatus was calibrated by means of KCl vapor. Calibration yielded results well in agreement with data available in literature (Table 1, Fig.2). Measurement results for SnS_2 are given in Table 2:

Table 2: Vapor pressure of tin sulfide at different temperatures

t, °C	T, °K	$\frac{1}{T}\cdot 10^4$	lg p mm Hg	t, °C	T, °K	$\frac{1}{T}\cdot 10^4$	lg p mm Hg
815	1088	9,18	0,403	1035	1308	7,64	1,902
940	1213	8,23	1,324	1055	1328	7,54	1,979
955	1228	8,15	1,435	1070	1343	7,43	2,114
980	1253	7,97	1,585	1090	1363	7,32	2,190
990	1263	7,90	1,644	1105	1378	7,26	2,230
1000	1273	7,86	1,712	1110	1383	7,24	2,320
1020	1293	7,73	1,870				

The linear equation $\log p_{mm\ Hg} = -9980/T + 9.551$ (Fig.3) gives an exact reproduction of experimental data, and fits results published by Western researchers. By means of this equation, the evaporation heat was found to

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"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723220004-1

S/080/61/034/007/007/016
D223/D305

AUTHORS: Klushin, D.N., and Nadinskaya, O.V.

TITLE: Investigation of the reaction of stannous and stannic oxide with iron sulphide

PERIODICAL: Zhurnal prikladnoy khimii, v. 34, no. 7, 1961, 1461-1469

TEXT: The reaction of metallic oxides with sulphides is of great metallurgical interest, in particular reaction with pyrites and iron sulphide. This reaction is particularly important in the case of non-ferrous metals especially in the extraction processes. The present work deals with mechanism and kinetics of these reactions for the temperature interval 600-900°C. The set-up used for the sulphidation process of stannous and stannic oxide with iron sulphide is shown in Fig. 1. The experiments are then described in detail, the results showing that interaction of stannous oxide with iron sulphide at a comparatively low temperature (600°C)

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agrees with previous work by D.N. Klushin, O.V. Nadinskaya, and K.G. Bogatina (Ref. 5: ZhPKh., 32, 2, 176, 1959), and follows the reaction:

$$3SnO = Sn_2O_3 + Sn \quad (1)$$

where the ratio of trioxides to metallic tin in the residue is found to be 2. Then as the temperature increases to 750°C and the formation rate of tin sulphide increases, the quantity of tin oxides and metallic tin decreases indicating that the simultaneous reaction

$$2SnO = SnO_2 + Sn \quad (2)$$

is taking place. At a higher temperature 900°C, the oxide and metallic tin content decreases which indicates that reactions (1) and (2) are practically absent. It is also shown that molecular rations of magnetic iron oxide and tin sulphide at all temperatures and Sn : S ratios equal 1/3 which indicates that the principal reaction in the sulphidation of stannous oxide with iron sulphide is:

$$4SnO + 3FeS = 3SnS + Fe_3O_4 + Sn. \quad (3)$$

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The isobaric-isothermal potential of the above reaction for temperature T is given by

$$Z = 8709 - 46.46T \lg T - 1.36 \cdot 10^{-3} T^2 + 111.2 T.$$

This shows that reaction (3) could take place at 400°C and higher temperatures which agrees with experimental data. Hence it is obvious that for the temperature interval 600-750°C, the decomposition of SnO follows reactions (1) and (2) with the simultaneous reaction (3). At 750°C and higher, only reaction (3) takes place perhaps with a negligible extent of slight side-secondary reactions. The interaction of stannic oxide with iron sulphide was investigated at 600, 700, 900 and 1000°C for 15 and 60 minutes and with charges containing 1.5 gr. of SnO_2 and 0.9 gr. of FeS which corresponds to equiatomic proportions of tin and sulphur in charges. The results are given in tabulated form. The products of interaction of SnO_2 and FeS obtained were tin sulphide, magnetic iron oxide and sulphur dioxide hence the reaction is as follows:

$$5SnO_2 + 6FeS = 5SnS + 2Fe_3O_4 + SO_2 \qquad (4)$$

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and its isobaric-isothermal potential is given by

$$Z = 250792 + 7.54T \lg T - 6.86\ T^2 \cdot 10^{-3} - 124.7\ T.$$

This gives a practical operating temperature for reaction (4) of 1000°C. There are 8 figures, 5 tables and 6 references: 5 Soviet-bloc and 1 non-Soviet-bloc.

