

ACC NR: AP6030567

SOURCE CODE: UR/0413/66/000/016/0035/0035

INVENTOR: Bliznyuk, N. K.; Kvasha, Z. N.; Khokhlov, P. S.; Libman, B. Ya.;
Vershinin, P. V.; Beym, A. I.; Mil'gotin, I. M.

ORG: none

TITLE: Preparation of S,S,S-trialkyl trithiophosphates. Class 12, No. 184864

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 16, 1966, 35

TOPIC TAGS: ~~trialkyl trithiophosphate preparation~~, mercaptan, phosphoryl chloride,
phosphate, chemical reaction, phosphorus chloride

ABSTRACT:

To simplify the technological preparation of S,S,S-trialkyl trithio-
phosphates by the reaction of mercaptans with phosphoryl chloride,
the reaction is conducted in the presence of an ammonium salt of
substituted polythiophosphoric or polythiophosphonic acids as catalysts.

SUB CODE: 07/ SUBM DATE: 24May65

[WA-50; CBE No. 11]

Card 1/1

ACC NR: AP7013151

SOURCE CODE: UR/0413/66/000 021 0040/0040

INVENTOR: Bliznyuk, N. K.; Khokhlov, P. S.; Libman, B. Ya.; Vershinin, P. V.;
Beyn, A. I.; Varshavskiy, S. L.

ORG: none

TITLE: Method for preparing alkyl(aryl)dithiodichlorophosphates, Class 12,
no. 187785

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki,
no. 21, 1966, 40

TOPIC TAGS: heterocyclic base compound, mercaptan, organic phosphate

SUB CODE: 07

ABSTRACT: A method is claimed for the preparation of alkyl(aryl)dithio-
dichlorophosphates, which differs in that for the purpose of extending the
utilization of resources and increasing the yield of useful products,
phosphorous thiotrichloride is subjected to reaction with mercaptans in the
presence of catalytic quantities of heterocyclic bases, for example pyri-
dine. [JPRS: 40,422]

Card 1/1

L 4958-66 ENT(m)/EPF(c)/EWP(j)/EWP(t)/EWP(b) IJP(c) JD/RM

ACC NR: AP5025679

SOURCE CODE: UR/0286/65/010/018/0026/0026

AUTHORS: Bliznyuk, N. K.; ^{44,5}Vershinin, P. V.; ^{44,5}Kabankova, R. I.; ^{44,5}Iibman, B. Ya.; ^{44,5}Khokhlov, P. S.

ORG: none

TITLE: A method for obtaining trialkyltetrathiophosphates, Class 12, No. 174626 /announced by Organization of the State Committee for Chemical Industry at the Gosplan SSSR (Organizatsiya gosudarstvennogo komiteta po khimicheskoy promyshlennosti pri gosplane SSSR)/

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 18, 1965, 26

TOPIC TAGS: trialkyltetrathiophosphate, thiotrichlorophosphorus, mercaptan, sulfur organic compound, catalyst

ABSTRACT: This Author Certificate presents a method for obtaining trialkyltetrathiophosphates. The compound is obtained by reacting thiotrichlorophosphorus with alkylmercaptans. To increase the purity of the final product, the reaction is carried out in presence of catalysts--quinoline, pyridine or alkyl derivatives of the latter.

Card 1/2

UDC: 547.413.1.07

0901 1573

L 4958-66

ACC NR: AP5025679

SUB CODE: OC/

SUBM DATE: 20Nov64

OC
Card 2/2

VERSHININ, Petr Vasil'yevich

Osnovy Agrofiziki (By) P. V. Vershinin (1 dr.) Moskva,

Fizmatgiz, 1959.

903 p. illus., diagra., graphs, tables.

Includes bibliographies.

VERSHININ, Petr Vasil'yevich; MEL'NIKOVA, Mariya Konstantinovna; MICHURIN, Boris Nikolayevich; MOSHKOV, Boris Sergeyevich; POMASOV, Nikolay Petrovich; CHUDNOVSKIY, Abram Filippovich, prof.; IOFFE, A.F., akademik, red.; REVUT, I.B., kand.sel'skokhoz.nauk, red.; ORLOVA, L.I., red.; POL'SKAYA, R.G., tekhn.red.

[Principles of agricultural physics] Osnovy agrofiziki. Moskva, Gos.izd-vo fiziko-matem.lit-ry, 1959. 903 p. (MIRA 13:2)
(Agricultural physics)

VERSHININ, P.V.

Synthetic soil conditioners [with summary in English]. Pochvo-
vedenie no.10:28-37 O '58. (MIRA 11:10)

1. Agrofizicheskiy nauchno-issledovatel'skiy institut, Leningrad.
(Soil conditioners)

VERSHININ, Petr Vasil'yevich; DOLGOV, S.I., doktor sel'skokhoz.nauk, red.;
~~GOLOVIN, M.Y.~~, red.izd-va; KRUGLIKOVA, N.A., tekhn.red.

[Soil structure and conditions for its formation] Pochvennaia
struktura i uslovia ee formirovaniia. Moskva, Izd-vo Akad.nauk
SSSR, 1958. 187 p. (MIRA 12:2)

(Soil physics)

VERSHININ, P.V.; REVUT, I.B.

Structure and physical properties of soils in the Kamennaya
Steppe. Sbor.trud.po agron.fiz. no.6:5-56 '53. (MIRA 11:7)
(Kamennaya Steppe--Soils)

VERSHININ, P.V.

Physical and chemical nature of soil structure. Sbor.trud.po
agron.fiz. no.6:208-218 '53. (MIRA 11:7)
(Soil physics)

VERSHININ, P.V.

Reversibility of phenomena of water stability of the soil
structure. Sbor.trud.pa.agron.fiz. no.6:219-227 '53. (MIRA.11:7)
(Soil physics)

VERSHININ, P.V.; REVUT, I.B.

Methods for determining the water stability of soils. Sbor.trud.po
agron. fiz. no.5:5-16 '52. (MIRA 11:7)
(Soil physics)

VERSHININ, P.V.; POYASOV, N.P.

Methods for studying soil air. Sbor. trud.po agron. fiz. no.5:17-25
'52. (MIRA 11:7)

(Gases in soils)

VERSHININ, Petr Vasil'yevich

Sci-Res Agrophysical Inst VASKhNIL, Academic degree of Doctor of Agricultural Sciences, based on his defense, 17 November 1953, in the Council of the Leningrad Agricultural Inst, of his dissertation entitled: "Forming of Soil Structure".

Academic degree and/or title: Doctor of Sciences

SO: Decisions of VAK, List no. 9, 16 April 55, Byulleten' MVO SSR, No. 14, Jul 56, Moscow, pp 4-22, Uncl. JPRS/NY-429

SOV/50-59-10-25/25

3(9)
AUTHOR: Vershinin, S. S.

