CSANADI, Gyorgy, dr.,egyetemi tanar; FASKERTI, Sandor; SZABO, Dezso, dr.,
a kozlekedestudomanyok kandidatusa, okl.mernok; CSUHAY, Denes;
TAKACS, Endre; CSABAI, Rudolf; NAGY, Rudolf; KUTAS, Laszlo,mernok;
VASARHELYI, Boldizsar, dr.,a muszaki tudomanyok doktora, tanszek-
vezeto egyetemi tanar; KOLLER, Sandor, muegyetemi adjunktus; KALNOKI
KISS, Sandor; GYOMBER, Sandor; TALLO, Gyula;KOZARY, Istvan; SZILAGYI,
Lajos; HEGYI, Kalman,okl.mernok; BERCZIK, Andras; MARKI, Laszlo; PALFI,
BUDINSZKI, Endre; NAGY, Endre,okl.mernok; SZATMARY, Ferenc; MAGORI,
Judit; CSIKHELYI, Bela; MESZLERI, Zoltan; VEROSZTA, Imre; ZSIGA, Sandor;
TOROK, Istvan; KONCZ, Laszlo; WESSELY, Ferencne; SZABO, Bela; KOMOROCZI,
Lajos; GINTL, Jozsef; CSONTOS, Dezso; JAKAB, Sandor; LOVASZ, Istvan,
mernok; KISS, Karoly; RODONYI, Karoly

The City Transportation Conference in Szeged. Kozl tud sz 12 no.2:
49-54 F '62.

1. Akademiai levelezo tag, a kozlekedes- es postaugyi miniszter
elso helyettese, es "Kozlekedestudomanyi Szemle" szerkeszto
bizottsagi tagja (for Csanadi) 2. Kozlekedes- es Postaugyi Miniszterium
Muszaki Felugyeleti Osztalyanak vezetoje (for Faskerti) 3. Fovarosi
Tanacs Vegrehajto Bizottsaga VIII. Varosrendezesi es Epiteszeti
Osztalyanak munkatarsa, es "Kozlekedestudomanyi Szemle" szerkeszto
bizottsagi tagja (for Szabo)

(Continued on next card)

CSANADI, Gyorgy --- (Continued) Card 2.
    4. Fomernok, Kozlekedes- es Postaugyi Miniszterium Kozlekedespoli-
tikai Osztalyanak munkatarsa (for Csuhay) 5. Kozlekedes- es Postaugyi
Miniszterium Autokozlekedesi Vezerigazgatosaganak szakosztalyvezetoje
(for Takacs) 6. MAV fointezo, a Kozlekedestudomanyi Egyesulet miskolci
teruleti szervezetenek titkara (for Csabai) 7. Fomernok, a Fovarosi
Tanacs Vegrehajto Bizottsaga Kozlekedesi Igazgatosaga helyettes
vezetoje (for Nagy) 8. Fovarosi Tanacs Vegrehajto Bizottsaga
Kozlekedesi Igazgatosaganak fejlesztesi eloadoja (for Kutas)
9. "Kozlekedestudomanyi Szemle" szerkeszto bizottsagi tagja (for
Vasarhelyi) 10. Csoportvezeto fomornok, Debrecen m.j. Varosi Tanacs
Vegrehajto Bizottsaga Ipari es Kozlekedesi Osztaly (for Kalnoki Kiss)
11. Rendorornagy, Csongrad Megyei Rendorfokapitanysag Kozrendvedelmi
Osztalya (for Gyomber) 12. Fomernok, Miskolc m.j. Varosi Tanacs
Vegrehajto Bizottsaga Epitesi es Kozlekedesi Osztaly (for Tallo)
13. Fomernok, Kozlekedes-es Postaugyi Miniszterium Utosztalya (for
Kozary) 14. Favorosi Tanacs Vegrehajto Bizottsaga VIII. Varosrendezesi
es Epiteszeti Osztalyanak vezetoje (for Szilagyi) 15. Ut-Vasuttervezo Vallalat
Kozlekedesi Osztalya vezetoje (for Hegyi) 16. BUVATI Kozlekedesi es
Kozmuszakosztalyanak vezetoje, Budapest (for Berczik) 17. Pecs m.j.
varos Tanacsa BV Epitesi es Kozlekedesi Osztalyanak vezetoje (for
Marki)

(Continued on next card)

CSANADI, Gyorgy --- (Continued) Card 3.
18. Szeged m.j. Varosi Tanacs Epitesi es Kozlekedesi Osztalyanak fomernoke (for Palfi Budinszki) 19. Budapest Fovarosi Tanacs Melyepitesi Tervezo Vallalat iranyito tervezoje (for Endre Nagy) 20. Debreceni Kozlekedesi Vallalat igazgatoja (for Szatmary) 21. Budapest Fovarosi Tanacs Melyepitesi Tervezo Vallalat tervezomernoke (for Magori) 22. Budapest Fovarosi Tanacs Melyepitesi Tervezo Vallalat tervezomernoke (for Csikhelyi) 23. Miskolci Kozlekedesi Vallalat fomernoke (for Meszleri) 24.Kozlekedes- es Postaugyi Miniszterium Autokozlekedesi Foosztalyanak fomernoke (for Veroszta) 25. Szegedi Kozlekedesi Vallalat fomernoke (for Zsiga) 26. Miskolci Kozlekedesi Vallalat fokonyveloje (for Torok) 27. Debreceni Kozlekedesi Vallalat fomernoke (for Koncz) 28. Penzugy- miniszterium foeloadoja (for Wessely) 29. Pecsi Kozlekedesi Vallalat igazgatoja (for Szabo) 30. Epitesugyi Miniszterium Varosrendezesi Foosztalyanak mernoke (for Komoroczi) 31. Fovarosi Villamosvasut Fomernoke (for Gintl)   (Continued on next card)

CSANADI Gyorgy —— (Continued)   Card 4.
  32. 51-es Autokozlekedesi Vallalat munkatarsa (for Csontos).
  33. Ut-Vasuttervezo Vallalat irodavezeto fomernoke (for Jakab).
  34. Budapesti Helyierdeku Vasutak osztalyvezetoje (for Lovasz).
  35. Magyar Allamvasutek igazgatohelyettese (for Kiss, Karoly).
  36. Magyar Allamvasutak vezerigazgathohelyettese (for Rodonyi).

KOZARY, Ottokar

    Unusually-long styloid process. Kiserletes Orvostud. 12 no.2:
220-221 Ap '60.

    1. Szegedi Orvostudomanyi Egyetem Igazsagugyi Orvostani Intezete.
       (TEMPORAL BONE abnorm.)

KOZARZEWSKA, Magdalena

A hypothesis of selective protection of homeostasis. Pediat. pol. 37 no.10:1041-1050 O '62.

