The Isotopic Effect in the Viscosity of   S/076/60/034/009/028/041XX
Deutero-glycerin and Ethylene Deutero-glycol   B020/B056

deutero-glycerin equals 16.5 %, and for ethylene deutero-glycol 8.3 %
with a molecular weight difference of 3.2 % in both cases. By the sub-
stitution of deuterium for hydrogen in the hydroxyl groups of glycerin,
the viscosity is increased within the temperature range of from 20 to 90°
by from 16.5 to 9.0 %, whereas the rise in the case of ethylene-glycol
within the temperature range of from 10 to 90° amounts to 9.0 % to 2.0 %.
The great isotopic effect in the viscosity of the associated liquids
investigated is explained by the fact that it depends exponentially on the
isotopic difference of the activation energy of the viscous flow, which,
in turn, is exponentially related to the isotope difference of the zero
energy of vibrations, which correspond to the hydrogen bond. The authors
thank Academician of the AS UkrSSR, A. I. Brodskiy and Professor A. Z. Golik
for discussing the results of the present paper. There are 2 tables and
10 references: 7 Soviet, 3 US, and 1 Belgian.

ASSOCIATION: Gor'kovskiy gosudarstvennyy universitet im. N. I. Lobachev-
               skogo (Gor'kiy State University imeni N. I. Lobachevskiy)

SUBMITTED: December 16, 1958

Card 2/2

RABINOVICH, I.B.; MURZIN, V.I.; ZHILKIN, L.S. (Gorkiy)

Isotopic effect in the viscosity of deuteroglycerin and
ethylenedeuteroglycol. Zhur.fiz.khim. 34 no.9:1973-1975 S
'60.   (MIRA 13:9)

1. Gor'kovskiy gosudarstvennyy universitet im. N.I.Lobachevskogo.
           (Glycerin)   (Glycols)

ZHILKIN, N.

Need for changes in the special requirements for beef cattle supply to industries. Mias.ind. SSSR 33 [i.e.34] no.2:43 '63.

(MIRA 16:4)

1. Kurganskiy myasokombinat.
(Animal industry)   (Meat industry—Equipment and supplies)

POKHVISNEV, A.N.; ROZHAVSKIY, L.I.; ZHILKIN, N.K.

Automatic control of the blast furnace process. Stal' 23
no.10:875-878 O '63.
(MIRA 16:11)

1. Moskovskiy institut stali i splavov i Lipetskiy filial
Moskovskogo instituta stali i splavov.

POKHVISNEV, A.N., doktor tekhn.nauk prof.; ZHILKIN, N.K., inzh.

Using the composition of blast furnace gas for the analysis
and control of thermal conditions in blast furnaces. Izv.
vys.ucheb.zav.; chern.met. 2 no.9:29-45 S '59.   (MIRA 13:4)

1. Moskovskiy institut stali.
      (Blast furnace)

1. ZHILKIN, B.D., PROF.

2. USSR (600)

4. Forest Management

7. Classification of trees by productivity in even-aged pure stands and practice in applying it. Les. khoz. 5 no. 11, 1952.

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

ZHILKIN, B.D.; SOKOLOV, S.Ya.; SOSNIN, L.I.

Mikhail Ivanovich Sakharov; obituary. Bot.zhur. 42 no.4:663-664
Ap '57.   (MLRA 10:5)
    (Sakharov, Mikhail Ivanovich, 1897-1953)
    (Bibliography--Forests and forestry)
    (Forests and forestry--Bibliography)

SLAVSKIY, G.N.; ZHILKIN, G.V.; KOLESNIKOVA, I.A.

Wide-band RC and RC-RL filters for audio-band frequencies. Trudy LPI no.194:184-194 '58.   (MIRA 11:11)

(Radio filters)

ZHILKIN, I., arkhitektor; GIRSHTEL', G., inzh.

Factory finishing of wall slabs. Zhil. stroi. no.4:19-21 '62.
(MIRA 15:5)

(Finishes and finishing) (Concrete walls)

ZHINKIN, L.N.; ANDREYEVA, L.F.

DNA synthesis and nuclear multiplication in the course of the
development of striated muscle tissue. Sbor. rab. Inst. tsit.
no.5:12-22 '63.   (MIRA 17:2)

1. Laboratoriya morfologii kletki Instituta tsitorlogii AN SSSR.

TIKHONOV. B.A., inzh.; ZHILKIN, N.A., inzh.

Study of the effectiveness of the modernization of the PT-25-90/10 turbine. Elek. sta. 36 no.10:40-43 O '65.

(MIRA 18:10)

ZHILKIN, N.G.

15-57-1-1109D

Translation from: Referativnyy zhurnal, Geologiya, 1957, Nr 1,
                   p 177 (USSR)

AUTHOR: Zhilkin, N. G.

TITLE: Investigation of the Possibility of Applying Ramming
              Machines to the Geological Exploratory Drilling
              (Issledovaniye vosmozhnostey primeneniya zaboynykh
              dvigateley dlya geologorazvedochnogo bureniya)

ABSTRACT: Bibliographic entry on the author's dissertation for
              the degree of Candidate of Technical Sciences,
              presented to the All-Union Mineral Ores Institute
              (Vses. n.-i. in-t mineral'n. syr'ya), Moscow, 1956.

ASSOCIATION: Vses. n.-i. in-t mineral'n. syr'ya (All-Union
              Mineral Ores Institute)

Card 1/1

ZHILKIN, N.G.; IURASOV, A.V.; TROSTNIKOVA, N.Ya., red. izd-va;
IVANOVA, A.G., tekhn. red.

[Safety measures and industrial hygiene in the research
institutes and laboratories of geological organizations]
Okhrana truda i proizvodstvennaia sanitariia v nauchno-
issledovatel'skikh institutakh i laboratoriiakh geologiche-
skikh organizatsii. Moskva, Gos. nauchno-tekhn. izd-vo lit-
ry po geol. i okhrane nedr, 1961. 178 p.   (MIRA 15:3)
  (Laboratories—Safety measures) (Geological research)

3(8)   SOV/132-59-3-5/15

AUTHOR: Zhilkin, N.G.

TITLE: To Step-up the Development of a Small-Size Electric Drill
               for Prospective Drilling

PERIODICAL: Razvedka i okhrana nedr, 1959, Nr 3, pp 20-26, (USSR)

ABSTRACT: The author stresses the necessity to speed up the develop-
               ment of small-size turbine and electric drills for pro-
               spective core drilling. As the power of turbine and elect-
               ric drills used today for the drilling of oil wells is too
               high (1,000 and a minimum of 1,500 kw resp.) to be utilized
               economically for prospective drilling, low-powered electric
               drills with a capacity of as little as 25 kw, and an oil well
               diameter of 100 to 130 mm must be developed. VNIIBT, in co-
               operation with the KB of the Zavod im. Vorovskogo (Plant
               imeni Vorovskiy), has 2 new turbine drills under development,
               the TS30-33/8" and TSR-33/8". They reach a maximum depth of
               2,000 m and have a productivity of the pumps of 5 to 7 liters
               per second. They differ with respect to rpm and other design
Card 1/3   details. (For more performance data see table 2, p 22). In

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To Step-up the Development of a Small-Size Electric Drill for Prospective Drilling.

addition to this, the Plant imeni Vorovskiy is developing a small-size turbine drill of its own, the FUTB-1200-ZIV, with the following specifications: maximal drilling depth - 1,200 m; drive - diesel of 300 hp; weight - 19.5 tons; price - about 180,000 rubles. However, the turbine drills have serious shortcomings since they cannot operate in arid, permafrost, highland, and other areas too distant from their supply bases. The main vantage point of electric drills is the fact that no water is needed for flushing, as their drill hole bottom is cleaned by compressed air. The Pervaya kontora bureniya tresta Tuymazaburneft' (First Drilling Office of the Tuymazoburoneft' Trust), after having tested several electric drills, suggests the following specifications for a new small-size electric drill: power - 25 kw; r.p.m. - 1,000 to 1,200; voltage - 350-500 v; maximum outer diameter - 100 to 105 mm. Its torque will be at 25 kw and 1,000 r.p.m. as follows: rated torque - 24 kgm; maximal torque - 85 kgm. The new drill is supposed to have the

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To Step-up the Development of a Small-Size Electric Drill for Prospective Drilling

following performance expressed in m per drill unit and month: in soft and medium-soft rocks (class III to IV) - 2,600; in solid rocks (class V to VI) - 1,520; in hard rocks (class V to VII) - 795; in very hard rocks (class IX to XI) - 560. The overall power of the new drill unit, all auxiliary equipment included, will be 50-65 kw. In conclusion, the author suggests the VITR and the Tsentral'- noye konstruktorskoye byuro Ministerstva geologii i okhrany nedr SSSR (Central Design Office of the Ministry of Geology and Conservation of Mineral Resources of the USSR) display more creative power in boosting the development of the new electric drill. There are 3 tables.

ASSOCIATION: VIMS

Card 3/3

ZHILKIN, N.G.

Efficient prospecting methods based on competitive materials
of the Ministry of Geology and Preservation of Mineral Re-
sources of the U.S.S.R. Sov.geol. 2 no.10:146-152 O '59.
                                            (MIRA 13:4)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut mineral'nogo
syr'ya (VIMS).
            (Prospecting)

ZHILKIN, N.G.; LYUBIMOV, N.I.; MOROZOV, V.I.

Approximate determination of changes in rocks based on their physicomechanical properties. Razved. i okh. nedr 26 no.12:14-17 D '60.

(MIRA 13:12)

1. Veesoyuznyy institut mineral'nogo syr'ya.
(Petrology)

ZHILKIN, N. G.:

Zhilkin, N. G.: "Investigation of the possibility of using mine-
cutting engines for geological-prospecting drilling." Min
Geology and Protection of Natural Resources USSR. All-
Union Sci Res Inst of Mineral Raw Materials, Moscow, 1956.
(Dissertion for the Degree of Candidate in Technical Science)

ZHILKIN, N. K., Cand Tech Sci -- (diss) "Regulation of the working of blast furnaces according to the composition of the blast furnace gas and jumps in its static pressure." Moscow, 1960. 15 pp; including cover; (Ministry of Higher and Secondary Specialist Education RSFSR, Moscow Order of Labor Red Banner Inst of Steel im I. V. Stalin); 120 copies; free; (KL, 18-60, 151)

ZHELKIN, N.K.; INOZEMTSEV, N.S.; ORLOV, Yu.A.; POKHVISNEV, A.N.;
SHAROV, S.I.