TITLE: A New Expedition Ship

PERIODICAL: Meteorologiya i gidrologiya, 1959, Nr 10, pp 57 - 58 (USSR)

ABSTRACT: The new expedition ship "A. I. Vovaykov" was commissioned. It was built by the Nikolavovskiy sudostroitel'nyy zavod im. I. I. Nosenko (Nikolayev Shipbuilding Yard imeni I. I. Nosenko) by order of the Glavnoye upravleniye gidrometeorologicheskoy sluzhby (Main Administration of the Hydrometeorological Service) (Fig 1). It is intended for oceanographic and aerological research work within the stormy latitudes of the Pacific throughout the year. Like the other Soviet expedition ships "Ob", "Mikhail Lomonosov", "Vityaz", and "Sevastopol", it is a floating institute with a permanent staff of scientists and scientific equipment. It is a shelter-deck motor ship with an extended waist superstructure, a screw, and an engine room amidships. It has an over-all length of 84.6 m, a beam of 14 m, and a free-board of 10 m. An 8DR 43/61-engine of 2000 hp at 250 rpm with direct shaft drive is installed as main engine. At full engine performance, the ship attains a speed

Card 1/2

A New Expedition Ship

50V/50-59-10-25/25

of 12 knots, it has a range of 15000 miles, and the maximum length of voyage is 120 days including reserves. It operates throughout the year without any restrictions. The article is concluded with a short general list of the apparatus and equipment on board the ship. There is 1 figure.

Card 2/2

VERSHININ, S.S.

Dry-freight transportation boat for the Volga River. Biul. tekhn.-ekon.
inform. no.10:70-72 '59. (MIRA 13:3)
(Volga River--Freighters)

VERSHININ, S.S.

Ship for sea and river navigation used for transportation of cotton
and lumber. Bul.tekh.-ekon.inform. no.4:65-66 '60. (MIRA 13:11)
(Freighters)

VERSHININ, S.S.

Perishable cargo carrier. Biul.tekh.-ekon.inform. no.7:
60-61 '60. (MIRA 13:7)
(Freighters)

VERSHININ, S.S.

The "Tavria" fish refrigerator ship. Biul.tekh.-ekon.inform. no.9:
63-66 '60. (MIRA 13:10)

(Refrigerator ships)

VERSHININ, S. S.

The 5,000-ton lumber carrier "Pavlin Vinogradov." Biul. tekhn.-ekon.
inform. no.11:60-62 '60. (MIRA 13:11)
(Lumber--Transportation)

VERSHPININ, S.S.

The "Volga-Don-1" dry-cargo diesel ship with a 5,000-ton
capacity. Biul.tekh.-ekon.inform. no.3:61-63 '61. (MIRA 14:3)
(Freighters)

VERSHPININ, S.S.

Sectional barge "Perryi." Biul. tekhn.-ekon. inform. Gos.
nauch.-issl. inst. nauch. i tekhn. inform. 17 no.3:71-73 '64.
(MIRA 17:9)

VERSHININ, S.S.

Floating fish cannery. Biul. tekhn.-ekon. inform. no. 4:50-53 '61.
(MIRA 14:5)

(Fishing boats)

VERSHININ, S.S.

Icebreaker and freighter "Amguema." Biul.tekh.-ekon.inform.

no.8:75-77 '61.

(MIRA 14:8)

(Ice-breaking vessels)

VERSHININ, S.S.

Freight cranes on sea-going vessels. Biul.tekh.-ekon.inform.

no.10:75-76 '61.

(MIRA 14:10)

(Cranes, derricks, etc.)

(Freighters)

VERSHININ, S.S.

Self-propelled ferryboat for rivers and reservoirs. Biul.tekh.-ekon.-
inform. no.11:83-84 '61. (MIRA 14:12)
(Ferries)

VERSHININ, S.S.

Dry-cargo freighter "Poltava." Biul.tekh.-ekon.inform.Gos.nauch.-
issl.inst.nauch. i tekhn.inform. no.7:74-76 '62. (MIRA 15:7)
(Freighters)

VERSHININ, S.S.

The "Strela" sea-going passenger diesel ship with underwater wings.
Biul.tekh.-ekon.inform.Gos.nauch.-issl.inst.nauch. i tekhn.inform.
no.8:75-77 '62. (MIRA 15:7)

(Planing hulls)

VERSHININ, S.S.

The "Chernomorskaia-1" earth-transporting diesel scow. *Mul.tekh.-
ekon.inform.Gos.nauch.-issl.inst.nauch.i tekhn.inform.* no.1:74-75
'63. (MIRA 16:2)

(Scows)

VERSHININ, S.S.

Refrigerator ship "Sibir." Biul.tekh.-ekon.inform.Gos.nauch.-
issl.inst.nauch.i tekhn.inform. no.2:75-76 '63. (MIRA 16:2)
(Refrigerator ships)

VERSHININ, S.S.

Lumber carrier "Vytegralis." Biul.tekh.-ekon.inform.Gos.nauch.-
issl.inst.nauch. i tekhn.inform. no.3:65-67 '63.
(MIRA 16:4)

(Lumber--Transportation)
(Freighters)

VERSHININ, S.S.

Maritime passenger motorboat "Baku" for Caspian oilfields.
Biul.tekh.-ekon.inform.Gos.nauch.-issl.inst.nauch.i.tekh.inform.
16 no.4:68-69 '63. (MIRA 16:8)
(Caspian Sea—Motorboats)

VERSHININ, S.S.

Scientific and fishing ship "Akademik Knipovich". Biul. tekhn.-ekon.
inform. Gos. nauch.-issl. inst. nauch. i tekhn. inform. 17 no.6:
78-81 Je '64. (MIRA 17:11)

VERSHININ, S.S.

Fish-refrigerating ship with 15t. a day capacity. Biul.tekh.-ekon.-
inform.Gos.nauch.-issl.inst.nauch.i tekhn.inform. 16 no.7:62-64
'63. (MIRA 16:8)

(Refrigerator ships)

ROZEN, Boris Yakovlevich; VERSHININ, T.I., red.

