

LANGH, Istvan (Budapest); VAGI, Janos (Budapest)

Forum of innovators. Ujit lap 15 no.20:30 25 0 '63.

VAGI, Mihaly

Strain-hardened metal work. Musz elet 15 no.14:10 J1 '60. (EEAI 9:9)
(Metalwork)

VAGT, Miklos

What about profit sharing at the automobile repair enterprises?
Auto motor 11 no.23:4 15 D '58.

VAGI, Miklos

We announce it from Debrecen. Auto motor 12 no. 316 F 159.

VAGI, Miklos

Up-to-date establishments at the No.5 Auto Repair Plant. Auto
motor 14 no.15:4 Ag '61.

VAGI, Miklos

Up-to-date and cheaper transportation. Auto motor 14 no.19:6
0 '61.

VAGI, OSZKARNE

STARK, Ervin, az orvostudományok kandidátusa; LEMPERT, Karoly; VAGI, Oszkarne

Isolation of benzoic acid from the urine of patients suffering from hyperfunction of the pituitary and adrenal cortex. Magy. Tudom. Akad. Biol. Orv. Oszt. Kozl. 8 no.4:415-416 1957.

1. Az MTA Kiserleti Orvostudományi Kutató Intézet Korelettani Osztálya és a Budapesti Orvostudományi Egyetem I. sz. Belklinikája.

(CUSHING SYNDROME, urine in benzoic acid isolation (Hun))

(ADRENAL CORTEX, dis. hyperfunct., isolation of benzoic acid from urine (Hun))

(BENZOATES, in urine in adrenal cortex hyperfunct. & Cushing synd., isolation of benzoic acid (Hun))

HOLLO, Istvan, dr.; STARK, Ervin, dr.; YAGI, Oszkars, dr.

Effect of iodine on adrenal cortex function. Orv. hetil. 98
no.12:304 24 Mar 57.

1. A Budapesti Orvostudományi Egyetem I. sz. Belklinikájának
és a MTA Kóki Korelettani Osztályának (igazgató: Russnyak, Istvan
dr. egyet. tanár, akadémikus) közleménye.

(ADRENAL CORTEX, eff. of drugs on
iodine, on funct. in men & dogs (Hun))

(IODINE, eff.
on adrenal cortex funct. in men & dogs (Hun))

VAGI-KOLBAN, K.

EIDUS, L.; CLAUDER, O.; VAGI-KOLBAN, K.

Results and methods of in vitro studies on antituberculous agents. Acta microb. hung. 4 no.2:131-146 1957.

I. I. Innere Klinik und Klinik für Lungenkrankheiten der Medizinischen Universität, Budapest.

(MYCOBACTERIUM TUBERCULOSIS, eff. of drugs on testing of antituberc. agents in vitro (Ger))

VAGIN, A.

Mestnye vozdushnye linii. [Local air lines]. (Grazhdanskaiia aviatsiia, 1934, no. 3, p. 25-27).

DLC: TL504.G7

Rabota mestnykh vozdushnykh linii sel'khozaviatsii za ianvar' i fevral' 1934 g. [The operation of local air lines in rural aviation for January-February 1934]. (Grazhdanskaiia aviatsiia, 1934, no. 4, p. 26).

DLC: TL504.G7

Vozdushnye soobshcheniia. [Air communications]. Zapiski slushatelei L. A. Ageeva i M. I. Solov'eva. Pod. red. A. N. Vegenera. Moskva [Izдание Akademii vozdushnogo flota] 1924. 65 p. fold tab., diags.

DLC: TL552.V4

SO: Soviet Transportation and Communications, A Bibliography, Library of Congress, Reference Department, Washington, 1952, Unclassified.

MEMIROVSKIY, Moisey Il'ich, inzhener; VAGIN, A.A., redaktor izdatel'stva;
EVENSON, I.M., tekhnicheskiy redaktor

[Electric equipment of electric stations and substations of metallurgical plants; a collection of problems and exercises] Elektrooborudovanie elektrostantsii i podstantsii metallurgicheskikh zavodov; sbornik zadach i uprazhnenii. Moskva, Gos. nauchno-tekhn. izd-vo litery po chernoi i tsvetnoi metallurgii, 1956. 288 p. (MLRA 10:2)
(Electric substations) (Electric power plants)

V.I. 11-11
BANNOV, Semen Yegorovich; FIBIKH, V.V., redaktor; VAGIN, A.A., redaktor
izdatel'stva; ATTOPOVICH, M.K., tekhnicheskij redaktor.

[Repair of electrical equipment of metallurgical plants]
Remont elektrooborudovaniia metallurgicheskikh zavodov. Moskva,
Gos.nauchno-tekhn.izd-vo lit'ry po chernoi i tsvetnoi metallurgii,
1957. 503 p. (MIRA 10:11)

(Metallurgical plants--Equipment and supplies)
(Electric machinery--Maintenance and repair)

Vitkin, A.H.

GROSHEV, Mikhail Vasil'yevich; MILLER, A.I., inzh., red.; VAGIN, A.A., inzh.,
red.izdatel'stva; KARASEV, A.I., tekhn.red.

[Heat calculations for open-hearth furnaces] Teplovye raschety
martenovskikh pechei. Moskva, Gos.nauchno-tekhn.izd-vo lit-ry po chernoi
i tsvetnoi metallurgii, 1957. 247 p. (MIRA 11:1)
(Open-hearth furnaces)

VAGIN, A.A., inzhener, redaktor; BERLOV, A.P., tekhnicheskiiy redaktor

[Rules for installation and safe operation of cranes; obligatory for all ministries and departments] Pravila ustroistva i bezopasnoi ekspluatatsii gruzopod'emnykh kranov; obiasatel'ny dlia vsekh ministerstv i vedomstv. Moskva, Gos.nauchno-tekhn.izd-vo lit-ry po chernoi i tsvetnoi metallurgii, 1957. 75 p. (MLRA 10:7)

1. Russia (1923)- U.S.S.R.) Komitet po nadsoru za bezopasnym vedeniyem rabot v promyshlennosti i gornomu nadsoru. (Cranes, derricks, etc.)

VAGIN, A.A.

ZETSEROV, Yakov Mikhaylovich; KAS'YANOV, S.F., redaktor; VAGIN, A.A.,
redaktor izdatel'stva; EVENSON, I.M., tekhnicheskly redaktor

[Comprehensive mechanisation of plants manufacturing refractory
materials] Kompleksnaia mekhanizatsiia na ognepornykh zavodakh.
Moskva, Gos.nauchno-tekhn.izd-vo lit-ry po chernoi i tsvetnoi
metallurgii, 1957. 312 p. (MLRA 10:9)
(Refractory materials)

RUVINSKIY, Semen Mikhaylovich; STARETS, Iosif Samoylovich; KOROLEV, A.A.,
kandidat tekhnicheskikh nauk, redaktor; YAGIN, A.A., inzhener,
redaktor izdatel'stva; ATTOPOVICH, M.K., tekhnicheskij redaktor

[Improving friction points of rolling mills] Modernizatsiia uslov
treniia prokatnykh stanov. Moskva, Gos.nauchno-tekhn.isd-vo lit-ry
po chernoi i tsvetnoi metallurgii, 1957. 189 p. (MLRA 10:9)
(Rolling mills) (Bearings)

LEONIDOV, Nikolay Konstantinovich; ARUTYUNOV, N.B., red.; VAGIN, A.A.
red.izd-va; ISLENT'YEVA, P.G., tekhn.red.

[Improved construction of blast furnaces] Uovershenstvovanie
konstruktsii domennykh pechei. Moskva, Gos.nauchno-tekhn.izd-vo
lit-ry po chernoi i tsvetnoi metallurgii, 1961. 57 p.
(MIRA 14:3)

(Blast furnaces--Design and construction)

VAGIN, Aleksandr Alekseyevich; POZDNYAKOVA, G.L., red. izd-va;
ATTOPOVICH, M.K., tekhn. red.