Processes in the hearth of a powerful blast furnace.   Izv. vys.
ucheb. zav.; chern. met. 7 no.11:34-40 '64.
(MIRA 17:12)

1. Moskovskiy institut stali i splavov.

POKHVISNEV, A.N.; SHAROV, S.I.; ZHILKIN, N.K.; ORLOV, Yu.A.; MATVEYEV,
P.M.; VASIL'YEV, S.V.; VIZLOV, Ye.M.

Operation of a 2,000 m^3 capacity blast furnace. Metallurg. 9
no.1:7-11 Ja '64
(MIRA 18:1)

18.3200

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SOV/148-59-9-3/22

AUTHORS: Pokhvisnev, A. N. (Doctor of Technical Sciences, Professor), Zhilkin, N. K. (Engineer)

TITLE: The Use of Blast Furnace Gas Composition for the Analysis and Thermal Control of Blast Furnace

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Chernaya metallurgiya, 1959, Nr 9, pp 29-45 (USSR)

ABSTRACT: This article describes a method of control of blast furnace work under stabilized or unstabilized conditions, working on wet blast, on oxygen-enriched blast, or with application of natural gas. The method was developed by A. N. Polhvisvev (Author's Certificate Nr 75401) and checked under industrial conditions at the Plant imeni Dzerzhinskiy (zavod imeni Dzerzhinskogo) and at the Magnitogorsk Plant (Magnitogorskiy zavod) in 1941-1942. A. N. Pokhvisnev showed that, using the analysis of blast furnace gas, it is possible to calculate the value of p (index of carbon economy),

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which is a volumetric or weight ratio of oxygen of the charge (which passed over into gas) to the gasified carbon. Therefore $p = \dfrac{O\ (charge)}{C\ (gasified)}$, and can be calculated using the data of material balance of melt. At the same time the carbon economy index can be determined by the composition of the blast furnace gas and blast: $p = \dfrac{CO_2 + 0.5\ CO - \beta\ N_2}{CO_2 + CO}$ where CO_2, CO, and N_2 are the components of the blast furnace gas in % by volume, and β is the ratio of oxygen (including the oxygen of blast moisture) to the nitrogen in the blast. A. N. Pokhvisnev also suggested that the reducing work of gases can be evaluated by the value $q = \dfrac{0.5\ CO_2}{CO_2 + CO}$, which represents the ratio of oxygen of indirect reduction to the gasified carbon of the coke. His previously published method of preparing the heat balance rate on

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the basis of blast furnace gas analysis gives the
means of calculating (for any period of time) the con-
sumption of heat (M) per unit of oxygen taken away
from the charge, or per unit of produced cast iron.
Expressing M through the indexes p and q, M =

$$M = \frac{1{,}254 + 2.38\, W_{\partial} + 4.76\, W_{\partial q} + 6.040\, q}{p} - 4.76\, W_{\partial} \cdot$$

$\dfrac{cal}{m^{3}O_{2}}$ of charge, where W_{∂} = heat content of $1\ m^{3}$

of blast. The indexes of blast furnace work, deter-
mined by the blast furnace gas content; the heat
balance rate; a program of analysis; and blast furnace
thermal control and the investigation of the furnace
work are discussed. The authors derived 13 formulas
which were tested on blast furnace Nr 2 of the "Azov-
stal'" Plant (zavod "Azovstal'") over a period of 95
days in February, June, July, August, and September,
1958 and in March, 1959. Altogether, 665 comparisons
of calculated and experimental indexes were prepared.

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The Use of Blast Furnace Gas Composition   77133
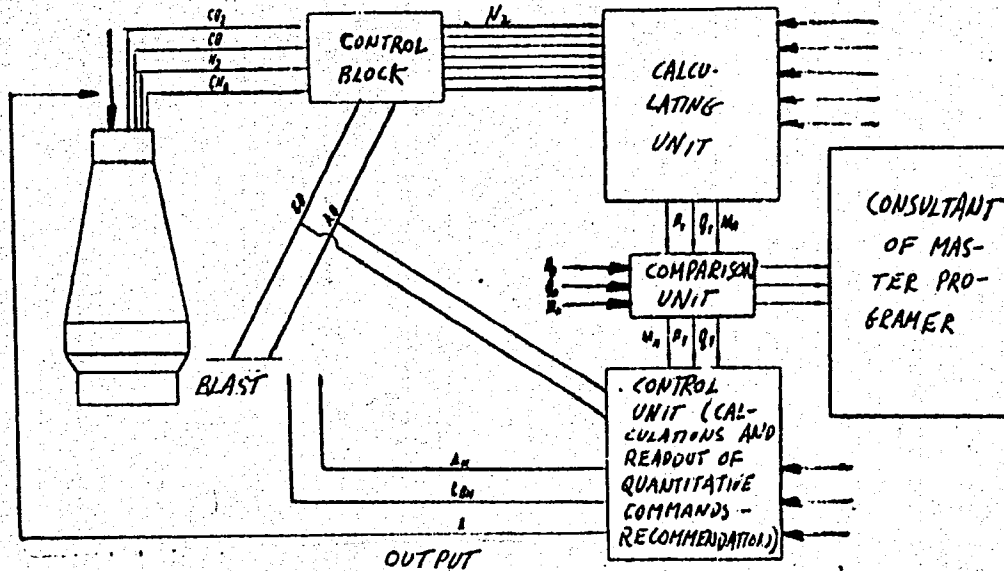for the Analysis and Thermal Control of   SOV/148-59-9-3/22
Blast Furnace

For illustration of the proposed method, the authors
kept a daily diagram of the furnace work (see Fig. 4)
and also prepared a schematic diagram of blast furnace
thermal control (see Fig. 1). The results of the above
investigation were listed as follows: (1) A new method
of making hydrogen balance by the analysis of blast
furnace gas. It determines the amount of hydrogen
which evolved in the reduction processes and also the
amount of oxygen taken from the charge by hydrogen and
withdrawn from the furnace as water vapor, which is
especially important when blowing natural gas. (2)
The indexes, previously advanced by Pokhvisnev for the
analysis of operation of blast furnace process under
industrial conditions, were supplemented, in order to
provide for the work of blast furnaces using the wet
high-temperature blast and oxygen-enriched blast. The
indexes took into account the possibilities of blowing
the natural gas and also the reduction work of hydrogen.
(3) A derived general formula of heat balance rate gives
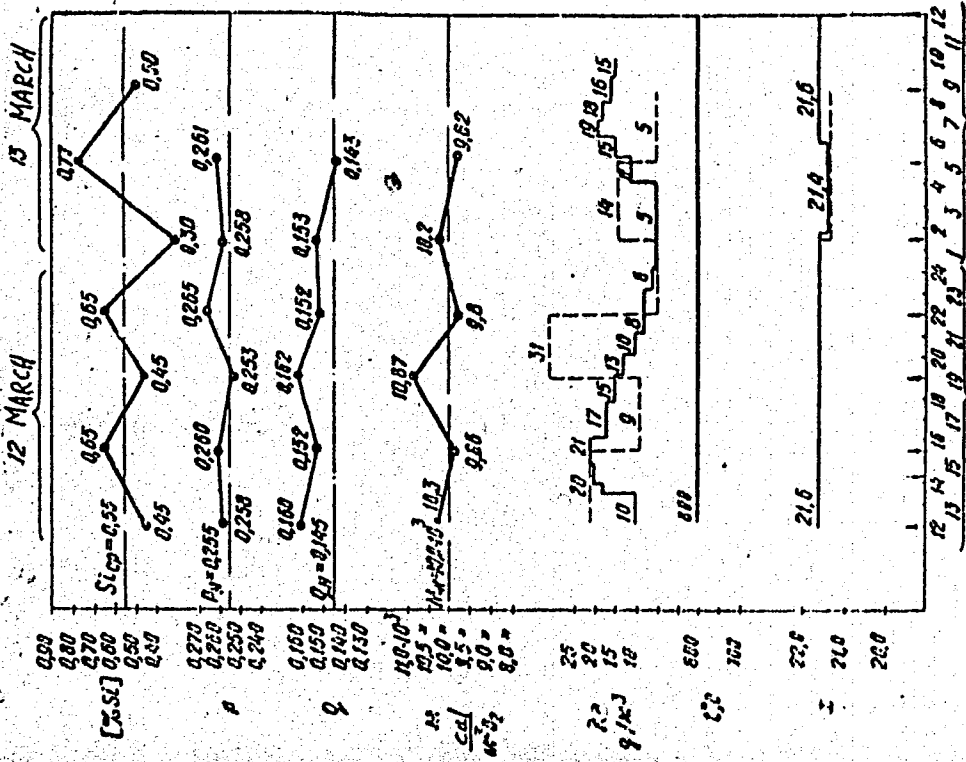Card 4/8   the means of calculating (at any given moment, using the

The Use of Blast Furnace Gas Composition
for the Analysis and Thermal Control of
Blast Furnace

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Fig. 1. A schematic diagram of blast furnace thermal control.

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Fig. 4.
A diagram
for March
12 and 13.

