(40)

Rolling Industry; Handbook   SOV/6044

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Candidate of Technical Sciences; N. M. Fedosov, Professor;
S. N. Filipov, Engineer [deceased]; I. N. Filippov, Can-
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M. M. Shternov, Candidate of Technical Sciences; M. V.
Shuralev, Engineer; I. A. Yukhvets, Candidate of Technical
Sciences; Eds. of Publishing House: V. M. Gorobinchenko,
R. M. Golubchik, and V. A. Rymov; Tech. Ed.: L. V. Dobuzhinskaya.

PURPOSE: This handbook is intended for engineering personnel of
metallurgical and machine-building plants, scientific research

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Rolling Industry; Handbook

SOV/6044

_institutes, and planning and design organizations. It may
also be used by students at schools of higher education.

COVERAGE: Volume 2 of the handbook reviews problems connected
with the preparation of metal for rolling, the quality and
quality control of rolled products, and designs of roll
passes in merchant mills. The following topics are dis-
cussed: processes of manufacturing semifinished and finished
rolled products (the rolling of blooms, billets, shapes, beams,
rails, strips, wire, plates, sheets, and the drawing of steel
wire), hot-dipped tin plates, lacquered plates, floor plates,
tubes made by different methods, and special types of rolled
products. Problems of the organization of rolling operations
are reviewed, and types of rolled products manufactured in the
USSR are shown. No personalities are mentioned. There are
no references.

TABLE OF CONTENTS: [Abridged]:

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Rolling Industry; Handbook   SOV/6044

Card 8/14

VITKIN, A.I., doktor tekhn.nauk

Pilot plant unit for the electrolytic sheet steel tin plating
in salt solutions. Sbor. trud. TSNIICHM no.28:138-145 '62.
(MIRA 15:11)

(Tin plating--Equipment and supplies)

VITKIN, A.I., doktor tekhn. nauk

Mechanism of the basic properties of hot dip tinning (theory of the process). Sbor. trud. TSNIICHM no.28:74-82 '62.   (MIRA 15:11)

(Tinning)

KOKORIN, G.A., inzh.; VITKIN, A.I., doktor tekhn.nauk

Investigating the structure and phase constitution of the transition
layer of sheet steel tinned by various methods. Sbor. trud.
TSNIICHM no.28:190-196 '62.   (MIRA 15:11)
                    (Sheet steel—Metallography)
                    (Tin plate—Metallography)

VITKIN, A. I., doktor tekhn.nauk; PLOTNIKOVA, T.P., inzh.

Dissolution of sheet steel iron in the process of electrolytic
tin plating in fused salts. Sbor. trud. TSNIICHM no.28:159-
165 '62.   (MIRA 15:11)
                    (Tin plating) (Fused salts)

VITKIN, A.I., doktor tekhn.nauk; PLOTNIKOVA, T.P., inzh.

Characteristics of the process of electrolytic tin plating of
sheet steel in salt solutions. Sbor. trud. TSNIICHM no.28:
146-152 '62.   (MIRA 15:11)

(Tin plating)

L ____ ___ ___ - ___ - ___ - ___ - ___

___ ___ ___ ___ ___

SOURCE. ___ zh. ___ , ___ ___

AUTHOR: Kokorin, G. A., ___ , A. ___ .

TITLE: A study of the processes of formation of intermediate layers on the surface
___ ___ base metal ___ ___ ___ ___

___ ___ ___ ___ ___ ___ ___ ___ M. ___
Metallurgizdat, ___ , ___ .

TOPIC TAGS: electroplating, coating structure, base metal structure, base coating
___ ___ electron micro ___ ___ ___ ___ ___ , zinc electrodeposition,
galvanized iron, tin ___ ___

TRANSLATION: The phase boundaries of the couples Fe-Sn, Fe-Zn, ___ -Zn and ___ r-Sn,
formed during electroplating, were ___ ___ ___ electron microscopic and ___ ___ -
graphic methods. The results showed ___ ___ ___ intermediate layer is ___ ___ ___ ___
the electroplating of Sn on Fe ___ ___ ___ ___ , which agrees with the
strong mechanical bond between the metals in these couples. During the electro-
plating of Sn on Cr, no intermediate phase is formed and there is consequently
no strong bond between the coating and the base metal. The appearance of inter-
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L 25347-65
ACCESSION NR: AR4039572

mediate phases is thus responsible for the strong bond between the coating and the

Card   2/2

VITKIN, A.I., doktor tekhn.nauk; KOKORIN, G.A., inzh.

Mechanism of the bond between the coating and base metals.
Sbor. trud. TSNIICHM no.34:61-69 '63.   (MIRA 17:4)

ALEKSANDROVA, L.K., inzh.; BEREZOVSKIY, V.V., inzh.; VITKIN, A.I., doktor
    tekhn.nauk; KEGELES, A.S., inzh.; SHEYER, E.A., inzh.; SHNOL', R.B.,
    inzh.; SHUMNAYA, V.A., inzh.

    Coating thin steel strips with plastics. Sbor. trud. TSNIICHM
    no.34:70-81 '63.   (MIRA 17:4)

VITKIN, A.I.

Manufacture of tinned and thin sheet steel with protective
coatings. Stal' 25 no.10:966-967 O '65.

(MIRA 18:11)

VITKIN, D.B., inzh.

        Practices of Building Trust No.33 of the Sverdlovsk City-
        Construction Office. Mekh.stroi. 16 no.11:26 N '59.
                                     (MIRA 13:5)
         (Drying machinery) (Paper hanging)

VITKIN, V.M.

CHEPEL', V.M.; VITKIN, V.M.; LEBEDEV, M.V., redaktor; AKATOVA, V.G., redaktor; GUROVA, O.A., tekhnicheskiy redaktor.

[A stoker's manual] V pomoshch' kochegaru. Moskva, Izd-vo Ministerstva kommunal'nogo khoziaistva RSFSR, 1954. 174 p.
(Steam boilers) (Combustion)   (MLRA 7:12)

CHEPEL', Vladimir Mikhaylovich; VITKIN, Vladimir Mikhaylovich;
    LIBERMAN, G.R., red.; ALMAZOV, V.Z., red.izd-va; KHENOKH,
    E.M., tekhn. red.

    [Aid to the stoker] V pomoshch' kochegaru. Izd.2., perer.
    i dop. Moskva, Izd-vo M-va kommun.khoz.RSFSR, 1963. 220 p.
                                        (MIRA 17:3)

VITKIN, V.P., kand.tekhn.nauk; BASKAKOV, S.T., inzh.

