ACC NR: AP6013368   SOURCE CODE: UR/0370/66/000/002/0144/0148

AUTHOR: Krylov, B. S. (Leningrad)

ORG: none

TITLE: Solubility of hydrogen in titanium

SOURCE: AN SSSR. Izvestiya. Metally, no. 2, 1966, 144-148

TOPIC TAGS: hydrogen, titanium, solubility

ABSTRACT: In order to determine the maximum solubility of hydrogen in titanium,
use was made of two methods based on phenomena associated with the changing electri-
cal resistance and impact resistance of the metal as the hydride phase of titanium
separates from the metal or dissolves in it. A special assembly was constructed for
measuring the solubility by the electrical resistance technique. Both methods were
shown to be suitable in principle for the determination of maximum hydrogen solubil-
ity in titanium. In the case of titanium alloys, only the impact resistance method
proved to be suitable. The maximum hydrogen solubility in the crystal lattice of
unalloyed titanium was determined in the 20-300°C range. At these temperatures,
(taking literature data into account), the hydrogen concentration range within which
the limiting hydrogen solubility for a series of alloys is located was determined.
It was found that the solubility changes with the composition of the alloy and the

Card 1/2   UDC: 669.295

L 38972-66

ACC NR: AP6013368

temperature; as the latter rises, the solubility drops appreciably. Orig. art. has:
5 figures and 1 table.

SUB CODE: 11/ SUBM DATE: 10Sep64/ ORIG REF: 002/ OTH REF: 005

Card 2/2

LOBANOV, Ye.M.; SOLODOVNIKOV, A.C.; KRYLOV, B.Ye.; NULAL'MAN, B.I.; ROZOV, M.N.

Use of radioisotopes in testing the lining of rotary cementation furnaces. Atom. energ. 19 no.2:204-205 Ag '65.   (MIRA 18:9)

KRYLOV, D.

Telegraph, Wireless

Semi-automatic key, Radio No. 2, 1953.

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

KRYLOV, D.G.

Characteristics of the distribution of birds of prey in the Sarydzhaz
basin of the central Tien Shan. Ornitologiia no.7:203-208 '65.
(MIRA 18:10)

FILATOV, I.G. (Moskva); KRYLOV, L.G.; USHAKOV, M.A.; BRAVERMAN, E.M. (Moskva)

Criticism and bibliography. Fiz. v shkole 23 no.4:95-101
Jl-Ag ''63.   (MIRA 17:1)

1. Moskovskiy gosudarstvennyy pedagogicheskiy institut imeni
V.I. Lenina (for Ushakov).

SHILOVA, S.A.; CHABOVSKIY, V.I.; MOROZOV, Yu.V.; SIMKIN, G.N.;
VASIL'YEV, B.D.; KRYLOV, D.G.; GOLOVLEV, Ye.L.

Epizootiological importance of birds in foci of tick-borne
encephalitis in the Central Urals. Ornitologiia no.6:126-
139 '63.   (MIRA 17:6)

SHILOVA, S.A.; KRYLOV, D.G.

Effect of the clearing of forests on the role of birds as carriers of
ticks in foci of tick-borne encephalitis [with summary in English].
Biul. MOIP. Otd. biol. 62 no.6:25-29 N-D '57.   (MIRA 11:1)
    (Ticks as carriers of disease)   (Birds as carriers of disease)

ACC NR: AP7001075 (A,N) SOURCE CODE: UR/0439/66/045/001/0137/0139

AUTHOR: Krylov, D. G.; Shvarts, Ye. A.

ORG: Moscow State University (Moskovskiy gosudarstvennyy universitet);
Frunze Antiplague Station (Frunzenskaya protivochumnaya stantsiya)

TITLE: Certain peculiarities of the distribution of fleas in the
Issyk-Kul region and their relation to the distribution of rodents and
other mammals

SOURCE: Zoologicheskiy zhurnal, v. 45, no. 1, 1966, 137-139

TOPIC TAGS: geography, zoogeography, mammal, mammalian ANIMAL parasite, flea,
animal distribution BIOLOGIC ECOLOGY, DISEASE CONTROL, RODENT,
ANIMAL DISEASE, GEOGRAPHIC SURVEY

ABSTRACT: Mammals and their fleas found in an area near Lake Issyk-Kul
on the Tien Shan border were studied intensively for several years in
connection with an antiplague effort. The map in Fig. 1 shows the dis-
tribution of some of these animals and their fleas. More than 80,000
mammals and 138,000 fleas were examined. Mammal-flea associations
varied with species and with ecological zonation. Three flea species
were exclusively high-altitude species.

Card 1/3.   UDC: 595.775-599.32 + 599.325:591.9
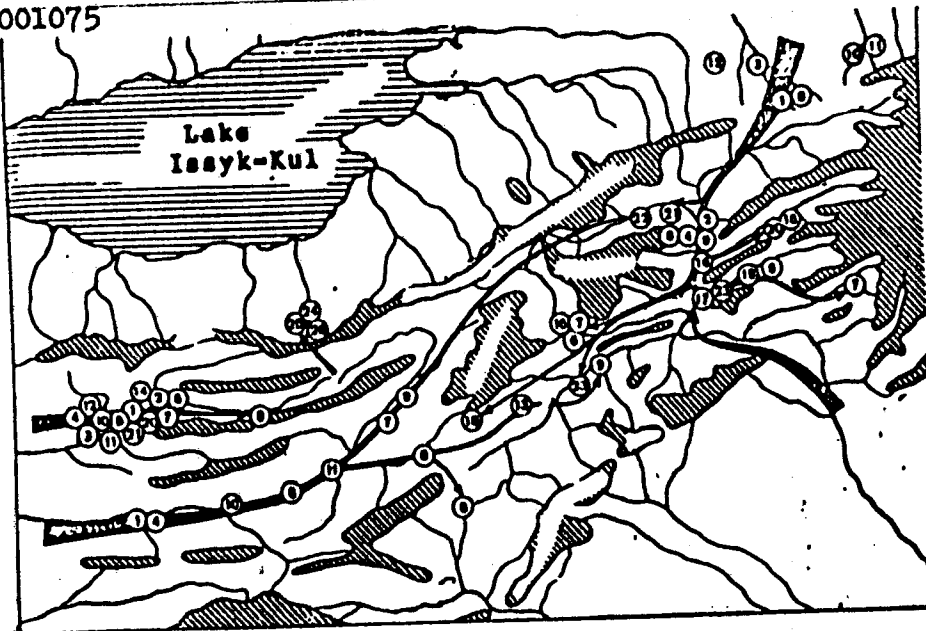
ACC NR: AP7001075

Fig. 1.   Distribution pattern of some mammals and fleas along the Issyk-Kul divide

Card 2/3

ACC NR: AP7001075

1 - Tien Shan forest mouse; 2 - Afghan vole (*Ellobius fus-cocapillus*); 3 - field mouse; 4 - wild boar; 5 - roe deer; 6 - Tien Shan birch mouse; 7 - Asiatic field mouse; 8 - Siberian polecat; 9 - badger; 10 - *P. irritans*; 11 - *C. lebedewi*; 12 - *A. rossica*; 13 - *P. naryni*; 14 - *R. Semenovi*; 15 - *H. glacialis*; 16 - *A. sibirica*; 17 - *L. bidentata*; 18 - *P. alatau*; 19 - *P. tiflovi*; 20 - *A. dumalis*; 21 - *S. suknevi*; 22 - *P. elata glabra*; 23 - *P. elata. elata P. elata pilosa, P. elata humida*; 24 - *C. penicilliger syrt*; 25 - *N. meridiana*; 26 - *P. ioffi*. Distribution routes are shown by arrows. Orig. art. has: 1 figure.   [LP]

[WA-50; CBE NO. 14]

SUB CODE: 06/ SUBM DATE: none/ ORIG REF: 001

Card 3/3

ZHABOTINSKIY, Yu.M., KRYLOV, D.M. (Leningrad)

Origin of medullary and meningeal lesions in tuberculous spondylitis [with summary in English]. Arkh.pat. 20 no.7:51-60 '58 (MIRA 11:9)

1. Iz laboratorii normal'noy i patologicheskoy morfologii nervnoy sistemy (zav. - prof. Yu.M. Zhabotinskiy) otdela patologicheskoy anatomii (zav. - akad. N.N. Anichkov) Instituta eksperimental'noy meditsiny AMN SSSR.
         (TUBERCULOSIS, SPINAL, pathology,
              spinal cord & meninges (Rus))

KERBIKOV, O.V. (Moscow); KRYLOV, D.N. (Moscow).