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values of indexes p and q, and heat content of the
blast W$_{\ni}$) the incoming heat per unit of oxygen taken
away from the charge (or, correspondingly, per unit
of produced cast iron). (4) On the basis of the heat
balance rate formula, the authors derived new formulas
for quantitative evaluation of the means of thermal
control. (5) A newly developed method of analysis and
thermal control of blast furnaces gives the means for
evaluation of the rate of blast furnace process dur-
ing the stabilized as well as unstabilized operation,
and enables the taking of the necessary steps in the
event the work of the furnace deviates from normal.
(6) Industrial tests of optico-acoustical automatic
gas analyzers showed that, with proper tuning and
systematic observation, they can be used for continuous
control of blast furnace gas composition. For more
reliable data, however, some further work is needed
to increase their accuracy. The main drawback of optico-
acousticol gas analyzers is the insufficient durability
Card 7/8   of the lithium-fluorine glass glued into the optical

The Use of Blast Furnace Gas Composition   77133
for the Analysis and Thermal Control of   SOV/148-59-9-3/22
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                 cameras. This defect is especially noted by Pliskanov-
skiy, S. T., and Temnokhud, N. N., Metallurg, Nr 10,
1958. (7) To insure the analysis and the atomatic
control of blast furnace thermal conditions by the
developed method, the reliable automatic gas analyzers
should be supplemented by the computing devices. (8)
Industrial tests of the new method showed that, with
satisfactory performance of gas analyzers, satisfactory
forecasts regarding furnace thermal conditions reached
93-95%, a much higher percentage than any previously
reached by production men on the basis of other data
and practical experience. (9) A high percentage of
satisfactory forecasts induced the decision to install
this method in one or two plants with subsequent extensin
to other plants, putting control of blast furnaces on a
scientific basis. There are 4 figures; 1 table; and 4
Soviet references.

ASSOCIATION: Moscow Steel Institute (Moskovskiy institut stali)
SUBMITTED: June 27, 1959   Card 8/8

GORSKOV, V.K.; MYSLIVTSEV, I.V.; USHKOV, I.A.; ZHILKIN, N.K.

Controlling the state of the hearth inwall in an operating
blast furnace. Stal' 25 no.4:306-308 Ap '65.

(MIRA 18:11)

1. Metallurgicheskiy zavod "Svobodnyy Sokol" i Lipetskiy
fakul'tet Moskovskogo instituta stali i splavov.

ZHILKIN, Nikolay Stepanovich; OZEROV, V.S., red.; PRESNOVA, V.A.,
        tekhn. red.

[A national cause]Vsenarodnoe delo... Leningrad, Lenizdat,
1962. -48 p. (Resheniia XXII s"ezda KPSS - v zhizn' !)
                                        (MIRA 15:9)
        (Leningrad Province—Agriculture)

S/196/63/000/002/024/026
E194/E155

AUTHORS: Gilim, A.S., Zhilkin, P.S., Lazarev, N.S.,
              Khudyakov, V.V., and Yanvarev, A.I.

TITLE: A grid-control system for a thyratron rig of a
              12-phase rectifier.

PERIODICAL: Referativnyy zhurnal, Elektrotekhnika i energetika,
              no.2, 1963, 5, abstract 2 K 24. (Dokl. 4-y Mezhvuz.
              konferentsii po primeneniyu fiz. i matem. modeliro-
              vaniya v razlichn. otraslyakh tekhn. Collection 4.
              (Reports of the 4th Intercollegiate Conference on the
              Application of Physical and Mathematical Modeling in
              various Branches of Technology. Collection 4).
              Moscow, 1962, 433-442).

TEXT: Existing grid-triggering systems for the control of
thyratrons and mercury valves are briefly analysed. Disadvantages
of the electromagnetic and electronic systems are noted and the
requirements applicable to valves of multi-phase rectifiers are
formulated. A semiconductor system of grid control of mercury
thyratrons developed by the authors is described. It is based on

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A grid-control system for a thyratron..

the principle of combining the functions of phase displacement and peak formation into a common unit. The phase displacement part forms a saw-tooth waveshape voltage with steep front and flat straight tail. The phase of impulse formation, which controls the peak-generating circuit, is determined by the instant of coincidence between the instantaneous value of the saw-tooth voltage and the voltage of the d.c. control signal. The phase of the triggering impulse may be altered by changing the value of the control voltage. The saw-tooth voltage generator is based on a circuit with a single semiconductor triode and RC-chain. The signal corresponding to the difference between the saw-tooth and control voltage is amplified in a single stage on a semiconductor triode whose impulse is differentiated by a transformer. The narrow impulse obtained by differentiation controls the starting of a multi-vibrator with a single stable condition. The multi-vibrator forms a rectangular triggering signal, whose duration may be controlled by altering the C and R parameters in the phase chain of the first semiconductor triode, since the signal is formed in an unstable condition of the multi-vibrator. To avoid interrupting the operation of the multi-vibrator at the instant of

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A grid-control system for a thyratron..S/196/63/000/002/024/026
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blocking of the output amplifier, a divider cascade in the form of
an amplifier operating in key condition is inserted between them.
The divider cascade can be used to measure and adjust the output
parameters of the control unit for triggering impulses with the
output amplifier blocked. The output amplifier applies triggering
impulses through the divider impulse transformer to the thyratron
grid circuits. The voltages in different sections of the circuit
are applied from eight different rectifiers based on semiconductor
diodes each in three-phase bridge circuit. The system is
constructed as 3-channel units, each to control the grids of three
thyratrons. Tests on the system showed it to be practically
without inertia. The control angle does not alter on changing
the synchronizing voltage by 50% or on changing the supply voltage
from +10 to -20%.
3 figures. 2 references.

[Abstractor's note: Complete translation.]

Card 3/3

SHILKIN, V. B

TITLE: Conference on Autoclave Processes

PERIODICAL: Tsvetnyye metally, 1959, Nr 7, pp 84-87 (USSR)

ABSTRACT: On 23-26 February 1959 a conference was held in Moscow for summing-up and coordinating work on autoclave processes in the metallurgy of heavy, non-ferrous, rare and noble metals. The conference heard reports as follows:

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D.M. Yukhtanov, Gintsvetmet, on progress throughout the world on the use of hydrometallurgical, particularly autoclave, methods for non-ferrous and rare metal production; G. N. Dobrokhotov, Gipronikel', on nickel leaching practice at some Soviet works; N. I. Onuchkina and G. N. Dobrokhotov, on the thermodynamics and kinetics of the selective reduction by hydrogen and cobalt monoxide under pressure of nickel and cobalt from solution; L. Yu. Leibch and K.K. Shalapurn, Gipronikel', on design decisions on the application of the flowsheets dealt with by G. N. Dobrokhotov at the Yuzhuralnikel' and Severonikel' Combines and the Ufaleyskiy (Ufa) Nickel Works; I. M. Maslenitskiy, Leningradskiy gornyy institut (Leningrad Mining Institute), on the advantages of a combined flotation-autoclave method for nickel-electrolysis of slimes containing platinum-group metals; I. B. Zhilin, Severonikel' Combine, and S. I. Sobol', Gintsvetmet, on the essentials of the natural method of oxidizing leaching of nickel concentrate from converter-matte flotation; S. I. Sobol' on preliminary investigations on the development of a sulphurous-sulphuric method for leaching nickel and cobalt from oxidized nickel ores; N. N. Maslenitskiy, Mekhanobr, on the main results of investigations of the autoclave-soda process for treating tungsten-ore beneficiation products;

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V. I. Dmitrenko, Mekhanobr, and D. M. Malakhov, Skopin... otkov (Skopink) TsNP, separately, on problems in the application of an autoclave-soda flowsheet to scheelite and wolframite raw material; G. A. Meyerson, M. Ya. Shapiro, M. N. Kharakh, R. A. Perlyuk and A. P. ... ... Nauchno-issledovatel'skiy institut tsvetnykh metallov (... ... ... Non-Ferrous Metals Institute) on the treatment of tungsten concentrates in hermetical, heated ball-mills with acids or caustic alkali; M. I. Spiridonova, S. I. Sobol', Ye. A. Guliyayeva, Z. L. Berlin, L. M. Heyer and B. I. Rusenko, Gintsvetmet, on the treatment of prepared and unprepared sulphide molybdenum raw material by oxidizing autoclave alkaline leaching; I. H. Belen' and S. I. Sobol' on the kinetics of oxidizing autoclave leaching; A. M. Zelikman and Z. M. Lyapina, Krasnoyarsk Non-Ferrous Metals Institute, on the results of a study of conditions for the selective separation of lower oxides of tungsten and molybdenum from their salt solutions by hydrogen under pressure; V. I. Darkiyan, Gorno-metallurgicheskiy institut (Mining-Metallurgical Institute) of the Sovnarkhoz (economic council) of the Armyanskaya SSR (Armenian SSR), on his investigations of mechanical auto-clave leaching under oxygen pressure of molybdenum concentrates;

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S. I. Sobol' on technical-economic factors of mechanical leaching; A. I. Sinel'nikova and I. N. Plaksin, Krasnoyarsk Non-Ferrous Metals Institute, on an oxidizing autoclave process for gold-containing raw material; N. G. Truch, Ural'skiy politekhnicheskiy institut (Ural Polytechnic Institute) on the behaviour of noble metals in oxidizing autoclave leaching in thiosulphate solutions; A. L. Tseft and D. A. Tazakin and A. Yu. Dadabayev, Institut metallurgii i obogashcheniya AN Kaz SSR (Metallurgy and Beneficiation Institute of the AS Kaz SSR), respectively, on the physicochemical fundamentals and on works trials of autoclave salt leaching of polymetallic materials; I. Yu. Leibch, Gipronikel', on the unsuitability of autoclave leaching for lime-containing materials; V. A. Bernshteyn, VAMI, on industrial experience of a continuous autoclave leaching process for bauxites; V. G. Tronev, IONKh AN

Card 4/5

SSSR (IONKh, AS USSR), on compounds of some rare elements in various valency states under oxygen and hydrogen pressure in the presence of anhydrous ammonia; Z. L. Berlin, Gintsvetmet, on autoclave design and operation; P. S. Yakovlev, Gipronikel', and M. Ye. Vishnevskiy, VAMI, respectively, on model studies on autoclaves and the development of mixers; M. A. Polyakov, K. B. Gizetskor, on the design of an experimental high-pressure pulp pump; G. L. Shvarts, NIIKhIMMASH, on the selection of steel for acid leaching of cobalt matte and matte-flotation concentrate; Yu. I. Arkhanov, VNIIneftekhim, on corro-sion of types 1Kh18N9T, 12Kh0H, 10Kh9ND and 10GMD steels in soda and alkaline solutions in the presence of metal salts and oxygen at 5 - 15 kg/cm²; V. I. Deryabina and M. N. Kalyntin, VNIIneftekhim, separately on mechanical properties of hydrogen-affected steels. The conference made recommendations aimed at the extension and improve...