Investigating deformations and stresses in crankshaft forging machines.
[Nauch. trudy] ENIKMASHa 1:134-191 '59.   (MIRA 14:1)
    (Forging machinery)   (Strains and stresses)

VITKINA, A., shveya-motoristka shveyno-trikotazhnoy arteli (g. Lomonosov, Leningradskoy oblasti)

My sewing machine has been working eight years without needing any repairs. Prom.koop. no.1:21 Ja '57.   (MLRA 10:4)
      (Sewing machines)

VITKINA, E.I., referent.

Scaling resistant chromium-manganese-nickel steel with 2-6 percent nickel (from foreign journals). Biul. TSNIICHM no.23:52-54 '57.
(MIRA 11:2)
(Germany, West--Chromium-manganese steel--Testing)

VITKINA, B.I., referent.

Removing sinter from heated metals. Biul. TSNIICHM no.16:55 '57.
(Steel forgings)
(MIRA 11:5)

VITKINA, E.I., referent.

Neutralization of used pickle liquor. Biul. TSNIICHM no.16:56-57 '57.
(Metals—Pickling)
(MIRA 11:5)

VITKINA, E.I., inzh.

Continuous annealing of strip steel. Biul. TSNIICHM no.2:28-3 - '58.
(Steel—Heat treatment)   (MIRA 11:5)

VITKINA, E.I., referent.

Shiny electroplating. Biul. TSNIICHM no.2:60-61 '58.   (MIRA 11:5)
(Electroplating)

VITKIN, E.I.

Time development of a thermal explosion. Dokl. AN BSSR 9 no.12:
794-797 D '65.

(MIRA 19:1)

1. Institut fiziki AN BSSR.

L 09326-67   EWP(m)/EWT(1)/EWT(m)   WW/JW/JWD
ACC NR: AP6030934   SOURCE CODE: UR/0207/66/000/004/0150/0151

AUTHOR: Anisimov, S. I. (Minsk); Vitkin, E. I. (Minsk)   23

ORG: none

TITLE: Some variational problems of the theory of thermal explosions

SOURCE: Zhurnal prikladnoy mekhaniki i tekhnicheskoy fiziki, no. 4, 1966, 150-151

TOPIC TAGS: thermal explosion, variational problem, nonlinear differential equation, approximation method

ABSTRACT: The authors point out that most of the results obtained in stationary theory of thermal explosion pertains to symmetrical regions, in which the temperature distribution depends on a single space coordinate, whereas practical problems deal with two or three independent variables, for which the nonlinear partial differential equations are difficult to solve without a tremendous amount of numerical calculations. It is shown, since the solutions of physical interest are only those corresponding to low temperatures, that the calculations can be simplified by approximating the exponential temperature dependence with a trinomial. The application of this approximation to the variational solution of problems involving a cylinder of finite length, a rectangle, and a parallelepiped show satisfactory agreement with results obtained by others. Orig. art. has: 11 formulas.

SUB CODE: 20/   SUBM DATE: 17May65/   ORIG REF: 004/   OTH REF: 001

Card   1/1

VITKINA, E.I., referent

High-speed butt welding of roll tin plates. Biul. TSNIICHM no. 8:52
'58.   (MIRA 11:7)
                              (Welding)
                              (Tin plate)

VITKINA, E.I., referent

Stainless steels with boron additions. Biul. TSNIICHM no. 8:53-
55 '58.
(MIRA 11:7)

(United States--Boron steel)

VITKINA, E.I., referent

Lacquer coating of steel sheets and tin plates. Biul. TSNIICHM
no. 9:60-61 '58.   (MIRA 11:7)
(Lacquer and lacquering)

BEL'SKIY, B.E. [deceased]; BUR'YANOV, V.F.; VASIL'YEV, Ye.P.; VITKINA, E.I.;
GALLAY, Ya.S.; LEVIN, G.I.; MATVEYEV, Yu.M.; CHELYUSTKIN, A.B.;
ROKOTYAN, Ye.S., red.; ISTOMIN, A.B., red.; GRUZIN, V.I., red.;
NEPOMNYASHCHIY, N.I., red. izd-va; KARASEV, A.I., tekhn. red.

[Ferrous metallurgy in capitalistic countries] Chernaia metallurgiia
kapitalisticheskikh stran. Pt.4. [Rolling mill production] Prokatnoe
i trubnoe proizvodstvo. Bel'skii, B.E. and others. Moskva, Gos.
nauchno-tekhn. izd-vo lit-ry po chernoi i tsvetnoi metallurgii.
1958. 627 p.   (MIRA 11:7)

1. Moscow. TSentral'nyy nauchno-issledovatel'skiy institut chernoy
metallurgii.
            (Forging)   (Rolling (Metalwork))   (Pipe, Steel)

VITKINA, E.I., referent.

      Superhigh-strength steels. Biul. TSNIICHM no.4:60 '58.
              (Steel--Testing)   (MIRA 11:5)

VITKINA, E.I., referent

Equipment for metal testing at low temperatures [from
"Metallurgia," no.363, 1960]. Biul. TSIICHM no.1:57 '61.
(MIRA 14:9)

(Metals at low temperatures--Testing)

VITKINA, E.I., referent

Steel with high wear resistance [from "Steel," no.13, 1960].
Biul. TSIICHM no.1:58 '61.   (MIRA 14:9)
                    (United States--Steel)

VITKINA, E.I.

Increasing the scale resistance of steel by additions of yttrium
[from "Metalworking Production," no.8, 1960]. Biul.TSIICHM
no.4:60 '61.   (MIRA 14:10)

(United States--Steel)

VITKINA, E.I., referent.

Equipment for hardening pipes. Biul. TSNIICHM no.22:60 '57.
(United States—Pipe, Steel)   (MIRA 11:5)

VITKINA, M.I., referent.

Continuous pickling. Biul. TSNIICHM no.1:56-57 '58.   (MIRA 11:5)
(Metals--Pickling)

VITKINA, E.I., referent.

      Drum-type pickling machines. Biul. TSNIICHM no.1:57 '58.
                   (Metals--Pickling)   (MIRA 11:5)

VITKINA, E.I., referent.

Furnaces for bright annealing of pipes made of stainless steel.
Biul. TSNIICHM no.6:60 '58.   (MIRA 11:5)
                        (Steel, Stainless--Hardening)

BRIK, S.D.; VITKINA, E.I.