SUBMITTED: June 24, 1960

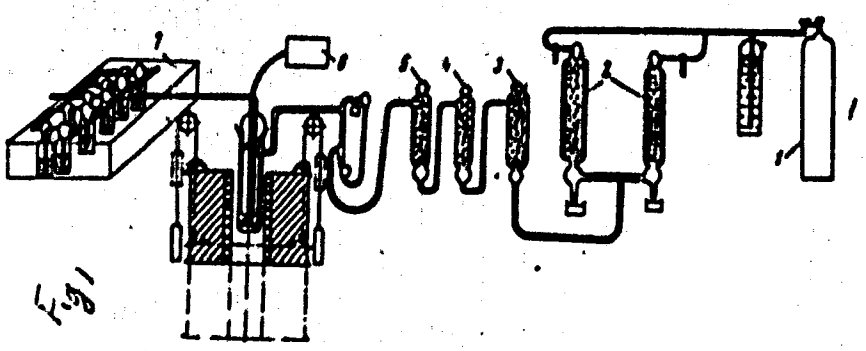
APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723220004-1"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723220004-1

Investigation of the reaction ... S/080/61/034/007/007/016
D223/D305

Fig. 1.

Legend: 1 - nitrogen cylinder; 2 - copper scrubber; 3 - askarite; 4 - P_2O_5; 5 - KOH; 6 - potentiometer; 7 - absorption bottles.



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BYKHOVSKIY, Yu.A., red.; VELLER, R.L., red. [deceased]; GREYVER, N.S., red.; KLUSHIN, D.N., red.; OL'KHOV, N.P., red.; RUMYANTSEV, M.V., red.; SAZHIN, N.P., red.; STRIGIN, I.A., insh., red.; TROITSKIY, A.V., insh., red.; MISHARINA, K.D., red. izd-va; EL'KIND, L.M., red. izd-va; VAYNSHTEYN, Ye.B., tekhn. red.

[Principles of metallurgy; in four volumes] Osnovy metallurgii; v chetyrekh tomakh. Red. kollegiia: IU.A.Bykhovskii i dr. Moskva, Gos. nauchno-tekhn. izd-vo lit-ry po chernoi i tsvetnoi metallurgii. Vol.1.[General metallurgy] Obshchie voprosy metallurgii. Otv.red. N.S.Greiver i dr. Pt.1. 1961. 661 p. p.2. 1961. 780 p. (MIRA 14:8)

(Metallurgy)

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KLUSHIN, D.N.; NADINSKAYA, O.V.; Prinimali uchastiye: BOGATINA, K.G.; SHELEKHES, T.N.; KUZNETS, T.P.; SAVINA, Ye.V.

Reaction between stannous and stannic oxide and ferric sulfide. Zhur.prikl.khim. 34 no.8:1668-1679 Ag '61. (MIRA 14:8)
(Tin oxide) (Iron oxide)

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723220004-1"

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KLUSHIN, D.N.; NADINSKAYA, O.V.

Reaction of tin dioxide with iron disulfide in the presence of a reducing agent. Zhur.prikl.khim. 35 no.6:1209-1216 Je '62. (MIRA 15:7)

(Tin oxides) (Iron sulfides)

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(Tin— Metallurgy)(Metals, Effect of temperature on)

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KLUSHIN, D.N.; BENUNI, A.A.; Prinimali uchastiye: BOGATINA, K.G.; BOBYLEVA, R.I.

Recovery of tin from lean, tin-bearing materials by the method of reduction-sulfuration roasting in a fluidized bed. Sbor. nauch. trud. Gintsvetmeta no.18:339-349 '61. (MIRA 16:7)

(Tin—Metallurgy) (Industrial wastes)

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KLUSHIN, D.N.; NADINSKAYA, O.V.; Prinimala uchastiye: BOGATINA, K.G., laborant

Studying the mechanism and the kinetics of tin sulfide oxidation by atmospheric and pure oxygen. Sbor. nauch. trud. Gintsvetmeta no.18:350-363 '61. (MIRA 16:7)

(Tin sulfide) (Oxidation)

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[Principles of metallurgy in four volumes]Osnovy metallurgii v chetyrekh tomakh. Red.kollegiia: IU.A.Bykhovskii i dr. Moskva, Metallurgizdat. Vol.2. Heavy metals]Tiazhelye metally. 1962. 792 p. (MIRA 15:8)

(Iron--Metallurgy)
(Nonferrous metals--Metallurgy)

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723220004-1"

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KLUSHIN, D.N.; NADINSKAYA, O.V.; BOGATINA, K.O.