Experiment in the study of the ultra-paradoxal phase in the clinical aspect of psychogenic reactions. Zhur.vys.nerv.delat. 3 no.3:369-380 My-Je '53.

(MLRA 6:9)

(Nervous system--Diseases)

KRYLOV, D.N.

Study on impaired activity of the higher segments of the central
nervous system during the early periods of closed bain injuries.
Trudy Inst.vys. nerv. deiat. Ser.patofiziol. 5:232-249 '58
(MIRA 11:12)

(BRAIN--WOUNDS AND INJURIES)
(REFLEXES)

KRYLOV, D.N.

[Aids for fruit growers in Daghestan] V pomoshch' sadovodam Dagestana;
kratkaia agrotekhnika vozdelyvaniia plodovykh kul'tur. Makhachkala,
Dagestanskoe knizhnoe izd-vo, 1957. 205 p.   (MIRA 14:10)
                    (Daghestan—Fruit culture)

USSR/Cultivated Plants - Fruits. Berries.   M-6

Abs Jour : Ref Zhur - Biol., No 20, 1958, 91831

Author   : Krylov, D.N.

Inst   : Dagestan Scientific Research Institute of Agriculture

Title   : Peach, Plum and Apricot Stocks in Dagestan.

Orig Pub : Byul. Nauchn. Tekhn. inform. Dagestansk. n.-i. in-ta.
             s. kh. 1957, No 1, 12-14.

Abstract   : According to the data of studies made in 1937-1941 the best
              peach stocks are peach and almond. Severe chlorosis was
              noticed on the plants grafted on the apricot and plum.
              The best stock for the plum (Prunus domestica) is Prunus
              divaricata. The plum united poorly with the apricot.
              A number of apricot varieties united poorly with the plum
              Prunus divaricata.

Card 1/1

USSR/Cultivated Plants - Fruits. Berries.   M

Abs Jour : Ref Zhur Biol., No 12, 1958, 53790

Author   : Krylov, D.N.
Inst   : ~.
Title   : A New Method of Binding the Eyes in Grafting

Orig Pub : Sad i ogorod, 1957, No 7, 49-50

Abstract   : In the ordinary method of binding, the ability of apple
              tree eyes to root, in Dagestan under strong wind condi-
              tions, was 40%. With a tight lower binding the possi-
              bility of the middle part of the cyme to come loose was
              eliminated and the ability to take reached 80-90%.

Card 1/1

ZATULOVSKIY, S.S., inzh.; NOSOVA, Ye.M., inzh.; KRYLOV, E.S., inzh.

Production of castings of cerim-cast iron with spheroidal
graphite. Mashinostroenie no.6:37-39 N-D '62.   (MIRA 16:2)

1. Institut liteynogo proizvodstva AN UkrSSR (for Zatulovskiy).
2. Kiyevskiy mashinostroitel'nyy zavod "Bol'shevik" (for
Nosova, Krylov).
                    (Cast iron)   (Founding)

ZATULOVSKIY, S.S., inzh.; KRYLOV, E.S., inzh.

Manufacturing spiked disks of the rotary hoes of a cultivator
from high-strength cast iron. Trakt. i sel'khozmash. 33 no.9:
41-42 S '63.   (MIRA 16:10)

1. Institut liteynogo proizvodstva AN UkrSSR (for Zatulovskiy).
2. Kiyevskiy mashinostroitel'nyy zavod "Bol' shevik" (for Krylov).
            (Cultivators)

GLADCHENKO, A.N., inzh.; KRYLOV, S.S., inzh.; VECHERYA, B.C., inzh.

Introducing sandblast mold making. Mashinostroenie no.2:
47-48 Mr-Ap '65.   (MIRA 18:6)

KRYLOV, F.

We are mechanizing production. Prof.-tekh. obr. 18 no.8:12
Ag '61.   ,   (MIRA 14:9)

1. Direktor remeslennogo uchilishcha No.17, g. Novosibirsk.
                (Conveying machinery)

PISKAREV, A., kand.tekhn.nauk; KRYLOV, G., kand. med. nauk.

Characteristics of histological changes in fish in connection with
freezing [with summary in English]. Khol. tekh. 35 no.4:48-52 Jl-Ag
'58.   (MIRA 11:10)

1.Vsesoyuznyy nauchno-issledovatel'skiy institut kholodil'noy
promyshlennosti.
                        (Fish, Frozen)

KRYLOV, G. (Penza)

Experts of precise time; a sketch. Sov. profsoiuzy 19 no.22:
26-27 D '63.   (MIRA 17:1)

KRYLOV, G.A., otvetstvennyy za vypusk; ZUBRILINA, Z.P., tekhn.red.

[More corn, more fodder; papers read at a conference of corn growers
in the German Democratic Republic, held at Leipzig-Markkleeberg,
February 15-16, 1957. Translated from the German] Bol'she kukuruzy -
bol'she kormov; materialy soveshchaniia roabotnikov nauki i praktiki
po vyrashchivaniiu kukuruzy v Germanskoi Demokraticheskoi Respublike,
soatoiavshegoia v Leiptsige-Markkleberge 15-16 fevralia 1957 goda.
Perevod s nemetskogo iazyka stenogrmmy dokladov i vystuplenii.
Moskva, Gos.izd-vo sel'khoz.lit-ry, 1957. 131 p.   (MIRA 11:3)
       (Corn (Maize))

KRYLOV, G.A.

New books put out by the Agricultural Publishing House on
cultivation practices and crop culture. Zemledelie 5 no.9:94-96
S '57.   (MLRA 10:9)

1.Glavnyy redaktor Sel'khozgisa.
            (Bibliography--Agriculture)

KRYLOV, G.A.

In the Farm Mechanization Agency of the All-Union Association
of the Council of Ministers of the U. S. S. R. Mekh. i elok,
sots. sel'khoz. 19 no,6:54 '61.   (MIRA 14:12)
                    (Farm mechanization)

TOMME, M.F., prof., doktor sel'khoz. nauk, red.; KRYLOV, G.A., red.;
YEMEL'YANOV, F.V., red.; KARTASHEVA, N.M., red.; ANTONOVA,
N.M., tekhn. red.

[Forage quality of corn]Kormovoe dostoinstvo kukuruzy. Pod
red. M.F.Tomme. Moskva, Izd-vo M-va sel'.khoz.SSSR, 1959.
413 p.   (MIRA 16:4)

1. Moscow. Vsesoyuznyy nauchno-issledovatel'skiy institut
zhivotnovodstva. 2. Chlen-korrespondent Vsesoyuznoy sel'sko-
khozyaystvennoy akademii im. V.I.Lenina i Vsesoyuznyy nauchno-
issledovatel'skiy institut zhivotnovodstva (for Tomme).
                    (Corn as feed)

KRYLOV, G.A.

All-Union Conference on Problems of Agricultural Machinery.
Zemledelie 24 no.8:91-93 Ag '62.   (MIRA 15:9)

1. Nachal'nik Byuro tekhnicheskoy informatsii i reklamy
Vsesoyuznogo ob"yedineniya Soveta Ministrov SSSR po prodazhe
sel'skokhozyaystvennoy tekhniki, zapasnykh chastey, mineral'nykh
udobreniy i drugikh material'no-tekhnicheskikh sredstv,
organizatsii remonta i ispol'zovaniya mashin v kolkhozakh i
sovkhozakh.
          (Agricultural machinery—Congresses)

KRYLOV, G.G.

Adopting a collective flotation flow sheet at the Leninogorsk
Ore Dressing Plant. Obog. rud. 8 no.2:35-36 '63. (MIRA 17:2)

KRYLOV, G.G.

Improved flow sheet for the dressing of complex metal ores
at the Leninogorsk ore dressing plant. TSvet. met. 38 no.8:
1-7 Ag '65.   (MIRA 18:9)

KRYLOV, G. M. (pos. Passudovo Moskovskoy oblasti)

Simple low-frequency amplifier. Radio no.1:53 Ja '61. (MIRA 14:9)
(Amplifiers (Electronics))

KRYLOV, G.M.