Card 5/5

S/598/62/000/008/009/009
D217/D307

AUTHOR: Zhilkin, V.B.

TITLE: Experience with the application of titanium
              in hydrometallurgical production

SOURCE: Akademiya nauk SSSR. Institut metallurgii.
              Titan i yego splavy. no. 8, Moscow, 1962.
              Metallurgiya titana, 273 - 278

TEXT: The sulphate-chloride solutions used for the
production of nickel and cobalt at temperatures of up to 70°C,
have the following composition (g/l): Ni $<$ 67, Na$_2$SO$_4$ $<$ 170,
Cl $<$ 35, Fe $<$ 0.5, Cu $<$ 0.8, H$_2$SO$_4$ $\sim$ 5-10. In such solutions,
even stainless steels containing 28 % Cr, 25 % Ni and 3 % Mo,
suffer from local corrosion. Long-term systematic investigations
of the corrosion resistance of titanium alloys such as BT1, BT3,
OT4, BT5, ИМП 1 (VT1, VT3, OT4, VT5, IMP1) and others were initiated
in 1956 and concluded in 1958. After direct immersion in the test
solution for 1000 - 6000 hours, all specimens exhibited complete

Card 1/2

Experience with the application ...   S/598/62/000/008/009/009
                                       D217/D307

corrosion resistance. The alloy VT1 is recommended owing to its
satisfactory strength, adaptability to production processes and
low cost. There are 9 figures.

Card 2/2

s/

BOOK EXPLOITATION

AM4016852

Itel'son, Genrikh Maksovich; Zhilkin, Vladimir Borisovich

Titanium equipment in the production of nickel (Titanovoye oborudovaniye v proizvodstve nikelya), Murmansk, Murmanskoye knizhnoye izd-vo, 1963, 124 p., illus., biblio., 2,000 copies printed.

TOPIC TAGS: titanium alloy, nickel, corrosion, corrosion resistance, VT-1, VT-4 OT4, VT5-1, stainless steel, pump, tubing, valve, metal working

PURPOSE AND COVERAGE: The development and creation of new progressive equipment that can be mechanized and automated is one of the conditions for an increase in the productivity of labor and fulfillment of the tasks of the Seven-Year Plan for nonferrous metal production. Titanium alloys, distinguished by their high corrosion resistance, have a great future as materials for such equipment. This book attempts to systematize the experience gained in studying the corrosion resistance of titanium alloys, the design, and the fabrication of titanium equipment at the "Severonikel'" Combine. Chapters I, II, III, and VI were written by engineer V. B. Zhilkin and chapters IV, V, VII, VIII, IX, and X were written by engineer G. M. Itel'son.

Card 1/2

DATE ACQ: 17 Jan 64

NR REF SOV: 28

AM4016852

TABLE OF CONTENTS:

SUB CODE: ML
OTHER: 001

SUBMITTED: 18 Apr 63
DATE ACQ: 17 Jan 64   NR REF SOV: 28

Card 2/2

SEVERDENKO, V.P.; ZHILKIN, V.Z.

Determining the coefficient of external friction during drawing
titanium. Sbor.nauch.trud.Fiz.-tekh.inst.AN BSSR no.6:66-73 '60.
(MIRA 14:6)

(Drawing (Metalwork))   (Titanium)

ZHILKIN, V.Z.

Drawing of titanium wire through a rotating draw die. Sbor.
nauch. trud. GINTSVETMET no.33:355-363 '60.   (MIRA 15:3)
                    (Titanium) (Wire drawing)

ZHILKIN, V. Z.

p L

PHASE I BOOK EXPLOITATION   SOV/4018

Akademiya nauk Belorusskoy SSR. Fiziko-tekhnicheskiy institut

Sbornik nauchnykh trudov, vyp. 5 (Collected Scientific Papers of the
    Institute of Engineering Physics, Academy of Sciences Belorusskaya
    SSR, No. 5) Minsk, Izd-vo AN BSSR, 1959. 235 p. Errata slip
    inserted. 1,100 copies printed.

Ed. of Publishing House: L. Mariks; Tech. Ed.: I. Volokhanovich;
    Editorial Board: V.P. Severdenko, Academician, Academy of Sciences
    BSSR (Chief Ed.), K.V. Gorev, Academician, Academy of Sciences
    BSSR, M.N. Bodyako, Candidate of Technical Sciences, and
    P.A. Parkhutik, Candidate of Technical Sciences.

PURPOSE: This book is intended for technical personnel and scien-
    tific workers.

COVERAGE: This collection of 23 articles   covers the following
    subjects: small draft rolling analysis of wire-drawing, design
    of drop-forging dies, impact upsetting, examination of the effect
    of temperature on plastic deformation, sulphidation and carburizing
    processes, the phenomena of pulse-discharge, etc. No personalities

Card 1/5

ZHILKIN   V.Z.

Collected Scientific Papers (Cont.)   SOV/4018

  are mentioned. References follow most articles.

TABLE OF CONTENTS:

Card 2/5

ZHILKIN, V. Z.: Master Tech Sci (diss) -- "Investigation of the process of

drawing titanium wire". Moscow, 1959.   14 pp (Min Higher Educ USSR, Moscow Inst

of Nonferrous Metals and Gold im M. I. Kalinin, Chair of "Technology of Metals"),

150 copies (KL, No 9, 1959, 114)

S/571/60/000/006/005/011
E193/E383

AUTHORS: Severdenko, V.P. and Zhilkin, V.Z.

TITLE: Determination of the friction coefficient during
             drawing of titanium (wire)

SOURCE: Akademiya navuk Belaruskay SSR. Fiziko-tekhnicheskiy
             institut. Sbornik nauchnykh trudov. no. 6. Minsk,
             1960. 66 - 73

TEXT: A method due to Saks and Linkus (Ref. 1 - Spanlose
Formung der Metall, K.W.I., 1931) was used in the investigation
described in the present paper. The method is based on measuring
the force required to pull a wire through a stationary die and
through a rotating die. In the latter case, the elements of the
metal deformed move along a spiral path, which is inclined at
a certain angle, β , to the die axis. The friction force, T ,
assumed to be constant, also acts at this angle. The horizontal
component T_x of T is given by:

$$T_x = T \cos \beta \qquad\qquad (1)$$

Card 1/6

S/571/60/000/006/005/011
E193/E383

Determination of ....

and the angle B is found from:

$$\cos \beta = \frac{v_x}{\sqrt{v_x^2 + v_y^2}} \qquad (2) \ ,$$

where v_x is the drawing speed (m/min) and

v_y the linear speed (m/min) of rotation of the die
measured on its internal diameter.

The total drawing force can be regarded as a sum of a force
P_T required to overcome the friction force, and a force P_A

required to overcome the resistance of metal to deformation.
According to Saks and Linkus:

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Determination of ....

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$$P_{\mathcal{A}} = P_x - \frac{P_x - P'_x}{1 - \cos \beta} \tag{4}$$

where P_x and P'_x are forces required to draw the wire through a stationary and rotating die, respectively. Hence, the friction coefficient, f, is given by:

$$f = \frac{P_x - P_{\mathcal{A}}}{P_{\mathcal{A}}} \, tg \, \alpha \tag{5}$$

where α is the die cone half-angle (in degrees).
The equipment used for measuring f of titanium is illustrated schematically in Fig. 2, which shows: 1 - coiling drum;
2 - dynamometer and a guide roll; 3 - die-rotating mechanism;
4 - intermediate transmission system; 5 - die-revolutions counter; 6 - electric motor (a detailed description of the apparatus is also given). An oscillograph was used to record
Card 3/6

S/571/60/000/006/005/011
E193/E383

Determination of ....

the drawing force, drawing speed and speed of rotation of the
die. The measurements were carried out on annealed and work-
hardened titanium wire, 1.58 and 1.78 mm in diameter, drawn to
the final diameter of 1.5 mm under conditions such that the
angle β was $70°30'$, $71°06'$ or $71°42'$. The results are tabulated
and reproduced graphically. In Fig. 5, the friction coefficient
is plotted against the reduction $(Q_{e\partial}, \%)$ per pass, for annealed
material (Curve 1) and for wire reduced by 30 and 60% (Curves 2
and 3, respectively). In Fig. 6, the friction coefficient is
plotted against the degree of preliminary deformation
$(Q_{cym}, \%)$, Curves 1-3 relating to specimens drawn with 10, 19
and 29% reduction per pass. The results obtained show that
friction in drawing titanium $(f = 0.06 - 0.11)$ is higher than
that in drawing steel, for which $f = 0.03 - 0.06$. This
difference is attributed to the tendency of titanium to galling
and to the presence of a surface oxide film on titanium wire.
The fact that f decreased with increasing reduction per pass
is not in contradiction to modern views on the nature of contact
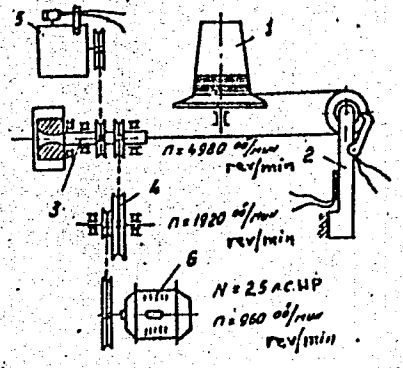
Card 4/6

Determination of .....

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E195/E383

friction during wire-drawing. The results showed also that as the reduction per pass decreased, the magnitude of P_T increased and could reach 60 - 70% of the total drawing force. For drafts of 20 - 30%, P_T constitutes 30 - 40% of the total drawing force.
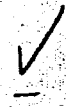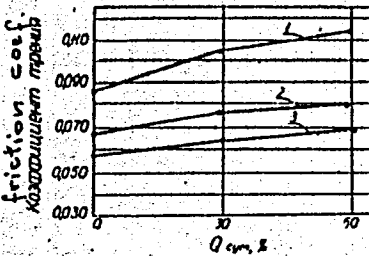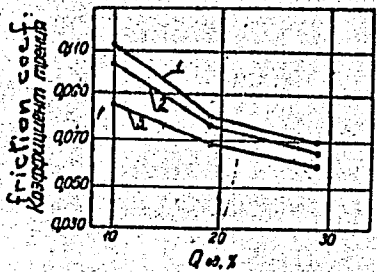There are 6 figures, 1 table and 1 non-Soviet-bloc reference.