Investigating the interaction of tin oxide with ferrous sulfide in the presence of carbon. Sbor. nauch. trud. Gintsvetmeta no.19:608-617 '62. (MIRA 16:7)

(Tin oxide) (Sulfuration)

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KLUSHIN, D.N.; NADINSKAYA, O.V.; BOGATINA, K.G.; Prinimali uchastiye: SAVINA, Ye.V., nauchnyy sotrudnik; KUZNETS, T.P., mladshiy nauchnyy sotrudnik; SHKLEKHES, T.B., laborant; KAYNOVA, I.S., laborant

Investigating the interaction of tin oxide with iron disulfide in the presence of a deoxidizer. Sbor. nauch. trud. Gintsvetmeta no.19:618-630 '62. (MIRA 16:7)

(Tin oxide) (Sulfuration)

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KLUSHIN, D.N.; NADINSKAYA, O.V.; BOGATINA, K.O.; Prinimal uchastiye: SHEKEKHES, T.B., tekhnik

Investigating the interaction of tin protoxide with ferrous sulfide in the presence of carbon. Sbor. nauch. trud. Gintsvetmeta no.19:631-636 '62. (MIRA 16:7)

(Tin oxide) (Sulfuration)

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KLUSHIN, D.N.; MADINSKAYA, O.V.; BOGATINA, K.G.; Prinimal uchastiye: SHELEKHES, T.B., tekhnik

Investigating the interaction of tin protoxide with iron disulfide in the presence of carbon. Sbor. nauch. trud. Gintsvetmeta no.19:637-641 '62. (MIRA 16:7)
(Tin oxide) (Sulfuration)

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Investigating the temperature dependence of the elasticity of stannous sulfide vapors over mixtures of SnO + FeS and Sn + FeS. Sbor. nauch. trud. Gintsvetmeta no.19:642-646 '62. (MIRA 16:7)

(Tin sulfide) (Vapor pressure)

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(Tin) (Iron sulfides)

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(MIRA 17:11)

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"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723220004-1

TITOVA, Z.P.; KLUSHIN, D.N.

Mechanism and the kinetics of the lead oxide reduction process by carbon monoxide. Sbor. nauch. trud. Gintsvetmeta no.23:54-66 '65. (MIRA 18:12)

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SAVINA, Ye.V.; TITOVA, Z.P.; KLOSHIN, D.N.

Decomposition of tin protoxide. Sbor. nauch. trud. Gintsvetmeta no.23:356-362 '65. (MIRA 18:12)

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TITOVA, Z.P.; SAVINA, Ye.V.; KLUSHIN, D.N.

Studying the kinetics of the decomposition of tin protoxide.
Sbor. nauch. trud. Gintsvetmeta no.23: 363-374 '65.
(MIRA 18:12)

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KLUSHIN, D.N.; MADINSKAYA, O.V.; BOGATINA, K.G.

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(MIRA 18:11)

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KLUSHIN, I.G.

KLUSHIN, I.G.

Geological interpretation of the vertical gradient of gravity anomaly. Prikl. geofiz. no.17:178-184 '57. (MIRA 11:2)
(Gravity)

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Klushin, I. G.

PHASE I BOOK EXPLOITATION 607/3876

Vsesoyuznyy nauchno-issledovatel'skiy institut geofizicheskikh metodov razvedki.

Prikladnaya geofizika; sbornik statey, vyp. 18 (Applied Geophysics; Collection of Articles, No. 18) Moscow, Gosenergoizdat, 1958, 286 p. Errata slip inserted. 3,000 copies printed.

Ed.: A.I. Bogdanov; Executive Ed.: E.F. Zaborovina; Tech. Ed.: E.A. Nikiforova.

PURPOSE: The book is intended for engineers, technicians, geophysicists, and persons interested in the geophysical methods of petroleum prospecting.

COVERAGE: The book is a collection of 16 articles dealing with the theoretical and practical problems of electrical sounding, seismic prospecting and gravimetry. Advances in electrical prospecting in not easily accessible regions and in the seas are treated for the first time in Soviet literature. New methods for the investigation and detection of radioactive emissions of drill holes, as well as optical and luminescence logging are analyzed. No personalities are mentioned. References accompany most of the articles.