Improvement of a simple low-frequency amplifier.   Radio no.4:52
Ap '62.   (MIRA 15:4)

        (Amplifiers, Electron-tube)

KRYLOV, G.M.

An aperiodic nonlinear amplifier with a stable passband.
Radiotekhnika 17 no.9:35-39 S '62.   (MIRA 15:9)

1. Deystvitel'nyy chlen Nauchno-tekhnicheskogo obshchestva
radiotekhniki i elektrosvyazi imeni Popova.
                    (Amplifiers (Electronics))

ACCESSION NR: AT4040779   S/2657/64/000/011/0111/0120

AUTHOR: Kry*lov, G. M.

TITLE: Characteristics of logarithmic amplifiers using transistors

SOURCE: Poluprovodnikovy*ye pribory* i ikh primeneniye; sbornik statey, no. 11, 1964, 111-120

TOPIC TAGS: amplifier, logarithmic amplifier, transistor, semiconductor device, transistor amplifier

ABSTRACT: The factors influencing the feasibility of employing logarithmic amplifiers in radioelectronic equipment are considered, along with the particular characteristics of a transistorized logarithmizing state with a nonlinear element connected to the collector load circuit. The inclusion of nonlinear resistances in the load circuit of the amplifier element is shown to be the simplest method of designing amplifiers with logarithmic amplitude response. The advantage of amplifiers with nonlinear load is demonstrated to be that, in terms of their final result, they are equivalent to a system with automatic

Cord 1/2

ACCESSION NR: AT4040779

gain control with a high speed of operation determined solely by the inertial properties
of the tubes and diodes. The author demonstrates the advisability of designing the
logarithmic stage so as to consist of the amplifier stage proper, the nonlinear element
and an emitter follower (repeater), to the output of which there is connected the input
of the next logarithmic stage, designed according to the same arrangement. The author
proposes a rational method of designing a 4-stage transistorized amplifier: the amplifier
stages are connected in a common-base circuit with matching elements (emitter followers)
connected between them. This device is described in detail and the fundamental principles
underlying its operation are explained. It is demonstrated that without any special mea-
sures a dynamic band on the order of 40 db can be achieved in a transistor amplifier, as
opposed to 15-20 db in the tube type. In general, the transistorized logarithmic amplifier
possesses greater stability in its frequency than the tube-type amplifier. Orig. art. has:
5 figures and 3 formulas.

ASSOCIATION: none

SUBMITTED: 00   ENCL: 00

SUB CODE: EC   NO REF SOV: 000   OTHER: 000

Card 2/2

ACCESSION NR: AP4038602   S/0108/64/019/005/0049/0053

AUTHOR: Kry*lov, G. M. (Active member)

TITLE: Designing multistage RC-amplifiers

SOURCE: Radiotekhnika, v. 19, no. 5, 1964, 49-53

TOPIC TAGS: amplifier, electron tube amplifier, aperiodic amplifier, broadband amplifier, multistage amplifier, amplifier design

ABSTRACT: In designing broadband aperiodic electron-tube amplifiers intended for handling short pulses, the problem of the highest attainable gain and the associated problem of the optimum number of stages become important. Curves and tables are offered to facilitate the design of a multistage aperiodic amplifier with specified parameters. The gain of a multistage amplifier is given by:

$K_o = [A/f]^n [\sqrt{2^{1/n} - 1}]$, where the coefficient $A = S/2\pi C_a$ characterizes the broadest band possible, f is the top frequency of the passband, n is the number of stages.

Card 1/2

ACCESSION NR: AP4038602

Any frequency compensation scheme introduced into the amplifier tends to increase its maximum gain and optimum number of stages. Orig. art. has: 4 figures, 5 formulas, and 4 tables.

ASSOCIATION: Nauchno-tekhnicheskoye obshchestvo radiotekhniki i elektrosvyazi (Scientific and Technical Society of Radio Engineering and Electrocommunication)

SUBMITTED: 12Jul63   /   DATE ACQ: 09Jun64   ENCL: 00

SUB CODE: . EC .   /   NO REF SOV: 002   OTHER: 001

Card 2/2

KRYLOV, G.M.; KANTSEPOL'SKIY, I.S.

Reactions of tricalcium aluminate and tetracalcium alunino ferrite
with naturally fired clay in autoclave processing. Uzb. khim. zhur.
no.3:37-42 '58.   (MIRA 11:9)

1.Institut khimii AN UzSSR.
    (Calcium aluminates) (Clay) (Cement--Testing)

KRYLOV, G.M.; PRIYEV, Ya.M.

Spectrometric study of xonotlite in infrared light. Dokl.AN
UzSSR no.1:25-27 '59.   (MIRA 12:4)

1. Institut khimii AN UzSSR. Predstavleno akademikom AN UzSSR
S.Yu.Yunusovym.
              (Xonotlite--Spectra)

KRYLOV, G.M.; TASHPULATOV, Yu.

Roentgenographic investigation of Angren Valley gliozh. Uzb.
khim.zhur. no.1:87-90   '59.   (MIRA 12:6)

1. Institut khimii AN UzSSR.
            (Angren Valley—Clay)

KRYLOV, O.M.

Behavior of calcium hydrosulfoaluminate during heating. Dokl. AN.
Uz.SSR no.10:36-38 '59   (MIRA 13:3)

1. Institut khimii AN UzSSR. Predstavleno akademikom AN UzSSR
S. Yu. Yunusovym.
       (Calcium aluminate sulfates)

KRYLOV, G.M.; SIROTENKO, G.F.

Identification of dicalcium silicate alpha-hydrate in
hydrotheraml cement products by infrared spectroscopy. Uzb.
khim. zhur. no. 2:13-18 '60.   (MIRA 14:1)

1. Institut khimii AN UzSSR.
                    (Calcium silicate—Spectra)

KRYLOV, G.M.

Halloysite in the burnt rocks of the Angren brown coal deposit.
Dokl.AN SSSR 134 no.2:422-424 S '60.   (MIRA 13:9)

1. Kh. aicheskiy institut Akademii nauk UzSSR. Predstavleno akad.
N.M.Strakhovym.
          (Angren region--Halloysite)

KRYLOV, O.M.; PARPIYEV, N.A.

X-ray study of the products from the interaction of clinker mine-
rals and Portland cement with natural burnt clay in an autoclave.
Uzv. khim. zhur. no.3:3-11 '60.   (MIRA 13:10)

1. Institut khimii AN UzSSR.
        (Portland cement)   (Clay)

KRYLOV, G.M.; NIKONOVICH, O.V.

Electron microscope study of the hydrothermal products obtained
by the hydration of clinker minerals. Uzb. khim. zhur. no.4:41-48
'60.   (MIRA 13:9)

1. Institut khimii AN UzSSR i Institut khimii polimerov AN UzSSR.
                              (Clinker)

KRYLOV, G. M.

Cand Chem Sci - (diss) "Study of gliyezhi, their reactions with clinker minerals and with portland-cement under hydrothermal conditions." Tashkent, 1961. 17 pp; (Academy of Sciences Ukrainian SSR, Joint Academic Council for Chemistry of the Division of Geology-Chemical Sciences); 170 copies; price not given; list of author's works at end of text (11 entries); (KL, 6-61 sup, 198)

SUROVKIN, V.M.; KRYLOV, G.M.

Interaction of lime with naturally burnt clay ("gliezh")
during heating. Uzb.khim.zhur. 6 no.2:68-72 '62. (MIRA 15:7)

1. Sredneaziatskiy nauchno-issledovatel'skiy institut geologii
i mineral'nogo syr'ya i Institut khimii AN UzSSR.
                    (Lime)   (Clay)

KRYLOV, G.M.; BARILOVICH, S.I.; YASEVICH, A.I.

Resistance to heat of gliozh concrete. Uzb.khim.zhur. 8 no.1:9-13 '64.

(MIRA 17:4)

1. Institut khimii AN UzSSR.

ALIYEV, Ya.Yu.; GREBENSHCHIKOVA, N.P.; KRYLOV, G.M.; ANAN'YEV, K.V.

Phase composition of aluminosilicate and its components. Uzb.
khim.zhur. 8 no.2:5-11 '64.   (MIRA 17:5)

1. Institut khimii AN UzSSR.

KRYLOV, G.M.