[Permian salt; the history of salt production in the
Kama Valley] Permianka; istoria solianogo proizvodstva
v Prikam'e. Perm', Permskoe knizhnoe izd-vo, 1965. 124 p.
(MIRA 18:10)

VERSHININ, V.D. (Moskva); KULEBAKIN, V.S. (Moskva)

Synthesis of linear invariant automatic control systems. Avtom.
i telem. 26 no.1:42-49 Ja '65. (MIRA 18:4)

L 40240-66 EWT(d)/EWP(v)/EWP(k)/EWP(h)/EWP(l) BC

SOURCE CODE: UR/0103/66/000/006/0200/0203

ACC NR: AP6021401

AUTHOR: Vershinin, V. D. (Moscow)

ORG: none

TITLE: Problems in the design of reproducing systems with a high order of astatism

SOURCE: Avtomatika i telemekhanika, no. 6, 1966, 200-203

TOPIC TAGS: automatic control theory, programmed control system, servomechanism system, *AUTOMATIC CONTROL DESIGN*

ABSTRACT: A method is outlined for the design of reproduction systems (servosystems and programmed control systems) having a high degree of astatism which operate at various levels of input noise. The conditions for the stabilization of closed systems which are equivalent to combined systems are established, and an analysis is made of a case in which the conditions for complete invariance in the system in terms of drift are fundamentally fulfilled without the introduction of positive feedback. Orig. art. has: 3 figures and 10 formulas.

SUB CODE: 13/ SUBM DATE: 13Jan66/ ORIG REF: 004/ OTH REF: 000

UDC: 62-501

Card

L 29252-66 EWP(j)/ENT(m) RM/WW/JW

ACC NR: AF6019314

SOURCE CODE: UR/0286/65/000/012/0022/0022

INVENTOR: Levin, A. M.; Glazov, A. N.; Vershinin, V. I.; Danilov, P. M.;
Plekhanov, P. S.; Pashchenko, V. Ye.; Lachinov, S. S.; Kuznetsov, L. D.; Rabina, P. D.;
Levitskaya, T. T.; Tatarov, F. S.; Lipinskaya, V. P.; Cherneyeva, Z. M.; Alekseyeva, Z. S.

ORG: none

TITLE: Steel for manufacturing ammoniaⁿ synthesis catalyzer. Class 18, No. 171877

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 12, 1965, 22

TOPIC TAGS: steel, ammonia, inorganic synthesis, catalysis

ABSTRACT: A steel for manufacturing ammonia synthesis catalyzers is distinguished by an increased catalyzer activity and has the following chemical composition: 0.10% C, 1.0-2.0% Al, 0.05% Mn, 0.008% P, 0.008% S, 0.05% Cr, 0.10% Cu, 0.05% Ni, 0.40% Si, balance--iron. [JPRS]

SUB CODE: 11, 07 / SUBM DATE: none

Card 1/1 10

UDC: 669.14/15

LEVIN, A.M.; GLAZOV, A.N.; VERSHININ, V.I.; DANILOV, P.M.; PASHCHENKO, V.Ye.

Characteristics of the production of catalyzer steel with a low
addition content. Izv. vys. ucheb. zav.; chern. met. 8
no.10:62-68 '65. (MIRA 18:9)

1. Sibirskiy metallurgicheskiy institut i Kuznetskiy metallurgi-
cheskiy kombinat.

L 00619-67 EWT(m)/EWP(t)/ETI/EWP(k) IJP(c) JD/HW

ACC NR: AP6016030

(A)

SOURCE CODE: UR/0145/65/000/011/0120/0125

AUTHOR: Vershinin, V. I. (Engineer)

34
B

ORG: None

TITLE: Drawing cylindrical parts with flanges

SOURCE: IVUZ. Mashinostroyeniye, no. 11, 1965, 120-125

TOPIC TAGS: metal drawing, plastic deformation, die, ultimate stress, yield stress

ABSTRACT: The author studies the effect of impulsion on stress reduction in the critical cross section of a part during drawing through the rounded edge of a die in the first phase of deformation. The dimensions of the region of plastic deformation are constant during this process. A formula is given for calculating the maximum stress in the critical cross section of the part. Graphs are given showing the effect of various factors on the stress in the critical cross section. The coefficient of friction is assumed to be 0.15 for all cases. It is shown that impulsion relieves stresses in the critical cross section of the part. Annular bulges are studied. The results show that the effect of impulsion depends on the entering angle α_H for the first phase of deformation. Impulsion increases stress at an entering angle $\alpha_H \rightarrow \pi/2$

Cord 1/2

UDC: 621.735

L 00619-67

ACC NR: AP6016030

in the critical cross section. Formulas are given for determining critical strength in the first approximation. In the final stage of deformation, stress may be reduced in the critical cross section by relieving the forces acting on the flange, although this produces annular deformation. The drawing process should be done in several stages to produce a good flange surface. Orig. art. has: 3 figures, 1 table, 6 formulas.

SUB CODE: 13/ SUBM DATE: 05Aug65/ ORIG REF: 007/ OTH REF: 000

Card 2/2 pb

VERSHININ, Ye.A.; FILIMONOV, V.N.; KISLYAKOV, L.D.; CHVANOV, P.A.;
BELYATEV, M.A.; KOROBKOV, V.P.

Efficient flotation flow chart for collective concentrates at the
Sibay plant. TSvet. met. 38 no.4:14-17 Ap '65. (MIRA 18:5)

L 1884-66 EWT(1)/FCC GS/GW
ACCESSION NR: AT5022834

UR/0000/65/000/000/0215/0223

AUTHOR: Vershinin, Ye. F.; Ponomarev, Ye. A.

TITLE: Observations of very-low-frequency emission from aurora

SOURCE: Vsesoyuznoye soveshchaniye po kosmofizicheskomu napravleniyu issledovaniy kosmicheskikh luchey. 1st, Yakutsk, 1962. Kosmicheskiye luchy i problemy kosmofiziki (Cosmic rays and problems in space physics); trudy soveshchaniya. Novosibirsk, Redizdat Sib. otd. AN SSSR, 1965, 215-223

ABSTRACT: Results of studies of vlf emission from aurora conducted in 1962 are presented. Reception of signals took place at Tiksi Bay. Signal-reception equipment included a horizontal ring-type antenna (diameter, 40 m), a series of filters covering the entire operating range (820—1400 cps), a wide-band amplifier (gain, 10^5), an attenuator with an additional lf filter, and narrow-band active RC filters. Signal images on the oscilloscope screen were recorded photographically and registered by the N-370 M recorder mounted on the output of the compensation circuit. Simultaneously with the regular recordings, rapid variations in aurora optical luminescence were measured at 3000—6000 Å by a photometer using the FEU-19M photomultiplier. Signal recording for the most part centered at 11 kc. Data from visual observations, electrophotometer readings, vertical ionospheric sounding, and hori-

Card 1/2

L 1884-66

ACCESSION NR: AT5022834

zontal magnetic field component measurements were correlated in the study. A close relationship was noted among visually observed aurora, magnetic field disturbances, E_s layer appearances, and vlf emission. Maximum optical intensity of aurora coincided with the maximum vlf signal intensity. In cases of total absorption of radio probes in the ionosphere, the vlf signal was recorded only during large magnetic disturbances. The range of vlf signals was lower during the evening hours than at other times and shifted to higher values during the night. Individual aurora formations produced vlf signals over the full frequency range with no maximum intensity at any particular frequency. Orig. art. has: 6 figures, 10 formulas, and 3 tables.