Gel'perin, Ye.I., G.A. Gravil'shchikov, V.I. Mironov, and A.V. Prokov. Methods and Techniques of the Application of Stereographic Projections for the Solution of Spatial Problems in Geometric Seismics 3

Bykhovsky, Y.P. Intensity of Refracted and Reflected Longitudinal Waves on Angles of Incidence Less Than Critical 30

Dolinkin, N.K., and A.I. Sinitsovskiy. Some Problems of the Theory and Design of the Output Stage of a Seismic Amplifier and Galvanometer 41

Tsvetkin, Ye.I. Theoretical Principles of Electrical Sounding With an Installation Immersed in Water 78

Alekseyev, A.K., E.E. Berdichevskiy, and A.N. Zagrodnov. Application of New Methods of Electrical Prospecting in Siberia 103

Berdichevskiy, E.E. Methods of Curvilinear Electrical Soundings 128

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Pazyrev, E.E. Relationship Between the Observation Control Density and the Grid Interval of Geophysical Maps 279

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3(4, 6) PHASE I BOOK EXPLOITATION SOV/3256

Vsesoyuznyy nauchno-issledovatel'skiy institut geofizicheskikh metodov razvedki

Prikladnaya geofizika; sbornik statey, vyp. 22 (Applied Geophysics; Collection of Articles, No 22) Moscow, Gostoptekhizdat, 1959. 217 p. 3,000 copies printed.

Ed.: N.K. Polshkov; Resp. Ed.: S.S. Kus'min; Tech. Ed.: A.S. Pelevina.

PURPOSE: This collection of articles is intended for geophysicists in both industrial and research organizations.

COVERAGE: The book contains articles on improved methods for interpreting seismic-exploration data obtained by means of reflected and refracted waves. A number of articles deal with the evaluation of gravity anomalies. Individual articles discuss a method of dividing a gravitational field into its components by means of a computer, gamma radiation in boreholes, density of rocks of the Precambrian basement in the eastern part of the Russian Platform, and the use of templates in micro-logging. There are 74 figures and 35 tables. There are 95 references: 89 Soviet and 6 English.

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"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723220004-1

SOV/49-59-2-3/25

AUTHOR: Klushin, I. G.

TITLE: On Determination of the Geophysical Anomalies Smaller than the Mean Square Error of Measurement (O vydelenii geofizicheskikh anomaliy, men'shikh srednekvadratichnoy pogreshnosti izmereniya)

PERIODICAL: Izvestiya Akademii nauk SSSR, Seriya geofizicheskaya, 1959, Nr 2, pp 189-196 (USSR)

ABSTRACT: Geophysical observations are usually carried out at certain points equally distributed along a profile. An error of measurement at every point can be defined as a probability function characterising the error distribution, the curve of which can be represented as in Fig 1. The calculation is best performed for a mean square value of the error as defined by Eq (1), where $y(x)$ - function of error distribution along a profile, L - length of profile. The length L should be long enough to allow the compensating error to be 0 . Therefore Eq (1) should be written as Eq (1a). Then when the function $y(x)$ satisfies the conditions:

$$y(x) = \begin{cases} y(x) & \text{at } x \leq |L/2| \\ 0 & \text{at } x > |L/2| \end{cases},$$

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On Determination of the Geophysical Anomalies Smaller than the Mean Square Error of Measurement

the value of $g(\alpha)$ can be expressed as Eq (2) and $\overline{y}^2$ as Eqs (4) and (5) based on the Fourier integral (3). The value of $\Phi(\alpha)$, expressed as the formula (5) defines the error in relation to the frequency α. In order to determine it, the formula at the bottom of p 190 and Eq (6) should be considered, where $g_k(\alpha)$ is defined from a rectangle in Fig 1 and $\overline{a}^2$ - mean square amplitude of the error. Thus the final equations, Eq (7), are obtained, from which it is seen that $\overline{y}^2 = \overline{a}^2$ for any distance between observation points H (Eq 8). It should be noted that the spectral distribution of error varies with changes of h, which can be seen in Fig 2, where the value of $\overline{a}^2$ is represented as a surface described by the curve $\Phi(\alpha)$. It shows that a decrease of H by 5 times causes an abrupt decrease of the density of spectral error distribution. Assuming that the distance between the observed anomalies is m times greater than the distance H, then their spectral distribution can be determined by Eq (6a). However, when the anomalies occur individually their spectral distribution can be determined more exactly. In order to minimise the effect of errors a filter $Y(\alpha, \lambda)$ can be