Calculation of a tuned amplifying stage. Radiotekhnika 20
no.8:39-43 Ag '65.   (MIRA 18:8)

1. Deystvitel'nyy chlen Nauchno-tekhnicheskogo obshchestva
radiotekhniki i elektrosvyazi imeni A.S. Popova.

ALIYEV, Ya.Yu. [deceased]; GREBENSHCHIKOVA, N.P.; KRYLOV, G.M.; IBRAGI-
MOV, Yu.I.; KHAMIDOV, Yu.A.: ANAN'YEVA, K.V.

Conversion of natural gas on a nickel catalyst in the presence
of silica. Uzb. khim. zhur. 9 no. 4:69-74 '65. (MIRA 18:12)

1. Institut khimii AN UzSSR. Submitted July 24, 1964.

YELIZAROV, B.V.; KRYLOV, O.N.; MAKAROV, O.I.

Asymptotic methods for the calculation of transients in low-frequency
filters. Radiotekhnika 14 no.2:63-69 F '59.   (MIRA 12:1)
              (Radio filters)

65908
S/109/60/005/04/023/028
E140/E435

9,1000

AUTHORS: Krylov, G.N. and Makarov, G.N.

TITLE: Attenuation Functions of the Electromagnetic Fields
             of a Vertical Dipole and a Vertical Antenna

PERIODICAL: Radiotekhnika i elektronika, 1960, Vol 5, Nr 4,
             pp 684-688 (USSR)

ABSTRACT: Approximate expressions are obtained for calculating
             the electromagnetic field components of a vertical
             dipole located at an arbitrary point in space and a
             vertical antenna with radiation directed along the
             surface of the earth. The results of numerical
             calculations at a frequency of 1 Mcs for earth
             parameters $\epsilon = 9$, $\sigma = 5 \times 10^{-3}$ mho/m are presented
             graphically. There are 4 figures and 4 references,
             1 of which is Soviet, 2 English and 1 English in Russian
             translation.

ASSOCIATION: Fizicheskiy fakul'tet Leningradskogo gosudarstvennogo
             universiteta im. A.A.Zhdanova (Physics Department,
             Leningrad State University imeni A.A.Zhdanov)
SUBMITTED: May 18, 1959
Card 1/1

KRYLOV, G.N.; MAKAROV, G.I.

Structure of the electromagnetic field of a vertical electric dipole and a vertical antenna in space over flat earth. Vest. LGU 15 no.16: 42-46 '60.   (MIRA 13:8)
     (Electromagnetic waves)   (Antennas (Electronics))

KRYLOV, G. N. Cand Phys-Math Sci -- "Calculation of the structure of the electro-magnetic field of a vertical electric dipole and vertical antenna in space above flat ground with finite conductivity." Len, 1961 (Min of Education RSFSR. Len State Ped Inst im A. I. Gertsen. Chair of Theoretical Physics and Astronomy).

(KL, 4-61, 183)

-20-

S/109/61/006/005/007/027
D201/D303

9,9000

AUTHOR: Krylov, G.N.

TITLE: Structure of the electromagnetic field of directional
            antennae over a plane-earth with finite conductivity

PERIODICAL: Radiotekhnika i elektronika, v. 6, no. 5, 1961,
            747 - 753

TEXT: At present, antennae radiating along the earth's surface are
widely in use. This feature is especially important in the medium
and long wave bands when it is required to secure an optimum magni-
tude of the received signal over large distances by means of a
ground wave, without any reflections from the ionosphere. One of
the main causes of distortion of the electromagnetic field of a
ground wave is the finite value of the earth's conductivity. In the
present article, the author discusses first the methods of deter-
mining the components of the electromagnetic field of an electric

Card 1/12

Structure of the ...

S/109/61/006/005/007/027
D201/D303

dipole and of an antenna with a sinusoidal current distribution under the condition that there exist boundary conditions at the earth's surface which have the properties of a full impedance. In this case the Hertzian vector must satisfy the boundary conditions at the earth's surface given by

$$\frac{\partial \bar{n}_s}{\partial s} = -ik\delta\pi_s . \tag{1}$$

Its evaluation can be approximated by introducing the constant S. The problem of values assigned to S has already been discussed by A.D. Petrovskiy, Ye.L. Feynberg (Ref. 1: 'O priblizhennom granichnom uslovii v teorii rasprostraneniya radiovoln vdol' Zemli, Radiotekhnika i elektronika, 1960, 5, 3, 385) and by J.R. Wait (Ref. 2: Transmission and reflection of electromagnetic waves in the presence of stratified media, J. Res. Nat. Bur. Standards, 1958, 61, 3, 205) and it is assumed to be known. Next a strict solution for the Hertzian vector is obtained together with the expressions for the components of the electromagnetic field of the dipole and of the

Card 2/12

Structure of the ...

$$\text{S/10?/6?/0}$$
$$\text{D201/D303}$$

antenna in space. The solution for the Hertzian vector is obtained assuming that it consists of the sum of S fields, both "direct" and "reflected" from the earth's surface.

$$\pi_z^0 = \int_{-\infty}^{\infty} H_0(\lambda\rho) e^{-n|h-z'|} \frac{\lambda d\lambda}{n}; \quad \pi_z' = \int_{-\infty}^{\infty} H_0(\lambda\rho) e^{-nz} R(\lambda) \lambda d\lambda; \quad \pi_z = \pi_z^0 + \pi_z'; \tag{2}$$

$$n = \sqrt{\lambda^2 - k^2}; \quad \text{Re} \, n > 0; \quad z = z' + h,$$

Where y = distance along the earth's surface between the dipole and receiver; h - the height of the dipole above the earth's surface; z' - observation point above the earth's surface; k - the wave number in air. In order to determine the unknown function $R(\lambda)$ it is necessary to apply boundary condition

$$n [1 + n R(\lambda)] = -ik\delta [1 - n R(\lambda)], \quad R(\lambda) = \frac{n + ik\delta}{n(n - ik\delta)},$$

from which the strict solution of the boundary problem is obtained

Card 3/12

Structure of the ...

$$\pi_s = \frac{e^{ikR_1}}{R_1} - \frac{e^{ikR}}{R} + 2I; \quad I = \frac{1}{2} \int_{-\infty}^{\infty} \frac{H_0(\lambda\rho) e^{-ns}}{n - ik\delta} \lambda \, d\lambda, \tag{3}$$

where

$$R = \sqrt{\rho^2 + z^2}; \quad R_1 = \sqrt{\rho^2 + (z - h)^2}.$$

The components of the electromagnetic field of the dipole are given by

$$E_s = k^2(1 + D_s^2)\pi_s; \quad E_\rho = k^2 D_{s\rho}^2 \pi_s; \quad H_\bullet = \frac{ik^2}{\omega\mu} D_\rho \pi_s, \tag{4}$$

where

$$D_s = \frac{d}{d(kz')}; \quad D_\rho = \frac{d}{d(k\rho)}.$$

The vertical component of the electric and magnetic fields respectively E_z^{fl} are given by

Card 4/12

Structure of the ...

$$k(1 + D_2^2) \int_{h_1}^{h_2} \sin \varphi \, \frac{e^{ikR_1}}{R_1} dh = - \left[\cos \varphi - \sin \varphi \frac{d}{kdh} \right] \frac{e^{ikR_1}}{R_1} \Big|_{h_1}^{h_2}. \qquad (8)$$

$$k(1 + D_2^2) \int_{h_1}^{h_2} \sin \varphi \, \frac{e^{ikR}}{R} dh = - \left[\cos \varphi - \sin \varphi \frac{d}{kdh} \right] \frac{e^{ikR}}{R} \Big|_{h_1}^{h_2}. \qquad (9)$$

and that of the horizontal components by

$$kD_\rho \int_{h_1}^{h_2} \sin \varphi \, \frac{e^{ikR_1}}{R_1} dh = - i \left[\cos \varphi - \sin \varphi \frac{d}{kdh} \right] \frac{e^{ikR_1}}{\rho} \Big|_{h_1}^{h_2}. \qquad (10)$$

$$kD_\rho \int_{h_1}^{h_2} \sin \varphi \, \frac{e^{ikR}}{R} dh = - i \left[\cos \varphi - \sin \varphi \frac{d}{kdh} \right] \frac{e^{ikR}}{\rho} \Big|_{h_1}^{h_2}. \qquad (11)$$

To evaluate the components of the electromagnetic field of the di-
pole also

Card 5/12

Structure of the ...