Low-alloyed steels used for making weld high-pressure boilers.
Biul. TSNIICHM no.2:35-39 '58.   (MIRA 11:5)
                        (Steel alloys)   (Boilers)

BORZDYKA, A.M.; VITKINA, E.I.; RYL'NIKOV, A.P.; SINITSYN, K.K.; BERNSHTEYN, M.L., red.; GOLYATKINA,A.G., red.izdatel'stva; ISLENT'YEVA, P.G., tekhn.red.

[Ferrous metallurgy of capitalist countries] Chernaia metallurgiia kapitalisticheskikh stran. Moskva, Gos.nauchno-tekhn.izd-vo lit-ry po chernoi i tsvetnoi metallurgii. Pt.5. [New quality steel and methods of testing it] Borzdyka, A.M., and others. Stali novykh marok i metody ispytanii. 1957. 282 p.   (MIRA 10:12)

1. Russia (1923-   U.S.S.R.) Ministerstvo chernoy metallurgii. TSentral'nyy institut informatsii.
                      (Steel--Testing)

VITKINA, E.I., referent

Acid-resistant steels and alloys in France [from "La métallurgie et la construction mécanique," no.3, no.4, 1959]. Biul.TSSICHM no.9:57-59 '60.   (MIRA 15:4)
(France--Steel, Stainless)

VITKINA, M. A.

General & Physical Chemistry – 2

The mechanism of absorption during bubbling. V. I. Dal and M. A. Vitkina. *Zhur. Priklad. Khim. S.S.S.R.* 23, 878-9; *J. Appl. Chem. U.S.S.R.* 23, 909-13(1950)(Engl. translation).—The motion of a gas bubble in a viscous medium is given by

$$v = \sqrt{\left(\frac{4DG}{3\phi}\right)\left(\frac{\gamma_1 - \gamma_t}{\gamma_1}\right)\left(1 - e^{-8\phi n/3D_1 t H}\right)}$$

where v is the rate at which the gas bubble rises, in m./sec.; D is the bubble diam., in m.; H is the height of the bubbling layer, in m.; ϕ is the coeff. of resistance of the medium; γ_0 and γ_1 are the densities of the gas and the liquid, resp., in kg./cu. m.; and G is the acceleration of gravity in m./sec.² The coeff. of absorption rate $K = 6.95 D^{1.80} \gamma_{1.36}^{1.80} H^{-0.3}$ kg./(sq. m. hr. mm. Hg), where D = diam. of the bubble, v = rate of flow of gas in cu. m./hr., and H = height of the bubbling layer in m. K increases as the bubbling depth diminishes and the bubble diam. increases. Near the surface of a rising bubble, the gas moves with the surrounding medium, and inside, in the opposite direction. The surface of the bubble is subjected to tension at the top and compression at the bottom. The eddying motion inside the bubble causes particles of the moving gas to rupture and pass through the boundary layer. With increasing velocity, the boundary becomes thinner and the interchange of the substances involved improves. Earl S. McColley

Speed of solution of copper in nitric acid. J. L. de Hauss (Lab. electronique appliquée, Paris). *Chim. anal.* 34, 185-8 (1952).—The speed was studied with 1, 2, 3, 4, and 5 N HNO₃; the action of more dil. acid is so slow that it has no interest. At these 5 concns. the nos. of g. of Cu dissolved per ml. were 0.008, 0.0020, 0.0038, 0.0147, and 0.1807 per hr. Immersion of Cu in 4 N or stronger HNO₃ for 5-10 min. renders the metal passive, and more dil. HNO₃ ' " 'o dissolve more Cu. All the results confirm the theory that CuO is the first product formed in dissolving the metal and that no H is liberated. The presence of K₂Cr₂O₇ or KMnO₄ increases the speed at which the metal dissolves in HNO₃. W. T. Hall

USATENKO, Yu.I., VITKINA, M.A.

Amperometric determination of bismuth with trilon B in low-
melting alloys. Zav.lab. 26 no.5:542-543 '60. (MIRA 13:7)

1. Dnepropertrovskiy khimiko-tekhnologicheskiy institut im.
F.E. Dzerzhinskogo.
                    (Bismuth--Analysis)

V. . . .

USSR/Analytical Chemistry - Analysis of Inorganic Substances, G-2

Abst Journal: Referat Zhur - Khimiya, No 1, 1957, 1219

Author: Usatenko, Yu. I., and Witkina, M. A.

Institution: Academy of Sciences USSR

Title: Determination of Calcium in Limestone by Coulombometric Titration Using an Indicator

Original
Periodical: Tr. komis. po analit. khimii AN SSSR, 1956, Vol 7, No 10, 155-161

Abstract: For the coulombometric determination of Cd in the presence of Cu(II) as an indicator /sic/, a 0.05-0.06 gm sample of limestone is wetted with water; after dissolving the sample by boiling in a small amount of HCl, 10 ml of 0.1 M NH_4Cl are added. The solution is diluted to 20 ml and heated until CO_2 evolution is completed. After cooling, an equal volume of alcohol is added to the solution together with 0.2-0.3 ml 0.1 M $FeCl_3$ (slightly acidified with HCl); after addition of one drop of methyl red the solution is neutralized with NH_4OH (1:1) until the color changes from pink to pale yellow when one to 2 drops

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USSR/Analytical Chemistry - Analysis of Inorganic Substances, G-2

Abst Journal: Referat Zhur - Khimiya, No 1, 1957, 1219

Abstract: excess NH_4OH are added. A rotating Pt electrode and a mercury-iodide half-cell with a small positive potential (0.017 v) are introduced in the solution and connected to the vessel by an agar-agar junction. The stirrer is turned on and the current is measured with a galvanometer with the following characteristics: $1^O - 0.2 \cdot 10^{-6}a$, $R = 649$ ohms. Dropwise addition of 0.01 M $CuCl_2$ is carried out until the needle of the galvanometer is deflected beyond the scale stop, after which titration is carried out slowly with 0.1 M $(NH_4)_2C_2O_4$. The portion of the curve around the end point is traced on a scale permitting readings of 0.01 ml to be taken. A blank is run to determine the indicator correction. The elements usually present in limestone do not interfere with the titration.