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On Determination of the Geophysical Anomalies Smaller than the Mean Square Error of Measurement

employed. Then the ratio $\gamma^2 = \bar{a}^2 : \bar{a}_A^2$ (before filtration) will take the form of Eq (9). The values of the function $Y(\alpha, \lambda)$ and of λ should be so defined that the character of anomalies will be preserved and the value of $\gamma^2 : \gamma_\Phi^2$ maintained as large as possible. Also, the function $Y(\alpha,\lambda)$ should $\rightarrow 1$ at small values of α and it should have a simple Fourier transformation. There are many functions satisfying these conditions, e.g. $e^{-\alpha\lambda}$, $e^{-\alpha^2\lambda}$, $\sin \alpha\lambda/\alpha\lambda$ etc. If $G(\alpha)$ represents a spectral distribution of the measured values (i.e. sum of anomalies and errors) and $[G(\alpha, \lambda)]_\Phi = G(\alpha)Y(\alpha, \lambda)$ is the spectral distribution of anomalies filtered from the errors, the solution of the filter (function $Y(\alpha, \lambda)$) can be represented as Eq (10). Similarly, the solution of the function (11a, б, B) will be Eqs (12a, б, B). The least effect of error

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On Determination of the Geophysical Anomalies Smaller than the Mean Square Error of Measurement

on anomalies will occur when the character of the filter will be as shown in Eq (13). Such a filter permits obtaining all the components undistorted, the frequencies of which are not greater than λ, i.e. if the frequency of a measured function $y(x)$ is $\alpha = 1/2\ H \times 2\pi$, then its error component ("residual error") can be expressed as Eq (14) (Ref 5). The parameter λ in this case will be defined by Eq (15). The effect of the residual error (Eq 16) is smallest when k tends to 2π while the least effect of the error of measurement (Eq 17) will be obtained for k tending to 0. Therefore, a determination of k becomes an important problem. When the value of k is at its maximum, then the total value of error given by Eqs (18) and (19) becomes the minimum. By differentiating Eq (19) in respect to k and taking $d(\varepsilon^2)/dk = 0$, an equation defining k_{max} in values of γ is obtained. The graph of this equation is shown in Fig 4. (Eq (20) is derived for all computing purposes). The curve in Fig 3 represents the relationship of δ_n and mk_{max} and the curves in Fig 5 show the relationship $\gamma^2 : \gamma_Q^2 = f(k, m)$

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On Determination of the Geophysical Anomalies Smaller than the Mean Square Error of Measurement

as calculated from Eq (21). As it can be seen from Fig 5, the ratio $\gamma^2 : \gamma_{\Sigma}^2$ tends to m when k tends to 0 . This can be further explained by an example where a theoretical gravitational anomaly over an ore deposit is 0.5 mgl which is too small to be measured ($\sqrt{\bar{a}^2} = 0.73$ mgl). Therefore, $\gamma^2 = \bar{a}^2/\bar{a}_A^2 = 2.25$. The width of the anomaly is 17 H. From Fig 4 k = 0.45 (for $\gamma^2 = 2.25$, m = 17). The non-distorted anomaly is determined from the expression to the left of Fig 5, p 195. Thus, for H = 1 the formula (22) is obtained. The value of γ_{Σ}^2 is calculated as 0.189. Therefore, as a result of filtering, the relation anomaly:error is found to be 3.4, which agrees with the theoretical considerations (Fig 6, 1 - sum of an anomaly and error, 2 -

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On Determination of the Geophysical Anomalies Smaller than the Mean Square Error of Measurement

anomaly only before filtering, 3 - sum of anomaly and error after filtering). The above example was based on the tables in Ref 6. There are 6 figures and 6 references; 5 of the references are Soviet and 1 is English.

ASSOCIATION: Leningradskiy gornyy institut (Leningrad Mining Institute)

SUBMITTED: March 13, 1957.

Card 6/6

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"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723220004-1

SOV/49-59-9-15/25

AUTHOR: Klushin, I.G.