Fig. 2:

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Determination of ....

S/571/60/000/006/005/011
E193/E383

Fig. 5:

Fig. 6:

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36797
S/137/62/000/004/067/201
A052/A101

/. /35 0

AUTHOR: Zhilkin, V. Z.

TITLE: Titanium wire drawing through a rotating die plate

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 4, 1962, 31, abstract 4D182
            ("Sb. nauchn. tr. In-t tsvetn. met. im. M. I. Kalinina", no. 33,
            1960, 355-363)

TEXT: The developed appliance makes it possible to realize the Ti-wire
drawing both through a stationary and a rotating die plate with the possibility
of varying the drawing speed and the rotating speed of the die plate within
broad limits. An analysis of experimental data shows that the coefficient of
friction of Ti, determined at a rotating die plate, increases with the increase
of reduction per pass and with the increased strain hardening of Ti-wire. It
is established that at a rotating die plate the drawing force decreases, however,
even at the rate of 8 revolutions of the die plate per unit of length of the
drawn metal equal to its diameter, the decrease of the force is not so consider-
able as was asserted by some authors previously.   K. Ursova

[Abstracter's note: Complete translation]

Card 1/1

S/137/60/000/010/018/040
A006/A001

AUTHORS: Severdenko, V.P., Zhilkin, V.Z.

TITLE: Determination of Specific Pressure During Drawing

PERIODICAL: Sb. nauchn. tr. Fiz.-tekhn. in-t, AN BSSR, 1959, No.5, pp. 59-65

TEXT: For the purpose of determining the specific pressure when drawing ВТ1-Д (VT1-D) alloy wire, a draw plate was manufactured consisting of 2 halves fastened to each other with tie bolts. Wire indicators were fixed to the bolts, used to determine the radial constituent of normal pressure on the draw plate wall. Drawing of the wire was made on a tearing machine where the draw plate was fastened with the aid of a special device. A dynamometer, representing a socket with wire indicators glued on its walls, was mounted on this machine for the measurement of the drawing forces. It is shown by experiments that the specific pressure increases with a decreased reduction and with a higher degree of preliminary deformation.

A.R.

Translator's note: This is the full translation of the original Russian abstract.
Card 1/1

ZHILKIN, V.Z.; GAYDAR', L.M.

Evaluating certain factors in the rolling of metal powders.
Porosh. met. 5 no.10:19-26 O '65.   (MIRA 18:11)

1. Krasnoyarskiy institut tsvetnykh metallov imeni Kalinina.

USSR / Virology. Human and Animal Viruses. Influenza Virus.   E-3

Abs Jour   : Ref Zhur - Biol., No 18, 1958, No 81257

Author   : Zhilkina, A. S.
Inst   : Scientific Research Institute of Ear, Nose and Throat.
Title   : Interepidemic Influenza Infections and Development of Post-
              Influenza Immunity Among Children.

Orig P ub   : Tr. gos. n.-i. in-ta ukha, gorla i nosa, 1955, sb. 6,
              130-149.

Abstract   : No abstract given.

Card 1/1

ZHILKINA, I.N.; POLYAKOVA, Ye.G.

Effect of submerged aquatic plants on the microflora of water.
Uch.zap.Chuv.gos.ped.inst. no.7:84-99 '59. (MIRA 13:9)
(Aquatic plants)   (Water--Microbiology)

ZHILKINA, I. N.

"An Ecological and Phytocenotic Investigation of Water Plants in Relation To Hydroconstruction Problems on the Lower Volga." Cand Biol Sci, Saratov State U imeni N. G. Chernyshev, Saratov, 1955. (KL, No 12, Mar 55)

So: Sum. No 670, 29 Sept 55 - Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (15)

ZHILKINA, Lyudmila Vasil'yevna [Zhylkina, L.V.]; OVCHARENKO, S.K.,
        red.; NEMCHENKO, I.Yu., tekhn. red.

    [Analysis of the utilization of working capital on col-
    lective farms] Analiz vykorystannia oborotnykh koshtiv v
    kolhospakh. Kyiv, Derzhsil'hospvydav URSR, 1963. 64 p.
                                        (MIRA 17:3)

PISAREV, V., prof.; ZHILKINA, M., nauchnyy sotrudnik

Krasnozernaia, a new spring wheat variety. Nauka i pered.
op.v sel'khoz. 9 no.11:43-46 N '59.   (MIRA 13:3)
(Wheat--Varieties)

ZHILKINA, M.D

Category: USSR/General Biology. Genetics.   B-5

Abs Jour : Referat Zh.-Biol., No 6, 25 March 1957, 21574

Author   : V.E. Pisarev, M.D. Zhilkina
Inst   : not given
Title   : Use of boron for selection of low-fertility hybrids.

Orig Pub : Dokl. AN SSSR, 1956, 108, No 5, 945-947

Abstract : Several amphidiploid low-fertility hybrids of different wheat
           and summer wheat types and summer rye were planted in vegetative
           vessels in an abundantly fertilized soil. Beginning with the
           sprouting of plants into the tube, a weekly extra above-root
           nutrient mixture with 0.05% boric acid was administered. The
           fertility of hybrids greatly increased. Thus, in a tertiary
           hybrid / (Tr. monococcum x Tr. persicum) F_1 x Tr. vulgare/F_n
           the number of spikelets in the ear while boric nutrient was
           used increased 7.2 x by comparison with the control, and the
           grain content of the ear from 1.4 in the control to 41.3 in

Card   : 1/2   -11-

Inst zernovogo khozyaystva nechernozemnoy polosy.

PISAREV, V.Ye. ; ZHILKINA, M.D.

Application of boron in the process of selection of poorly fertile
hybrids. Dokl. AN SSSR 108 no.5:945-947 Je '56.   (MIRA 9:10)

1. Institut zernovogo khozyaystva nedhernozemnoy polosy. Predstavle-
no akademikom A.L. Kursanovym.
  (Boron--Physiological effect) (Hybridization, Vegetable)

SHVEDOV, V.P.; ZHILKINA, M.I.; ZINOV'YEVA, V.K.

Radiochemical determination of Cs^{137} in low activity samples.
Radiokhimiia 3 no.6:732-736 '61.   (MIRA 14:12)
                    (Cesium—Isotopes)
                    (Radiochemistry)

L 27510-66   EWT(1)/EWT(m)/FCC/EWA(n)   ...

ACC NR: AT5023950   UR/0000/65/000/000/0357/0360

AUTHOR: Gedeonov, L.I.; Zhilkina, M.I.; Il'inskaya, T.A.; Stepanov, A.V.

ORG: None

TITLE: Chemical composition of atmospheric precipitation and fallouts in the vicinity of Leningrad

SOURCE: Nauchnaya konferentsiya po yadernoy meteorologii. Obninsk, 1964. Radioactiv-nyye izotopy v atmosfere i ikh ispol'zovaniye v meteorologii (Radioactive isotopes in the atmosphere and their use in meteorology); doklady konferentsii. Moscow, Atomizdat, 1965, 357-360

TOPIC TAGS: fallout chemical composition, Leningrad vicinity fallout, fallout deter-mination methods radioactive fallout, atmospheric precipitation, radioactive fallout, atmospheric precipitation

ABSTRACT: The aim of this study was the determination of radioactive fallout composi-tion with higher than usual precision and range. Samples were analysed to determine two groups of data: a) radioactive fission products content, b) content of macroadmix-tures. Radioactive fission products were caught into aluminum containers with 1 squ. meter area, 10 cm. deep, provided with a layer of oiled filter paper on the bottom, and into porcelain tanks filled with a weak solution of nitric acid in water. After a monthly exposure on an open platform, the accumulated material was evaporated, burned, fired and weighed. After a measurement of total beta activity and the spectrum of

Card 1/3   UDC: None

L 27510-66

ACC NR: AT5023950

D

TABLE 1

Composition of fallout by individual elements, in the viscinity
of Leningrad. Period of collection: 1960-1963.

Element:	Concentration, % :
As, Bi, Cd, Ge, Hg, In, Nb, Sb, Ta, Tl, W, Th, Sc, U	Not detected by the spectral analysis method
Ag, Be, Mo, Co, Ga, Cs	<0,001
Sn, Y	0,001—0,01
Cu, Cr, Mn, Ni, Pb, Sr, Zn, Zr, La, Ce, V	0,01—0,1
Ti, Ba	0,1—1,0
Ca, Si, Fe, Al, Mg, P, Na, K	1,0—10 and over.

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ACC NR: AT5023950   0

gamma radiation, the samples were subjected to radiochemical analysis for the deter-
mination of the fission products Sr^{89-90}, $Ce^{141-144}$, Cs^{137}, and Y^{91}. In some samples,
the content of Ba^{140}, Ag^{111}, Mo^{99}, Zn^{95}, Sb^{125}, Be^{7}, and other isotopes was also deter-
mined. Macroadmixtures were determined by using spectral analysis and analytical me-
thods for Ca, Fe, Si, Ba and Al. Flame photometry was utilized for K and Cs content
determinations. Table 1 shows the results of analysis of 50 samples gathered during
the 1960-1963 period in the viscinity of Leningrad. Orig. art. has: 2 tables.

SUB CODE: 18, 04   SUBM DATE: 28Apr65   ORIG REF: 014   OTH REF: 001

                                                            (18)

Card 3/3   BLG

L 39099-66   EWT(m)/T   DS/HW

ACC NR: AP6022882   (N)   SOURCE CODE: UR/0186/66/008/002/0251/0254

AUTHOR: Rys'yev, O. A.; Rosyanov, S. P.; Zhilkina, M. I.; Gedeonov, L. I.