ASSOCIATION: Institut kosmofizicheskikh issledovaniy i aeronomii [PW]
(Institute of Space Physics Research and Aeronomy, Yaf SO AN SSSR)

SUBMITTED: 29Oct64

ENCL: 00

SUB CODE: ES, EM

NO REF SOV: 003

OTHER: 006

ATD PRESS: 4112

Card 2/2

ACC NR: AR6019482

SOURCE CODE: UR/0269/66/000/002/0066/0066

AUTHOR: Vershinin, Ye. F.; Ponomarev, Ye. A.

TITLE: Ultra-low frequency radiation of aurora polaris

SOURCE: Ref. zh. Astronomiya, Abs. 2.51.502

REF SOURCE: Sb. Kosmich. luchy i probl. kosmofiz. Novosibirsk, Sib., otd. AN SSSR, 1965, 215-223

TOPIC TAGS: aurora, radiation, very low frequency, photometer, geomagnetic field, ionosphere

ABSTRACT: Ultra-low frequency radiation of aurora polaris was observed on the frequency of 11 kc in 1962 at Tiksi Bay. At the same time, the optical glow of auroras in the 3000-6000 range was recorded by the electrophotometer. The experimental apparatus is described. A close relationship was detected between the auroras observed visually, the perturbations of the terrestrial magnetic field, the formation of the E_s layer, and ultra-low frequency radiation. The interaction between ultra-low frequency radiation and the ionosphere was investigated. Bibliography of 9 titles. I. Ya. /Translation of abstract/

SUB CODE: 04

Card 1/1

UDC: 551.594.5

VERSHININ, Yu.I.

Results of the investigation of the effect of the rotational
speed of a drilling tool on the operation of fine-diamond bits.

Razved. i okh. nedr. 30 no.11:58-59 N '64.

(MIRA 18:4)

1. Ural'skoye geologicheskoye upravleniye.

L 60858-65 EWG(B)-2/EWP(J)/ENT(B) RM
ACCESSION NR: AR5011411

UR/OCB1/62/100/100/100/100/100

SOURCE: ref. 25. Anal. ya, Abg. (M. J.)

AUTHOR: Vershinin, Yu. N.

12
B

TITLE: Concrete as electrotechnical material

CITED SOURCE: Tr. Sibirsk. n.-i. in-ta energ., v.p. 2(21), 1964, 5-11

TOPIC TAGS: concrete, cement, insulating material, nonmetallic conductor

TRANSLATION: Analyses of three varieties of concrete (plasto-concrete¹ polymer cement, and cement concrete) were carried out. The results of the analyses are presented.

Card 1/2

L 60858-65

ACCESSION NR: AR5011411

SUB CODE: MT, EM

MTCL: 00

L 08722-67 EWT(1) IJP(c) GG

ACC NR: AP6026307

SOURCE CODE: UR/0288/66/000/001/0149/0153

AUTHOR: Vershinin, Yu. N.

40

ORG: Siberian Scientific-Research Institut of Power Engineering, Novosibirsk
(Sibirskiy nauchno-issledovatel'skiy instit energetiki)

TITLE: Possibility of a phenomenological approach to the quantitative analysis of
the electric strength of solid dielectrics

SOURCE: AN SSSR. Sibirskoye otdeleniya. Izvestiya. Seriya tekhnicheskikh nauk, no.1,
1966, 149-153

TOPIC TAGS: solid dielectric, dielectric breakdown, dielectric strength, dielectric
material

ABSTRACT: A thermodynamic approach is proposed to the problem of determining the
work performed by the electrons during the development of breakdown, with the aim of
overcoming the mathematical and physical difficulties involved in a kinetic approach
that is based on laws which govern in time and space the motion of electrons in a
dielectric. A thermodynamic approach, for example, eliminates the necessity of study-
ing the peculiarities of the motion and interaction of ionizing electrons. The work
performed by the electrons is then characterized by thermodynamic parameters of the
natural and streamer states of the dielectric. The determination of these parameters
does not encounter any major obstacles. The corresponding equations of electrical
resistance are derived on the basis of an avalanche-type streamer theory of develop-
Card 1/2

UDC: 621.315.611.015.51

L 08722-67

ACC NR: AP6026307

0

ment of breakdown, taking into account recent theoretical and experimental data of the processes associated with the formation of a discharge, and making use of the generally accepted equality between the energy acquired by an electron in an electric field and the work performed by an electron in a dielectric. An analysis developed on this basis leads to a general expression for the electric strength in the form

$$E_{np} = k(\tau, \lambda_s, d) W_e + E_0 \quad (1)$$

The results obtained from this equation for various dielectric material are found to correlate well with the experiment. Orig. art. has: 12 formulas and 1 table.

SUB CODE: 20/ SUBM DATE: 25Sep65/ ORIG REF: 022/ OTH REF: 006

Card 2/2 nst

VERSHININA, E.N., inzh.; PITYUNOV, V.M., inzh.

Determining the critical moisture of clays in the drying process. Stek. i ker. 22 no.11:24-26 N '65.

(MIRA 18:11)

1. Novosibirskiy inzhenerno-stroitel'nyy institut (for Vershinina).
2. Novosibirskiy elektrotekhnicheskiy institut svyazi (for Pityunov).

YUDELEVICH, I.G.; VERSHININA, F.I.; SOSNOVSKAYA, T.I.

Spectrographic determination of arsenic, antimony, and tin
in raw materials and intermediate products of the lead
industry. Sbor.trud. VNIITSVETMET no.9:181-185 '65.

(MIRA 18:11)

VERSHININA, F.I.; VIKHAREV, L.I.

Spectrographic determination of tellurium in telluric
lead. Sbor.trud. VNIITSVETMET no.9:186-188 '65.
(MIRA 18:11)

VERSHININA, K.I.