$$E_z = k^2 \left\{ (1 + D_z^2) \frac{e^{ikR_1}}{R_1} - (1 - D_z^2 + 2i\delta D_z) \frac{e^{ikR}}{R} + (1 - \delta^2)2I \right\}, \quad (16)$$

$$E_\rho = k^2 \left\{ D_{z\rho}^2 \left[\frac{e^{ikR_1}}{R_1} + \frac{e^{ikR}}{R} \right] - 2i\delta U \right\}, \quad (17)$$

and

$$H_\varphi = \frac{ik^2}{\omega\mu} \left\{ D_\rho \left[\frac{e^{ikR_1}}{R_1} - \frac{e^{ikR}}{R} \right] + 2U \right\} \quad (18)$$

could be used together with corresponding equations for an antenna

$$E_z^a = k^2 j_0 \left\{ (\cos\varphi + \sin\varphi D_z) \left[\frac{e^{ikR}}{R} - \frac{e^{ikR_1}}{R_1} \right] - (\cos\varphi + i\delta\sin\varphi)2I \right\} \Bigg|_{h_1}^{h_2}$$

$$(19)$$

Card 6/12

Structure of the ...

$$E_\gamma^a = k^2 j_0 \left\{ - i(\cos\varphi + \sin\varphi D_z) D_z \frac{e^{ikR_1}}{\varrho} + \delta_0^\cdot (\cos\varphi + i\delta\sin\varphi) U + \right.$$

$$\left. + i \left[\sin\varphi(\delta_0 D_z - \delta_0^\cdot) - \cos\varphi(\delta_0 + \delta_0^\cdot D_z)\right] D_z \frac{e^{ikR}}{\varrho} \right\} \Big|_{h_1}^{h_2} \qquad (20)$$

$$H_\varphi^a = \frac{ik^2}{\omega\mu} j_0 \left\{ - i(\cos\varphi + \sin\varphi D_z) \frac{e^{ikR_1}}{\varrho} - 2\delta'(\cos\varphi + i\delta\sin\varphi) U + \right.$$

and $$+ i[\cos\varphi(1 - \delta_0' D_z + 2\delta' D_z^2) + \sin\varphi(\delta_0 + \delta_0' D_z) D_z] \frac{e^{ikR}}{\varrho} \Big\} \Big|_{h_1}^{h_2} \qquad (21)$$

where $$\delta_0 = \delta'(1 + \delta^2); \quad \delta_0' = 2i\delta\delta'.$$

In a previously published article G.N. Krylov and G.I. Makarov, (Ref. 3: Struktura elektromagnitnogo polya vertikal'nogo elektricheskogo dipolya i vertikal'noy antenny v prostranstve nad ploskoy zemley,

Card 7/12

S/109/61/006/005/007/027
D201/D303

Structure of the ...

Vestn. Leningr. un-Ta, 1960, 16, 42) obtained convergent and assymptotic solutions for evaluating integrals I and U in the case of earth being homogeneous. These solutions are given also in the present article without proof but including the introduced parameters. For "small" values of basic parameters the integrals I and U are evaluated using

$$I = \frac{e^{ikR}}{R} + k \sum_{n=0}^{\infty} B_n; \quad U = D_\rho \frac{e^{ikR}}{R} + k \sum_{n=0}^{\infty} C_n. \qquad (23)$$

where coefficients B_n and C_n are determined by recurrent relationships

$$B_{n+2} = \frac{n\delta^2}{n+2} B_n^* - \frac{(k\rho\delta^2)^2}{n(n+2)} B_{n-2} + M_n [ikR(n+1) + (kz)^2],$$ \qquad (24)

$$C_{n+2} = \frac{n\delta^2}{n+2} C_n - \frac{(k\rho\delta)^2}{n(n+2)} C_{n-2} - \frac{2k\rho\delta^2}{n(n+2)} B_{n-2} +$$

$$+ i [(ikR+1)(n+1) + (kz)^2] \frac{\rho}{R} M_n, \qquad (25)$$

$$M_n = \frac{i\delta^2 (ik\Lambda z)^{n-1}}{(n+2)!} e^{ikR - ik\delta z}.$$

Card 8/12

The initial terms in these recurrent relationships can be represen-
ted by

$$B_0 = i\delta\alpha(kz;\ k\rho)e^{-ikbz},\quad C_0 = \left(i - \frac{1}{kR}\right)\frac{i}{\delta\rho}B_1 - \frac{2}{k\rho\delta^2}B_2,$$

$$B_1 = -i\delta^2 e^{ikR-ikbz},\quad C_1 = i\frac{\rho}{R}B_1,\tag{26}$$

$$B_2 = -\frac{i\delta^3}{2}\beta(kz;\ k\rho)e^{-ikbz},\quad C_2 = \frac{k\rho\delta^2}{2}B_0 - \frac{\delta k\rho z}{2R}B_1,$$

$$B_3 = -\frac{\delta^2}{6}[2ikR - 2 + (kz)^2]B_1,\quad C_3 = i\frac{\rho}{R}B_3 - \frac{i\delta^2\rho}{3R}B_1.$$

the evaluation of coefficients α and β having been carried out in
Ref. 3 (Op.cit.) For "large" values of basic parameters it is
necessary to evaluate the above integrals from assymptotic repre-
sentation which depends, however, on the value of argument S. The
basic expression for the integral becomes then

Card 9/12

$$I = \frac{e^{ikR}}{R} + ik\delta e^{-ik\delta z} \int_{k(R+z)}^{+\infty} \frac{e^{iU}dU}{\sqrt{U^2 - k^2\rho^2(1-\delta^2)}},$$

and the assymptotic solution (using the method of the greatest rate of fall) can be obtained using e.g. integration by parts. An approximate solution can also be obtained using the Sommerfield attenuation factor.

$$I = kI' - 2k\delta\pi e^{-ik\delta z} H_0(k\rho\sqrt{1 - \delta^2}),$$

$$U = kU' + 2k\delta\pi \sqrt{1 - \delta^2} e^{-ik\delta z} H_1(k\rho\sqrt{1 - \delta^2}). \tag{32}$$

In this case it has to be remembered that the assymptotic representation will have different forms depending on the sign of the imaginary part of S

Card 10/12

Structure of the ...

$$I \sim \frac{e^{ikR}}{R}\left[1 - \sqrt{\frac{s_0}{s}}\sum_{n=0}^{\infty}\frac{(2n-1)!!}{(2s)^n}\right], \quad \text{Im}\sqrt{s} > 0 \tag{34}$$

$$\left(I \sim \frac{e^{ikR}}{R}\left[1 - \sqrt{\frac{s_0}{s}}\sum_{n=0}^{\infty}\frac{(2n-1)!!}{(2s)^n} + 2i\sqrt{\pi s_0}\,e^{-s}\right], \quad \text{Im}\sqrt{s} < 0. \tag{35}\right.$$

S being given by

$$s_0 = \frac{ik\delta^6 R}{2}\left(\frac{R}{\rho}\right)^2; \quad s = s_0\left(1 + \frac{s}{\delta R}\right)^2.$$

The exact assymptotic evaluation of the above expressions has been given by G.N. Krylov and G.I. Makarov (Ref. 5: Funktsiya oslablen-iya elektromagnithogo polya vertikal'nogo dipolya i vertikalnoy antenny, Radiotekhnika i elektronika, 1960, 5, 4, 684). There are 1 graph and 5 references: 3 Soviet-bloc and 2 non-Soviet-bloc. The

Card 11/12

22260

references to the English-language publications read as follows:
J.R. Wait, Transmission and reflection of electromagnetic waves in
the presence of stratified media, J. Res. Nat. Bur. Standards, 1958
61, 3, 205; T. Kahan, G. Eckart, On the existance of a surface wave
in dipole radiation over a plane earth, Proc. I.R.E. 1950, 38, 7,
807.

ASSOCIATION: Fizicheskiy fakul'tet Leningradskogo gosudarstvennogo
               universiteta im. A.A. Zhdanova (Leningrad State Uni-
               versity im. A.A. Zhdanov, Faculty of Physics)

SUBMITTED: May 30, 1960

Card 12/12

S/109/62/007/004/001/018
D230/D302

9.9700

AUTHOR: Krylov, G.N.