ORG: none

TITLE: Method of radiochemical separation of Be^7, P^{32}, P^{33}, and S^{35} from a single sample in studies of atmospheric precipitation and aerosols

SOURCE: Radiokhimiya, v. 8, no. 2, 1966, 251-254

TOPIC TAGS: beryllium, phosphorus, sulfur, radioisotope, radioactive aerosol, atmospheric precipitation

ABSTRACT: A method of radiochemical separation of Be^7, P^{32}, P^{33}, and S^{35} is proposed which, in addition to an analysis of atmospheric precipitation, permits a study of samples of atmospheric aerosol collected on fibrous filters. The method involves the removal of fission products (present in the atmosphere following nuclear tests) from the nuclides Be^7, P^{32}, P^{33}, and S^{35} being determined. After the isotopes interfering with the determination of Be^7 have decayed, the γ radiation of Be^7 can be measured directly with β spectrometers, but the sulfur and phosphorus isotopes, in view of their small amounts and low energies of their β radiation ($E_{max} = 0.26$ MeV for P^{33} and $E_{max} = 0.16$ MeV for S^{35}), have to be separated radiochemically before they are determined. The radiochemical analysis involved the use of isotopic dilution. The

Card 1/2   UDC: 543.53:551.577

L 39099-66

ACC NR: AP6022882

half-lives of the four radioisotopes were measured. Orig. art. has: 3 figures and 3 tables.

SUB CODE: 08/ 07/ SUBM DATE: 27Feb65/ ORIG REF: 006/ OTH REF: 009

Card 2/2 MLP

SHVEDOVA, V.P.; ZHILKINA, M.I.; ZINOV'YEVA, V.K.

New method for the quantitative separation of antimony. Radio-
khimiia 1 no.1:109-111 '59.   (MIRA 12:4)
        (Antimony--Analysis)   (Extraction (Chemistry))

SHVEDOV, V.P.; YAKOVLEVA, G.V.; ZHILKINA, M.I.

Dose of external γ-radiation from radioactive fallout in 1959.
Atom.energ. 9 no.4:323-324 O '60.   (MIRA 13:9)
 (Gamma rays)   (Radioactive fallout)

ZHELEZNA, M. ...; TARKULEVA, J. ?.

"Concerning the Decay of Cd^{115*} and Sb^{127}."

report submitted for All-Union Conf on Nuclear Spectroscopy, Tbilisi, 14-22 Feb 64.

Radiyevyy Inst (Radium Inst)

33187
S/186/61/003/006/007/010
E051/E135

AUTHORS: Shvedov, V.P., Zhilkina, M.I., and Zinov'yeva, V.K.

71.7200

TITLE: The radiochemical determination of Cs137 in samples
           with low levels of radioactivity

PERIODICAL: Radiokhimiya, v.3, no.6, 1961, 732-736

TEXT: The determination of Cs137 in rain or snow and in
aerosols is made difficult by the low level of activity
($10^{-8} - 8 \times 10^{-7}$ curies) and by the presence of other elements
and organic compounds in the samples. By the use of an isotope
dilution method with added carrier, Cs137 has been determined at
low levels. Rain or snow was collected in a large, high walled,
porcelain tank and one month's sample (30-60 ℓ) was evaporated.
Air was filtered and the filters ignited. Cs carrier (10-15 mg)
and carriers of Rb, Zr, Ce, Y and Sr ($\sim$ 5 mg each) were added
to the residues. The mixture was heated with 20-25 mℓ of
concentrated HCℓ in a porcelain dish and mixed thoroughly, then
evaporated to dryness and baked at 100-110 °C for one hour to
dehydrate SiO$_2$. This treatment was carried out two or three times.

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The radiochemical determination...

The residue was heated with 0.5N HCℓ and centrifuged. The
solution thus obtained contained Cs together with Fe, Aℓ, Ca,
Mg, Na, K, Co, Cu, Ni, etc. Fe, Aℓ and rare earth hydroxides
were precipitated by the addition of 5-10% NH$_4$OH solution. After
centrifuging the precipitate was washed two or three times with
hot distilled water. To the supernatent solution combined with
the washings was added (NH$_4$)$_2$CO$_3$ solution to precipitate
alkaline-earth carbonates. The filtrate from the carbonate
precipitation contained Cs, Mg, Na, K, Co, Cu, Ni and traces of
other elements. The solution was acidified with HCℓ, 5 mg each
of Fe, Ce, Y, Sr and Zr carriers was added and, after careful
mixing, NH$_4$OH added to precipitate the hydroxides. This step
was repeated three times. After the third hydroxide
precipitation, the remaining solution was evaporated to low
volume on a water bath and the residue treated with concentrated
HNO$_3$ to decompose NH$_4$+ salts. The dry residue contained Co, Cu,
Ni, K, Mg, Na and Co. This was treated three to four times with
concentrated HCℓ to convert the nitrates to chlorides and then

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The radiochemical determination ... E051/E135

dissolved in 2-3 mℓ of distilled water. 7-10 mℓ of glacial acetic acid was added, the solution stirred and centrifuged. The residue was washed 2-3 times with 2 mℓ portions of glacial acetic acid and the supernated liquid and washings combined. 2-3 mℓ KBiI$_4$ solution (5 g Bi$_2$O$_3$ and 17 g KI in 50 mℓ glacial acetic acid) was added and the solution heated to boiling. After standing 40-60 minutes the precipitate was separated by centrifuging and washed with glacial acetic acid until the washings were no longer yellow. After a final wash with alcohol the precipitate was dried at 140-160 °C to constant weight. The chemical purity of the Cs$_3$Bi$_2$I$_9$ was checked by spectrographic analysis and showed no contamination by any likely radioactive element or Co and Cu. Traces of Ni, Mg, K and Na in quantities less than 1% were present. After reprecipitation of the Cs$_3$Bi$_2$I$_9$ none of these elements could be detected. The radiochemical purity of the recovered Cs137 was checked by β-decay curves and by γ-spectrometry. Following the β-decay curve over 12-20 months showed that no activity with a half-life of less than 5 years was present. γ-spectrometry was carried out using a single channel

Card 3/ 5

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The radiochemical determination ...

scintillation counter with a sodium iodide crystal, measuring the 0.662 KeV Cs^{137} peak. The activity of Cs^{137} in the original sample was calculated using the formula

$$A = c \cdot n \cdot \frac{P}{p} \, e^{-\lambda t}$$

where: A - absolute activity in microcuries; C - counter efficiency in dis/min per microcurie for a given weight of precipitate; P - weight of Co carrier added to the original sample; p - weight of carrier recovered; λ - decay constant for Cs^{137}; t - mean time from collection of sample. Chemical yields were of the order of 60-70%. Using the procedure outlined it proved possible to determine 10^{-10} curie amounts of Cs^{137}, or greater, the whole procedure taking 5-8 hours. Acknowledgments are expressed to Yu.M. Tolmachev for his assistance.
There are 2 figures, 1 table and 8 references: 6 Soviet-bloc, 1 Russian translation from a non-Soviet-bloc publication, and 1 non-Soviet-bloc.

Card 4/5

λ

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The radiochemical determination ...   S/186/61/003/006/007/010
E051/E135

The English language reference reads as follows:
Ref.7: H. Tadishi, Bull. Inst. Chem. Res., Kyoto Univ.,
    v.37, 2, 126 (1959).

SUBMITTED: November 17, 1960

Card 5/5

AUTHOR: Gedeonov, L.I.; Zhilkina, M.I.

TITLE: The fallout of long life isotopes Sr^{90} and Cs^{137} in the Leningrad region during 1961-1963.

UR/0000/65000/000/0342/0344

SOURCE: Nauchnaya konferentsia po yadernoy meteorologii, Obninsk, 1964. Radioaktiv-nyye izotopy v atmosfere i ikh ispol'zovaniye v meteorologii (radioactive isotopes in the atmosphere and their utilization in meteorology); doklady konferentsii. Moscow, Atomizdat, 1965, 342-344

TOPIC TAGS: radioactive fallout, radioisotope

ABSTRACT: The descending fission products (fallout) were caught into por. elain con-tainers and analyzed. Monthly fallout magnitudes were determined and tabulated. Radio-chemical analysis showed that the fallout was represented in the main by long life isotopes and their products of decay: Pm^{147}, $Ce^{144} + Pr^{144}$, Sb^{125}, $Ru^{106} + Rh^{106}$, $Sr^{90} + Y^{90}$, $Cs^{137} + Ba^{137}$. No increase in fallout was observed after the French tests in the Sahara Desert. No isotopes with a life of less than a year were observed. The 1962 total yearly fallout was equal to 11.5 microcuries/km^2 of Sr^{90} and 22.0 micro-curies/km^2 of Cs^{137}. During the 1958-1962 period, the ratio of Cs^{137}/Sr^{90} fallout ac-tivities was nearly constant, that is, $2.0 \pm .6$. Therefore, beginning in 1963, the Sr^{90} fallot was used for the estimate of the Cs^{137} fallout. Since the Cs/Sr ratio

ard 1/2

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in the fallout is close to their ratio during the event of nuclear fission, the authors conclude that the average time of sojourn in the stratosphere for these acti-vities is approximately equal. The cumulative fallout of Sr^{90} and Cs^{137} to July, 1963, not counting the effects of wind erosion and precipitation leaching, was 30.5 Micro-curies/km^2 of Sr^{90} and 59.8 microcuries/km^2 of Cs^{137}. Orig. art. has 2 tables.

SUB CODE: 18

ASSOCIATION: 00

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SUBMITTED: 00

OTHER: 000

NO REF SOV: 005

(18)

Card 2/2

ZHILKINA M. M.

Adsorption of lead nitrate by metastannic acid. A. G. Samartseva and M. M. Zhilkina. J. Applied Chem. (U. S. S. R.) 8, 1287-90 (in German 1290)(1935).—In analysis of Pb the sepn. of Pb with HNO_3 results in the adsorption of $Pb(NO_3)_2$ by the metastannic acid, increasing with the increasing ratio of Pb in the alloy. For alloys contg. little Pb and const. values of Sn, the adsorption of $Pb(NO_3)_2$ can be calcd. by the Freundlich formula (isotherm of adsorption). A graph and table are given.   C. R.

ZARUBIN, G.G.; RUBTSOVA, I.K.; SMIRNOV, M.I.; PERTSOV, L.D.; DOLGOV, F.F.;
KOKOREV, V.V.; ZHILINA, R.D.

Using alkyl aryl phosphates for plasticizing polyvinyl chloride.
Plast.massy no.5:7-10 '63.   (MIRA 16:6)
   (Vinyl compound polymers)   (Phosphoric acid)   (Plasticizers)

KRICHEVSKIY, Ye.S., kand.tekhn.nauk; ZHILKINA, Ye.V.