Leading scientist I.I. Mechnikov; on the 110th anniversary of his
birth. Mikrobiol. zhur. 17 no.4:68-70 '55 (MLRA 10:5)
(BIOGRAPHIES,
Mechnikov, I.I.) (Uk)

GOL'SHTEYN, Isak Moiseyevich; VERSHININA, Klavdiya Il'inichna

[Poliomyelitis and its prevention] Poliomielit i ego pro-
filaktika. Izd.2., dop. i perer. Kiev, Gosmedizdat USSR,
1960. 159 p. (MIRA 13:12)
(POLIOMYELITIS)

GOL'SHTAYN, Isak Moyseyevich, professor; VARSHEININA, Klavdiya Il'inichna,
kandidat meditsinskikh nauk; KOL'NER, E.Yu., redaktor; GITSHAYN,
A.D., tekhnoredaktor

[Polioomyelitis and its prevention] Poliomyelit i ego profilaktika.
Kiev, Gos. med. izd-vo USSR, 1956. 108 p. (MLBA 9:8)
(POLIOOMYELITIS)

VERSHININA, K.I.; MASLOVA, L.I.; KHANINA, E.E.; MARYANSKAYA, Ye.Yu.

Study of the sanitary arrangements, schedules, and incidence of infectious diseases in the schools of Dnepropetrovsk. Gig.i san. 26 no.12:88 D '61. (MIRA 15:9)

1. Iz kafedr kommunal'noy gigiyeny i gigiyeny detey i podrostkov Dnepropetrovskogo meditsinskogo instituta.
(DNEPROPETROVSK--SCHOOL HYGIENE)

VERSHININA, Klavdiya Il'inichna, kand. med. nauk; BARSHTEYN,
Yu.A., red.; ZAPOL'SKAYA, L.A., tekhn. red.

[Botkin's disease in children's collectives and measures
for its prevention] Bolezn' Botkina v detskikh kollektivakh
i mery ee profilaktiki. Kiev, Gosmedizdat USSR, 1963. 142 p.
(HEPATITIS, INFECTIOUS) (MIRA 16:7)
(CHILDREN—DISEASES)

SHKLYAYEV, Aleksandr Sergeyevich; BALKOV, Vladimir Aleksandrovich;
YERSHININ, T.I., red.; YEZOV, G.M., tekhn. red.

[Climate of Perm Province] Klimat Permskoi oblasti. Perm',
Permskoe knizhnoe izd-vo, 1963. 189 p. (MIRA 17:2)

VERCHININ, T.I. (Perm')

History of the founding of the first medical institution in Perm.
Trudy Perm. gos. med. inst. 43: 77-78 '68. 2015 12 01

DEDOV, Gavriil Ivanovich; ROCHETOV, Yuriy Ivanovich; VERSHININ,
T.I., red.

Aleksandrovsk. Perm', Formskoe knizhnoe izd-vo, 1963.
70 p. (MIRA 17:5)

SHARIPOV, Akram Agzamovich; VERSHININ, T.I., red.

General N.V.Krisanov. Perm' Permskoe knizhnoe izd-vo,
1963. 50 p. (MIRA 17:5)

VISHNEVSKIY, Boris Nikolayevich; VERSHININ, T.I., red.; NEUDAKINA, N.G.,
tekhn.red.

[The explorer Kirill Khlebnikov] Puteshestvennik Kirill Khleb-
nikov. Perm', Permskoe knizhnoe izd-ro, 1957. 59 p. (MIRA 13:3)
(Khlebnikov, Kirill Timofeevich)

NIKOLAYEV, S.F.; VERSHININ, T.I., red.; NEUDAKINA, N.G., sekhn.red.

[Kungur] Kungur. Perm', Permskoe knizhnoe izd-vo, 1958.
145 p. (MIRA 12:11)
(Kungur--History) (Kungur--Economic conditions)

VERSHININ, V.

General line of Soviet foreign policy. Koma, Vooruzh. Sil
4 no. 19:8-16 0 '63. (MIRA 17:7)

VERSHININ, V.D. (Moskva)

Electron tube circuit for summation of signals. Avton. i telen.
21 no.11:1560-1562 H '60. (MIRA 13:11)
(Servomechanisms)

VERSHININ, V.D. (Moskva)

Relationship between the adjuncts of determinant elements and its
application to the invariance theory. Avtom.i telem. 23 no.4
441-446 Ap '62. (MIRA 15:4)
(Automatic control.)

S/103/62/023/004/002/011
D299/D301

16.8000

AUTHOR: Vershinin, V.D. (Moscow)

TITLE: On the relation between cofactors of determinant elements and its use in invariance theory

PERIODICAL: Avtomatika i telemekhanika, v. 23, no. 4, 1962,
441-446

TEXT: A relationship is established between the cofactors of a determinant. This relationship yields a formula which permits calculating the value of the determinant by means of $(n-1)$ cofactors. The existence of a relationship between the cofactors A_{1k} of the determinant $//a_{ij}//$ is proved by means of a well-known property of determinants (if the elements of a column (row) are multiplied by the algebraic complement of the corresponding elements of another column (row), and the products are added, then the sum equals zero). The question of such a relationship arises when determining the number of signals applied to the various networks of a control system, with respect to which the controlled parameter can be made complete.
Card 1/3

On the relation between cofactors ...

S/103/b2/023/004/002/011
D299/D301

tely invariant by setting the corresponding cofactors equal to zero. One obtains

$$A_{sk} = - \frac{1}{a_{sd}} \left(\sum_{i=1}^{i=s-1} a_{id} A_{ik} + \sum_{i=s+1}^{i=n} a_{id} A_{ik} \right). \quad (4)$$

Hence the cofactor A_{sk} depends on the cofactors A_{ik} of other elements of the k th column. The relationship is used in invariance theory. Thereby an expression is obtained which shows that if $(n-1)$ cofactors vanish, i.e. if the function $x_k(t)$ is absolutely invariant with respect to $(n-1)$ functions $f_i(t)$, then the principal determinant of a system of differential equations with constant coefficients vanishes also, provided at least one element a_{sd} is not zero. Further, the compensation of changes in a determinant, by way of increasing the value of one (or of several) elements, is considered. Formulas are derived which permit calculating the required changes in certain elements, so as to compensate the effect (on the

Card 2/3

On the relation between cofactors ... S/103/62/023/004/002/011
D299/D301

determinant) of changes in other elements. These formulas can be used e.g. for determining the changes resulting from introduction of feedback. It is noted however, that it is not always possible to compensate changes in certain elements, by effecting changes in other elements. There are 8 Soviet-bloc references.