1. Z Oddzialu Chorob Dzieci Szpitala Miejskiego w Nysie.Dyrektor: lek. med. G. Burak,Ordynator: lek. med. M. Kozarzewska.
    (HOMEOSTASIS)   (UREMIA)   (CEREBROSPINAL FLUID)
     (NEPHRITIS)   (HYPERTENSION)   (CHLORIDES)

KOZARZEWSKA-SAPER, B.

MEDUSKI, J.; MANDES, Z.; ZABLOCKA, B.; KOZARZEWSKA-SAPER, B.

Hyperglycemic properties of Polish insulin. Acta physiol. polon.
5 no.4:639-640 1954.

1. Z Oddzialu Przemiany Posredniej P.Z.H. i z Zakladu Farmakologii
Akademii Medycznej w Warszawie.
      (INSULIN,)

ACCESSION NR: AP4040363   P/0045/64/025/003/0437/0441

AUTHOR: Kozarzewski, Bohdan

TITLE: A theorem concerning the gravitational field with shear-free, rotation-free, and expansion-free geodesic rays

SOURCE: Acta physica polonica, v. 25, no. 3, 1964, 437-441

TOPIC TAGS: gravitation, unified field theory, Newman Penrose method

ABSTRACT: The gravitational field produced by the null electromagnetic field is investigated by the Newman-Penrose method for the case of vanishing shear, rotation, and expansion of geodesic rays. It is proved from the added requirement of finiteness of the metric tensor along the rays that the gravitational field must be of type N in this case. From earlier work by Kundt and Tamburino it follows that this gravitational field represents a plane gravitational wave. The author thanked Dr. A. Bialas for valuable comments.

Card 1/ 2

ACCESSION NR: AP4040363

ASSOCIATION: Wyzsza Szkola Pedagogiczna, Katowice (Higher Pedagogical School)

SUBMITTED: 28Sep63   DATE ACQ: 15May64   ENCL: 00

SUB CODE: GP   NO REF SOV: 000   OTHER: 004

Card 2/2

GODLEWSKI, Zbigniew

        Jan Wiktor Kozarzewski, obituary. Przegl odlew 14 no.7:223-224 Jl '64.

KOZARZHEVSKAYA, E. F.

Biology of the scale insect Leucaspis japonica Ckll. (Homoptera, Coccoidea) in Abkhazia. Ent.oboz. 35 no.2:302-310 '56.

(MLRA 9:10)

1. Kafedra entomologii Moskovskogo gosudarstvennogo universiteta, Moskva.

(Abkhazia--Scale insects)

COUNTRY   :   USSR   P-5
CATEGORY   :

ABS. JOUR.   : RZBiol., No. 19, 1958, No. 87726

AUTHOR   :   Kozarzhevskaya, E. F.
INST.   :
TITLE   :   Gall-Midges Damaging Fruit and Seed of
                   Arboreal and Shrub Species.

ORIG. PUB.   :   Zool. zh., 1957, 36, No 10, 1500-1504

ABSTRACT   :   In 1954-1955, in plantings at Derkula
(Voroshilovgradskaya Oblast') and in the neighboring
forest stands growing in dry ravines were discovered 4
species of gall-midges (G). Contarinia marshali overwinters
as mature larva (L) in the soil. Pupation -- in the spring,
imago emerges in May. Eggs are deposited in pairs in fruit
of common ash. The fruit contains -- 14-40 (sometimes up
to 120) L as a result of polyembryony. L start hibernation
late in June. Fruit infested with G are dull-white (the
alae are green), irregularly inflated, wither gradually
and drop off. L of Dasyneura sp. were encountered in fruit
of common ash, 12-20, seldom 30, per fruit. Imago was not
   CARD: 1/2

Country   : USSR   1-5

CATEGORY   :

A::. JOUR. : IZBiol., No. 1?, 1958, No. 87726

AUTHOR   :
INST.   :
TITLE   :

ORIG. PUB. :

ABSTRACT   : reared. In fruit of black poplar, during the
2nd-3th ten days of May, were found 12-40 larvae, per each.
of Dasyneura populicola Mar. Fruit infested with the L
are spherically inflated and always closed. At the beginning
of June damaged fruit or L could no longer be found. The
development of the summer generation was not traced, the
same as near Tomsk where L of this G infest male flower
buds of silver poplar. From fruit of Common Buckthorn were
reared Lasioptera kosarzewkella. The L were infested with
Chalcidoidea and biology of L was not ascertained.
                                         A. F. Adrianov.

CARD: 2/2

KOZARZHEVSKAYA, E. F.: Master Biol Sci (diss) -- "Insects, pests of tree seeds and fruit and bushes in the steppe zone (On the example of the Derkul' Experimentation Station for Protective Forestry)". Moscow, 1958. 15 pp (Acad Sci USSR, Inst of Forestry), 150 copies (KL, No 6, 1959, 130)

KOZARZHEVSKAYA, N.F.

Insect damages to seeds and fruits of trees and shrubs in the area
served by the Derkul' Shelterbelt Afforestation Station. Soob. Inst.
lesa no.10:62-75 '58.   (MIRA 11:6)
            (Voroshilovgrad Province--Forest insects)

KOZARZHEVSKAYA, El'ga Faddeyevna; VORONTSOV, A.I., red.; KHIVRICH, Ye.D.,
     red. izd-va; LOBANKOVA, R.Ye., tekhn. red.

     [Manual on injuries to tree and shrubbery fruits and seeds in the
     steppe zone of the European S.S.R.] Opredelitel' povrezhdenii plo-
     dov i semian derev'ev i kustarnikov stepnoi zony evropeiskoi chasti
     SSSR. Moskva, Goslesbumizdat, 1961. 29 p.   (MIRA 14:8)
                         (Forest insects)

KOZARZHEVSKAYA, E.F., kand.biol.nauk

      Sciara army worm. Priroda 50 no.1:110 Ja '61.   (MIRA 14:1)

    1. Institut lesa AN SSSR, Moskva.
               (Army worms)

KOZARZHEVSKAYA, E.F.; MAMAYEV, B.M.

Succession of insects and other invertebrates in spruce wood
and their role in the decomposition of windfallen trees and
felling waste. Izv. AN SSSR. Ser. biol. no.3:449-454 My-Je '62.
(MIRA 15:6)

1. Institute of Animal Morphology, Academy of Sciences of the
U.S.S.R., Moscow.
                    (FOREST INSECTS)
              (SPRUCE--DISEASES AND PESTS)

USHATINSKAYA, R.S.; KOZARZHEVSKAYA, E.F.