[Blast furnace practice] Domennoe proizvodstvo. Moskva,
Metallurgizdat, 1962. 134 p. (MIRA 15:4)
(Blast furnaces)

LEMLEKH, Izrail Moiseyevich; GORDIN, Veniamin Avseyevich; VAGIN, A.A.,
red.; ATTOPOVICH, M.K., tekhn. red. [deceased]

[High temperature preheating of air in ferrous metallurgy] Vy-
sokotemperaturnyi nagrev vozdukha v chernoi metallurgii. Mo-
skva, Metallurgizdat, 1963. 352 p. (MIRA 16:3)
(Air preheaters)
(Metallurgical furnaces)

POKHVISNEV, A.N.; SPEKTOR, A.N.; VAGIN, A.A.

Pyrometallurgical method of treating iron-titanium ores from the
"Lysanskoye" deposit. Izv. vys. ucheb. zav.; chern. met. 7
no.3:23-28 '64. (MIRA 17:4)

1. Moskovskiy institut stali i splavov.

POKHVISNEV, A.N., prof., doktor tekhn. nauk; VEGMAN, Ye.F., dotsent,
kand. tekhn. nauk; VAGIN, A.A., inzh.

Investigating the model of a charging apparatus with a rotating
chute. Stal' 23 [i.e. 24] no.4:299-300 Ap '64.

(MIRA 17:8)

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BARINOV, Yevgoniy Mikhaylovich; VAGIII, A.A., red.

[Brief handbook for the blast-furnace operator] Krat-
kii spravocnik domenshchika. Moskva, Metallurgiya,
1965. 211 p. (MIRA 18:3)

GEFNER, Vitaliy Mikhaylovich; VAGIN, Andrey Grigor'yevich; SEMENENKO,
P.A., inzh., red.; FREGER, D.P., red. izd-va; GVIRTS, V.L.,
tekh. red.

[Pneumatic pulse machine, its parts and their manufacture] Pnev-
matischekaia impul'snaia mashina, ee detali i osobennosti ikh iz-
gotovleniia. Leningrad, 1961. 19 p. (Leningradskii Dom nauchno-
tekhnicheskoi propagandy. Obmen peredovym opytom. Seriya: Me-
khanicheskaia obrabotka metallov, no.16). (MIRA 14:12)
(Pneumatic machinery)

VAGIN, A.G.; KULIKOV, A.A.

Sensitivity of the skin to tuberculin in healthy persons and
pulmonary tuberculosis patients. Probl. tub. 42 no.3:9-11 '64.
(MIRA 18:1)

1. Kafedra tuberkuleza (nachal'nik -- doktor med. nauk V.A.
Vasil'yev) Voenno-meditsinskoy ordena Lenina akademii imeni S.M.
Kirova.

VAGIN, A.T., kandidat tekhnicheskikh nauk

Calculations for wheels of tractor-drawn plows. Izv. AN BSSR
no.2:81-85 Mr-Ap '55. (MLRA 8:9)

(Plows)

VAGIN, A.T., inshener, mekhanik.

Designing the wheels of tractor-drawn plows. Sel'khoz mashina no. 6:14-15
Je '54. (MLRA 7:6)
(Plows)

YAGIN, A.T., kandydat tekhnichnykh navuk.

Study of the working parts of plowing machines used for cutting
the surface layer of virgin swamps. Vestsi AN BSSR. Ser. fiz.-tekh. nav.
no.3:121-134 '56. (MLRA 10:1)
(Plows) (Peat machinery)

VAGIN, A.T., kand. tekhn. nauk.

Stability of the plow on a horizontal plane. Sel'khozmaschina no.12:
5 D '57. (MIRA 11:2)

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MALININ, S.N.; LUPINOVICH, I.S.; MOLOCHKO, I.S.; ABRAMCHUK, A.P.; ALEKSEYEV, Ye.K.; AL'SMIK, P.I.; AMBROSOV, A.L.; ANDREYEVA, N.M.; ANOKHIN, A.N.; AFONIN, M.I.; BABOSOV, M.M.; BALOBIN, V.N.; BARANOVSKIY, A.K.; BEZDENKO, T.T.; BEL'SKIY, B.B.; BOBKOVA, A.F.; BOL'SHAKOVA, V.P.; BULGAKOV, N.P.; VAGIN, A.T.; BIL'DYLUSH, R.T.; VIL'CHINSKIY, A.D.; VLASOVA, K.S.; VOYTKO, D.I.; VOLUZNEV, A.G.; GABYSHEV, M.F. [deceased]; GAYKO, A.A.; GALASHEV, M.A.; GOREGLYAD, Kh.S.; GARKUSHA, I.F.; GOSTILOVSKAYA, M.N.; GORBUNOVA, N.N.; GORSKIY, N.A.; GORFINKEL', Z.Sh.; GRUBILKO, N.P.; GUSAKOV, V.A.; GUDAYKIN, A.I.; DANILOVICH, A.F.; DEMENT'YEV, V.A.; DENISOV, Z.N.; DOROZHKIN, N.A.; DUBOV, A.B.; DUBOVSKIY, Ya.K.; YEVTIKHIYEV, B.Ye.; ZHARIKOV, I.S.; ZHILIN, A.P.; ZHOLNE-ROVICH, A.M.; ZHURAVEL', B.N.; ZABELLO, D.A.; ZAKHARENKO, G.D.; ZUBETS, V.M.; IVITSKIY, A.I.; KACHURO, I.M.; KEDROV-ZIKHMAN, O.K.; KUDALINSKIY, V.A.; KIPENVARLITS, A.F.; KOVALEVSKIY, G.T.; KOVAL'CHUK, P.P.; KOZHANOV, K.Ya.; KOZLOVSKIY, I.Ye.; KOCHETOVA, Z.N.; KRIVODUBSKIY, I.P.; KUDRYAVTSEV, S.F.; KUSTOVA, A.I.; LAPPO, A.I.; LARIONENKO, V.B.; LASHKEVICH, G.I.; MAL'CHEVSKIY, V.I.; MAN'KO, N.F.; MARKOVETS, A.F.; MATSEPURO, M.Ye.; MEDVEDEV, A.G.; MEL'TSER, Ya.D.; MOISEYEV, I.G.; MUSORIN, V.V.; MUKHIN, N.D.; NAGORSKAYA, Ye.D.; MALIBOTSKIY, S.B.; NIKOLAYEVA, Yu.N.; MEDOLUGOV, I.T.; ORLOVSKIY, I.A.; ORLOVSKIY, K.P.; PANKEVICH, A.A.; PESKIN, A.L.; PROKOPOV, P.Ye.; PUSHKAREV, I.I.; RAZMYSLOVICH, I.R.; RAZUMENKO, A.V.; REMNEVA, Z.I.; RINKIS, V.A.; ROVDO, A.I.; ROGOVOY, P.P.; ROZENBLYUM, B.M.; RYZHMANOV, A.G.; RUSINOV, A.A.; SAVCHENKO, A.I.; SAPUNOV, V.A.; SAFRONOV, I.P.; SVIRSKIY, Ya.N.; SEVERNEV, V.P.; SERGEYEV, I.V.; SEMENOV, A.L.; SIDORENKO, G.M.;

(Continued on next card)

MALININ, S.N.---(continued) Card 2.

SKOROPANOV, S.G.; SKRIPNICHENKO, L.A.; SMIRNOV, T.Ye.; STAROVOYTOV, K.T. [deceased]; STRELKOV, I.G.; SUSLOV, V.P.; SUKHORUKOV, G.Ye.; SYUBAROV, A.Ye.; TIMOSHININ, V.D.; FISHEVICH, I.I.; TROPASHKO, I.N.; TRIZNO, S.I.; TRIMA, N.K.; TUZOVA, R.V.; TURETSKIY, R.L.; UMANSKIY, M.M.; UR'YEV, I.M.; KHOT'KO, A.I.; KHROBOSTOV, S.N.; TSEKHANOVICH, P.V.; CHERNYAVSKIY, I.G.; CHULKOVA, Ye.I.; CHUNOSOV, M.N.; SEMPPEL', V.I.; SHIKHALEYEV, N.F.; SHILYAR, A.Ye.; SHCHERBOV, N.A.; YURGENS, B.A.; YUSKOVETS, M.K.; YAKOVLEV, B.I.; YAKERSON, S.A.; YAROSHEVICH, A.A.; LUTSENKO, M.N., red.; LARIN, V., red.; KALECHITS, G., tekhn.red.