SUBMITTED: June 19, 1961

Card 3/3

16.8000 (1013, 1031, 1132)

26.2195

29562

S/024/61/000/005/002/009

E140/E135

AUTHORS: Kulebakin, V.S., and Vershinin, V.D. (Moscow)

TITLE: The invariance of servosystems with respect to several signals

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Otdeleniye tekhnicheskikh nauk. Energetika i avtomatika, no.5, 1961, 25-37

TEXT: The authors consider linear automatic control systems which can be described by equations with constant coefficients with combined regulation, i.e. regulation with respect to the disturbances and the deviations. A solution of the differential equation describing the behaviour of the coordinate x_j may be represented as the sum of the following components: a free component, constituting the general solution of a homogeneous differential equation and a forced component resulting from the action on the system of a disturbance, found as a particular solution. The free component appears only in the presence of a disturbance or when the process is caused by non-zero initial conditions. In high-quality control systems it is necessary that the free component rapidly attenuate and have small absolute

Card 1/4

The invariance of servosystems with ... ²⁹⁵⁶²
S/024/61/000/005/002/009
E140/E135

values while the forced component should be practically zero. These requirements can be satisfied when the disturbances are either arbitrary functions of time bounded in absolute value or are prescribed functions of time. The invariance conditions may be expressed in two ways. One of these is based on the use of supplementary control with respect to the disturbances; the other in the use of compound control, i.e. the introduction of supplementary restraints with respect to other coordinates connected with the controlled object. The first method has the advantage that it does not affect the dynamic properties of the system. The authors recall from the theory of determinants that if all elements of a row or column but one vanish, all $n - 1$ adjuncts of the column or row elements in which this element appears also vanish. In this case the corresponding coordinate becomes invariant with respect to all disturbances in the remaining coordinates of the system, or all $n - 1$ coordinates become invariant with respect to a single disturbance. The required matrix elements can be reduced to zero by the introduction of supplementary couplings. Under certain conditions the

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The invariance of servosystems with ...

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S/024/61/000/005/002/009

E140/E135

vanishing of certain adjuncts will cause the system equations to degenerate to equations of lower order. Then small variations of the system parameters may lead to violations of system stability. This situation can be treated by suitable adjustment of the elements not entering into the invariant condition. Then the system will be coarse in Andronov's sense. The methods developed in the article have been tested on the analogue computer EMU-8 (EMU-8) and on a d.c. motor speed control. Typical results of the analogue computation are given in Fig.1, where α represents a fifth order system with regulation with respect to deviations, β the same with introduction of supplementary control with respect to perturbations, and γ the system with compensation of the disturbance. Fig.2 gives oscillograms of a d.c. motor speed control, where α gives the results for an ordinary system with control with respect to deviation, and β gives the system with partial invariance - the upper line in each set gives the output velocity, the middle line the armature voltage and the lower line the shaft load. The authors also consider application of the theory to servosystems in which the controlled object is required

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The invariance of servosystems with ... ²⁷⁵⁶²
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to follow the variations of an input signal.
G.V. Shipanov and A.A. Andronov are mentioned in the article in
connection with their contributions in this field.
There are 5 figures and 16 Soviet-bloc references.

SUBMITTED: April 25, 1961

Card 4/0 4

Card 1/2

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ACCESSION NR: AP5003968

condition of invariance of the controlled variable with respect to the disturbance

ASSOCIATION: none

SUBMITTED: 21 May 1960

SUPPLEMENT: none

S/103/60/021/010/005/010
B012/B063

AUTHOR: Vershinin, V. D. (Moscow)

TITLE: Control of Drive by One Zero Indicator Which Fulfills the Functions of Two Zero Indicators

PERIODICAL: Avtomatika i telemekhanika, 1960, Vol. 21, No. 10, pp. 1387-1392

TEXT: The semi-automatic control of available automatic drives and the control of the accuracy of automatic following are carried out by means of two zero indicators. The greatest difficulty to be overcome is the necessity of observing two pointers at the same time. The drive is controlled by a circuit in which the exact and the rough signal are added up. This circuit is used to control the drive and to check the accuracy of automatic following with one zero indicator. This circuit is shown in Fig. 1 and described. Its mode of operation is based upon the use of the non-linear static resistance characteristic and consists in the following: As soon as the signal of the exact control and part of the signal of the rough control (which reach the zero indicator) attain a certain power, they

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Control of Drive by One Zero Indicator Which Fulfills the Functions of Two Zero Indicators
 Mul- S/103/60/021/010/005/010
 B012/B063

are limited by two dry rectifiers. At a small mismatching angle θ , the pointer of the zero indicator deflects mainly due to the exact control signal, while at a large θ this is caused by the rough control signal. The dependence of the deflection angle on θ is studied by the method of circular currents. The corresponding formulas are derived by neglecting the inductive resistance of the winding of the zero indicator, and it is assumed that the sinusoidal shape of the current is not distorted by θ . Next, the author describes a simple method of calculating this circuit. The circuit was tested in the laboratory. It guarantees automatically a high sensitivity to small θ angles and a low sensitivity of the same instrument at large θ angles. There are 2 figures and 1 Soviet reference. ✓

SUBMITTED: April 4, 1960

Card 2/2

9.3220

86257
S/103/60/021/011/014/014
B019/B067

AUTHOR: Vershinin, V. D. (Moscow)

TITLE: A Circuit for Signal Summation by Means of Tubes

PERIODICAL: Avtomatika i telemekhanika, 1960, Vol. 21, No. 11,
pp. 1560 - 1562

TEXT: In the servosystem usually two channels are used to transmit signals, one for transmitting fine control, the other for transmitting rough control. An especially simple circuit for summing signals at the amplifier input is described (Fig.1). The working principle of this circuit consists in the application of a lumped voltage to the grid of a twin triode which corresponds to the working point in the anode grid characteristic. To the second grid of the tube a negative voltage is applied which is equal to or higher than the cutoff voltage of the tube. The modulated control signals are then fed into these two grids, i.e., the voltage U_r for rough control and the voltage U_f for fine control (Fig.1). The following relation is obtained for the anode voltage:

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A Circuit for Signal Summation by Means of Tubes S/103/60/021/011/014/014
B019/B067

$$U_a = \mu_1 (U_m \sin \theta \sin \omega t - U_{cm1}) + \mu_2 \{ U_m \sin \theta \sin(\omega t - \varphi) - U_{cm2} \}, \text{ where}$$

$U_r = U_m \sin \theta \sin \omega t$ and $U_T = U_m \sin \theta \sin \omega t$ and U_{cm1} and U_{cm2} are the grid voltages. The mode of operation of this circuit is thoroughly studied. There are 3 figures.

SUBMITTED: May 24, 1960

Fig. 1

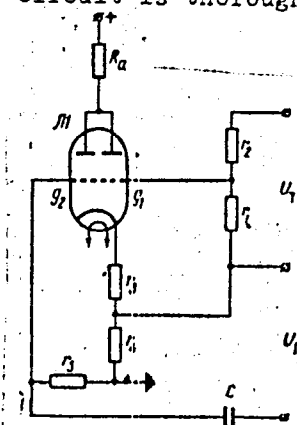


Fig. 1

Card 2/2

D'YACHKOV, N.P.; DAVYDOV, V.F.; VERSHININ, V.I.