Diapause and hibernation of the first generation of the Colorado
beetle (Leptinotarsa decemlineata Say.)In various soil types. Zool.
zhur. 41 no.8:1166-1174 Ag '62.   (MIRA 15:9)

1. Institute of Animal Morphology, U.S.S.R. Academy of Sciences,
Moscow.
            (Transcarpathia--Potato beetle) (Diapause)

KoZATcHeNKo; L.S.

Paper submitted for the [...] Int. [...], Mannheim, Germany,
2 September, 1960.

A.N. Bronn — : — Detonation Parameters

P.F. Pohil — : — The Mechanism of Combustion of Colloidal
Powders

L.S. Kozatchenko — : — The Combustion Mechanism and Burning Velocity
in a Turbulent Flow

S.M. Kogarko — : — On the Burning Probability for Droplets of
Liquid Atomized Fuel in a Turbulent Flow

S.M. Kogarko — : — Application of Compression Waves in the
Combustion Zone

P.YUGHIN, B.I. — : — On the Stationary Theory for Heat Balance of
Powder and Explosive Condensed Phases

Ya.B. Zeldov — : — On the Mechanism of Detonation Combustion
Ya.K. Troshin

K.I. Shchelkin — : — The Interaction of Carbon with Carbon Dioxide
G.P. Shmatovich — and Oxygen at Temperatures up to 3000°K

KARPUKHIN, L.A. — : — The Carbon Burning Burning Characteristics of
RAVICH, M.B. — Solid Fuel
KOTOVA, L.L.

O.A. Tsukhanova — : — The Investigation of the State of Explosion
Products Behind the Shock Wave

V.A. Popov — : — On the Conduction in the Flame Front
ASTACHOV, V.Ye.

KOZBAGAROV, A.A.

Comparative rating of some methods for treating powerless labor.
Zdrav.Kazakh. 16 no.12:30-35 '56.   (MIRA 10:2)

1. Iz rodil'nogo doma No.1 goroda Semipalatinska i kafedry
akusherstva i ginekologii lechebnogo fakul'teta (zaveduyushchiy -
professor Ya.S.Klenitskiy) Kazakhskogo gosudarstvennogo meditsinskogo
instituta im. V.M.Molotova.
          (PREGNANCY, PROTRACTED)

KOZBAGAROV, A. A. Cand Med Sci -- (diss) "Clinical Appraisal of Certain Methods of Stimulating and ~~Exciting the Birth Activity.~~ *Inducing Labor.*"

Alma-Ata, 1957.   13 pp 22 cm. (Kazakh State Medical Inst im V. M. Molotov), 280 copies (KL, 27-57, 110)

- 22 -

KOZBAGAROV, A.A.

Ovarian apoplexy. Akush. i gin. 34 no.1:107-110 Ja-F '58.
(MIRA 11:4)

1. Iz kafedry akusherstva i ginekologii Semipalatinskogo
moditsinskogo instituta (rodil'nyy dom No.1, glavnyy vrach
A.A.Kozbagarov)
(OVARIES, hemorrh.
apoplexy, case reports (Rus))

KOZBAGAROV, A.A., kand.med.nauk

Surgical treatment of prolonged secondary sterility. Trudy Semipal.
med. inst. 2:338-341 '59.   (MIRA 15:4)

1. Iz kafedry akusherstva i ginekologii Semipalatinskogo gosudarstvennogo
meditsinskogo instituta (roddom No.1, glavnyy vrach A.A.Kozbagarov).
                        (STERILITY)

KOZBAGAROV, A.A.

Appendicitis and pregnancy [with summary in English]. Akush. 1
gin. 35 no.1:51-54 Ja-F '59. (MIRA 12:2)

1. Iz kafedry akusherstva 1 ginekologii Semipalatinskogo meditsin-
skogo instituta.
(PREGNANCY, compl.
appendicitis (Rus))
(APPENDICITIS, in pregn.
(Rus))

KOZBAGAROV, A.A.

Etiology and prevention of atypical ruptures of the uterus and methods
of treatment. Akush. i gin. 36 no.2:68-71 Mr-Ap '60. (MIRA 13:12)
              (UTERUS—RUPTURE)   (PREGNANCY, COMPLICATIONS OF)

KOZBAGAROV, A.A.

The management of labor with premature escape of fluid. Akush.i
gin. 36 no.5:34-38 S-O '60.   (MIRA 13:11)

1. Iz rodil'nogo doma No.1 Semipalatinska (glavnyy vrach A.A.
Kozbagarov) i kafedry akusherstva i ginekologii Alma-Atinskogo
meditsinskogo instituta (zav. prof. Ia.S. Klenitskiy).
                    (LABOR (OBSTETRICS))

KOZBAGAROV, A.A., kand.med.nauk

Uterine tamponade in atonic hemorrhage. Akush.i gin. no.4:57-
59 '61.   (MIRA 15:5)

1. Zaveduyushchiy kafedroy akusherstva i ginekologii Semipala-
tinskogo meditsinskogo instituta.
                    (HEMORRHAGE, UTERINE)

KOZBAGAROV, A.A.

Modification of the suture in Sturmdorf's operation. Akush. i gin. 39 no.5:131-132 S-O '63.   (MIRA 17:8)

1. Iz kafedry akusherstva i ginekologii (zav. - dotsent A.A. Kozbagarov) Semipalatinskogo meditsinskogo instituta.

KOZBAGAROV, S.G., aspirant

Treatment of eczema at the resort of Alma-Arasan. Zdrav.Kazakh.
17 no.9:44-47 '57.   (MIRA 12:6)

1. Iz kafedry kozhnykh i venericheskikh bolezney Kazakhskogo
gosudarstvennogo meditsinskogo instituta.
    (ALMA-ARASAN--MINERAL WATERS, SULFUROUS) (ECZEMA)

EXCERPTA MEDICA Sec 13 Vol 13/8 Dermatology Aug 59

1991. SOME DATA ON THE TREATMENT OF PATIENTS WITH PSORIASIS
AND NEURODERMATITIS IN THE SPA ALMA-ARASAN (Russian text) -
Kozbagarov S. G. Dept. of Dermatol. and Vener. Dis., Kazakh Med.
Inst., Alma-Arasan - ZDRAVOOKHR.KAZ. 1958, 18/6 (45-49)
The treatment of patients with psoriasis and neurodermatitis in the spa Alma-
Arasan (Kazachstan), with mineral baths, gives better and more persistent results
than various other drug therapies and physiotherapeutical methods. It is in par-
ticular chronic forms of psoriasis and neurodermatitis that are suitable for spa
treatment. The complex action of the spa therapy has a favourable influence not
only on the clinical alterations but also on the disturbed function of the nervous
system.
                                                        Blelicky - Prague (XIII, 19)

MYASOYEDOV, M.; MOROZOV, N.; KOZBAGAROV, Zh.