[Measures for increasing agricultural production per 100 hectares of land on collective and state farms of White Russia] Meropriyatia po uvelicheniiu proizvodstva sel'skokhoziaistvennoi produktsii na 100 hektarov zemel'nykh ugodii v kolkhozakh i sovkhozakh BSSR. Red.kolle-giia; I.S.Lupinovich i dr. Minsk, Gos.izd-vo BSSR. Red.sel'khoz. lit-ry, 1959. 601 p. (MIRA 13:4)

1. White Russia. Ministerstvo sel'skogo khozyaystva.
(White Russia--Agriculture)

VAGIN, A.V., Cand Agr Sci -- (diss) "^{Commercial activities} ~~Merchandise~~ ^{as a function of} ~~ability~~
of fir-groves ~~in relation to~~ their age." Mos 1958,
18 pp (Min of Higher Education USSR. Mos Forest ^{Engineering} ~~Techn~~
Inst) (~~no copies~~). Author not shown on cover.
(KL, 21-58, 92)

USSR / Forestry. Forest Management.

K

Abs Jour : Ref Zhur - Biologiya, No 18, 1958, No. 82206

Author : Vagin, A. V.

Inst : High School of Forest Engineering

Title : Yield of Grades in Fir Forests in Relation to Their Age

Orig Pub : Nauchn. dokl. vyssh. shkoly. Lesoinzh. delo, 1958,
No 1, 25-28

Abstract : No abstract given

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22

ORIG. SOURCE: Forestry: Forest Management.
REF. JOURN. Ref Zhur-Biologiya, No.1, 1959, No. 1472
AUTHOR Vogin, A.V.
INST.
TITLE Industrial Price-fixing of the Wood Stock
to be Felled, by means of Index Coefficient
Coefficients of Grades.
ORIG. PUB. Izv. vyssh. uchebn. zavedeniya. Lesn. zh.,
1958, No.2, 27-33
ABSTRACT No abstract

CARD: 1/1

VAGIN, G.I., gornyy inzhener; STROGANOV, G.S., tekhniki-elektromekhanik.

D.c. drive winch for suspending safety ladders in vertical shaft
sinking. Ugol' 31 no.5:10-11 My '56. (MLRA 9:8)
(Coal mines and mining--Safety measures)
(Winches)

VAGIN, G.I. , inzh.; PIN'KOVSKIY, G.S.

Borehole charge firing in stages during shaft sinking. Shakht.
stroil. no.6:26-27 Ja '59. (MIRA 12:9)

1. Trest Krivbassshakhtoprokhodka.
(Shaft sinking) (Blasting)

88677

12.9100

S/127/69/000/001/001/005
B012/B058

AUTHORS: Vagin, G. I., Manager of the Trust, Zaslavskiy, Yu. Z.,
Chief Engineer of the Trust

TITLE: Large-scale mechanization of the sinking of vertical shafts

PERIODICAL: Gornyy zhurnal, no. 1, 1960, 44-48

TEXT: The sinking of shafts (usually to a depth of from 700 to 1000 m) in the Krivorozhskiy basin largely determines the total construction time of the mine. In 1957, the trust Krivbassshakhtoprokhodka (Krivbass-shakhtoprokhodka Trust) was established in the Krivorozhskiy basin, similar to the other trusts in the coal mining industry, in order to increase the speed of sinking vertical shafts. Starting in August 1957, the collective of engineers and technicians has taken a number of important measures on the basis of experience made at home and abroad. Concrete of high early strength is used for reinforcing the shafts. Metal casings (Fig.1) developed by engineers of the Trust are used for this purpose. In most cases concrete is fed to a depth of up to 650 m through a pipeline as is shown in Fig. 2. Fig. 3 shows a mechanized mixing installation

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B012/B058

Large-scale mechanization of....

operated by two to three persons. The control of the loading equipment in the Novaya-Rakhmanovskaya mines, Yuzhnaya Gleyevatskaya mines, and others was centralized from a control column with automatic blocking of the loading equipment and the hoist. Despite the rock hardness of 10 to 20 (according to Protod'yakonov), the measures indicated resulted in an increase in production. Fig. 4 shows equipment for shaft sinking according to the parallel process without provisional reinforcing, developed by the engineers of the Trust. The collective of the Trust works together with the krivorozhskiy institut Giprorudmash (Krivoy Rog Institute Giprorudmash), krivorozhskiy institut Krivbassproyekt (Krivoy Rog Institute Krivbassproyekt) and Dnepropetrovskiy gornyy institut (Dnepropetrovsk Mining Institute) and makes here a number of recommendations for the increase of the speed of sinking and the production as such. There are 4 figures.

ASSOCIATION: Trest Krivbassshakhtoprokhodka

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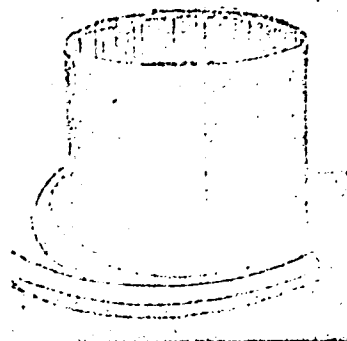
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Large-scale mechanization of...

Fig. 1. Displaceable metal casing for shaft reinforcement by concrete of high early strength.



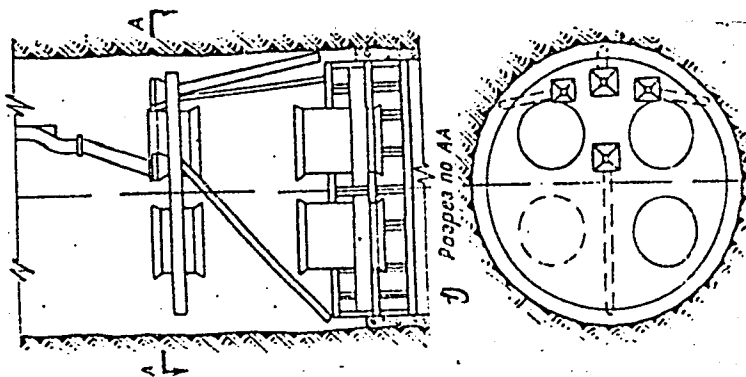
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Large-scale mechanization of...

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Fig. 2. Scheme for concrete mixing.

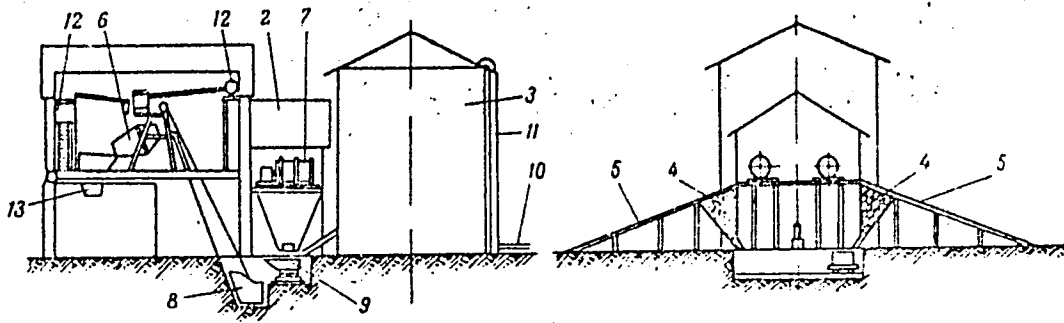
Legend: (1) Section A-A.