TITLE: Radiopulse propagation over plane homogeneous ground

PERIODICAL: Radiotekhnika i elektronika, v. 7, no. 4, 1962,
579 - 589

TEXT: A rigorous solution of the propagation of an arbitrary pul-
se over plane ground having an arbitrary dielectric permeability
and conductivity is presented. The choice and methods in evaluat-
ing the standard solution are examined; a transfer process is for-
mulated for any type of spectrum of the dipole moment in terms of
a single integral. In considering a number of cases for the spec-
trum of the dipole moment, approximate expressions are obtained
for the configuration of the e.m. field; in order to use these ex-
pressions tables of the probability integral as a function of the
complex argument are required. In examining the fundamental confor-
mity with the laws of propagation of the radio pulse over the pla-
ne ground it is found that the stationary solution represents a
set of plane waves which propagate at various angles with the
Card 1/2

Radiopulse propagation over plane ...   S/109/62/007/004/001/018
D230/D302

earth's surface. The propagation velocity of these waves along the
earth's surface varies; it is, however, always less than that of
light. For this reason, in the non-stationary case and at any mo-
ment, there is only a restricted beam of angular spectrum of these
waves corresponding to the trimming of the top section of the inte-
gration. Both, the r.f. and video cases of pulse propagation are
considered. It is possible to investigate the distortion in the
propagation of an arbitrary pulse even when its form is given gra-
phically. There are 9 references: 5 Soviet-bloc and 4 non-Soviet-
bloc. The references to the English-language publications read as
follows: J.R. Johler, Transient radio-frequency ground waves over
the surface of a finitely conducting plane earth, J. Res. Nat. Bur.
Standards, 1958, 60, 4, 281; C.L. Pekeris, E. Alterman, Radiation
resulting from an impulsive current in a vertical antenna placed
on a dielectric ground, J. Appl. Phys., .1957, 28, 11, 1317; B. van
der Pol, On discontinuities of electromagnetic waves and the occur-
rence of a surface wave, IRE Trans., 1956, AP-4, 3, 288.
ASSOCIATION: Fizicheskiy fakul'tet Leningradskogo gosudarstvennogo
            universiteta im. A.A. Zhdanova (Faculty of Physics,
            Leningrad State University im. A.A. Zhdanov)
SUBMITTED: May 15, 1961
Card 2/2

KRYLOV, G.N.

Propagation of a radio pulse above plane homogeneous earth.
Radiotekh. i elektron. 7 no.4:579-589 Ap '62.   (MIRA 15:3)

1. Leningradskiy gosudarstvennyy universitet im. A.A.Zhdanova,
fizicheskiy fakul'tet.
(Electromagnetic waves)
(Pulse techniques (Electronics))

44839

8/560/62/000/014/011/011
A001/A101

3. 2700

AUTHORS: Krylov, O. N., Martynenko, I. A., Pogrebnyak, Ye. B., Sergeyeva, M.K.

TITLE: An autonomous optical method of determining orientation of an
Earth's satellite in space

SOURCE: Akademiya nauk SSSR. Iskusstvennyye sputniki Zemli. no. 14, 1962,
145 - 153

TEXT: The purpose of this investigation is determination of orientation of
an Earth's artificial satellite in space from the readings of solar radiation
pickups mounted on the satellite. In the first part of the article the problem
of determining the vector, denoting direction from the satellite to the Sun, is
solved in terms of three direction cosines. The second part deals with the prob-
lem of determining the matrix of transformation from the coordinate system "Earth"
to the system of "Sputnik". As a result, the matrix was obtained, each of whose
elements contained the unknown angle of turn of one system relative to the other.
This angle can be determined from the reading of at least one scanning pickup
whose optical system fixes the line of horizon, provided that the altitude of the

Card 1/2

An autonomous optical method of...

S/560/62/000/014/011/011
A001/A101

satellite above the Earth's surface is known. If the readings of several scanning pickups are known, which determine the line of horizon, then it is possible to calculate from them both the angle of turn and the altitude of the satellite. In the fourth part of the article the authors analyze the problem of forecasting the orientation of the satellite in space. For this purpose they derive the formula for the angular velocity of the satellite using three Euler dynamical equations of rotational motion and three kinematic equations. Then, knowing the angular velocity and time intervals expired from the beginning of motion, one can calculate for the future the orientation of the satellite in space. In conclusion the authors discuss the problem on the number of pickups necessary for determination of orientation; the number is eight, located at the vertices of a cube, of which four will be illuminated by the Sun. There is 1 figure.

SUBMITTED: February 26, 1962.

Card 2/2

S/0293/64/002/001/0098/0108

ACCESSION NR: AP4026237

AUTHOR: Bary*shev, V. A.; Kry*lov, G. N.

TITLE: Use of the concept of a standard model of the field of outgoing radiation of the earth as a planet in a method for the solution of the inverse radiation problem

SOURCE: Kosmicheskiye issledovaniya, v. 2, no. 1, 1964, 98-108

TOPIC TAGS: meteorology, inverse radiation problem, terrestrial radiation, atmospheric outgoing radiation, earth radiation balance, outgoing radiation model

ABSTRACT: Certain systematic problems are discussed which are involved in devising techniques for the solution of inverse radiation problems by statistical methods. The use of the concept of a model of the earth's radiation makes it possible to employ well-known mathematical methods for processing experimental results. A simplified method is presented for determination of the vertical to the earth's surface. It is noted that the development of a quite precise universal model of the field of terrestrial radiation in the form of tables, graphs or diagrams is theoretically soluble, but the use of such a model for solution of a specific inverse problem would involve a considerable modification of information, in essence leading to the development of a completely new model - the model for a

Card 1/2

ACCESSION NR: AP4026237

specific experiment. In addition, the modification process inevitably causes a loss of information incorporated in the universal model. On the other hand, preparation of a precise model for each specific experiment is not feasible, since this would require unwieldy computations and the resulting model would be of limited applicability. It is recommended that the solution is gradual refinement of an initial approximate model in the course of an experiment on the basis of data obtained in the preceding stages of this same experiment. Orig. art. has: 54 formulas.

ASSOCIATION: none

SUBMITTED: 20Mar63   DATE ACQ: 16Apr64   ENCL: 00

SUB CODE: AS   NO REF SOV: 003   OTHER: 004

.Card   2/2

AT6007617   BWT(d)/BWT(1)/T IJP(c) CW

AUTHORS: Baryshev, V. A.; Krylov, G. N.

ORG: Leningrad State University (Leningradskiy gosudarstvennyy universitet)

TITLE: On computing certain integrals in the theory of absorption

SOURCE: Leningrad. Universitet. Problemy fiziki atmosfery, no. 3, 1965, 145-150

SOURCE CODE: UR/2960/65/000/003/0145/0150

TOPIC TAGS: absorption, absorption spectrum, atmosphere, approximation method, asymptotic solution, recursive function

ABSTRACT: The question on absorption of long-wave radiation in the atmosphere is discussed. In computing atmospheric absorption, it is frequently necessary to compute integral functions such as

$$H(q,\mu) = \frac{1}{\pi} \int_{-\infty}^{\infty} \frac{e^{-x}}{q^2 + (x+\mu)^2}\, dx$$

$$\tau(\mu) = \int_{q_1}^{q_2} P(x)/f(x,\mu)\,dx,$$

$P(x)$ is some function of x. Computer solutions of this type of equation are time-consuming, hence the authors have developed a numerical, asymptotic means of computing the function $H(q,\mu)$ applicable for computing with any desired values of desired integral functions and...

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ACC NR: AT6007617

parameters. It is assumed, however, that the problem is such that in the interval $[q_1, q_2]$ the function $P(x)$ satisfies the parabolic approximation

$$P(x) = ax^2 + bx + c.$$

The integral H is transformed into

and two additional integrals are defined

$$H(q, \mu) = \frac{1}{\sqrt{\pi}} \int_0^\infty e^{-qz - \frac{z^2}{4}} \cos \mu z \, dz,$$

$$M(q, \mu) = \frac{1}{\sqrt{\pi}} \int_0^\infty e^{-(q+i\mu)z - \frac{z^2}{4}} dz$$

where

$$Q(q, \mu) = \frac{1}{\sqrt{\pi}} \int_0^\infty e^{-qz - \frac{z^2}{4}} \sin \mu z \, dz,$$

$$M(q, \mu) = H(q, \mu) - iQ(q, \mu).$$

Since e^{-qz} and e^{-iqz} may be stated as a series, the series summation is

$$M(q, \mu) = \sum_{n=0}^\infty (A_n + iB_n),$$

where the coefficients A_n and B_n are given by the recursion formulae

$$A_n = \frac{2q}{n}(q A_{n-1} - \mu B_{n-1}),$$

Card 2/3

L 22954-66
ACC NR: AT6007617

$$B_n = \frac{2q}{n}(q B_{n-1} + \mu A_{n-1})$$

The recursion relationship replaces a Gamma function as the means of computing H. A similar series-based method for solving for ζ is developed. The authors discuss the limitations of applicability of the solution technique described. Orig. art. has: 31 equations.