Card 2/2

AUTHORS: Usatenko, Yu. I., Vitkina, M. A.   SOV/156-58-3-24/52

TITLE: An Amperometric Titration Using Complexon-(III)-Solution (Ampero-
             metricheskoye titrovaniye pri pomoshchi rastvora kompleksona
             III)

PERIODICAL: Nauchnyye doklady vysshey shkoly, Khimiya i khimicheskaya
             tekhnologiya, 1958, Nr 3, pp. 502 - 504 (USSR)

ABSTRACT: The complexon-(III)-solution oxidizes on a rotating microelectrode
             in alkaline and acid medium. The peaks of the Volt-Ampere wave
             curve are dependent upon the concentration and the pH value
             of the solution. By using the complexon-(III)-solution it is
             possible to carry out amperometric titrations with many
             elements. Titrations of zinc in aqueous solutions and acetic
             acid solutions at a pH value of 3 - 4,5 and a potential of
             0,9 V were carried out. More accurate results in the titration
             of cobalt were obtained in weakly alkaline solutions at a
             potential of 0,5 - 0,6 V. The titration of bismuth is carried
             out at 0,9 V. The amperometric titration of iron permits the
             determination of iron in ores and agglomerates by means of
Card 1/2   complexon-(III)-solutions. In all cases the appearance of the

An Amperometric Titration Using Complexon-(III)-So-   SOV/156-58-3-24/52
lution

anodic current indicates the end of the titration. There are 3
figures and 4 references, 3 of which are Soviet.

ASSOCIATION: **Kafedra** analiticheskoy khimii Dnepropetrovskogo
khimiko-tekhnologicheskogo instituta im.F.E.Dzerzhinskogo
(Chair of Analytical Chemistry at the Dnepropetrovsk Chemical
and Technological Institute imeni F.E.Dzerzhinskiy)

SUBMITTED: January 15, 1958

Card 2/2

AUTHORS: Usatenko, Yu. I., Vitkina, M. A.   SOV/32-24-9-5/53

TITLE: The Amperometric Determination of Iron With Trilon B in Various
             Materials (Amperometricheskoye opredeleniye zheleza trilonom
             B v razlichnykh materialakh)

PERIODICAL: Zavodskaya Laboratoriya, 1958, Vol 24, Nr 9, pp 1058-1059
             (USSR)

ABSTRACT: According to literature data (Ref 1), trilon B is oxidized, at
             a pH = 8, at the Hg dropping electrode, producing an anodic
             diffusion wave. In the investigations under review, it was found
             that this oxidation occurs also at the rotating platinum micro-
             anode. In this process, most marked waves are formed in the
             voltage curves, the wave height being proportional to the
             concentration of trilon B. The pH of the solution has a strong
             influence upon the current strength. At a pH = 1, for instance,
             the wave height is four times that in neutral solutions. An
             oxidation of trilon B in the alkaline medium is also possible.
             Thus determinations are feasible both in acid and in alkaline
             media, and consequently a trilon solution can be used for
             anodic amperometric titrations of such metals as form stable
             complex compounds with trilon. In the paper under review, iron

Card 1/2

SOV/32-24-9-5/53

The Amperometric Determination of Iron With Trilon B in Various Materials

determinations were made by a direct titration with trilon B, without any previous separation of other components. The analytical procedure and a table listing the materials tested and the results obtained are given.
There are 1 table and 1 reference.

ASSOCIATION: Dnepropetrovskiy khimiko-tekhnologicheskiy institut im. F. E. Dzerzhinskogo (Dnepropetrovsk Chemo-Technological Institute imeni F. E. Dzerzhinskiy)

Card 2/2

VITKINA, M.A.

137-58-5-11200

AUTHORS: Usatenko, Yu. A., Vitkina, M. A.

TITLE: Determination of Lead by the Method of Amperometric Titration
           With an Indicator (Opredeleniye svintsa metodom amperometri-
           cheskogo titrovaniya s primeneniyem indikatora)

PERIODICAL: Tr. Nauchno-tekhn. o-va chernoy metallurgii. Ukr. resp.
             pravl., 1956, Vol 4, pp 44-48

ABSTRACT: A method was developed which permitted direct ampero-
             metric titration of Pb with an oxalate solution and with $CuCl_2$ as
             an indicator. Since the solubility product (SP) of PbC_2O_4
             (2.74×10^{-11}) is considerably lower than the SP of CuC_2O_4
             (2.87×10^{-8}), PbC_2O_4 will precipitate out first. Near the point of
             equivalence the indicator ions, Cu^{2+}, will become attached, and
             the diffusion current previously occasioned by them will cease.
             A rotary Pt microelectrode serves as the indicator electrode in
             the titration process, while the comparison electrode is a mer-
             cury iodide semi-element ($+0.017$ v), which makes it possible to
             obtain a Cu wave without the superimposition of an external e. m. f.
Card 1/2   The current is measured by a galvanometer. The titration is

137-58-5-11200

Determination of Lead by (cont.)

carried out in an acetic acid medium in the presence of NH_4Cl; a correction is made for the increased quantity of $CuCl_2$. The error is approximately 2%. See also RzhMet, 1958, Nr 1, abstract 2143.

N. G.

1. Lead--Determination   2. Titration--Applications

Card 2/2

VITKINA, M.A.

E-2

USSR / Analytical Chemistry.
Analysis of Inorganic Substances.

Abs Jour: Ref. Zhur - Khimiya No. 2, 1958, 4298

Author : Usatenko Yu. I., Vitkina M.A.

Title   : The Determination of Lead by the Method of
Amperometric Titration With Application of An
Indicator

Orig Pub: Zavodsk. laboratoria, 1957, 23, No. 4, 427-429

Abstract: To 10 ml. of the electrolyte solution for Pb
refining (containing Pb sulfamate) in a 100 ml.
volumetric flask, water is added to the mark and
2-5 ml. of the resulting solution (15-40 mg. Pb)
is taken for the analysis; to that is added 25 ml.
of water and from .1-1.0 ml. of a 0.1 M solution
of Na_2SiO_3 for coagulation of the material and it

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USSR / Analytical Chemistry.
Analysis of Inorganic Substances.   E-2

Abs Jour: Ref. Zhur - Khimiya No. 2, 1958, 4298

is heated for 5 min. at 70°C. The solution is
cooled with subsequent addition of 10 ml. of
0.1 M NH_4Cl solution, and neutralized with
0.1 N NaOh solution (plus 2-3 drops in excess)
and then CH_3COOH is added to a light pink color-
ation of the methyl red indicator. Into this
solution a rotating Pt-microelectrode is immersed,
also the switch from a mercury-iodide half-cell,
and the agitator is turned on and exactly 1ml. of
copper salt solution is added; whereby the arrow
of the galvanometer is sharply deflected and even
might go off scale. Titration is done with
$(NH_4)_2C_2O_4$ solution, first carefully and then
more rapidly. Near the equivalent point the
diffusion current caused by Cu^{2+} ions, disappears.
The titration curve is plotted, the equivalent

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USSR / Analytical Chemistry.
    Analysis of Inorganic Substances.   E-2

Abs Jour: Ref. Zhur - Khimiya, No. 2, 1958, 4298

        point is found and a correction for Cu is made.
        The method gives satisfactory results. Up to
        0.01% Sn, 0.05% Sb, 0.01% As, 0.01% Bi and 0.1%
        Zn do not interfere.