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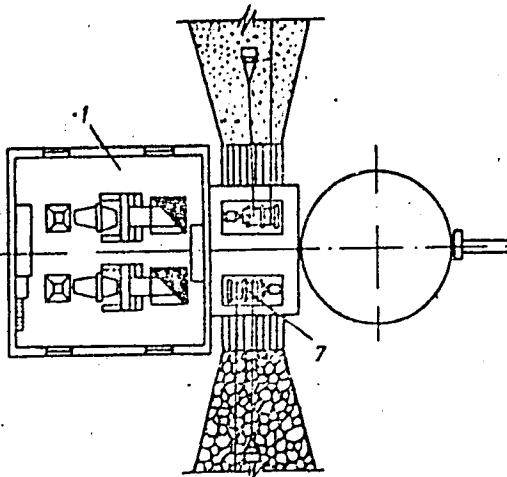
Large-scale mechanization of...

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Large-scale mechanization of....



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Fig. 3. Mechanized concrete-mixing installation of the Mine imeni Lenin

Legend: (1) Building for two mixers, (2) building for two scraper winches, (3) cement store, (4) aggregate- and sand bunker, (5) inclined ramp for bunker loading, (6) concrete mixer of 425 l capacity, (7) scraper winch LA-10, (8) skip for charging the mixer, (9) dump car (dosage instrument), (10) horizontal screw conveyor, (11) vertical screw conveyor, (12) water- and calcium chloride container, (13) bunker for ready mixed concrete.

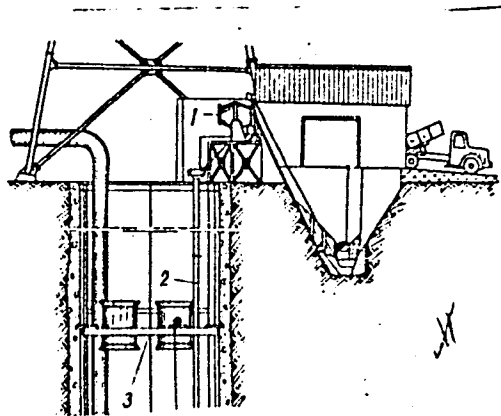
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Large-scale mechanization of...

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Fig. 4. Shaft sinking equipment
proposed by the Krivbassshakhtoprokhodka
Trust

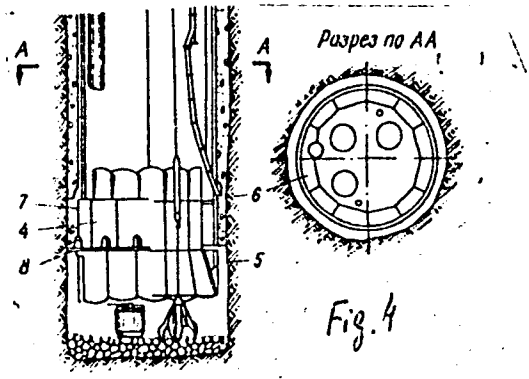
Legend: (1) Concrete mixer, (2) set of
concrete lines for feeding concrete into
the shaft, (3) tenting frame, (4)
(4) short shield-loading platform,
(5) conical part of the shield loading
platform, (6) ring platform for sinkers,
(7) displaceable planking, (8) lower
bottom for the planking.



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Large-scale mechanization of...

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B012/B052

12.2000

AUTHOR: Vagin, G. I., Administrator

TITLE: Economical application of concentrated bilateral explosions
in the sinking of vertical shafts

PERIODICAL: Gornyy zhurnal, no. 7, 1960, 44-47

TEXT: A new method suggested by the author is described. It is based upon concentrated bilateral explosions, and consists in the following items: after the formation of a cut by blowing up the first two circles (one by instantaneous firing, the other one by a 25 millisecond delay), the charges of the two semicircles I (along the uprising of the rock layers) are blown up at the same time by a 50 millisecond delay. Then, the two semicircles II a-dipping are blown up by 75 millisecond delay (Fig. 2). Explosions carried out by this method in the Mines imeni Artem, imeni Kirov, and Ventilyatsionnaya No. 4, prove its expedience (Fig. 3). Experience proved pure granulated slag to be the best, though not the most perfect, stemming for vertical boreholes. Best results in blowing up are obtained with boreholes of 1 m distance in rock of hardnesses between 11 and 15 accord

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B012/B052

Economical application of ...

Protod'yakonov. The new method makes the utilization of explosive energy more economical since it does not only separate and divide the rock but also eject it. Labor input is thus reduced by 70%, and specific consumption of explosives per m³ of blown-up rock is also reduced. Besides, the tensile stresses in instantaneous firing of many charges along the circumference become very high. This has a positive effect on the outlines of shaft walls. There are 4 figures, 1 table, and 1 Soviet-bloc reference.

ASSOCIATION: Trest Krivbassshakhtoprokhodka (Krivbassshakhtoprokhodka Trust)

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Economical application of

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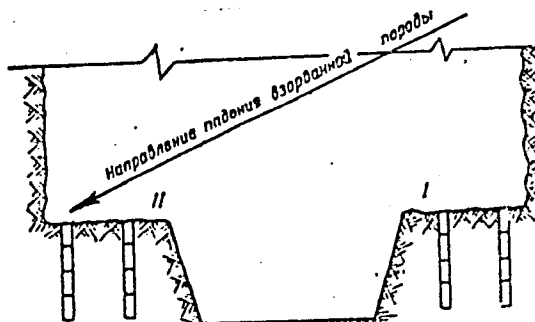
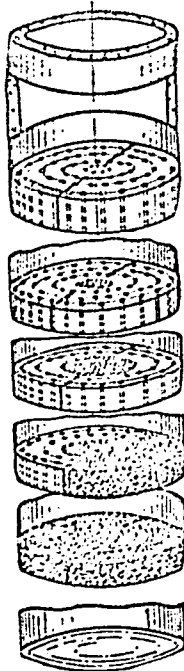


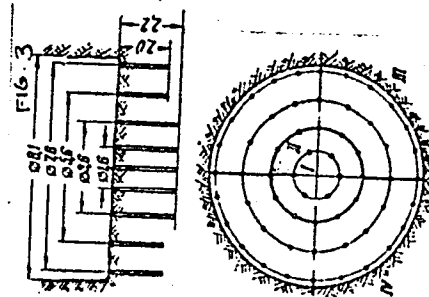
FIG. 2

Card 3/4

88717

Economical application of ...

S/127/60/000/007/006/011
B012/B052



Legend to Fig. 2: Scheme of concentrated bilateral blowing up of a shaft face: 1) Down-dip of blown-up rock
Legend to Fig. 3: Chart for drilling and blowing up in sinking shafts at the Mine imeni Artem: I) Auxiliary cut, II) main cut, III) boreholes of the first series of bilateral explosions, IV) ditto of the second series

Card 4/4

MONIN, G.I.; MALEVICH, N.A.; VAGIN, G.I.

"Boring and blasting operations in mining" by E.O.Mindeli,
Reviewed by G.I.Monin, N.A.Malevich, G.I.Vagin. Gor.zhur.
no.2:80 F '61. (MIRA 14:4)

1. Tsentral'nyy nauchno-issledovatel'skiy institut Rodzemshakhtos-
troy (for Monin, Malevich). 2. Krivbassshakhtoprokhodka (for
Vagin).

(Boring)

(Blasting)

(Mindeli, E.O.)

VAGIN, G.I.

Increasing the efficiency of mine construction. Trudy MIEI
no.15:391-393 '61. (MIRA 14:12)

1. Upravlyayushchiy trestom Krivbassshakhtoprokhodka.
(Krivoy Rog Basin--Mining engineering)

VAGIN, Gennadiy Ivanovich; PIN'KOVSKIY, Gleb Stanislavovich; CHERNEGOVA,
E.N., red. izd-va; SHKLYAR, S.Ya., tekhn. red.