State Bank's business and people. Den. i kred. 19 no.8:52-57
Ag '61.   (MIRA 14:9)

1. Zamestitel' glavnogo bukhgaltera Kirgizskoy respublikanskoy kon-
tory Gosbanka (for Myasoyedov). 2. Upravlyayushchiy Navashinskim
otdeleniyem Gosbanka Gor'kovskoy oblasti (for Morozov). 3. Uprav-
lyayushchiy Yuzhno-Kazakhstanskoy kontoroy Gosbanka (for Kozbagarov).
                        (Banks and banking)

KOZBAGAROV, Zh.

Increase the material self-interest of enterprises. Den. i kred.
21 no.9:53-55 S '63.   (MIRA 16:10)

1. Upravlyayushchiy Yuzhno-Kazakhstanskoy krayevoy kontoroy
Gosbanka.

KOZBENKO Yu. N.

GORBACHEVA, Anna Ivanovna, GORITSKIY, Aleksandr Vasil'yevich; KOZBENKO,
    Yuriy Nikolayevich; FATOVSKIY, P.A., otvetstvennyy red.; ZVORYKINA,
    L.N., red.izd-va; SABITOV, A., tekhn.red.

    [Experience in drifting with a heading machine] Opyt provedeniia
    shtrekov prokhodcheskimi shchitami. Moskva, Ugletekhizdat, 1958.
    57 p.   (MIRA 11:6)
              (Coal mines and mining)

89818

12.9100

S/193/60/000/005/001/012
A004/A001

AUTHOR: Kozbenko, Yu.N.

TITLE: The Model БОС (BOS) Drilling Machine

PERIODICAL: Byulleten' tekhniko-ekonomicheskoy informatsii, 1960, No. 5, pp.
               3-6

TEXT: The Institut TsNIIPodzemshakhtostroy has developed the new BOS
drilling machine intended for underground drilling of large-diameter boreholes,
e.g. ventilation shafts, drain wells and advanced boreholes. The illustration
shows that the machine is composed of: electromotor 1, reducer 2, spindle 3 with
clamping chuck 4, terminal switch 5, swivel mechanism 6, lifting mechanism 7,
underparriage 8, expanding props, electric start devices and drilling tool 9. The
drilling tool consists of a tapered helical or stepped drilling head 215 mm in
diameter with ВК -8 (VK-8) carbide-tipped cutting blades, a spiral expansion
reamer 500 mm in diameter for the reaming of boreholes in the reverse gear, drill
rods and connecting couplings. The reducer of the drilling machine can be c
swivelled through 360°C in the horizontal plane. and, with the aid of the lifting
mechanism, the reducer can be lifted and lowered through ± 15°. The machine is
controlled by a three-button control panel of the КУВ-6013 А (KUV-6013A) type.

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S/193/60/000/005/001/012
A004/A001

The Model bOC(BOS) Drilling Machine

The spindle feed is effected owing to the difference in the number of revolutions of the spindle and reducer nut. A friction coupling, making it possible to cut the spindle feed magnitude from 1 mm/rev to 0 at a constant spindle speed, is mounted between spindle and reducer nut. Two drilling speeds, viz. 39.3 and 69.3 mm/min are available. By switching over the reducer gears the reversing movement of the spindle is actuated and the borehole is reamed at 36.2 and 63.5 mm/min respectively. Since the machine is able to produce during drilling an axial stress of 15 tons, it is possible to drill holes in rock with a hardness of class 8 according to the scale of Prof. Protod'yakonov. The possible drilling depth of boreholes 215 mm in diameter in rock of the same hardness amounts to 50-60 m with subsequent expansion reaming to 500 mm. The electric equipment of the BOS drilling machine is explosion-proof, so that it can be used in gas and dust-contaminated mines. In 1959 two pilot models of the BOS machine were subjected to service tests. The machines were manufactured by the Skuratovskiy eksperimental'nyy zavod (Skuratov Experimental Plant) of the TsNIIPodzemshakhtostroy Institute. During service tests at the Nos. 22 and 2 mines "Churubay-Nurinskaya" of the Karaganda Coal Fields eight boreholes with a total length of 355 running meters were drilled in coal and rock of 3-6 Protod'yakonov scale hardness. During the service tests at the "Shushtalepskaya" No. 1 mine in the Kuzbas six boreholes 215 mm in diameter

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The Model 5 *OC*(BOS) Drilling Machine

S/193/60/000/005/001/012
AOO4/AOO1

with a total length of 215 running meters were drilled in class 5-6 rock according to the hardness scale of Protod'yakonov. One borehole was reamed to 500 mm in diameter to a depth of 35 m. During the service tests technical characteristics were obtained which hitherto could not be realized with any other type of drilling machine (see table).

Table:

1) Наименование операций	2) Диаметр скважины, мм	3) Коэф. крепости пород по шкале проф. Протодьяконова	4) Достигнутые скорости бурения, м/ч	
			a) техническая	b) средняя коммерческая
5) Бурение	215	3	4.16	2.66
6) Бурение	215	6	2.36	1.85
7) Разбуривание	430	6	2.15	1.77
8) Разбуривание	500	8	2.15	1.4
9) Извлечение бурового инструмента из скважины	215 и 500	3—8	42	6.9

1) kind of operation;   2) borehole diameter, mm;   3) rock hardness factor according to the scale of Prof. Protod'yakonov;   4) attained drilling speed, m/h;   a) technical;   b) mean commercial;   5) drilling;   6) drilling;   7) expansion reaming;   8) expansion reaming;   9) withdrawal of the drilling tool

from the borehole.
As a result of the service tests it was found that advanced boreholes of 430 and

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S/193/60/000/005/001/012
A004/A001