Card 3/3

USATENKO, Yu.I.; VITKINA, M.A.

Amperometric titration with oxalates. Ukr. khim. zhur. 23 no.6:
788-791   '57.   (MIRA 11:1)

1.Dnepropetrovskiy khimiko-tekhnologicheskiy institut im. F.E.
Dzerzhinskogo, Kafedra analiticheskoy khimii.
                  (Electrochemical analysis) (Oxalates)

USATENKO, Yu.I.; VITKINA, M.A.

Determining lead by the method of amperometric titration with an indicator. Zav. lab. 23 no.4:427-429 '57.   (MLRA 10:6)

1. Dnepropetrovskiy khimiko-tekhnologicheskiy institut.
          (Lead--Analysis)   (Titration)

2501 Amperometric determination of calcium in / / 4 /

soln. to 1 N, slightly acid with methyl red with 50% aq. NH_3 and add one or two drops in excess. Insert a rotating platinum electrode and a mercury iodide half-cell having a low positive potential, joined to the titration vessel by an agar bridge. Stir and add 0.01 M $CuCl_2$ soln.

VITKINA M-A.

USATENKO, Yu.I.; VITKINA, M.A.

Determination of calcium in limestone by amperometic titration
with the use of an indicater. Trudy Kom.anal.khim. 7:155-161
'56.   (MLRA 9:9)

1.Dneprepetrovskiy khimiko-tekhnologicheskiy institut.
(Calcium) (Titration)

Determination of calcium in limestone by amperometric titration in the presence of indicator. Yu. I. Usatenko and M. [...] Khim. [...] Tekh. [...] [Dnepropetrovsk] [...] Inst. Akad. [...] Nauk S.S.S.R. [...] Khim. [...] 7 [...] 55-61(1956). Pure [...] was placed in a 10-ml. [...] treated with [...] then dissolved in a small amt. of HCl by heating [...] 5 ml. of 0.1 M NH₄Cl [...] and [...] equal vol. CO₂ was re- [...] and was [...] an equal vol. of 0.2 M [...] KCl and [...] M [...] D₂ was added. The soln. was [...] tralized with NH₄OH in the presence of one drop of [...] red to the light yellow color and again 1-2 drops of NH₄OH was added. The titration was carried out with 0.1 M [...] in the presence of 0.01 M CuCl₂, [...] indicator. Equivalence points were read from the [...] curves. The limit of errors are ±0.78%.

N. Charmandarian

VITKINA, N. Kh.

Origin of the hummock-and-hollow relief in the Angara Valley.
Marzl. issl. no.1:112-115 '61.   (MIRA 16:1)

(Angara Valley—Landforms)

KUDRYAVTSEV, V.A.; KONDRAT'YEVA, K.A.; VITKINA, N.Kh.

Mapping the seasonal freezing and thawing of ground. Mərzl.issl.
no.2:18-32 '61.

(Frozen ground--Maps)

(MIRA 16:5)

VITKIND, L. M.

VASIL'YEV, G.D., inzhener; VITKIND, L.M., inzhener; MODEL', B.I.,
tekhnicheskiy redaktor

[Oilless binder "P" for core production] Sterzhnevoi bezmaslianyi
krepitel' "P". Moskva, Gos. nauchno-tekhn. izd-vo mashinostroit.
i sudostroit. lit-ry, 1954. 49 p.   (MLRA 7:8)

1. Moscow. Gosudarstvennyy Vsesoyuznyy institut avtomobil'noy
tekhnologii.
      (Founding)

GALKTIONOV, P.A.;   VITKIND, L.M.

Progressive technological processes for cleaning and protecting
metal products. Avt.i trakt.prom. no.4:28-32 Ap '56.   (MLRA 9:8)

1. Nauchno-issledovatel'skiy institut Traktorosel'khozmash;
2. Nauchno-issledovatel'skiy institut Avtoprom.
          (Machinery--Maintenance and repair)

USSR / Soil Science. Fertilizers. General Problems.   J

Abs Jour: Ref Zhur-Biol., No 2, 1959, 6087.

Author : Vitko, A. M.
Inst   : L'gov Experimental Selection Station.
Title   : Agrotechny and Economical Efficiency of Fertil-
          izers in Crop Rotation.

Orig Pub: Byul. nauchno tekhn. inform. L'govsk. opytno-
          selekts. st., 1958, vyp. 1, 5-8.

Abstract: Since the year 1937 an experiment has been carried
          out by the L'gov Experimental Station to clarify
          the influence of manure doses and mineral fertil-
          izers on plant crops in crop rotation. In an 8-
          field crop rotation before sugar beets the follow-
          ing, in kilograms per hectare, were successfully
          applied: N10 P15 K10, and under deep plowing N30
          P40 K40. 12.5 tons of manure per hectare was in-

Card 1/3

USSR / Soil Science.   Fertilizers.   General Problems.   J

Abs Jour: Ref Zhur-Biol., No 2, 1959, 6087.

Abstract: troduced into a clean fallow under winter wheat, and 20 kilograms of P per hectare were introduced at the time of sowing, while 20 kilograms of N and 10 kilograms of K per hectare were applied the previous spring. Mineral fertilizers were also distributed, placing them under winter rye. Under spring wheat phosphorus-potassium fertilizers were applied under plowing, while nitrogen fertilizers were introduced under presowing cultivation. Perennial grasses were sidedressed with phosphorus-potassium fertilizers after the cover crops were removed. To one hectare of plowland in one rotation the following were applied: 1.7 tons of manure, 14 kilograms of nitrogen, 22 kilograms of P_2O_5, and 17 kilo-

Card 2/3

29

USSR / Soil Science. Fertilizers. General Problems.   J

Abs Jour: Ref Zhur-Biol., No 2, 1959, 6087.