[Using portable formwork in supporting mine shafts] Kreplenie
stvolov shakht s primeneniem peredvizhnykh opalubok. Moskva,
Gosgortekhzdat, 1962. 146 p. (MIRA 15:11)

(Mine timbering)

(Concrete construction--Formwork)

VAGIN, G.I., inzh.; LOGACHEV, N.T., inzh.

Waterproofing mine shafts in the western Donets Basin. Shakht.
stroit. 9 no.4:20-23 Ap '65. (MIRA 18:5)

1. Trest Pavlogradshakhtostroy (for Vagin). 2. Krivorozhskiy
filial Vsesoyuznogo nauchno-issledovatel'skogo instituta organizatsii
i mekhanizatsii shakhtnogo stroitel'stva (for Logachev).

VAGIN, I. Ye (Director)

"Colisepticemia of lambs."

SO: Vet. 28 (1) 1951, p. 51

Fegan Oblast Veterinary-Bacteriological Laboratory

VAGIN, I. Ye

Bees - Diseases

Let's get rid of foul broods in bees. Pchelovodstvo, 29, No. 7, 1952.

9. Monthly List of Russian Accessions, Library of Congress, October 195~~1~~₂. Unclassified.

VACIN, I.Ye.

Epizootiology of foot-and-mouth disease in sheep and goats.

Veterinariia 30 no.1:26 Ja '53.

(MLRA 6:1)

1. Direktor Ferganskoy oblastnoy vetbaklaboratorii.

Foot and mouth disease has occurred during spring months, at the time of lambing. Kids and lambs therefore, also contracted the disease, which resulted in high mortality. A daily dose of 20 cc to 30 cc of 1:1,000 solution of blue vitriol in water was given internally for a period of five days; incidence of the disease disappeared immediately thereafter.

256T53

VAGIN, L., nachal'nik.

Our experience. Radio no.11:9-10 N '53.

(MLRA 6:11)

1. Leningradskiy otdel radioinformatsii.

(Radio in agriculture)

10105
S/109/62/007/009/014/018
D409/D301

86 2531

AUTHOR: Vagin, L.N.

TITLE: Temperature regime of oxide cathodes during pulse discharges

PERIODICAL: Radiotekhnika i elektronika, v. 7, no. 9, 1962, 1608 - 1618

TEXT: The author investigated the following effects in pulse discharges in helium: the pulse-temperature rise of the oxide-cathode surface, the cooling down of the surface in the interval between pulses, and the relation between pulse duration and the cooling time of the cathode. The experiments were conducted at a pulse duration of 100 to 1200 microseconds, and an emission-current density of up to 15 A/cm². This compares very favorably with other investigations, in which the pulse duration did not exceed 2 microseconds, and the current density 5.5 A/cm². The temperature regime of the oxide cathodes was studied by the photoelectric method. The light-flow from the investigated cathode was directed through a channel and monochromator to a photomultiplier; the voltage at the photomul-
Card 1/3

S/109/62/007/009/014/018
D409/D301

Temperature regime of oxide ...

tiplier was measured, after amplification, by means of an oscillograph. Sintered oxide-cathodes with pure-nickel base, were investigated. The helium pressure in the experiments was 0.5 mm Hg. The pulse-temperature rise on the oxide surface was investigated under various operating conditions of the cathode (the emission current varied from 8-15 A/cm², and the temperature from 850-950°C). It was found that the temperature rise follows the law

$$T_+(0, t) = B\sqrt{t}, \tag{5}$$

where B is a constant which depends on the power, imparted to the cathode during the pulse, and on the physical properties of the oxide coating. Formula (5) can be used for calculating (to an accuracy of ± 5 %) the expected warming-up of the oxide surface during a pulse of given duration. It was found that the cooling down of the surface (in the interval between pulses), is slower for cathodes with higher oxide-layer resistance. Further, the dependence of the pulse temperature on the anode current, was investigated, as well as its dependence on the mean cathode-temperature. It was found that the pulse temperature decreases with increasing mean-temperature. The pulse temperature rises in direct proportion with
Card 2/3

Temperature regime of oxide ...

S/109/62/007/009/014/018
D409/D301

the square root of the discharge time. In the interval between pulses, the temperature drops to its mean value, at a rate which depends on the size and properties of the subsurface oxide-layer. The longer the pulse which heats up the cathode surface to a given temperature, the slower the surface cools down in the interval between pulses. The pulse temperature rise of the surface can restrict the magnitude of the allowed specific cathode-loads (even under free operating-conditions), if the pulse duration exceeds 1000 microseconds. There are 12 figures.

SUBMITTED: December 29, 1961

Card 3/3

TOPCHIYEV, A.V., akademik [deceased]; ALANIYA, V.P.; VAGIN, M.F.

Synthesis of o-fluoro-*l*-nitrostyrene and a study of its polymerization capacity. Dokl. AN SSSR 151 no.1:114-116 J1 '63. (MIRA 16:9)

1. Moskovskiy institut neftekhimicheskoy i gazovoy promyshlennosti im. Gubkina.

(Styrene) (Polymerization)

L 12656-63 EWP(j)/EPF(c)/EWT(m)/BDS ASD Pr-4/Pe-4 RM/WW/MAY 68
ACCESSION NR: AP3003556 S/0020/63/151/002/0350/0352 05

AUTHORS: Topchiyev, A.V. (Deceased, Academician); Alaniya, V.P.;
Vagin, M.F.

TITLE: Problems in the polymerization of nitroolefins 7

SOURCE: AN SSSR. Doklady*, v. 151, no. 2, 1963, 350-352

TOPIC TAGS: polymerization, nitroolefin, olefin, nitroisobutylene,
dehydration, nitroisobutanol, catalyst, anion exchange resin,
infrared spectroscopy, cyclohexylydenenitromethane, 1-(nitromethyl)
cyclohexanol, 1-cyclohexynylene nitromethane, cyclohexylydenenitro-
methane, synthesis

ABSTRACT: In a study involving the polymerization of nitroolefins,
nitroisobutylene and cyclohexylydenenitromethane were synthesized and
their tendency toward polymerization was investigated. Nitroiso-
butylene was prepared in 65% yield by dehydration of nitroisobutanol
in the presence of phthalic anhydride. Nitroisobutanol was prepared
in 53.3% yield by condensation of acetone with nitromethane in the
presence of sodium methoxide at 20C for 30 hours with stirring.

Card 1/3

L 12656-63

ACCESSION NR: AP3003556

Tendency of nitroisobutylene toward polymerization was studied by varying a) the type of catalysts (benzoyl chloride, benzoyl peroxide, ammonium persulfate, sodium methoxide, boron trifluoride, and phosphoric acid saturated with boron trifluoride), b) the amount of catalyst, c) the temperature (oil bath, water bath, ice-salt mixture) and d) the reaction time. A three-neck flask equipped with a mechanical stirrer and a reflux condenser was used. The polymer was purified by dissolving in benzene, followed by precipitation with methanol, filtering and drying under vacuum. Only benzoyl chloride and benzoyl peroxide proved to be useful catalysts in polymerization of nitroisobutylene. With benzoyl chloride as the catalyst, maximum yield (80%) was obtained after 14 hours by using 10% of the catalyst. The optimum temperature was 150C. With benzoyl peroxide as the catalyst, the yield was 20-21% and the optimum temperature range 120-140C. The amount of catalyst was varied from 1 to 10% with no significant influence on the yield. Polynitroisobutylene is a dark powder, insoluble in water, ethanol and ether but soluble in benzene and acetone. It melts at 98C; has a molecular weight (Rast method) of 1700; and exhibits paramagnetic properties. Cyclohexyldene-nitromethane (33-36% yield) was prepared by dehydration of 1-(nitro-

Card 2/3

L 12656-53

ACCESSION NR: AP3003556

methyl)cyclohexanol in the presence of phthalic anhydride. A mixture of two isomers: 1-cyclohexynylenitromethane (b.p. 98-102°/12mm) and cyclohexylydenenitromethane (b.p. 108-110°/12 mm) was obtained. 1-(Nitromethyl)cyclohexanol was prepared in 41-45% yield by condensation of cyclohexanone with nitromethane in the presence of sodium methoxide. With condensation in the presence of anion exchange resins AB-17 and Amberlite IRA-401, the yield was much purer. Cyclohexylydene nitromethane was polymerized in the presence of sodium methoxide at 20C with a 57% yield. The polymer is a yellow amorphous powder, soluble in water and lower organic acids but insoluble in organic solvents. It has a molecular weight of 900. Its possible structure was confirmed by infrared spectroscopy. Orig. art. has: 2 figures, 5 formulas, and 1 table.