SUB CODE: 04, 12/ SUBM DATE: none/ ORIG REF: 004/ OTH REF: 002

Card 3/3

ACC NR: AT6026770

SOURCE CODE: UR/2754/66/000/005/0085/0096

AUTHOR: Krylov, G. N.; Petrovskiy, A. D.

ORG: none

TITLE: Exact and approximate boundary conditions in the theory of electromagnetic wave propagation

SOURCE: Leningrad. Universitet. Problemy difraktsii i rasprostraneniya voln, no. 5, 1966. Rasprostraneniye radiovoln (Radio wave propagation), no. 4, 85-96

TOPIC TAGS: electromagnetic wave, approximate solution, radio wave propagation

ABSTRACT: The paper deals with the methods of investigating waves propagated above the earth. Such a problem generally requires different degrees of approximation of conditions existing on the earth's surface. The present discussion is based on the assumption that the earth surface can be approximated as being flat. The Hertz vector is used for the solution of the problems relating to the theory of electromagnetic wave propagation. Two transformations relating the Hertz vector to vectros of electric and magnetic fields are given. A vertical electric dipole is located in space as the next step and the conditions of the interphase surfaces are then formulated. Construction of precise and approximate solutions is discussed for two locations of the dipole: one in the upper half-space and the other in the lower half-space. Two methods of selecting proper constants are reviewed. Orig. art. has: 30 formulas.
SUB CODE: 17, 20/ SUBM DATE: none/ ORIG REF: 004
Card 1/1

25645   KRETOV, G. V.

Perspektivy osvoeniya lesov tomskoy oblasti dlya nuzhd lesosnabzheniya. Les, 1948, No. 3, s. 50-56.

SO: Letopis' Zhurnal'nykh Statey, No. 30, Moskva, 1948

KRYLOV, G. V.

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SO: U-3042, 11 March 53, (Letopis 'Zhurnal 'nykh Statey, No.7 1949).

KRYLOV, G. V.

"Birch Forests of the Tomsk Area and Their Types."
Thesis for degree of Cand. Biological Sci. Sub 11 Jul 49,
Inst of Forestry, Acad Sci USSR.

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Degrees in Science and Engineering in Moscow in 1949.
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KRYLOV, G. V.

20897 Krylov, G. V. i Tyazhel'mkov, A. D. I. V. Michurin i Sibiryaki, /O perepiske
I. V. Michurina s sadovadami7 Sad i ogorod., 1949, No. 6, s. 35-38

SO: LETOPIS ZHURNAL STATEY - Vol. 28, Moskva, 1949

KRYICV, G.E.

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First scientific works on forest cultivation in Russia. Ics i step' 4 no. 6, 1952.

9. Monthly List of Russian Accessions, Library of Congress, _____September 1952; Uncl.

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4. Siberia - Forests and Forestry

7. Forests of communism. Sib. ogni 31 no. 6, 1952.

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KRYLOV, G.V.; GLUZDAKOV, S.I., red.

[Birch forests in Tomsk Province and their types]Berezovye lesa
Tomskoi oblasti i ikh tipy. Pod red. S.I.Gluzdakova. Novosibirsk,
Akad. nauk SSSR, 1953. 121 p.   (MIRA 15:12)
                    (Tomsk Province—Birch)

KRYLOV, G.V.

KRYLOV, G.V.

New species of birch from the Tomsk Province. Bot.zhur. 39 no.2 :
250-255 Mr-Ap '54.   (MIRA 7:6)

1. Biologicheskiy institut Zapadno-Sibirskogo filiala Akademii nauk
SSSR.
        (Tomsk Province--Birch)

KRYLOV, G. V.

USSR/Miscellaneous - Book review

Card 1/1   :   Pub. 86 - 42/46

Authors   :   Krylov, G. V., Cand. Biol. Sci., and Kalomiets, N. G., Cand. Biol. Sci.

Title   :   Nature in the Tomsk District

Periodical :   Priroda, 43/9, 123-124, Sep 1954

Abstract   :   Review of a book entitled "Nature in the Tomsk District", by
                E. G. Ioganzen, published by the Tomsk District Reader's Bureau,
                Tomsk, 1953, 48 pages.

Institution :   .....

Submitted   :   .....

KRYLOV, G. V.

USSR/Biology - Cattle breeding

Card   1/1   :   Pub. 86 - 19/38

Authors   :   Krylov, G. V., Cand. Biol. Sci.

Title   :   The significance of the condition of the mother's organism
               in animal breeding

Periodical :   Priroda 43/12, 102-103, Dec 1954

Abstract   :   An account is given of observations made with various cows to
               determine the effect of different milking regimes, from which
               the conclusion is drawn that thorough milking produces better
               offsprings. Explanation of this phenomenon is presented.

Institution : .....

Submitted   : .....

KRYLOV, G. V.

KRYLOV, G. V.: "The forests of western Siberia (the history, forest types, regional breakdown, methods of utilization, and ways of improvement)." Acad Sci USSR. Inst of Forestry. Moscow 1956. (DISSERTATION FOR THE DEGREE OF DOCTOR IN BIOLOGICAL SCIENCE)

So.: Knizhnaya letopis' No 15, 1956, Moscow

Krylov, G.V.   K-4

USSR / Forestry. Forest Economy.

Abs Jour: Ref Zhur - Biologiya, No. 1, 1958, 1340.

Author : Krylov, G.V., Kolomiyets, N.G.

Inst   : Institute of Forests of the Acad Sci GruzSSR

Title   : Major Types of Thinning Employed in the Moun-
          tain Forests of Western Siberia

Orig Pub: Tr. in-ta lesa. Akad. Nauk GruzSSR, 1956, 6,
          101-106.

Abstract: This is a discussion of the unsatisfactory
          state of natural reforestation in the most com-
          mon types of forest. In the cedar, fir, and
          larch types of forests there is excessive new
          growth of deciduous varieties with almost no
          replacement of the principle species. The III

Card 1/2

USSR / Forestry. Forest Economy.   K-4

Abs Jour: Ref Zhur - Biologiya, No. 1, 1958, 1340

          growth classification predominates. Selective
          thinning, which is most widely applied in the
          water- and soil-conservation forests, is hardly
          utilized at all in the Western Siberian forests,
          which also belong in this category. The single
          growth /i.e. with trees of the same age -
          Trans./ larch, cedar, and pine forests, as well
          as the multiple growth /trees of differing ages/
          spruce-fir forests of low commercial value are
          in urgen need of immediate and intense thinning.
          For the conditions the biologically most ex-
          pedient type of thinning would be the cutting
          over of large areas /sploshno-lesosechnyy rubki/.
          To ensure replacement, in case of destruction of
          the undergrowth by fire or insects, the area
          should be uniformly seeded.

Card 2/2

Krylov, G.V.

USSR/General and Special Zoology. Insects

Abs Jour : Ref Zhur - Biol., No 6, 1958, No 25810

Author : Kolomiyets N.G., Krylov G.V.
Inst   : Not Given
Title   : Spring Floods and Cutbreaks of the Siberian Silkworm in West
          Siberia. (Vesenniye polovod'ya i vspyshki sibirskogo shel-
          kopryada v Zapadnoi Sibiri.)

Orig Pub : Losn. kh-vo, 1956, No 12, 45-47

Abstract : The greatest damage to forests by the silkworm in West Siberia
           was caused in the dryest periods. A 13% fall of larvae during
           the hibernation period was noted in high places and up to 80%
           in swampy places. Cutbreaks of mass breeding were adjusted
           to periods when the highest level of the river for more than
           two years was lower than the average river level for many
           years. In high floods the conditions for larvae hibernation
           were worse. During low floods the pest was capable to ac-
           complish its development in one year. Conditions for mass

Card   : 1/2

USSR/General and Special Zoology

Abs Jour : Ref Zhur - Biol., No 6, 1958, No 25810

propagation of the silkworm in West Siberia were created first
in fir forests, then in codar forests and at last in decid-
uous and pine forests.