Abstract: grams of K_2O (an ordinary dose). The effect-
          iveness of an ordinary dose of fertilizer based
          on direct and delayed action on seed plants was
          determined by the average increase in the grain
          crop, - 3 centners per hectare or 16%, while a
          double dose yielded 4.7 centners or 25%. The
          increase of garden beet roots was comprised as
          follows: a 33% increase from an ordinary dose,
          and a 52% increase from a double dose. -- L. D.
          Stonov.

Card 3/3

COUNTRY   : USSR   M
CATEGORY   : Cultivated Plants. Commercial. Oleiferous.
                Sugar-Bearing.
ABS. JOUR.   : RZhBiol., No. 4, 1959, No. 15773

AUTHOR   : Mitko, A.V.
INST.   : Lvov Experimental Selection Station
TITLE   : Seeding Quotas and Methods of Thinning Single-
                Seed Sugar Beet.

ORIG. PUB.   : Byul. nauchno-tekhn. inform. L'vovsk. opytno-
                selekts. st., 1958, vyp., 1, 30-33

ABSTRACT   : In 1956 the Lvov experimental selection station
                made a study of the seeding quotas of single-seed
                beet. Both for square-nest and row sowing, the
                optimal seeding quota for single-seed beet is 20
                kg/h. In productivity the single-seed beet are
                only slightly inferior to the multi-seed sort.
                Most effective is bunching at 44.5 cm with 18 cm
                as length of cut. The conditions of the experiment
                and the agrotechnique employed are described.
                -- G.Yu. Hingman

Card: 1/1

VITKO, A.M.

Role of stubble and root residues of crops of the grain-sugar beet crop rotation in enriching the soil with organic matter and mineral plant nutrients. Pochvovedenie no.10:99-104 O '61.
(MIRA 14:9)

1. L'govskaya opytno-selektsionnaya stantsiya, Kurskaya oblast'.
(Crops and soils)

VITKO, K.R.

Seansonal development of the woods of pubescent oak (Quercus
pubescens) in Moldavia. Izv. AN Mold. SSR no.12:3-17 '62.

(MIRA 18:4)

VERESHCHAGIN, B.V., kand.sel'skokhoz.nauk.; NIKOLAYEVA, L.P., kand.biolog.-
nauk; VITKO, K.R. (Kishinev)

Dog-day cicada, a forest pest. Priroda 51 no.7:128 Jl '62.
                                                    (MIRA 15:9)
(Moldavia--Cicada)

VITKO, K.R.

Transpiration of plants in dry pubescent oak forests of Moldavia.
Bot. zhur. 47 no.10:1455-1463 O '62.   (MIRA 15:12)

1. Botanicheskiy sad AN Moldavskoy SSR, Kishinev.
            (Moldavia—Plants—Transpiration)
                (Moldavia—Oak)

VITKO, K.R.

Dynamics of water content in the leaves of some herbaceous plants
in the dry forests of pubescent oak. Izv. Mold. fil. AN SSSR
no.1:53-66 '61.   (MIRA 16:3)
            (Moldavia--Oak) (Moldavia--Forest ecology)
                (Plants--Water requirements)

VITKO, N.

Using "Neptune" radar equipment while navigating under icy conditions. Mor.flot 19 no.6:33-36 Je '59. (MIRA 12:9)

1. Tretiy shturman parokhoda "Nakhodka".
         (Radar in navigation)

KUPERSHTOK, K.I.; PERKAS, Kh.D.; VIT'KO, N.D.

Determination of fluorine in a nitric-hydrofluoric pickling
solution. Zav.lab. 28 no.4:416-417 '62.   (MIRA 15:5)

1. Nikopol'skiy Yuzhnotrubnyy metallurgicheskiy zavod.
                (Fluorine—Analysis)

VIT'KO, P.I.; ROYTMAN, V.I.; NUDEL'MAN, I.N.

The EMID-2M defectoscope is helping workers in pipe mills.
Metallurg 10 no.5:26-27 My '65.
(MIRA 18:6)

1. Nikopol'skiy yuzhnotrubnyy zavod.

L 18430-63

EWT(d)/EWP(q)/EWT(m)/BDS   AFFTC/ASD   JD

ACCESSION NR: AP3005540

S/0184/63/000/004/0035/0035

AUTHORS: Vit'ko, P. I.; Roytman, V. I.; Vornyy, A. V. (Engineers)

TITLE: An experiment on checking the hardness of pipes by a magnetic method

SOURCE: Khimicheskoye mashinostroyeniye, no. 4, 1963, 35-36

TOPIC TAGS: coercimeter, magnetic method, hardness, pipes, steels ShKh15, 10, 20, 12KhN3A, Kh5M, 12Kh5MA

ABSTRACT: This factory has applied a magnetic method for inspecting the hardness of pipes by means of a coercimeter. The method has been used on cold and hot rolled pipes of steel ShKh15. In the former, the magnitude of the coercive force (relative to the hardness) varies within broad limits; in the latter the differences in coercive force are much smaller. Minute variations in the structure of pipes cause large variations in coercive forces which can be measured with the Mikheyev coercimeter. The hardness of pipes made of soft steels 10, 20, 12KhN3A, Kh5M, 12Kh5MA and others was more difficult to determine and called for changes in the coercimeter. The augmented design is shown in Enclosure 1. It has been noted in plotting of hardness curves that the scatter of points obtained with a coercimeter is conditioned by the form and material composition of the electromagnet, its

Card 1/3

L 18430-63
ACCESSION NR: AP3005540

contact with the pipe, etc. The use of this method saves metal and time and makes it possible to inspect the entire length of a pipe. Orig. art. has: 2 figures.

ASSOCIATION: Nikopol'skiy yuzhnotrubny*y zavod (Nikopol' Southern Pipe Factory)

SUBMITTED: 00

SUB CODE: ML

DATE ACQ: 21Aug63

NO REF SOV: 002

ENCL: 01

OTHER: 000

Card   2/3

L 28404-66   EWT(d)/EWT(m)/EWP(c)/EWP(v)/T/EWP(t)/ETI/EWF(k)/EWF(l)/ETC(m)-0   IJP(c)

ACC NR: AP6010271   JD/HW

AUTHOR: Samsonov, Yu. I.; Teverovskiy, V. I.; Anikeyev, Ya. F.; Spil'nik, V. F.; Butenko, A. I.; Vit'ko, A. I.