ASSOCIATION: none

SUBMITTED: 24Nov62

DATE ACQ: 30Jul63

ENCL: 00

SUB CODE: CH

NO REF SOV: 002

OTHER: 003

Card 3/3

VAGIN, N.A., inzh.

Effect of blasting on the state of a bolted roof. Shakht.
stroil. 5 no.10:24 0 '61. (MIRA 16:7)

1. Ural'skiy nauchno-issledovatel'skiy i proyektnyy institut
mednoy promyshlennosti.
(Mine roof bolting) (Blasting)

ATMANSKIKH, S.A., inzh.; VAGIN, N.A., inzh.

Using rod bolting in explosive store rooms. Shakht.stroi.
6 no.1:26-27 Ja '62. (MIRA 14:12)

1. Ural'skiy nauchno-issledovatel'skiy i proyektnyy institut
mednoy promyshlennosti.
(Coal mines and mining—Explosives)

VAGIN, N.A., inzh. [translator]

Robbins cutter-loaders. Shakht. stroi 6 no.5:30-31 My '62.

(MIRA 15:7)

(United States--Mining machinery)

VAGIN, N.A., inzh.

Slot-and-wedge bolt plug for roof bolting in hard rocks. Shakht.-
strol. 6 no.9:25 3 '62. (MIRA 15:9)

1. Ural'skiy nauchno-issledovatel'skiy i proyektnyy institut
mednoy promyshlennosti.

(Mine roof bolting)

VAGIN, N.A., inzh.

Rock removal train with a scraper winch (from "Mine and Quarry
Engineering," May, 1962). Shakht.stroi. 6 no.11:30 N '62.
(MIRA 15:12)
(Canada—Mine railroads)

YAGIN, Nikolay Frolovich; KARMINSKIY, Mark Samar'yevich; POPOV, I.V.,
otv.red.; LIVSHITS, B.Ye., red.; VOLKOV, N.V., tekhn.red.

[The Danube River] Reka Dunai. Leningrad, Gidrometeor. izd-vo,
1960. 98 p. (MIRA 14:4)
(Danube Valley)

ALMAZOV, A.M., doktor geogr. nauk; BONDAR, K.; VAGIN, N.F.;
GEDERIM, V.; D'YAKONU, K. [Diacomi, C.]; MITSE, P. [Mitse, P.];
STENESKU, V. [Stanescu, V.]; STENESKU, S. [Stanescu, S.];
MAYSTRENKO, Yu.G.; MIKHAYLOV, V.N., kand. geogr. nauk;
NIKIFOROV, Ya.D., kand. tekhn. nauk; RAY, I.A.; RODIONOV,
N.A.; MJZENKO, V.M., red.; ZARKH, I.M., tekhn. red.

[Hydrology of the region of the Danube estuary] Hidrologiia
ust'evoi oblasti Dunaia. [By] A.M. Almazov i dr. Moskva,
Gidrometeoizdat (otdelenie), 1963. 382 p. (MIRA 17:1)

1. Gosudarstvennyy okeanograficheskiy institut Glavnogo
upravleniya gidrometeorologicheskoy sluzhby pri Sovete
Ministrov SSSR (for Mikhaylov, Nikiforov, Rodionov).
2. Dunayskaya gidrometeorologicheskaya observatoriya Uprav-
leniya gidrometeorologicheskoy sluzhby Ukr.SSR (for Vagin, Ray).
3. Institut gidrobiologii AN Ukr.SSR (for Almazov, Maystrenko).
4. Nauchno-issledovatel'skiy institut gidrotekhniki Komiteta
vodnogo khozyaystva Rumynskoy Narodnoy Respubliki (for Bondar,
Gederim, D'yakonu, Mitse,, Stenesku, V., Stenesku, S.).

VAGIN, N.P.

Unsuccessful heating radiator model. Vod.1 san.tekh.no.3:33 Mr 156.
(Radiators) (MIRA 9:7)

1. VAGIN, P., YASNOV, G.
2. USSR (600)
4. Pumping Machinery
7. Pump for supplying farms with water.
MTS 12 No. 10, 1952

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

VAGIN, P., dots.; SYCHUGOV, N., inzh. (g. Barnaul).

Automatic photoelectric cutout switches. Zhil.-kom. khoz. 8
no.11:26 '58. (MIRA 11:12)

(Electric cutouts)

VAGIN, P.; MITTEL'SHTEYN, M.; KHODOSH, M.

Efficient delivery of materials for erecting buildings. Avt. transp.
37 no.2:10-11 P '59.
(MIRA 13:1)

1. Mosstroytrans.

(Building materials--Transportation)

VAGIN, P.I., kand.tekhn.nauk; SYCHUGOV, N.A., aspirant

Automatic photoswitch for electric lighting. Mekh. i elk. sots.
sel'khoz. 15 no.2:43 '58. (MIRA 11:5)

1. Altayskiy sel'skokhozyaystvennyy institut.
(Electric switchgear)

VAGIN, P.I., dotsent

Use of animal reflexes in systems of automatic regulation and control.
Mekh. i elek. sots. sel'khoz. 21 no.4:27-29 '63. (MIRA 16:9)

1. Altayskiy sel'skokhozyaystvennyy institut.
(Farm mechanization)

VAGIN, Pavel Ivanovich; GLEBOVICH, Aleksandr Aleksandrovich;
SOLODENIKOVA, G.A., red.

[Principles of automatic control and automation of production processes in agriculture] Osnovy avtomatiki i avtomatizatsiia proizvodstvennykh protsessov v sel'skom khoziaistve. Moskva, Izd-vo "Kolos," 1964. 270 p.
(MIRA 17:11)

VAGIN, P.N., inzh.

Transportation of details of prefabricated houses according to a time table for assembling the buildings, taking materials directly from trucks. Trudy MIEI no.17:147-153 '61.

(MIRA 14:11)

(Precast concrete construction)

(Building materials--Transportation)

SHUNAYEV, Boris Konstantinovich; VAGIN, P.T.; inzh., .retsensent;
KUVSHINSKIY, V.V., kand.tekhn.nauk, red.; DUGINA, N.A., tekhn.red.

[Gear milling by the axial and vertical feed method] Zubofresero-
vanie metodom dvukh podach.. Moskva, Gos.nauchno-tekhn.isd-vo
mashinostroil.lit-ry, 1958. 48 p. (MIRA 12:1)
(Gear cutting)

YAGIN, S.B.

Mesozoic waters in the eastern part of the Kuma Valley. Trudy
MINKHIGP no.27:70-79 '60. (MIRA 13:9)
(Kuma Valley--Water, Underground)

VAGIN, S.B.

Recent data on the hydrogeology of the eastern Karpinsk swell.
Izv. vys. ucheb. zav.; neft' i gaz 4 no.4:7-12 '61. (MIRA 15:5)

1. Moskovskiy institut neftekhimicheskoy i gazovoy promyshlennosti
imeni akademika I.M.Gubkina.
(Karpinsk region--Water, Underground)

YAGIN, S.B.; KARTSEV, A.A.; OTMAN, N.S.; SHUGRIN, V.P.