TITLE: The Determination of the Distribution with Depth of Gravitational and Magnetic Anomalies

PERIODICAL: Izvestiya Akademii nauk SSSR, Seriya geofizicheskaya, 1959, Nr 9, pp 1402-1411 (USSR)

ABSTRACT: The vertical component of the field containing the gravitational and magnetic anomalies is defined by Eq (1) where: U (x, 0) - initial distribution of anomalies, X_m - boundary beyond which the anomaly is nil, Z_m - maximum depth of anomaly, σ_z - a vertical component and σ_x - a horizontal component of the volumetric density of anomaly ($\sigma_x = 0$ in the case for gravitational anomaly). If Eq (1) is repeated as the Fourie integral (2) and (3), then the expressions defining U (x, 0) and V (x, 0) can be shown as Eqs (11) and (12). By equalising the latter two equations with Eqs (1) and (2) the formulae (13) and (14) can be obtained from which the expression (17), defining the vector ϕ (α) is derived. The analysis of ϕ (α) (Eq (18)) shows that its components can be defined by Eqs (9) and (10) where the functions φ_{11} (α, z);

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The Determination of the Distribution with Depth of Gravitational and Magnetic Anomalies

$\varphi_{12}(\alpha,z)$; $\varphi_{21}(\alpha, z)$; $\varphi_{22}(\alpha,z)$ determine the character of the horizontal density $\sigma(x, z)$ of the anomaly of a layer dZ thick placed at the depth Z. The magnitude of $\varphi_{ik}(\alpha, z)$ decreases rapidly when α increases and when the abrupt changes of $\sigma(x, z)$ cause an increase of $\varphi_{ik}(\alpha,z)$ in the region of large α. This can be defined by Eqs (19) to (21). The latter formula describes the relationship between the character of anomaly at the surface and the physical properties of rocks. It should be noted that the distribution with depth of the density of anomaly can be defined without $\sigma(x, z)$. This is evident from the following examples. Example 1 - thin layer with vertical magnetisation. The analytical expression for anomaly is defined by Eq (27) where Z_1, Z_2 - depth of the top and bottom of the layer respectively, A, d - constants characterising thickness and displacement from the origin of coordinates respectively. Thus from Eq (21) the formula (28a) is obtained where each pole corresponds to a waving function $A_k e^{i\omega(z - zk)}$

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The Determination of the Distribution with Depth of Gravitational and Magnetic Anomalies

describing the depth. Example 2 - the horizontal distribution of unevenly stratified rocks is constant. The gravitational anomaly at the contact of two different strata is defined by Eq (29). The analytical equation of the spectral distribution is defined by Eq (30) from which the function φ (z) is derived as Eqs (31) and (32). The latter determines the distribution of stratifications which is illustrated in Fig 1. Example 3 - the practical interpretation of anomalies of the magnetic field (Fig 2, isolines 50 - 100 γ) of the Tartar region of the Russian platform. The formula (33) is applied and solved according to the approximated method (Eq (34) to (37)) described by Tranter (Ref 8). The results are given in Fig 4 ($\Delta T(x)$) and Tab 1. Fig 4 shows a comparison between actual geological cross section (1 - sedementary rocks, 2 - crystallic base) and the theoretical calculations. There are 4 figures, 1 table and 9 Soviet references.

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KLUSHIN, I.S.

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Moscow. Vsesoyuznyy nauchno-issledovatel'skiy institut geofizicheskikh metodov razvedki

Prikladnaya geofizika; sbornik statey, vyp. 24 (Applied Geophysics; Collection of Articles, No. 24) Leningrad, Gostoptekhizdat, 1958. 200 p. 3,300 copies printed.

Sponsoring Agency: MGRE, Ministerstvo geologii i okhrany nedr.

Scientific Ed.: N.K. Polishchuk; Executive Ed.: A.A. Chizhov; Tech. Ed.: I.M. Gusel'gova

PURPOSE: This book is intended for members of scientific research organizations, engineers and technical personnel engaged in geophysical surveying and research in industrial organizations.

COVERAGE: This is a collection of 11 articles by different authors on new methods of interpreting data and evaluating techniques in seismic, electrical, and geomagnetic methods of surveying wells. The theory of seismic instrumentation and methods of outlining flat platform structures through seismic surveys are discussed, and theoretical problems of a new electrical survey method developed by the VNIIMedfizika (All-Union Scientific Research Institute of Geophysical Methods of Surveying) are analyzed. Recent developments in the interpretation of gravimetric and geomagnetic methods and a new method for separating real data by gamma logging are also described. No personalities are mentioned. Most of the articles are accompanied by references, a majority of which are Soviet.