The Model БСС (BOS) Drilling Machine

215 mm in diameter made the blasthole utilization factor increase by 13-29%, labor consumption decrease by 12.5-21.5%, while the labor productivity of miners working at development faces increased up to 33%, compared to horizontal workings without advanced boreholes. The tests at the "Shushtalepskaya" No. 1 mine showed a reduction in the costs for the working of 1 running meter by 17% compared to working without advanced borehole. Analogous results were obtained at the No. 2 "Churubay-Nurinskaya" mine. The author points out, that in spite of the positive results obtained, the BOS drilling machine has a number of deficiencies, e.g. expansion reaming can only be effected with the reverse gear, insufficient drilling speed and resistance to wear of the drill bits, the necessity to dismantle the machine when being transported to the mine workings, etc. To eliminate these deficiencies the TsNIIPodzemshakhtostroy has developed a new BOS-type drilling machine with smaller overall dimensions, while the drilling and reaming speed has been increased 2-3 times. The resistance to wear of the drill bits has been increased by using ВК-6В (VK-6V) carbide-tipped cutting tools. Besides, boreholes 400 mm in diameter up to a depth of 50-60 m can be drilled in rock of 6-8 Protod'-yakonov scale hardness. In 1960 the first pilot series of the new BOS drilling machine will be manufactured by the Novocherkasskiy mashinostroitel'nyy zavod im. Nikol'skogo (Novocherkassk Mechanical Engineering Plant im.Nikol'skiy). There are 1 figure and 1 table.
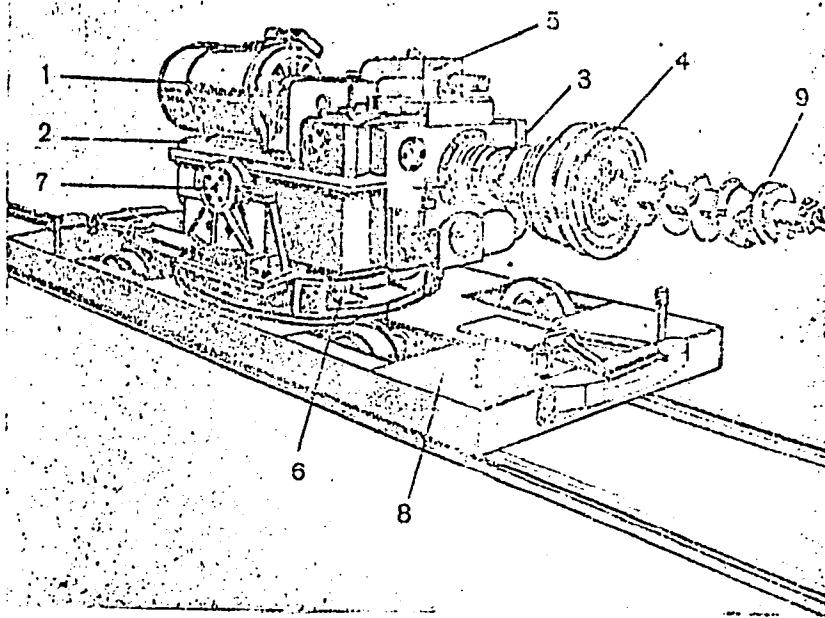
Card 4/5

89817

The Model 60C (BOS) Drilling Machine

S/193/60/000/005/001/012
A004/A001

Figure:

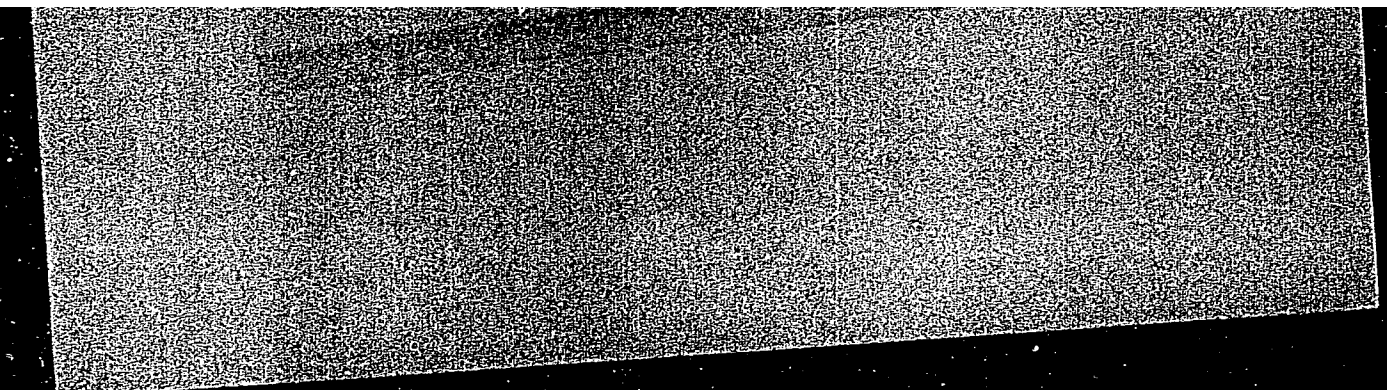Card 5/5

KOZBENKO, Yu.N., inzh.; GLADUN, I.N., inzh.

The BOS machine for boring horizontal holes. Shakht. stroi. 4
no. 5:19-22 My '60.   (MIRA 14:4)

1. TsNIIpodzemshakhtostroy. (Boring machinery)

KOZDERKOVA, V.

Microbiological problems in the rejuvenation of firs.

P. 547, (Sbornik Rada Lesnictvi) Vol. 30, no. 7, July 1957, Praha, Czechoslovakia

SO: Monthly Index of East European Acessions (EEAI) Vol. 6, No. 11 November 1957

KOZDERKOVA, V.; ~~BARTOS, J.~~

SCIENCE

Periodical CESKOSLOVENSKA MIKROBIOLOGIE. Vol. 3, no. 1, 1958.

KOZDERKOVA, V.; ~~BARTOS, J.~~ A new method of staining microorganisms in contact slide
technique. p. 58.

Monthly List of East European Accessions (EEAI) LC, Vol. 8, no. 3, March, 1959, Uncl.

KAMINSKIY, N.A., kand.tekhn.nauk; ARUTYUNYAN, N.S., inzh.;
KALININ, A.I., inzh.; KOZDOBA, A.A., inzh.; DMITRIYEVA, N.A., inzh.
YUDINA, T.N., inzh.

Neutralization of fats and oils in an alkali in neutralization
chambers. Masl. - zhir. prom. 27 no.12:37-40 D '61.
(MIRA 14:12)

1. Zaporozhskiy maslozhirovoy kombinat.
(Oils and fats)

KAMINSKIY, N.A., kand.tekhn.nauk; ARUTYUNYAN, N.S., inzh.;
    KALININ, A.I., inzh.; KOZDOBA, A.A., inzh.;
    DMITRIYEVA, N.A., inzh.; YUDINA, T.N., inzh.

Neutralization of fats and oils in an alkaline medium.
Masl.-zhir.prom. 28 no.7:13-14 Jl '62.   (MIRA 15:11)

1. Zaporozhskiy maslozhirovoy kombinat.
                     (Oils and fats)

KOZDOBA, A.A., inzh.