Some recent data on the hydrogeology and tectonics of the
Yeysk-Berezanskaya gas producing area. Dokl. AN SSSR 139 no.5:
1205-1207 Af '61. (MIRA 14:8)

1. Moskovskiy institut neftekhimicheskoy i gazovoy
promyshlennosti im. I.M. Gubkina. Predstavleno akademikom
D.I. Shcherbakovym.

(Krasnodar Territory—Geology, Structural)
(Water, Underground)

KARTSEV, A.A.; VAGIN, S.B.

Paleohydrogeological data of the formation and disintegration of oil and gas accumulations as revealed by the studies of the Mesozoic sediments in Ciscaucasia. Sov.geol. 5 no.8:104-121 Ag '62. (MIRA 15:9)

1. Moskovskiy institut neftekhimicheskoy i gazovoy promyshlennosti imeni I.M. Gubkina.
(Caucasus, Northern--Petroleum geology)
(Caucasus, Northern--Gas, Natural--Geology)

VAGIN, S.B.; GORDINSKIY, G.Ye.; GRIBOVA, Ye.A.; DUBROVSKAYA, M.A.; ZHDANOV, M.A., prof.; ZYUZINA, N.G.; KARTSEV, A.A.; KNYAZEV, V.S., dots.; LEONOVA, R.A.; POKROVSKAYA, L.V.; SUDARIKOV, Yu.A.; YUDIN, G.T., dots.; SOKOL'SKAYA, Z.V.; TOMKINA, A.V.; USPENSKAYA, N.Yu., prof.; FOMKIN, K.V., kand. geol.-min. nauk; CHERNYSHEV, S.M.; YAVORCHUK, I.V.; BAKIROV, A.A., prof., red.; DEMENT'YEVA, T.A., ved. red.

[Geological conditions and basic characteristics of oil and gas accumulations in the limits of the Epi-Hercynian Platform in the south of the U.S.S.R.] Geologicheskie uslovia i osnovnye zakonomernosti razmeshchenia skoplenii nefiti i gaza v predelakh epigertsinskoj platformy iuga SSSR. Pod obshchei red. A.A. Bakirova. Moskva, Nedra. Vol. 2. 1964. 306 p. (MIRA 17:12)

1. Moscow. Institut neftekhimicheskoy i gazovoy promyshlennosti.

TALIFOV, S.; VAGIN, S.B.; SHUGRIN, V.P.

Gas content characteristics of waters of the Mesocenozoic sediments
in the southern Tajik depression. Izv. ys. ucheb. zav.; neft' i
gaz. 7 no.10:15-18 '64. (MIRA 18:2)

1. Moskovskiy institut neftekhimicheskoy i gazovoy promyshlennosti
im. akad. I.M. Gubkina.

VAGIN, Stepan Mikhaylovich

EPI.
.R93153

17, 8 (I.E. SNNADTSAT' VCSEM' DESYATYKH) TSENTNERA OZIMOY PSHENITSY S
GEKTARA (17.8 CENTERS (850 KGS) OF WINTER WHEAT PER HECTARE) KUYBYSHEV,
KUBYSHEVSKOYE KNIZHNOYE IZD-VO, 1955. 14 p. (PEREDOVGY OPYT V SEL'SKOM
KHOLYAYSTVE)

VAGIN, T.

Current problems in maintaining apartment houses controlled by the economic councils. Zhil.-kom. khoz. 10 no.8;8-9 '60.

(MIRA 13:9)

1. Nachal'nik planovogo otdela upravleniya zhilishchno-kommunal'nogo khozyaystva Uralmashzavoda, g. Sverdlovsk.

(Sverdlovsk--Apartment houses--Maintenance and repair)

VAGIN, V.; SURNACHEV, B.

Signaling by means of odors. Sov. shakht. 12 no.6:21-22 Je
'63. (MIRA 16:9)

1. Starshiy inzh. shakhty "Koksovaya-1" v Kuzbasse (for Vagin).
2. Vostochnyy nauchno-issledovatel'skiy institut po bezopasnosti
rabot v gornoy promyshlennosti (for Surnachev).
(Coal mines and mining--Safety measures)

ACCESSION NR: AP4031622

8/0053/64/082/004/0707/0748

AUTHORS: Vagin, V. A.; Kotov, V. I.; Semenyushkin, I. N.

TITLE: Methods of high-energy particle separation

SOURCE: Uspekhi fizicheskikh nauk, v. 82, no. 4, 1964, 707-748

TOPIC TAGS: particle acceleration, particle spectroscopy, particle spectrum, separation, relativistic particle, high energy particle

ABSTRACT: The existing and proposed methods for the separation of high-energy particles are systematized and described. Some of the problems involved in separation of low-yield high-energy particles and their importance to research are discussed. The presently developed electrostatic separators are shown to be inadequate for higher energies presently available and planned to be produced with future accelerators. Electrodynamic separators, which have a higher energy range are described. It is indicated that when it comes to

Card 1/6

ACCESSION NR: AP4031622

production of pure beams of ultrarelativistic particles, it will become necessary to separate the particles on the basis of other attributes than are presently used, for example the differences in such characteristics of their nuclear interactions as total cross sections, kinematics, and angular distributions. High-frequency separators now under construction in several laboratories, including the SSSR Joint Institute of Nuclear Research, are described. The section headings are: I. Introduction. II. Separation by using the distinguishing features of the interaction between particles and their decay properties (1. The absorber method. 2. Muon beams. 3. Neutrino beams.). III. Electrostatic separators (1. Principle of electrostatic separation. 2. Schematic diagram of electrostatic separator. 3. Ion-optical system of separator. 4. Example of existing separator. 5. Region of application of the method of electrostatic separation.). IV. Electrodynanic separators (1. Principles. 2. Motion of charged particle in high-frequency fields. 3. High-frequency separator for Stanford two-mile linear electron accelerator.

Card 2/6

ACCESSION NR: AP4031622

4. OIYaI electrodynamic particle separator. 5. CERN high-frequency separator. 6. Region of application and prospects of development of high-frequency separators.). Conclusion. Orig. art. has: 22 figures, 93 formulas, and 4 tables.

ASSOCIATION: None

SUBMITTED: 00

DATE ACQ: 07May64

ENCL: 03

SUB CODE: NP

NR REF SOV: 012

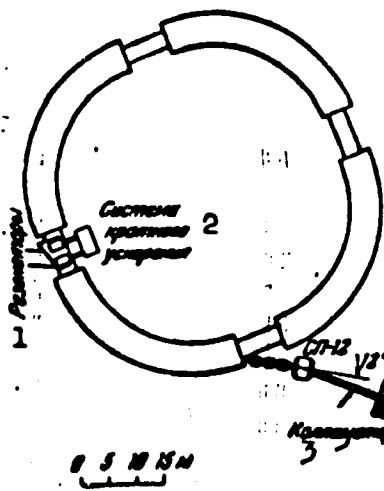
OTHER: 059

Card 3/6

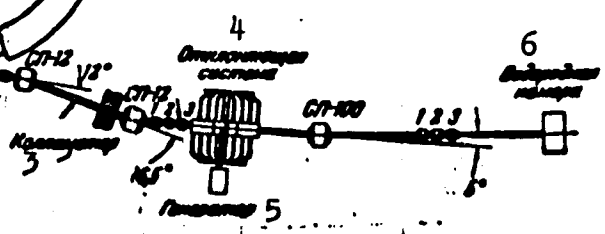
ACCESSION NR: AP4031622

ENCLOSURE: 01

Diagram of OIYaI electrodynamic particle separator: 1 - resonator, 2 - multiple acceleration system, 3 - collimator, 4 - deflecting system, 5 - generator, 6 - hydrogen chamber, MJL - magnetic lens, CH - electromagnet