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"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723220004-1

S/169/62/000/001/015/083
D228/D302

AUTHOR: Klushin, I. G.

TITLE: Use of gravity and magnetic surveys for determining the thickness of sedimentary rocks in oil- and gas-bearing areas

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 1, 1962, 24, abstract 1A196 (Byul. nauchno-tekhn. inform., M-vo geol. i okhrany nedr SSSR, no. 2 [26], 1960, 37-42)

TEXT: Discrepancies are noted in the appraisal of the practical possibility of determining the depth of occurrence of the upper edges of disturbing masses with a precision necessary for distinguishing and outlining I- and II-order structures from the data of gravity and magnetic observations. The analysis shows that all accurate determinations apply to regions with shallowly-occurring anomalous masses. Determinations with a large relative error apply to areas with deeply (about 2 km and more) occurring anomalous masses. A number of reasons are adduced which, in the author's

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D228/D302

Use of gravity ...

opinion, may explain the divergences in determining depths from gravity and magnetic data as compared with seismic-surveying data. The possibility of sufficiently reliably determining the average thickness of a sedimentary series within certain depth intervals is noted wherever the depth does not vary too abruptly and wherever there is a sufficient quantity of local anomalies. This conclusion is illustrated by a number of practical examples. [Abstractor's note: Complete translation.]

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KLUSHIN, I.G.; TOLSTIKHIN, I.N.

Interpretation of gravity and magnetic anomalies in southeastern regions of the Russian Platform in the light of historical geology. Izv. vys. ucheb. zav.; geol. i razv. no.11:102-115 N '60. (MIRA 14:2)

1. Leningradskiy gornyy institut im.G.V.Plekhanova.
(Russian Platform—Prospecting—Geophysical methods)

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"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723220004-1

S/552/60/000/027/006/008
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AUTHOR: Klushin, I. G.

TITLE: Estimation of the depth of the crystalline basement from computations of magnetic and gravitational anomalies

SOURCE: Prikladnaya geofizika (sbornik statey), no. 27, 1960, 96-115

TEXT: The possibility of using gravimetric and aeromagnetic surveys of the southeastern part of the Russian platform in making a quantitative estimate of the depth of the crystalline basement is indicated by the very close correlation found between the upper surfaces of anomalous masses as computed from magnetic and gravitational anomaly determinations and the depth of the basement as revealed by drilling and seismic prospecting. Averaging computation results within zones with a uniformly structured anomaly field yields a more reliable estimate of the mean depth location of major structures on the surface of the crystalline basement but a less precise determination of their boundaries.

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KLUSHIN, I.G.; TOLSTIKHIN, I.N.

Delineating linear tectonic dislocations on geophysical maps. Geol. i geofiz. no.6:98-103 '61. (MIRA 14:7)

1. Gornyy institut imeni G.V. Plekhanova, Leningrad.
(Magnetic anomalies—Maps)

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723220004-1"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723220004-1

KLUSHIN, I.G.

Method of the combined interpretation of geophysical data for purposes of studying the density of deep crystal layers. Geol. i geofiz. no.11:99-107 '61. (MIRA 15:2)

1. Gornyy institut imeni G.V.Plekhanova, Leningrad.
(Earth--Internal structure)

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"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723220004-1

S/169/62/000/007/008/149
D228/D307

AUTHOR: Klushin, I. G.

TITLE: Method of jointly interpreting geophysical data in order to study the density of deep crustal layers

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 7, 1962, 10, abstract 7A54 (Geologiya i geofizika, no. 11, 1961, 99-107)

TEXT: A method is proposed for interpreting geophysical data in order to ascertain the density of deep crustal layers. It consists of the simultaneous variation of all sought parameters in a wide range of values, followed by the rejection of the not very likely variants. Detailed seismic observations by the method of deep seismic sounding in different areas of the Russian Platform served as the original data; several hundred versions of density sections, which were compared with the materials of large-scale gravity surveys, were calculated. The resulting data show that in different profiles the crust's normal density is practically identical (2.82

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KLUSHIN, I.O.