SOURCE CODE: UR/0381/66/000/001/0024/0034

ORG: Ukrainian Scientific Research Tube Institute (Ukrainskiy nauchno-issledovatel'-skiy trubnyy institut); Nikopol' Southern Tube Plant (Nikopol'skiy yuzhnotrubnyy zavod)

TITLE: Quality control of thin-walled tubes

SOURCE: Defektoskopiya, no. 1, 1966, 24-34

TOPIC TAGS: ultrasonic flaw detector, flaw detection, metal tube, quality control/UDT-4 ultrasonic flaw detector, IDTs-3M ultrasonic flaw detector

ABSTRACT: The article presents the results of the research and development work on UDT-4 ultrasonic flaw finders at the Ukrainian Scientific Research Tube Institute and compares their performance with that of the IDTs-3M ultrasonic flaw finder. The UDT-4 pulsed ultrasonic flaw finder is designed for the quality control of thin-walled tubes through the excitation of normal waves in their walls. It consists of an electronic unit and a mechanical-acoustical part. The inspected tube is drawn through the device. If a flaw is present, a lamp glows on the panel of the electronic unit and at the same time the tube-drawing mechanism halts. The defective spot is pinpointed and subse-

Card 1/2

UDC: 620.179.16

L 28464-66

ACC NR: AP601C271

O

quently metallographically examined. The UDT-4 reliably reveals defects of the scale, film, scratch, crack and other types. Compared with the IDTs-3M the UDT-4 has a slower tube-drawing mechanism. On the other hand, the IDTs-3M is inferior in that it cannot be used to inspect bent or curved tubes and it involves vibration of the tube, which generates spurious signals. This comparison implies that a new flaw finder embodying the advantages of both devices can be developed. The UDT-4 in its present form may be used for high-speed flaw detection in shops fabricating a broad range of thin-walled precision tubes if the device is so modified as to use several ultrasonic pickups aligned along the tube axis. Thus, e.g. if 5-6 pickups with beam width of 10 mm each are used to inspect tubes rotating at the rate of 200 RPM, a productivity of approximately 600 m/hr or more than 4000 m per shift may be achieved. In mass production of tubes of a limited range of types, on the other hand, it is best to use ultrasonic flaw finders with a series of pickups mounted over the tube perimeter. Orig. art. has: 5 figures.

SUB CODE: 13, 11, 20/ SUBM DATE: 27Oct64/ ORIG REF: 001

Card 2/2

VITKO, S.; KNYAZEVA, V.

They will grow up to be champions. Za rul. 18 no.9:13-14 S'60.
(MIRA 13:10)
1. Pervyy sekretar' Krasnodonskogo rayonnogo komiteta Leninskogo
kommunisticheskogo soyuza molodezhi Ukrainy(for Vitko). 2. Spetsial'nyy
korrespondent zhurnala "Za rulem"(for Knyazeva).
(Krasnodon--Motorcycle racing)

VIT'KO, Yu.K., inzh.

Automation of power supply units with 100 kv.-a. ratings.
Izv.vys. ucheb. zav.; energ. 7 no.7:23-27 Jl '64

1. Ul'yanovskiy politekhnicheskiy institut. Predstavlena
kafedroy elektrosnabzheniya promyshlennykh predpriyatiy.

VITKOCZI, Jeno

Phonograph arms. Radiotechnika 12 no.10:340-341 O '62.

BEKESI, Gabor (Vac); VITKOCZI, Jeno

Letters to the editors. Radiotechnika 11 no.11:343 N '61.

S/058/62/000/010/071/093
A061/A101

24.7700

AUTHORS: Kasabov, I., Vitkov, A., Gerova, Ye.

TITLE: Constant emitter current measurement of carrier lifetime and drift mobility in silicon

PERIODICAL: Referativnyy zhurnal, Fizika, no. 10, 1962, 35, abstract 10E272 ("Dokl. Bolg. AN", 1961, v. 14, no. 6,563 - 565; summary in German)

TEXT: The possibility of measuring the carrier lifetime in Si by an improved constant emitter current method was verified. The lifetimes (τ) for n-type Si with ρ of the order of some ohms·cm ranged between 4.6 and 6.8 μsec. The values of τ, determined by the given method, coincided with good accuracy with those determined by the Galkin-Vavilov method (RZhFiz, 1958, no. 4, 8601).

L. Galkina

[Abstracter's note: Complete translation]

Card 1/1

VITKOV, A.

VITKOV, A.

How to improve battery mixers. Radio i televiziia 12 no.
11: 344 '63.

Data on the bobbins of the portable transistor superheterodyne
for medium and short waves. Ibid.; 350.

KASABOV, I.; VITKOV, A.; GEROVA, E.

Measuring the life period and the drifting motion of carrier of current load in to silicum method of direct transmitted current. Doklady BAN 14 no.6:563-565 '61.

1. Predstavleno akad. G. Nadzhakov

VITKOV, Al.

A portable transistor superheterodyne with medium and short
waves. Radio i televiziia 11 no.11:342-344 '62.

VITKOV, G.

"Method for Enameling." p. 22,
(LEKA PROMISHLENOST, Vol. 3, No. 3, 1954, Sofiya, Bulgaria)

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 4
No. 5, May 1955, Uncl.

ACC NR: AP6021780   (A)   SOURCE CODE: UR/0413/66/000/012/0045/0045

INVENTORS: Vitkov, G. D.; Kamentsev, V. V.; Seleznev, P. N.; Zaytsev, V. K.;
Morozov, P. P.; Yakovlev, V. A.; Tatishchev, P. A.

ORG: none

TITLE: An induction furnace for heating blanks. Class 18, No. 182756

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 12, 1966, 45

TOPIC TAGS: furnace, induction furnace, refractory alloy

ABSTRACT: This Author Certificate presents an induction furnace for heating blanks
of complex shapes, made of refractory alloys, in a nonoxidizing atmosphere. To save
the refractory alloys and to produce proper heating, the furnace is provided with a
hermetically closed casing which contains two induction heating elements. The two
heating chambers formed are interconnected by transmitting tunnels. A closed rec-
tangle conducts push rods for a self-dumping pan with blanks being heated.

SUB CODE: 13/ SUBM DATE: 11Mar63

Card 1/1   UDC: 621.365.5:621.785.1

VITKOV, Metodi, agr.; GRUEV, Tsanko, agr.; MIKHOV, Ivan, agr.