Oils and Fats Combine of Zaporozh'ye. Masl.-zhir. prom. 29
no.5:3 My '63.   (MIRA 16:7)

(Zaporozh'ye—Oil industries)

KOZDOBA, L. A., Cand Tech Sci -- (diss) "Study of the ~~affect~~
~~influence~~ *Effect* of the form and scheme of cooling of the gas turbine
rotor upon its temperature field by means of electric modeling --
on the integrator EGDA-6/53." Odessa, 1957. 10 pp (Min of ~~Navy~~, *Maritime Fleet*
Odessa Inst of ~~Engineers of the Maritime Fleet~~), 150 copies (KL, 2-58, 113)

-37-

KOZDOBA, L.A., inzh.

Investigating temperature fields of turbine disks by means of the
EGDA-6/53 integrator under given boundary conditions of the third
order. Izv. vys. ucheb. zav.; energ. no.3:65-71 Mr '58.

(MIRA 11:5)

1.Odesskiy institut inzhenerov morskogo flota.
(Gas-turbine disks)

SOV/143-58-9-12/18

AUTHOR: Kozdoba, L.A., Candidate of Technical Sciences

TITLE: Investigation of the Effects of Apertures on the
               Temperature Field of a Disc (Issledovaniye vliyaniya
               otverstiy na temperaturnoye pole diska)

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy - Energetika,
               1958, Nr 9, pp 73-76 (USSR)

ABSTRACT: The paper examines the effects of apertures on the
               temperature field of holed discs, used in steam and
               gas-turbine construction. The author discusses the
               results of determining temperature fields in discs of
               even thickness in the absence of heat emission from
               the disc faces. Tests were made with the help of an
               EGDA-6/53 electrointegrator. Limiting conditions of
               the type $\frac{T}{n}$ = 0 were assumed on the surface of the
               openings. For setting III degree limiting conditions,
               the method of modelling the disc's temperature fields
Card 1/3   can be used. The conversion of nominal to actual

Investigation of the Effects of Apertures on the Temperature Field of a Disc

SOV/143-58-9-12/18

temperatures is effected by the formula: $t = t_r + \dfrac{t_y}{100}(t_R - t_r)$ where, t = temperature in $^{\circ}C$, t_y = temperature in nominal units, t_R = temperature at the outer radius in $^{\circ}C$ and t_r = temperature at the inner radius in $^{\circ}C$. The use of electric modelling on the integrator allows not only a qualitative, but a quantitative picture of the temperature fields in discs weakened by holes. Discs with holes of a radius less than $(3.5-4.0\%)R$ and up to 10 in number have practically the same temperature fields as discs without holes. Changes in the temperature field become considerable as the diameter of the holes increases. In all cases, interesting from the viewpoint of turbine construction, an increased concentration of thermal currents was found around the rim of the holes. An increase in the radius of the hole centers causes a decrease in temperature variations (less change in thermal resistance) but the nature of the temperature

Card 2/3

Investigation of the Effects of Apertures on the Temperature Field
of a Disc

SOV/143-58-9-12/18

        field variation remains the same as with smaller radii
r_z. There are 2 drawings, 3 graphs and 4 Soviet
references.

ASSOCIATION: Kafedra sudovykh silovykh ustanovok Odesskogo instituta
inzhenerov morskogo flota (Chair of Ships' Power
Plants, Odessa Institute for Marine Engineers)

SUBMITTED: June 26, 1958

Card 3/3

KOZDOBA, L.A., inzh.

Investigating the temperature field of plates on an EGDA-6/53-type integrator. Nauch.trudy OIIMF no.16:77-94 '58.   (MIRA 11:11)
(Plates, Iron and steel)   (Integrators)

KOZDOBA, L. O.

PHASE I BOOK EXPLOITATION   SOV/2775

Akademiya nauk Ukrayins'koyi RSR. Instytut matematyky

Lastosuvannya metodu elektrohidrodynamichnykh analohiy do rozv'yazannya tekhnichnykh zadach (Application of the Method of Electrohydrodynamic Analogy to the Solution of Various Engineering Problems) Kyyiv, Vyd-vo AN URSR, 1959. 160 p. 1,000 copies printed.

Ed. of Publishing House: T.K. Mamenuk; Tech. Ed.: O.O. Matviychuk; Editorial Board: P.F. Fil'chakov (Resp. Ed.), V.M. Ostapenko (Resp. Secretary), Yu.V. Blukhoshchenа'kyy, Y.B. Pohreby'kyy, and V.I. Shamans'kyy.

PURPOSE: This book is intended for scientific workers, engineers, Aspirants and students.

COVERAGE: This book is a collection of articles on the application of the electrohydrodynamic analog method to the solution of various engineering problems. Among the topics discussed is the modelling of certain technical problems on resistance paper by the electrohydrodynamic analog method. Special attention is given to the study of various problems of filtration, in both homogeneous and nonhomogeneous ground, problems of plane bending, heat exchange problems, modelling electro-osmotic water-level fall, and the conformal mapping problem. Problems of the physical and technical properties of resistance paper and the accuracy of the electrohydrodynamic analog method are studied and the new, more universal model of the EGDA integrator is described. All the articles and with summaries in Russian and English.

TABLE OF CONTENTS:

From The Editors

9(6)

S/143/60/000/02/014/018
D043/D002

AUTHOR: Kozdoba, L.A., Candidate of Technical Sciences

TITLE: Using Measuring Circuits of "EGDA-6/53" Integrators
              for Investigating Temperature Fields Under Transient
              Conditions

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Energetika,
              1960, Nr 2, pp 103-110 (USSR)

TITLE: The author discusses formulas for calculating the
              resistor network which is used as an electrical ana-
              log for solving three-dimensional heat conduction
              problems with unequal spatial intervals into which
              the part to be investigated is divided. P.F. Fil'cha-
              kov and V.I. Panchishin described the "EGDA-6/53"
              integrator $\angle$ Ref. 1 $\angle$. In four previous papers
              $\angle$Ref. 2 - 5$\angle$, the author reported on investigations
              of temperature fields of turbine rotors during

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S/143/60/000/02/014/018
D043/D002

Using Measuring Circuits of "EGDA-6/53" Integrators for Investigating Temperature Fields Under Transient Conditions

steady-state operations using an analog made of electroconductive paper. G. Liebmann ∠Ref 6_7 explained the calculation of a resistor network for solving one- and two-dimensional heat conduction problems. The circuit diagram of an "EGDA-6/53" integrator with a resistor network for solving one-dimensional problems is shown (Figure 1). The resistor network consists of equal resistors, for example, "KMS-4" and "KMS-6" resistance boxes may be used. The resistor network is very simple and inexpensive compared to the expensive and complicated capacitor and resistor network of L.I. Gutenmakher ∠Ref 7_7. Capacitor and resistor networks do not provide sufficient accuracy for boundary conditions of the first and third order which are frequently