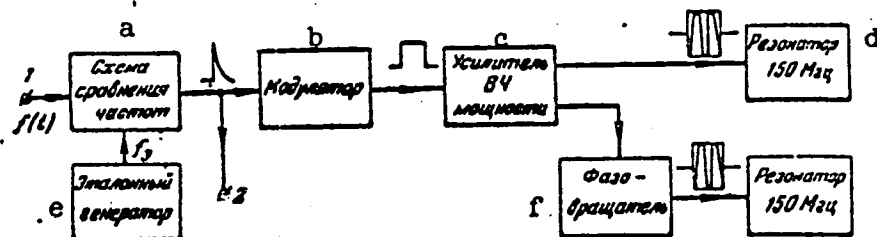
1 and 2	- mag. lens	MJL -17
3	- mag. lens	MJL -16



Card 4/6

ACCESSION NR: AP4031622

ENCLOSURE: 02

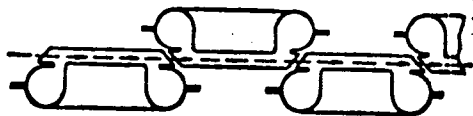


Block diagram of multiple-acceleration system used in OIYaI electro-dynamic separator: 1 - accelerating frequency of OIYaI proton synchrotron, 2 - pulse to turn off the accelerating voltage. a - frequency comparison circuit, b - modulator, c - hf power amplifier, d - 15 Mc resonator, e - standard generator, f - phase shifter

Card 5/6

ACCESSION NR: AP4031622

ENCLOSURE: 03



Arrangement of resonators
of the deflecting system
of the OIYaI electrodynamic
separator.

Card 6/6

ACC NR: AP7001932

SOURCE CODE: UR/0120/66/000/006/0022/0025

AUTHOR: Vagin, V. A.; Volodin, V. D.; Plyashkevich, N. N.; Sayenko, A. P.;
Semenyushkin, I. N.; Stepanyuk, V. L.

ORG: Joint Institute of Nuclear Research, Dubna (Ob'yedinenny institut yadernykh
issledovaniy)

TITLE: System for multiple acceleration of an electrodynamic separator of high-
energy particles

SOURCE: Pribory i tekhnika eksperimenta, no. 6, 1966, 22-25

TOPIC TAGS: particle beam, proton accelerator

ABSTRACT: A system for multiple acceleration of high-energy particles is described. The system recaptures protons in multiple frequency ($q = 100$) acceleration conditions previously accelerated to maximal energy and continues their acceleration for 15—20 μ sec. The system consists of a coaxial resonator, hf units, a pulse modulator, and a synchronizer. The frequency of the multiple acceleration is 149.520 mc and the pulse duration is 15—20 μ sec. A 70% coefficient of proton recapture at beam energy $E = 10$ Gev, energetic spread $\Delta E = \pm 1.7$ Mev, and amplitude of the accelerating voltage in the resonator $V_r = 70$ kv was obtained during testing

Card 1/2

UDC: 539.1.076:621.384.6

ACC NR: AP7001932

of the system on a proton synchrotron at the Joint Institute of
Nuclear Research. Orig. art. has: 4 figures and 2 formulas.

SUB CODE: 20/ SUBM DATE: 12Nov65/ ORIG REF: 005/ ATD PRESS: 5111

Card - 2/2

L 3774-66 EWT(m) DIAAP GS

ACCESSION NR: AT5007949

5/0000/64/000/000/0788/0790

39
BT/

AUTHOR: Vagin, V. A.; Veksler, V. I.; Zubarev, V. N.; Kuznetsov, A. B.; Mukhin, S. V.; Petukhov, V. A.; Popov, V. A.; Rubin, N. B.; Stepanyuk, V. L.; Chekhlov, K. V.; Semenyushkin, I. N.

TITLE: Electrodynamic separator of antiprotons with 5 Gev/c momentum

SOURCE: International Conference on High Energy Accelerators. Dubna, 1963. Trudy. Moscow, Atomizdat, 1964, 788-790

TOPIC TAGS: high energy particle, antiproton, pion, particle interaction

ABSTRACT: The study of processes initiated by such particles as high-energy K-mesons and antiprotons is often determined by the possibility of separating these particles from an accompanying pi-meson background. The tremendous technical difficulties arising in the use of the electrostatic method of separation for obtaining pure beams of relativistic particles urgently dictate the necessity of seeking new means of separating particles. In 1956, V. I. Veksler and V. A. Petukhov proposed an electrodynamic method of separating particles according to masses. At the present time the high-energy laboratory of the Joint Institute of Nuclear Research is perfecting the application of an electrodynamic separator, creat-

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ed on the basis of this method, of antiprotons with momentum up to 5 Gev/c. The present report discusses the principle governing the operation of the electrodynamic separator. At the end of the acceleration cycle in the synchrophasotron the protons are recaptured into the acceleration regime at a frequency of high multiplicity and are subsequently directed against a target. The beam of secondary particles which then occurs possesses a corresponding high-frequency structure. The negatively charged particles that interest us are extracted by the magnetic field of the accelerator to the outside. Further, as a result of magnetic analysis the particles are resolved in a narrow interval of momenta, or pulses. A longitudinal distribution of the resolved particles begins to take place over a certain distance of their flight. The antiprotons being heavier particles retire from the pi-mesons. If the total length L of flight, counted from the target (for the case of relativistic particles) is equal to

$$L \approx \frac{\lambda}{2(\beta_1 - \beta_2)}$$

where g is the operating wavelength of a multiple-acceleration system and β_1, β_2 are respectively the velocities of the pi-mesons and antiprotons in units of the speed of light, then the lag of the antiprotons is exactly equal to the half wavelength $\lambda/2$. On the path of the particles at this place there is created a high-frequency transverse electric field with the same wavelength λ which is rigidly bound in

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phase with the voltage that is accelerating the beam at multiple frequency. In case of a suitable choice of the phase of the electric field the antiprotons and the pi-mesons will obtain angular deflections different in sign and can be spatially resolved further. The report discusses the composition of the electrodynamic separator of antiprotons at the high-energy laboratory, which consists of a multiple-acceleration system, deflecting device, and an ion-optical system. Also discussed are the separator's characteristics. The device can also be employed to resolve pi-mesons and antiprotons with smaller values of momenta and to separate K-mesons, if certain necessary conditions are fulfilled for the separation of antiprotons and K-mesons respectively:

$$(pc)_p \approx m_p c^2 \left[\frac{L}{(2n+1)\lambda} \right]^{1/2}; \quad (pc)_k \approx m_p c^2 \left[\frac{L}{(2n+2)\lambda} \right]^{1/2}$$

where the momenta of the antiprotons and K-mesons are respectively $(pc)_p$, $(pc)_k$, and the rest-energy of an antiproton is $m_p c^2$, and $n = 0, 1, 2, \dots$. Orig. art. has 3 figures!

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AUTHOR: Brodskiy, Yu.Ya.; Vagin, V.A.; Kotov, V.I.

ORG: none

TITLE: Asymmetric waves in plasma waveguides

SOURCE: Zhurnal tekhnicheskoy fiziki, v. 36, no.3, 1966, 453-459

TOPIC TAGS: plasma waveguide, dispersion equation, wave propagation, electromagnetic wave

ABSTRACT: By asymmetric waves the authors understand waves that do not possess full axial symmetry. The electric and magnetic fields of the waves discussed in this paper have the form $F(r) \exp [i(ft - kz + n\theta)]$ in cylindrical coordinates r, θ, z , where f is the frequency, k is a propagation constant, and n is an integer not less than 1. The propagation of these waves is discussed in three types of plasma waveguide: 1) the region $r < a$ is empty and the region $r > a$ is filled with an isotropic plasma with dielectric constant $(f^2 - f_0^2)/f^2$, where f_0 is the plasma frequency; 2) the region $r < a$ is empty, the region $a < r < b$ is filled with the isotropic plasma of case 1), and the surface $r = b$ is conductive; and 3) the region $r < a$ is filled with a plasma that is highly magnetized by an axial magnetic field, the region $a < r < b$ is empty or filled with an isotropic nondispersive medium, and the surface $r = b$ is conductive. Case 1) is treated in most detail. The dispersion equation is derived and its roots are discussed separately for slow waves, waves with phase velocity c

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