Using a pantograph for transforming Δf curves. Geofiz. razved.
no.2:120-124 '60. (MIRA 13:12)

(Pantograph)

Geoff. lineiflorus RAVENHILL, *Trans. Wym. Acad. Sci.* 1900: 103.

Sponsoring Agencies: Glavnoye upravleniye spetsial' i obshchey nede- prii Sostav
Ministerov KPSR: Upravleniye spetsializatsiya rabot: trest Gostizmatte-
upravleniya.

Ed.: O.K. Clothing; Executive Ed.: S.M. Tungman; Tech. Ed.: C.Y. Cui; Assoc. Ed.: S.M. Tungman

PURPOSE: This book is intended for engineers and technicians working in geology and geophysics.

CONTENTS: This is a collection of 11 articles on geophysical methods and techniques for detecting mineral deposits. The surveys of these problems is presented and tabulating the results of surface and underground geophysical surveys and systems employed. Key types of geophysical methods and equipment, the MT-2 and MT-3 geophysical systems, the small portable D-55 geophysical systems, the geophysical properties, their utilization for solving geologic problems, a bibliography, and a modified index to articles are included. No photographs are included. References accompany individual articles.

TABLE 1. Comparison of Y and V as on the basis of A.C. Measurements for Cases of Plastic in Bottle Inward Anomalies

Baron, B.S., and T. A. Smith. Single-Tuned Equipment for Measuring Applied-Phase of a Low-Frequency Electromagnetic Field (AF-U)

Oil Bernstein, P.O., and I.A. Kolosov. Small Field Seismoscope for Measuring the Velocities of Elastic Waves

Oil'berthsen, P.J. Design of Perforated Models of Seismic Wells

Poll's, A.A. Improved Circuit for Marking the Moment of Explosion by Ball

D'yachkov, N.P., V.P. Davydov, and V.I. Verzhnina. Using a Pantograph to Transform ΔT Curves

Orbiter, L.A. Changing the Existing Layout of the 15h-4 Inclination

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Card 3/3

JA/Amn/DP
12-19-60

KONDYBIN, I.S.; VERSHINKIN, V.M.

Mine No.15 is an enterprise of communist labor. Ugol' 37
no.5:4-5 My '62. (MIRA 15:6)

1. Shakhta No.15, Krasnoyarskiy sovnarkhoz.
(Tunguska Basin—Coal mines and mining)

ZHELNOV, V.G.; VERSHININ, V.V.; RUBLEV, N.V.; DEQTYAREV, N.P.

Oscillography of millimicrosecond pulses. Izv. tekhn. no. 1:50-
51 Ja '61. (MIRA 14:1)

(Oscillograph)

VERSHININ, V. V.

VERSHININ, V. V. -- "Comparative Evaluation and the Scope of Application of Systems of Forced Stage Collapsing Including that with Open Clean-Up Space in the Sokol and Bystrushin Mines." Min Higher Education USSR. Moscow Inst of Nonferrous Metals and Gold imeni M. I. Kalinin. Moscow, 1956. (Dissertation for the Degree of Candidate of Technical Sciences.)

SO: Knizhnaya Letopis', No 5, Moscow, Feb 1956

VERSHININ, V.V.; KRIVENKOV, N.A., KURCHUK, Ye.I.

SPP dry dust collectors. Gor.zhur. no.5:69-70 My '60. (MIRA 14:3)

1. Tsentral'nyy nauchno-issledovatel'skiy ekonomicheskii institut Gosplana RSFSR (for Vershinin). 2. Institut gornogo dela AN SSSR (for Krivenkov).

(Mine dusts)

(Dust collectors—Cold weather conditions)

VERSHININ, Vasilii (DESI) (VASH).

Hydromechanization in the working of blanket and placer deposits Moskva, Metallurgizdat, 1944. 154 p. (49-34212)

TN421.V4

VERSHININ, V.V.; ALEKSEYEVA, Ye.P.

Improving methods of a commercial sampling of ores. Gor.zhur. no.2:
35-36 F'55. (MIRA 8:7)

(Ores---Sampling and estimation)

NAGIRNYAK, P.I.; ~~VERSHININ, Ye. A.~~

Enlarged laboratory testing of collective and selective flotation
of Degtyarka deposit ores. TSvet. met. 31 no. 6:57-61. Je '58.
(MIRA 11:7)

(Flotation--Testing)
(Degtyarka--Pyrites)

SOV/136-58-6-10/21

AUTHORS: Nagirnyak, F.I. and Vershinin, Ye.A.

TITLE: Large-scale Laboratory Tests ~~on the~~ Collective-selective Flotation of Degtyarskoye-deposit Ores (Ukrupnenno laboratornyye 'spytaniya kollektivno-selektivnoy flotatsii rud Degtyarskogo mestorozhdeniya)

PERIODICAL: Tsvetnyye Metally, 1958, Nr 6, pp 57 - 61 (USSR)

ABSTRACT: Laboratory work on the development of a new process for the collective-selective flotation of metamorphised pyrite ores from the Degtyarskoye deposit was completed in 1956 at the "Uralsmekhanobr" Institute (Ref 1). It has been shown (Ref 3) that the extraction of minerals from these ores is hindered by the presence of very thin chalcopyrite films on the pyrite grains and that (Refs 1, 4) the process can be facilitated by the presence of a grinding medium. On the continuous large flotation unit (40 kg/h) (Figure 1) at the Institute, the ore was used as its grinding medium. A high metal recovery was secured by using a weakly acid medium in the main and a weakly alkaline in the control flotation: a pH of over 7.0 was corrected with Na_2SiF_6 added to the primary grinding mill.

In the zinc cycle of flotation activation of sphalerite

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SOV/136-58-6-10/24
Large-scale Laboratory Tests on the Collective-selective Flotation
of Degtyarskoye-deposit Ores

was effected with the complex ion $\text{Cu}(\text{NH}_3)_4^{2+}$ and suppression of pyrite with a high-alkali lime liquid, cyanide and the activated charcoal required to remove excess foaming agent from the solution. The results obtained (Tables 2, 3) with the sizing of the flotation feed used (Table 1) using the flowsheet (Figure 2) showed that: a copper concentrate (13.03% Cu, 7.36% Zn) with a recovery in it of 84.50% of the copper contained in the ore could be obtained; the zinc concentrate obtained (1.25% Cu, 46.60% Zn) represented a recovery of 40.20% of the zinc in the ore, while for the pyrite concentrate (46.90% S) the S recovery figure was 78.70%. An editorial note suggests that in view of the high reagent consumption and other disadvantages involved in the proposed method, its further evaluation is desirable.