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S/143/60/000/02/014/018
D043/D002

Using Measuring Circuits of "EGDA-6/53" Integrators for Investigating Temperature Fields Under Transient Conditions

found in engineering problems. The "EGDA-6/53" with a resistor network (Figure 2) will produce results with an accuracy adequate for engineering purpose, but the calculation speed is considerably higher than with the more complicated analytical method. The author explains an equation in finite differences approximating the differential equation describing transient heat conduction phenomena with unequal spatial intervals. He gives two examples for using this method. A comparison of results obtained by the analog method with results obtained by A.V. Lykov's analytical method $\angle$ Ref. 11 $\angle$ is shown (Table 2). The accuracy of the method is said to be 2-3%. The author's investigations show that the accuracy of the solution increases with a

Card 3/4

S/143/60/000/02/014/018
D043/D002

Using Measuring Circuits of "EGDA-6/53" Integrators for Investigating Temperature Fields Under Transient Conditions

reduction of the time interval. The "EGDA-6/53" integrator was used with a resistor network analog for solving a number of problems for transient heat conduction with different boundary conditions of the first and third order, for determining temperature fields of turbine rotors, internal combustion engine pistons, fire-proof walls, etc. There are 1 circuit diagram, 1 set of diagrams, 2 tables, 11 references, 10 of which are Soviet and 1 English.

ASSOCIATION: Odesskiy institut inzhenerov morskogo flota (Odessa Institute of Marine Engineers)

SUBMITTED: September 22, 1959, by the Kafedra sudovykh silovykh ustanovok (Department of Ship Power Plants)

Card 4/4

S/170/60/003/007/013/018/XX
B019/B067

AUTHOR: Kozdoba, L. A.

TITLE: Application of Resistor Networks to Solve the Problem of
           Unsteady Heat Conduction

PERIODICAL: Inzhenerno-fizicheskiy zhurnal, 1960, Vol. 3, No. 7,
             pp. 72 - 79

TEXT:. The author describes the simulation of the three-dimensional
problem of heat conduction by means of resistor networks, obtains a
differential equation for the three-dimensional equation of heat con-
duction, and gives formulas for the electrical simulation for calculating
the individual resistors according to the scheme shown in Fig.1. The
problem of axisymmetric heat conduction is discussed in particular. The
applicability of this method is demonstrated by three examples, the
analytical solutions of which are known. It was found that the method
suggested is suitable for technical purposes. There are 1 figure,
3 tables, and 7 references: 5 Soviet and 2 US.

Card 1/2

Application of Resistor Networks to Solve the   S/170/60/003/007/013/018/XX
Problem of Unsteady Heat Conduction   B019/B067

ASSOCIATION: Institut inzhenerov morskogo flota, g. Odessa (Institute of
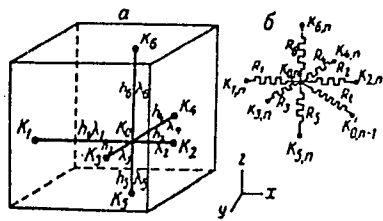   Engineers of the Sea-going Fleet, Odessa)

Рис. 1. Схема электрического моделирования трехмерной задачи нестационарной теплопроводности при помощи сеток сопротивлений:

а—элементарный объем вокруг точки K_{i}
б—электрическая модель этого объема

Card 2/2

88006

11.9100

S/170/60/003/012/003/015
B019/B056

AUTHORS: Kozdoba, L. A., Makhnenko, V. I.

TITLE: The Electrical Simulation of Non-steady Temperature Fields
              in the Presence of Variable Heat Sources

PERIODICAL: Inzhenerno-fizicheskiy zhurnal, 1960, Vol. 3, No. 12,
              pp. 24-28

TEXT: A survey is given of expressions for calculating the simulator
parameters for the simulation of non-steady three-dimensional thermal
conduction problems. First, the thermal conduction equation of a three-
dimensional problem in finite differences with existence of heat sources
at finite intervals in Cartesian coordinates is given, non-uniform spatial
intervals being assumed. By means of the Kirchhoff laws, formulas are then
obtained for the resistors of the simulator. Simulation at boundary con-
ditions of the I, II, III, and IV kind is discussed. By means of an
integrator of the type ЭГДА -6/53 (EGDA-6/53) and a resistor network
worked out according to formulas obtained here, some temperature fields
are calculated. Three examples are finally discussed more in detail.

Card 1/2

88006

The Electrical Simulation of Non-steady   S/170/60/003/012/003/015
Temperature Fields in the Presence of Variable   B019/B056
Heat Sources

There are 3 figures and 7 references: 6 Soviet and 1 US.

ASSOCIATION: Institut inzhenerov morskogo flota, g. Odessa (Institute
               for Engineers of the Ocean Fleet, Odessa)

SUBMITTED: April 22, 1960

Card 2/2

KOZDOBA, L. A., and MAKHNENKO, V. I.

"Electrical Modelling of Temperature Fields at Welding
and Soldering of Details Having Different Forms.

Report submitted for the Conference on Heat and Mass Transfer,
Minsk, BSSR, June 1961.

KOZDOBA, L. A.

>"Application of the Method of Electrical Modelling
>in Ohmic Resistance for Solution of Non-stationary
>Thermal Conductivity Problems.

Report submitted for the Conference on Heat and Mass Transfer,
Minsk, BSSR, June 1961.

KOZDOBA, L.A.; MAKHNENKO, V.I.

      Electric modeling on ohmic resistance grids of mobile temperature
      fields. Inzh.-fiz.zhur. 4 no.11:94-98 N '61.   (MIRA 14:10)

      1. Odesskiy institut inzhenerov morskogo flota.
          (Electromechanical analogies) (Heat--Conduction)

$S/143/61/000/010/001/001$
$D269/D304$

26. 2/20

AUTHOR: Kozdoba, L.A., Candidate of Technical Sciences,
               Docent

TITLE: The influence of certain factors on the temperature
               field in the solid rotor of a radial, inward flow,
               gas turbine under steady conditions

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Energetika,
               no. 10, 1961, 98-103

TEXT: An investigation of the temperature field in the rotor
was carried out using a network of ohmic resistances and with the
assistance of ЭГДА 6/53 (EGDA 6/53) integrator, supplemented with a
voltage divider for 200 positions. Analytical calculations and re-
sults of electrical simulation confirmed the validity of a formula
for the coefficient of heat transfer from the gas to the bladed sur-
face of the rotor as given by the author in his previous work (Ref.
8: Raschet uslovnykh koeffitsientov teplootdachi at gaza k disku