"Industrial electronics" by S.M. Gol'din. Reviewed by
E.S. Krichevskii, E.V. Zhilkina. Gor. zhur. no.12:68-70
D '62.   (MIRA 15:11)

1. Leningradskiy gornyy institut.
            (Electronics in mining) (Gol'din, S.M.)

ZHILKINSKIY, S.I.

BELEVTSEV, Ya.M.; AKIMENKO, M.M.; ZHIIKINS'KIY, S.I.; SHCHERBAKOV, B.D.;
   TOKHTUYEV, G.V.; SIROSHTAN, P.I.; FOMENKO, V.Yu.

   Method for studying structures of the Krivoy Rog Basin. Geol. zhur.
   17 no.2:80-82 '57.   (MIRA 10:11)
                    (Krivoy Rog Basin--Geology, Structural)

BELEVTSEV, Ya.N.; BEYGULENKO, I.L.; BETIN, D.I.; BORISENKO, V.G.;
GUBKINA, N.N.; DZHEDZALOV, A.T.; ZHILKINSKIY, S.I., prof.;
ZALATA, L.F.; KAZAK, V.M.; MALYUTIN, Ye.I.; MUROMTSEVA, Z.G.;
NATAROV, V.D., doktor geol.-miner. nauk: PANASENKO, V.N.;
PITADE, A.A.; RADUTSKAYA, P.D.; SLEKTOR, S.M.; SMIRNOV, D.I.;
TOKHTUYEV, G.V., kand. geol.-min. nauk; FOMENKO, V.Yu.;
SLENZAK, O.I., red.izd-va; MATVEYCHUK, A.A, tekhn. red.

[Methodological guide for the geological service for the
prospecting and mining of Krivoy Rog type deposits] Metodiche-
skoe rukovodstvo dlia razvedochnoi i rudnichnoi geologicheskoi
sluzhby mestorozhdenii krivorozhskogo tipa. Pod red. IA.N.
Belevtseva. Kiev, Izd-vo AN USSR, 1963. 395 p.
(MIRA 16:12)
1. Krivoy Rog. Gornorudnyy institut. 2. Chlen-korrespondent
AN Ukr.SSR (for Belevtsev).
(Krivoy Rog Basin--Engineering geology)

ZHILKINSKIY, S.I., prof.; YAROSHENKO, V.A.; SEMERGEYEVA, Ye.A.

Some characteristics and causes of the crookedness of holes in the Krivoy Rog Basin. Sbor. nauch. trud. KGRI no.20(3):61-73 '63.
(MIRA 16:9)

BELEVTSEV, Ya.N.; FOMENKO, V.Yu.; NOTAROV, V.D.; MOLYAVKO,G.I.;MEL'NIK,
Yu.P.; SIROSHTAN, R.I.;/ DOVGAN', M.N.; CHERNOVSKIY, M.I.;
SHCHERBAKOVA, K.F.; ZAGORUYKO, L.G.;.GOROSHNIKOV, B.I.;
AKIMENKO, N.M.; SEMERGEYEVA, Ye.A.; KUCHER, V.N.; TAKHTUYEV,
G.V.; KALYAYEV, G.I.; ZARUBA, V.M.; NAZAROV, P.P.; MAKSIMOVICH,
V.L.; STRUYEVA, G.M.; KARSHENBAUM, A.P.; SKARZHINSKAYA, T.A.;
CHEREDNICHENKO, A.I.; GERSHOYG, Yu.G.; PITADE, A.A.; RADUTSKAYA,
P.D.; ZHILKINSKIY, S.I.; KAZAK, V.M.; KACHAN, V.G.; STRYGIN,
A.I., red.; LADIYEVA, V.D., red.; ZHUKOV, G.V., red.; YEPATKO,
Yu.M., red.; SHCHERBAKOV, B.D., red.; SLENZAK, O.I., red.izd-va;
RAKHLINA, N.P., tekhn. red.

[Geology of Krivoy Rog iron-ore deposits]Geologiia Krivorozhskikh
zhelezorudnykh mestorozhdenii. Kiev, Izd-vo Akad. nauk USSR.
Vol.1.[General problems in the geology of the Krivoy Rog Basin.
Geology and iron ores of the deposits of the "Ingulets,"
Rakhmanovo, and Il'ich Mines]Obshchie voprosy geologii Krivbassa.
Geologicheskoe stroenie i zheleznye rudy mestorozhdenii rudnikov
"Ingulets," Rakhmanovskogo i im. Il'icha. 1962. 479 p.
(Krivoy Rog Basin—Mining geology)   (MIRA 16:3)
(Krivoy Rog Basin—Iron ores)

BELEVTSEV, Ya.N.; FOMENKO, V.Yu.; NOTAROV, V.D.; MOLYAVKO, G.I.;
MEL'NIK, Yu.P.; SIROSHTAN, R.I.; DOVGAN', M.N.; CHERNOVSKIY,
M.I.; SHCHERBAKOVA, K.F.; ZAGORUYKO, L.G.; GOROSHNIKOV, B.I.;
AKIMENKO, N.M.; SEMERGEYEVA, Ye.A.; KUCHER, V.N.; TAKHTUYEV, G.V.;
KALYAYEV, G.I.; ZARUBA, V.M.; NAZAROV, P.P.; MAKSIMOVICH, V.L.;
STRUYEVA, G.M.; KARSHENBAUM, A.P.; SKARZHINSKAYA, T.A.;
CHEREDNICHENKO, A.I.; GERSHOYG, Yu.G.; PITADE, A.A.; RADUTSKAYA,
P.D.; ZHILKINSKIY, S.I.; KAZAK, V.M.; KACHAN, V.G.; POLOVKO,N.I.,
red.; LADIYEVA, V.D., red.; ZHUKOV, G.V., red.; YEPATKO, Yu.M.,
red.; SLENZAK,O.I., red. izd-va; KULICHENKO, V.G., red.;
RAKHLINA, N.P., tekhn. red.; MATVEYCHUK, A.A., tekhn. red.

[Geology of the Krivoy Rog iron ore deposits] Geologiia Krivo-
rozhskikh zhelezorudnykh mestorozhdenii. Kiev, Izd-vo Akad. nauk
USSR. Vol.1.[General problems of the geology of the Krivoy Rog
Basin. Geology and iron ores of the "Ingulets," Rakhmanovskiy,
and Il'ich ore deposits] Obshchie voprosy geologii Krivbassa.
Geologicheskoe stroenie i zheleznye rudy mestorozhdenii rudnikov
"Ingulets," Rakhmanovskogo i im. Il'icha. 1962. 479 p. Vol.2.[Ge-
ology and iron ores of the Dzerzhinskiy, Kirov, Liebknecht, October
Revolution, "Bol'shevik," Frunze, 22d Parts'ezd, Red Guard, and
Lenin deposits]Geologicheskoe stroenie i zheleznye rudy mestorozhdenii
im. Derzhinskogo, im.Kirova, im.K.Linkenkhta, im.XX parts"ezda, im.
Krasnoi Gvardii i im.Lenina. 1962. 564 p.   (MIRA 16:5)
                    (Krivoy Rog Basin—Iron ores)

S/169/63/000/001/041/062
D218/D307

AUTHORS: Tokhtuyev, G.V., Zhilkinskiy, S.I., Kazak, V.M.,
             Radutskaya, P.D. and Dzhedzalov, A.T.

TITLE: A method of detailed prospecting for deposits in
             the Saksaganskiy region of Krivoy Rog

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 1, 1963, 10-11,
             abstract 1D57 (Sb. nauchn. tr. N.-i. gornorudn. in-t
             (USSR), 1962, no. 5, 201-217)

TEXT: Studies were carried out with the aim of developing
a rationalized method for detailed prospecting for deposits in the
Krivoy Rog. The method is based on the following geological, pros-
pecting and analytical data: 1) ore-bearing capacity of rocks in the
Krivoy Rog metamorphic series and geological factors which govern
mineralization (structural, stratigraphic, lithological, metamorpho-
genic, hypergenic); 2) form, dimensions, and quality of the ore
deposits and their change with depth; 3) complexity of the morphol-
ogy of ore deposits and the exposure of ore-deposit profiles which

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are characterized by: the quantity variation coefficient, form complexity modulus and the continuity of mineralization coefficient; 4) degree of exploration of the basin and ore potential of existing mines; 5) density of existing prospecting network and its analysis by comparison of prospecting and mining data, artificial exhaustion and variational statistics. As a result of these studies, a new classification of ore deposits in the Saksagan belt, based on natural factors, was developed for prospecting purposes. An optimum prospecting-network density has been established for each group of deposits. This density is considerably lower than both the currently employed density and that recommended by the ГКЗ (GKZ), but ensures satisfactory accuracy of determination of reserves and reliable description of their quality (cf. table). An increase in the reserves of rich ores is to be expected mainly at large depths. Because of this, and also in view of the desirability of reconstruction of mines, it is necessary to solve the following main problems of detailed prospecting: 1) constant replacement in the process exhaustion of class B reserves in order to ensure a regular planned development of major deep-mining operations; 2) sufficient geological

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D218/D307

studies of 1000-1500 m horizons, ensuring rational distribution of capital investiment in reconstruction and sinking of new mines. At existing working depths, prospecting operations aimed at conversion of the reserves to class B, can best be carried out from wells sunk from newly prepared or exhausted mining horizons. The well depth will then be less than 250-300 m. It is possible that a proportion of the wells will best be sunk from the surface. In order to decide on the optimum conditions, special preliminary analysis of the economical, time and technological factors is necessary. The following data should be determined in deep-horizon studies (1000-1500 m): the presence of ore-deposits should be confirmed, a preliminary estimate should be made of the size and quality of the mineralization, the form and deposit elements of ores, and the details of the general geological structure. It is also desirable to have even preliminary estimates of hydrogeological and mining-technological working conditions. For Krivoy Rog deposits, this degree of exploration would correspond to class C_1 reserves. Deep horizon prospecting, using wells sunk from the surface, should in future be confined to

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this category of reserves.
Table: 1) Group of deposits; 2) Subgroup; 3) Natural characterist-
ics; 4) Distance between prospecting sections (in the plane of the
deposit) m, as recommended by NIGRI; 5) Class B; 6) Class C_1;
7) Density of prospecting network; 8) Compared with the recommended
by GKZ; 9) Compared with currently employed; 10) Class B; 11) Class
C_1; 12) Class B; 13) Class C_1; 14) Major stratified deposits of con-
stant thickness and topological structure, slightly discontinuous,
more than 400 m; 15) Major stratified deposits of variable thick-
ness and complex topological structure; discontinuous mineralization,
more than 400 m; 16) Average in size deposits of various topological
types, morphologically simple, 400-150 m; 17) Average in size depo-
sits of various morphological types but morphologically complex,
400-150 m; 18) Minor deposits of various forms, 150 m; 19) Prospec-
ting inexpedient; 20) 75-100 (or single intersections).
/Abstracter's note: Complete translation_/

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A method of detailed ...