Watering and manuring the fodder corn, a guarantee of high yields.
Khidrotekh i melior 9 no.7:218-220 '64.

L 7755-66   E.T(d)/EWT(1)/T   IJP(c)

ACC NR: AP5025890   SOURCE CODE: UR/0057/65/035/010/1786/1790

AUTHOR: Vitkov, M.G.

ORG: none

TITLE: Pulse excitation of a magnetic field within a cylindrical shield

SOURCE: Zhurnal tekhnicheskoy fiziki, v. 35, no. 10, 1965, 1786-1790

TOPIC TAGS: pulsed magnetic field, cylindric shell structure, electric current, relaxation process, Laplace transform, mathematic method

ABSTRACT: The author calculates the magnetic field induced by a constant azimuthal current of sudden onset on the surface of a cylinder of radius a in the presence of a coaxial cylindrical shield of inner radius b and thickness d of material with given conductivity and permeability. The author (ZtTF, XXXV, vyp. 3, 30, 1965) has previously treated the case $a > b + d$; in the present paper he discusses the case $a < b$. The problem is treated with the aid of the Laplace transformation, and the field is assumed to be propagated instantaneously. At the initial instant it is the very high frequency components that are significant and the magnetic field within the inner cylinder is reduced from the value it would have in the absence of the shield by the factor $1 - (a/b)^2$. The subsequent development of the field in time is expressed as an infinite series. Approximate expressions are obtained in closed form for the magnetic field at times close to the initial instant when the current is switched on for the

Card   1/2   UDC: 538.3

L 7755-66

ACC NR: AP5025890   3

two limiting cases of a magnetically thin and a magnetically thick shield, and solu-
tions for a number of other cases are presented graphically. The author thanks V.M.
Balebanov for a discussion which stimulated the development of the investigation.
Orig. art. has: 20 formulas and 4 figures.

SUB CODE: EM/ SUBM DATE: 25Jan65/ ORIG REF: 002/ OTH REF: 000

Card   2/2

36942
S/142/61/004/006/003/017
E192/E382

24.9200

AUTHORS: Polivanov, K.M., Dyatlov, V.L. and Vitkov, M.G.

TITLE: Analysis of the remagnetization process taking into
             account the surface phenomena and dynamic properties
             of the material

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy,
             Radiotekhnika, v. 4, no. 6, 1961, 653 - 657

TEXT: In general, consideration of the surface phenomena
and the remagnetization process in nonlinear ferromagnetics is
a very complex problem. However, in the case of a medium
characterized by a rectangular hysteresis loop   .
the process can be easily analyzed by the method devised by
W. Wolman and H. Kaden (Ref. 1 - Zs. f. techn. Phys., 1932,
no. 7, 330). The results of analysis and experiment are in good
agreement in this case, provided that the remagnetization process
can be described by the static characteristic of the material.
It was found by V.K. Arkad'yev (Ref. 2 - Electromagnetic processes
in metals (Elektromagnitnyye protsessy v metallakh), ONGI, 1936)

Card 1/4

Analysis of the ....

S/142/61/004/006/003/017
E192/E382

that the formulae of Wolman and Kaden signified that the average value of the magnetic induction and total remagnetization of a sample depended only on the field impulse:

$$I = \int (H - H_c)\, dt$$

for any $H(t)$, provided $H > H_c$. In the case of a linear medium the dependence between B and H can be represented by:

$$B + b_1 \frac{dB}{dt} + b_2 \frac{d^2B}{dt^2} + \cdots = \mu_o \left(a_o H + a_1 \frac{dH}{dt} + \cdots \right) \tag{2}$$

from which it is easy to derive expressions for the complex permittivity of the medium. The situation becomes very complex in the case of a nonlinear medium, except for a rectangular static characteristic. The dynamic equation for this case is

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Analysis of the ....

S/142/61/004/006/003/017
E192/E382

very simple:

$$dB/dt = F(B)(H - H_c) \qquad (4) .$$

The field is expressed as:

$$H + H_e + H_{B.T}$$

where H_e is the external vield and

$H_{B.T}$ is the eddy-current field.

It is shown that for a plate of thickness 2a the external-field impulse necessary for full remagnetization of the plate is expressed by:

$$\bar{I}_e = \bar{I} + \sigma a^2 B_o \qquad (6)$$

where $\bar{I}$ is the current impulse in the material necessary for remagnetization; this is equal to the external-field impulse

Card 3/4

Analysis of the ....

S/142/61/004/006/003/017
E192/E382

in the absence of eddy currents (absence of surface effect).
Similarly, it is shown that for a cylindrical medium having a
radius a , the external field impulse is given by:

$$\bar{I}_e = \bar{I} + \frac{\sigma a^2}{2} B_o \qquad (7) \ .$$

By analyzing the above formulae it is concluded that the
dynamic characteristics of the ferromagnetic material in the
form of rings or tapes are insignificant in comparison with the
surface effect if $\sigma a^2 B_o \gg \bar{I}$. The above results are

in reasonable agreement with experiment. There are 2 figures.

ASSOCIATION: Kafedra teoreticheskikh osnov elektrotekhniki
Moskovskogo ordena Lenina energeticheskogo
instituta   (Department of Theoretical Principles
of Electrical Engineering of the Moscow Order of .
Lenin Power-engineering Institute)

SUBMITTED: May 9, 1961

Card 4/4

ALEKSEYEV, S.M.; BOL'SHOV, V.M.; VITKOV, M.G.; GUKIN, V.I.; IVANOV,
        V.M.; MALININ, R.M.; PILTAKYAN, A.M.; PLENKIN, Yu.N.;
        SOBOLEVSKIY, A.G.; BURLYAND, V.A., red.; BORUNOV, N.I.,
        tekhn. red.

[Handbook for beginning radio amateurs] Spravochnik nachi-
naiushchego radioliubitelia. Pod obshchei red. R.M.Malinina.
Izd.2., stereotipnoe. Moskva, Gosenergoizdat, 1963. 623 p.
(Massovaia radiobiblioteka, no.400)   (MIRA 16:5)
        (Radio--Handbooks, manuals, etc.)
    (Radio operators--Handbooks, manuals, etc.)

VITKOV, M. G.

Dissertation defended at the Institute of Automation and Telemechanics
for the academic degree of Candidate of Technical Sciences:

"Problem of the Effect of Electrical Properties of the Ferromagnetics on
Processes of Impulse Magnetic Reversal."

Vestnik Akad Nauk, No. 4, 1963, pp. 119-145