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SOV/136-58-6-10/21
Large-scale Laboratory Tests on the Collective-selective Flotation
of Degtyarskoye-deposit Ores

There are 2 figures, 3 tables and 5 Soviet references.

ASSOCIATION: Uralmekhanobr

Card 3/3

KAKOVSKIY, I.A.; VERSHININ, Ye.A.; GREBNEV, A.N.

Some sulfhydryl compounds of trivalent iron. Dok. AN SSSR 143 no.3:
649-652 Mr '62. (MIRA 15:3)

1. Ural'skiy politekhnicheskii institut im. S.M.Kirova. Predstavleno
akademikom P.A.Rebinderom.

(Iron compounds)(Thiols)

137-58-6-11322

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 6, p 9 (USSR)

AUTHORS: Kakovskiy, I.A., Nagirnyak, F.I., Vershinin, Ye.A.

TITLE: A Comparative Technological Evaluation of the Collecting Properties of Dithiophosphates and Xanthogenates on Flotation in Acid Media (Sravnitel'naya tekhnologicheskaya otsenka sobiratel'nykh svoystv ditiofosfatov i ksantogenatov pri flotatsii v kisloy srede)

PERIODICAL: V sb.: Usloviya raskrytiya i razdeleniya mineralov rud tsvetn. met. Sverdlovsk, 1957, pp 68-90

ABSTRACT: Theoretical data descriptive of the technological properties of collectors and the conditions for their use form the basis of a hypothesis to the effect that on flotation in a weakly acid medium a definite possibility exists of obtaining greater efficiency by employing collectors with shorter hydrocarbon chains, and that consumption thereof would be lower than that in basic mediums and also lower than that of collectors with longer hydrocarbon chains. In other words, the weaker the collector, the more efficient will be its action in a weakly acid medium. The object of the given study is to seek experimental confirmation for this

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137-58-6-11322

A Comparative Technological (cont.)

theoretical proposition and to justify the necessity of the practical employment of weak and selective collectors in the flotation of hard-to-concentrate complex pyrite ores in weakly acid mediums. The question of the advantage of flotation of refractory ores in acid mediums is also posed. The following collectors are investigated: ethyl and butyl frothers, ethyl and butyl xanthogenates, the quantities employed being 5-45 g/t ore. The Cu-Zn ore of the Degtyar deposit is investigated. In all experiments, the quality of the concentrates derived was higher when weaker collectors were employed. This is emphasized by their superior selective properties and higher efficiency, which is confirmed by the higher percentage of recovery attainable in weakly-acid medium with small consumptions of the weak collector. Thus, weak collectors with an increased number of radicals in the molecule are recommended. The superiority of dithiophosphates as collectors for flotation in weakly acid mediums is demonstrated.

A.Sh.

1. Ores--Flotation 2. Dithiophosphates--Effectiveness 3. Xanthogenates
--Effectiveness

Card 2/2

NAGIRNYAK, F.I.; VERSHININ, Ye.A.

Conditions for developing and separating minerals of the Degtyarka
metamorphic ore deposit. TSvet.met. 30 no.6:12-17 Je '57. (MLRA 10:7)
(Degtyarka--Copper ores) (Ore dressing)

VERSHININ, Ye. A.

136-6-2/26

AUTHOR: Nagirnyak, F.I. and Vershinin, Ye.A.

TITLE: Conditions for Opening and Separating Minerals of Metamorphosed Ores of the Degtyarka Deposit. (Usloviya raskrytiya i razdeleniya mineralov metamorfizovannykh rud Degtyarskogo mestorozhdeniya)

PERIODICAL: Tsvetnyye Metally, 1957, No.6, pp. 12-17 (USSR)

ABSTRACT: All rocks in the Degtyar deposit were subjected in their geological history to intensive re-crystallisation with decrease in volume. One of the reasons for low extractions obtained in the selective flotation of ores from this deposit is insufficiently fine sub-division and the presence of very thin layers of chalcopyrite and sphalerite on the pyrite grains. The authors point out that neglect of these peculiarities has led to erroneous statements on the optimal degree of sub-division by the Uralmekhanobr, Mekhanobr and Gintsvetmet organisations and the research laboratory of the Sredneuralskiy Copper-smelting Works (Sredneuralskiy Medopravilnyy Zavod). They cite tables of results obtained by L.I. Soldatenkova under the direction of G.A. Yarzhemskaya on the distribution of copper sulphides, sphalerite and pyrite between free grains and concretions for various degrees of sub-division. Results obtained by Dolivo-Card 1/2 Dobrevol'sky and Merlina [Ref. 6] on the contents and distri-

136-6-2/26
Conditions for Opening and Separating Minerals of Metamorphosed
Ores of the Degtyarka Deposit.

bution of free minerals and concretions in Degtyar ore ground to 98.8% -74 μ are also tabulated. The authors' work in which the collective properties of ethyl and butyl dithiophosphates and xanthates for the flotation of the ores in an acid medium without using cyanide (this work showed the superiority of butyl dithiophosphate) is mentioned and details are given of their laboratory-scale flotation experiment (flow-sheet and tabulation) results. These show that collective-selective flotation of Degtyar ores with initially acid media is interesting, but an editorial note suggests that further tests are necessary. There are 4 tables, and 9 references, of which 8 are Slavic.

ASSOCIATION: Uralmekhanobr.

AVAILABLE: Library of Congress
Card 2/2

VERSHININ, Ye.F.

Allowing for refraction in interpreting radio reflections from
auroras. Geomag. 1 aer. 2 no.2:289-292 Mr-Apr '62. (MIRA 15:6)

1. Yakutskiy filial Sibirskogo otdeleniya AN SSSR.
(Radar in astronomy)

42133

3/203/62/002/002/009/017
1046/1246

9,9500

AUTHOR:

Vershinir, Ye.F.

TITLE:

The role of refraction in the interpretation of radiowave reflection from polar auroras

PERIODICAL: Geomagnetizm i aeronomiya, v.2, no. 2, 1962, 289-292

TEXT: Allowing for the actual geomagnetic field and for the refraction of radiowaves along the receiver-reflector path in calculations of reflecting layer altitudes according to Chapman's hypothesis (Ref. 1: J. Atmos. and Terr. Phys., 1953, 3, No. 1, 1-29), the author explains successfully a) reflection at distances of 150 km, b) the increase in the reflection distance with the azimuth, and c) the lack of coincidence between the reflecting region and the optical maximum of the aurora. The lack of radiowave reflection at considerable electron concentration gradients may also be due to refraction, rather than to an abrupt increase in absorption. The new factors introduce at least a 30% correction into the spatial distribution of reflecting surfaces as published previously according to the original secular reflection model. There are 4 figures.

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