Examining charts used in gravity prospecting to separate regional and local anomalies. Prikl. geofiz. no.31:204-218 '61. (MIRA 15:3)

(Gravity prospecting)

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ANDREYEV, Boris Aleksandrovich; KLUSHIN, Igor' Gennad'yevich; SEMENOV, A.S., retsenzent; MIRONOV, V.S., retsenzent; DEMENITSKAYA, R.M., doktor geol.-miner. nauk, retsenzent; MIKHAYLOV, N.N., nauchnyy red.; TOKAREVA, T.N., ved. red.; SAFRONOVA, I.M., tekhn. red.

[Geological interpretation of gravity anomalies]Geologicheskoe istolkovanie gravitatsionnykh anomalii. Leningrad, Gostoptekhizdat, 1962. 495 p. (MIRA 16:3)
(Gravity anomalies)

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723220004-1"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723220004-1

VORONOV, P.S.; KLUSHIN, I.G.

Problem of aseismicity of Antarctica and Greenland. Probl. Arkt. i Antarkt. no.12:5-13 '63. (MIRA 16:7)
(Antarctic regions--Seismology) (Greenland--Seismology)

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"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723220004-1

KLUSHIN, I.G.

Interdependence between tectonic movements and the earth's magmatism on the basis of the least action variation principle. Zap. LGI 46 no.2:33-50 '63. (MIRA 17:6)

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723220004-1"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723220004-1

KLUSHIN, I.G.; TOLSTIKHIN, I.N.

Statistical determination of the depth of the source of magnetic field anomalies. Zap. LGI 46 no.2:63-70 '63. (MIRA 17:6)

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"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723220004-1

BLINOV, V.A.; KLUSHIN, I.G.

Determining the ratio between the averaging of geophysical anomalies and their analytic altitudinal continuation. Prikl. geofiz. no.40: 136-142 '64. (MIRA 18:1)

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"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723220004-1

ACC NR: AT6034911 SOURCE CODE: UR/2834/66/050/002/0039/0048

AUTHOR: Klushin, I. G.

ORG: none

TITLE: The theory of constructing intermediate geological documents

SOURCE: Leningrad. Gornyy institut. Zapiski, v. 50, no. 2, 1966. Matematicheskiye metody v geologii (Mathematical methods in geology), 39-48

TOPIC TAGS: information theory, correlation statistics, geology

ABSTRACT: For studies of deep crustal structures, search for deep-seated mineral deposits, and similar problems, special treatment of geological, geophysical, and geochemical characteristics is needed. In order to produce successive clarification of the geologic picture, it is frequently necessary to construct intermediate maps or plots. For example, when preparing a geologic map, one may illustrate the distribution of magmatic rocks of a particular age; or, when preparing a tectonic map, one may show the distribution of faults exceeding certain depth values. The author suggests the use of concepts of characteristics (A) and of the object (B). In the field of geology, characteristics may include geophysical anomalies of a particular kind, form, or intensity; geochemical aureoles or associations; color, composition, and structure of rocks; fossils; facies peculiarities; structural

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SUB CODE: 08/ SUBM DATE: none/ ORIG REF: 001/ OTH REF: 001

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"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723220004-1

KLUSHIN, K.I.; RUTENBERG, I.N., redaktor; YUZHNAYA, Ye.A., redaktor; MEL'NIKOVA, N.V., tekhnicheskiy redaktor

[Manufacturing of nails] Proizvodstvo gvozdei. Moskva, Gos.izd-vo mestnoi promysh. RSFSR, 1955. 106 p. (MLR 9:2)
(Nails and spikes)

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"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723220004-1

KLUSHIN, M. I.

Gor'kiy Automobile Plant imeni Molotov (-1944-)

Candidate of Technical Sciences

"The Physical Bases of the Process of Cutting Metals." Stanki I Instrument Vol. 15, No. 4-5, 1944

BR 52059019

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"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723220004-1

KLUSHIN, M. I.

Mbr., Gor'kiy Automobile Plant im. Molotov (-1944-)

Cand. Technical Sci.

"Estimated Economic Cutting Speeds." Starki i Instrument, 15, No. 4-5, 1944

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"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723220004-1

KLOSHIN, M. I.; FEL'DSHTEYN, E. I.

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Candidate of Technical Sciences

"The Influence of High-speed Curring on the Cutting force with Positive and Negative Front Angles of Cutters," Stanki I Instrument, 16, Nos. 7-8, 1945

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"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723220004-1

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"The Negative Front Angle on Cutting Tools," Stanki I Instrument 17, No. 1, 1946

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