1 Группа залежей	2 Под-группа	3 Характеристика залежей по природным факторам	4 Расстояния между разведочными пересечениями (в плоскости рудного тела) м, рекомендуемые ИПГРИ		7 Степень разрежения разведочной сети			
					8 против рекомендованной ГКЗ		9 против фактически достигнутой	
		14	5 категория B	6 категория C$_1$	10 категория B	11 категория C$_1$	12 категория B	13 категория C$_1$
I	1	Крупные залежи пластообразной формы, устойчивые по мощности, строению контуров, слабо прерывистые, более 400 м	200—250	300—400	3—5	2,3—4,0	1,3—2,0	1,2—2,2
	15	Крупные залежи пластообразной формы, изменчивые по мощности, сложные по строению контуров, прерывистые по оруденению, более 400 м	150—200	250—350	2,5—4,0	1,5—3,0	1,2—2,0	1,2—2,3
II	16	Средние по размерам залежи, различных морфологических типов, простые по морфологии, 400—150 м	100—150	150—250	2,5	1,0	1,5—1,2	1,0—1,2
	17	Средние по размерам залежи, различных морфологических типов, сложные по морфологии, 400—150 м	75—100	120—200	2,5	1,0	1,0	1,0
III	18	Мелкие залежи различной формы, 150 м	19 Разведку осуществлять нецелесообразно	20 75—100 (или единичные пересечения)	—	—	—	—

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ZHILKINSKIY, S.I.; YAROSHENKO, V.A.; SEMERGEYEVA, Ye.A.

    Some causes of deflection of test holes in the Krivoy Rog Basin.
Razved. i okh. nedr 29 no.5:40-43 My '63.   (MIRA 16:7)

    1. Trest "Krivbassgeologiya."
                   (Krivoy Rog Basin—Boring)

S/169/63/000/001/042/062
D218/D307

AUTHORS: Tokhtuyev, G.V., Kazak, V.M. and Zhilkins'kiy, S.I.

TITLE: Scientific foundations of rationalized prospecting
                for iron deposits of Krivoy Rog

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 1, 1963, 11-12,
                abstract 1D58 (Geologichniy zh., 1962, v. 22, 14-29
                (Ukr.: summary in Rus.))

TEXT: In order to ensure the correct development of geolog-
ical prospecting operations in the Krivoy Rog basin, it is necessary
to take into account lithological-stratigraphic, structural, meta-
morphic, hydrogeological, and geomorphological factors governing the
mineralization. The development of a rationalized method for detail-
ed prospecting for rich ore deposits in the Saksaganskiy and Ingulet-
skiy ore fields is largely determined by the dimensions and the
structural complexity of ore-bodies in the central Krivoy Rog depos-
its, e.g. variability in the occurrence of ferruginous quartzites,
and the complexity of the geological and internal structure. In

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choosing the rationalized method of detailed prospecting, the author suggests the use of a new classification of deposits which was developed with allowance for the main factors which characterize the prospecting procedure. Currently used prospecting-network density is considerably lower than that recommended by ГКЗ (GKZ), but is overestimated by a factor of about 2 for the major ore rich deposits in the Saksaganskiy and Inguletskiy fields which belong to group I. Average-size deposits of this type, which belong to the second group, and also deposits in the central Krivoy Rog field, are at present being investigated with a network whose density is nearly optimal, and it is recommended that this density be retained. Ferruginous quartzite deposits belonging to the first subgroup (deposits with simple internal structure), which belong to all the prospecting groups, are being investigated with a network density which is nearly optimal. The second subgroup of all groups (deposits which have complex internal structure) are being investigated with insufficient well-network density. In order to determine the extent of the oxidation zone of these deposits with depth, the prospecting-network density should be higher by a factor of roughly 4. The prospecting-Card 2/3

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network density should not be chosen for individual deposits but for the ore site as a whole. The density of prospecting wells should ensure normal exploration of most of the reserves. The degree of exploration of rich ores should be estimated not from the reserve categories but from prospecting data which ought to be obtained prior to the mining data. The degree of exploration of rich ores should be regarded as normal when most of the reserves at 280-320 m below the working horizon can be described as class B. At the maximum depth of mine reconstruction (1200-1500 m) most of the reserves should belong to class C_1. In order to reduce Class C_1 deposits to Class B, it is generally expedient to work through existing mine pits.
/Abstracter's note: Complete translation/

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ZHILINSKIY, S.I., prof.

Method of exploring iron ore deposits at deep levels in the
Krivoy Rog Basin. Sbor. nauch. trud. KGRI no.10:9-19 '61
(MIRA 17:8)

TOKHTUYEV, G.V. [Tokhtuiev, H.V.]; KAZAK, V.M.; ZHILKINSKIY, S.I. [Zhylkins'kyi, S.I.]

Principles of effective methods of detailed prospecting for iron ores in the Krivoy Rog deposits. Geol.zhur. 22 no.1:14-29 '62.
(MIRA 15:2)

1. Krivorozhskiy nauchno-issledovatel'skiy gornorudnyy institut.
(Krivoy Rog—Prospecting)(Krivoy Rog—Iron ores)

Zhilkin, E. L.,

8(5)   PHASE I BOOK EXPLOITATION   SOV/1869

Tsentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii

Elektroprivod reversivnykh prokatnykh stanov s elektromashinnym
    upravleniyem (Electric Drive of Reversing Rolling Mills With Dynamoelectric
    Control) Moscow, Metallurgizdat, 1958. 257 p. (Series: Its: Sbornik trudov,
    vyp. 14) Errata slip inserted. 3,800 copies printed.

Additional Sponsoring Agency: Institut proizvodstva stali.

Ed.: N.P. Kunitskiy; Ed. of Publishing House: A.A. Vagin; Tech. Ed.:
    O.G. Bekker.

PURPOSE: This book is intended for scientific workers, process engineers,
    setup men, and designers, whose work is connected with electric drives of
    rolling mills. It may also be useful for students in advanced courses at
    polytechnical and power institutes who are specializing in the field of
    electric drives for rolling mills.

COVERAGE: The book deals with theoretical and experimental research being done
    on electric drives for reversing rolling mills. Optimum regimes for motors,
    the control of tension in rolling very thin band, control of the thermal load
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Electric Drive of Reversing (Cont.).

of d-c rolling mill motors, and the stability of electronic time relay are discussed. Recommendations are made for the selection and determination of electric drive parameters of reversing rolling mills. The following personalities, all engineers, are mentioned: F.F. Olifer, B.Z. Zaytsev, V.L. Kalyazhnov, V.A. Kovtunovich, Sh.N. Kupershmit, and M.D. Kochenenko. There are 10 Soviet references.

Electric Drive of Reversing (Cont.)   SOV/1869

   The author states that there is certain optimum value of additional
   resistance in the field circuit of the exciter, at which time motor
   acceleration is at a minimum, and there is no need for a large e.m.f. for
   an amplidyne. He also discusses the problem of obtaining an optimum
   current for motors driving reversing rolling mechanisms by selecting the
   necessary e.m.f. curve of the amplidyne, particularly its minimum value.

Kalinskiy, D.N., [Engineer]. Multiple-winding Exciter of a Generator   61
   The use of a multiple-winding exciter for a self-excited generator
   is duscussed, and the expediency in using parallel self-excitation is shown.

Kunitskiy, N.P. [Candidate of Technical Sciences]. Optimum Regimes of a Motor
Driving a Reversing Rolling Mill at Speeds Above Normal With Three-stage
Dynamoelectric Control   75
   The theory design, method, and adjustment of parametric three-stage
   dynamoelectric control of the motor driving a reversing rolling mill
   at speeds above normal are discussed,

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Electric, Drive of Reversing (Cont.)   SOV/1869

Kunitskiy, N.P. [Candidate of Technical Sciences]. Optimum Regime for
Acceleration of the Motor Driving a Reversing Rolling Mill at Speeds Above
Normal With Two-stage Dynamoelectric Control   204
    The theory, design, method, and adjustment of two-stage dynamo-
    electric control of the motor driving a reversing rolling mill at speeds
    above normal are discussed. This system has been used for driving
    rolling mills put into operation during the last two or three years.

Lur'ye, B.B. [Candidate of Technical Sciences]. Stabilization of Electronic
Time-relay Performance   233
    A method of improving the stability of an electronic time-relay for
    use in circuits for the automation of processes in the metallurgical
    industry is discussed.

Zhilko, E.I. [Engineer]. Use of Logic Circuits for Controlling
Manufacturing Processes   246
    This approach, claimed by the author to be new, increases the possi-
    bility of automatic control of processes which were formerly con-
    sidered inaccessible for automation because of their lack of
    mathematical interpretation.

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A052/A001

Translation from: Referativnyy zhurnal, Elektrotekhnika, 1959, No. 12, p. 183, # 25173

AUTHOR: Zhilko, E.I.

TITLE: Application of Logical Circuits to the Control of Technological Processes

PERIODICAL: Sb. tr. Tsentr. n.-i. in-t chernoy metallurgii, 1958, No. 14, pp. 246-257

TEXT: Characteristics and special features of logical circuits and possibilities of their application to the control of technological processes are considered in brief. There are 6 illustrations.

Translator's note: This is the full translation of the original Russian abstract.

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