Card   : 2/2

K

Country : USSR
Category: Forestry. General Problems.

Abs Jour: RZhBiol., No 12, 1958, No 53441

and by the extent of cuttings. The article gives
briefly the results of a study of reforestation,
and of a study of problems in the biology of the
forest varieties, together with the names of re-
searchers who worked in the forests of Western
Siberia. With regard to practical suggestions,
most attention is concentrated on the development
of cutting methods by separate zones in forests of
different groups and types. Great significance is
attached to the problem of the reforestation of
the fellings. The chief aspects of the scienti-
fic and economic work in forestry research in Wes-
tern Siberia are enumerated. -- V.I. Klimov

Card   : 2/2

AUTHOR   : Krylov, G. V.
             : Novosibirsk Division, Geographical Society of USSR
TITLE   : The Division Into Districts by Forest Vegetation of
               the Steppe Part of the Altayskiy Kray

ABSTRACT   : There is a short analysis of the natural and artificial
               forest vegetation of the steppe part of the Altayskiy
               kray. In order to obtain comparative data on forest
               vegetation conditions of steppe and forest steppe, it
               is necessary to separate out the forest vegetation
               regions and their groups. The idea of "forest vege-
               tation region" and "group of forest vegetation regions"
               is described, the possibility of nonconformity of the
               boundaries of forest vegetation and geobotanical regions
               is indicated. A distribution scheme for steppe and
               forest steppe parts of the Altayskiy kray is presented
               with the following groups of forest vegetation regions

CARD: 1/3

KRYLOV, G.V.

On the history of the preparation of the first forest map with a
plan for transportation routes (in southern Siberia). Izv.Novosib.
otd.Geog.ob-va SSSR no.1:75-78 '57.   (MIRA 12:4)
                          (Siberia—Maps)

USSR/Forestry - Forest Economy.   K.

Abs Jour   : Ref Zhur - Biol., No 15, 1958, 68024

Author   : Kolesnikov, B.P., Krylov, G.V.

Inst   : Western Siberian Branch of the Academy of Science USSR

Title   : Ways of Developing the Forest Economy of Tyumenskaya
               Oblast'.

Orig Pub   : Tr. po lesn. kh-vu Zap. Sibiri. Zap.-Sib. fil. AN SSSR,
               1957, No 3, 49-60.

Abstract   : No abstract.

Card 1/1

KRYLOV, G.V.

Abs Jour   : Ref Zhur - Biol., No 20, 1958, 91499

Author   : Krylov, G.V.

Inst   : Western Siberian Affiliate AS USSR

Title   : The Forest Types in Western Siberia and Recommendations
              for Utilization and Improvement of the Wood Resources.
              (Authors Abstract of a Monography).

Orig Pub   : Tr. po lesn. kh-vu Zap. Sibiri. Zap.-Sib., fil. AN SSSR,
              1957, vyp. 3, 91-146.

Abstract   : On the basis of personal investigations during the years
              1930 and 1954 and of material published or compiled in
              archives, a monographical description of the woods in
              Western Siberia is made. The purpose is to elaborate a
              classification of the forest types, to demonstrate the
              genesis of basic forest formations and of the trend in

Card 1/3

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              planting, as well as to develop scientific principles for
              forest management under the conditions of different zones
              and different forest types. The leading timber species
              are characterized in detail: Abies sibirica, Picea obova-
              ta, Pinus cembra ssp. sibirica, P. silvestris, Larix sibi-
              rica, L. Sukaczevii, Tilia sibirica, T. septentrionalis,
              the asp, poplar, willow and birch. Morphological and eco-
              logical features of these species are considered. Also
              given are their areas, with a description of their habitat
              conditions. Using the northern border of the tree areal
              in the plains of Western Siberia as a relative index, one
              may obtain a scale of cold-resistance. According to de-
              creasing cold-resistance, the species are arranged in the
              following manner: Siberian and Sukaczev larch, spruce,
              Kuznishchev and downy birch, cedar, pine, asp, silver fir,
              black poplar, Krylov birch and northern linden. A table
              of the qualification of tree species for forest cultivation

Card 2/3

K-2

USSR/Forestry - Biology and Typology of the Forest.

Abs Jour   :   Ref Zhur - Biol., No 9, 1958, 39072

Author   :   Krylov, G.V.

Inst   :   Eastern Branch of the Academy of Sciences, USSR

Title   :   Principles and System of Division of Western Siberia into Forest Growing Districts.

Orig Pub   :   Izv. vost. fil. AN SSSR, 1957, No 3, 102-106.

Abstract   :   Western Siberia is considered as a group of forest growing provinces. The provinces of Western Siberian lowlands and of Altay-Sayan mountains are examined in this study. The forest growing zone consists of subzones and is characterized either by a prevalence or by a combination of some determined types of vegetative cover dependent on the latitude or the altitude.
                The territory of Western Siberian lowland is divided in

Card 1/3

USSR/Forestry - Biology and Typology of the Forest.

Abs Jour   :   Ref Zhur - Biol., No 9, 1958, 39072

zones of tundra, tundra-forest, lowland forests, aspen-
birch forest-steppes and steppes. In the Altay-Sayan
mountains belts of the foot-hill steppes, mountain forests,
alpine meadows, mountain tundras, nival-holz are distin-
guished. The forest growing subprovince consists of regions
and districts and is characterized by a prevalence of some
group of forest formation or by a determined combination
of such groups.
The forest growing sub-zone is subdivided into districts
and regions and is characterized by the prevalence on the
given territory of determined formations or of their com-
binations.
A forest growing district consists of regions and is cha-
racterized by a combination of complexes of determined
kinds of forest types or by the degree of their prevalence
in the territory.
A forest growing region consists of sectors (micro regions

Card 2/3

- 6 -

USSR/Forestry - Biology and Typology of the Forest.   K-2

Abs Jour   : Ref Zhur - Biol., No 9, 1958, 39072

                or survey marks) and is characterized by a uniform combi-
                nation of groups of forest types or, in the case of ter-
                ritories without forests, by groups of associations, re-
                gularly repeating themselves in boundaries of similar
                geomorphological profiles.
                It can also be characterized by a uniform prevalence of
                forest sectors in a territory, entering into the system
                of a river basin, or distinguished by the uniform shapes
                of the prevalent terrain.
                236 forest growing regions are found in the territory of
                Western Siberia.

        Card 3/3

M

Country : USSR
Category: Cultivated Plants. Ornamental.

Abs Jour: RZhBiol., No 22, 1958, No 100527

Author : Krylov, G.V.
Inst   : Western Siberian Affiliate, AS USSR
Title   : Creation of Green Zones Around the Cities of
          Western Siberia.

Orig Pub: Tr. po lesn. kh-vu Zap. Sibiri. Zap. Sib. fil.
          AnSSSR, 1957, vyp. 3, 273-278

Abstract: The division of Western Siberia into rayons
          for the creation of verdure, carried out in
          1953 is cited. In order to standardize mea-
          sures for the creation of verdant zones, it
          is proposed to unite rayons into 4 tree and

Card   : 1/2

M

          shrub planting districts (okrug): forest-
          tundra, forest, forest-steppe and steppe,
          which are briefly characterized. The princi-
          pal species of trees and shrubs for each rayon
          are listed, and the cities and large regional
          centers within each district are indicated.
          Directions are given on the evaluation from
          the standpoint of landscaping, of available
          plantings and on the creation of new ones.
          Works on the improvement of wooded landscapes
          in the green zone are listed. In addition to
          the work on the creation of verdure, the fol-
          lowing are included here: additional sowing of
          the spawn of edible mushrooms and an enrichment
          of animal life. -- N.S. Lebedova

Card   : 2/2

KRYLOV, G.V.

Victor Ivanovich Vereshchagin; obituary. Bot.zhur.42 no.2:322-324
F '57.   (MIRA 10:3)

1.Biologicheskiy institut Zapadno-Sibirskogo filiala Akademii nauk
SSSR, Novosibirsk.

(Vereshchagin, Viktor Ivanovich, 1871-1956)