Card 1/3

The influence of certain factors...   S/143/61/000/010/001/001
                                         D269/D304

gazovoy turbiny pri analiticheskikh i opytnykh issledovaniyakh
temperaturnykh poley. Nauchn. tr. OIIMF, vyp. 18, 1959). Results
of the investigation confirmed also that in the analytical formulae
it is necessary to take into account the effect of intensification
of heat transfer in the field of centrifugal forces when the flow
is centrifugal. This effect was evident in the centrifugal compres-
sor, but was absent in the centripetal turbine. The following fac-
tors influencing the temperature field were investigated: a) Temper-
ature of gas; b) heating of air entering rotor clearance; c) varia-
tion of the coefficient of thermal conductivity of rotor material
with increasing temperature; temperature of sealing bush and rotor
shaft. The following conclusions were reached: a) Temperature in-
crease of the gas causes a considerable temperature rise of the hot-
test sections of the rotor in the region of the bladed surface and
has little effect on the temperature in the region of attachment of
the rotor to the shaft; b) heating of air entering clearance affects
the temperature field only at the rim of the rotor; c) variation
of the coefficient of thermal conductivity of rotor material has

Card 2/3

The influence of certain factors...   S/143/61/000/010/001/001
                                          D269/D304

only a slight effect on the temperature field; d) the influence of temperature change of the sealing bush on the temperature of the hottest parts of the rotor is negligible. The use of the method described allows a speedy and sufficiently accurate choice of the best rotor design and a selection of the most suitable conditions for exploitation. There are 5 figures and 14 Soviet-bloc references.

ASSOCIATION: Odesskiy institut inzhenerov morskogo flota (Odessa
               Institute of Marine Engineers)

SUBMITTED: October 3, 1960

Card 3/3

KOZDOBA, L.A.; MAKHENKO, V.I.

Electric modeling of nonstationary temperature fields with variable
sources of heat. Inzh.-fiz. zhur. no.12:24-28. D '61.   (MIRA 14:3)

1. Institut inzherenov morskogo flota, g. Odessa.
             (Thermodynamics—Electromechanical analogies)

S/170/61/004/004/011/014
B125/B203

AUTHORS: Kozdoba, L. A., Makhnenko, V. I.

TITLE: Solution of some problems of metallurgic heat engineering
              by means of an electric grid integrator

PERIODICAL: Inzhenerno-fizicheskiy zhurnal, v. 4, no. 4, 1961, 102-104

TEXT: The authors studied temperature fields in ingots and molds by the
method described in the authors' previous papers (Kozdoba, L. A., IFZh,
III, no. 7, 1960; Kozdoba, L. A., Makhnenko, V. I., IFZh, III, no. 12,
1960). The method concerns the solution of problems of unsteady heat
conduction with available heat sources taking account of the dependence
of metallo-physical properties of the material on temperature and
coordinates by electric simulation with ohmic resistance grids. The
temperature field of ingots and molds was simulated by an integrator
circuit of the type ЭГДА-6/53 (EGDA-6/53) (Fil'chakov, P. F.,
Panchishin, V. I., Integratory EGDA-6/51 i EGDA-6/53, Izd.KGU im.
Shevchenko, 1955) with additionally developed voltage dividers for 100 and
200 points. The resistances simulating the heat source are determined

Card 1/6

Solution of some problems...

S/170/61/004/004/011/014
B125/B203

from the formula $R_q = V_M K c R_\tau / q\beta$ (1), where V_M is the voltage applied to resistance R_q (it is chosen so that $V_M \gg V_{o,n}$), K is the scale factor for transition from voltage to temperature, c is the specific heat in kcal/kg·deg, R_τ is the temporary resistance depending on thermal diffusivity and on time and space integrals, q is the latent crystallization heat in kcal/kg, and β is a coefficient varying between 1 and 0 during the experiment. After calculating R_q from (1) at $\beta = 1$, the energy V_M is applied via R_q to the given sites of the grid. If the voltage in the site is higher than the voltage corresponding to the crystallization temperature, R_q is increased by reducing β until the voltage corresponds to the crystallization temperature. At the next instant, the resistance $R_q = V_M K c R_\tau / q(1-\beta)$ (2) is applied to this site. By this procedure, the fact can be taken into account that not the entire elementary volume corresponding to the given site can crystallize after the time interval $\delta\tau$. The differential equation system describing the solidification of steel in the ingot with the respective boundary con-

Card 2/6

Solution of some problems...

S/170/61/004/004/011/014
B125/B203

ditions is, in the absence of overheating of the melt, similar to the
system of equations and boundary conditions for the voltages in the ohmic
resistance grid. The following assumptions were made when solving this
system: (1) The heat conductivity λ and the specific heat c are inde-
pendent of temperature. (2) Steel solidifies at constant crystallization
temperature. (3) The problem is one-dimensional. The solution can be
found without these restrictions by the method of electric simulation. To
check the accuracy of simulation, the authors determined the temperature
field and the curve for the advance of the crystallization front for a
problem with exact analytical solution, namely for the crystallization of
an infinite plane body at constant temperature of its surface (Stefan's
problem). In Fig. 1, $Q_k = q/c(t_k - t_o)$ denotes the dimensionless latent
crystallization heat, t_k and t_o the crystallization temperature and the
temperature of the body surface, respectively. Fig. 2 shows the advance
of the crystallization front in a 7-ton casting, and compares the results
of electric simulation with experimental results. The data of electric
simulation agree satisfactorily with the data of the analytical calcula-
tion and with the experimental results, the differences not exceeding 5%.

Card 3/6

Solution of some problems...

S/170/61/004/004/011/014
B125/B203

For the problems discussed here, the method of electric simulation is accurate to 1-2%; this accuracy may be even increased by a proper choice of space and time intervals. There are 2 figures and 6 Soviet-bloc references.

ASSOCIATION: Institut inzhenerov morskogo flota, g.Odessa (Institute of Sea-going Fleet Engineers, Odessa)

SUBMITTED: August 8, 1960

Card 4/6

KOZDOBA, L.A., kand.tekhn.nauk, dotsent

Effect of certain factors on the temperature field of the solic rotor of centrifugal radial gas turbine under steady-state operating conditions. Izv. vys. uchel. zav.: energ. A no.10:98-103 O '61.
(MIRA 14:11)

1. Odesskiy institut inzhenerov morskogo flota. Predstavlena kafedroy sudovykh silovykh ustanovok.
(Gas turbines)

S/196/63/000/001/021/035
E073/E435

AUTHORS: Kozdoba, L.A., Makhnenko, V.I.

TITLE: Solution of the problem of non-steady state heat
             conductivity with variable sources (sinks) of heat for
             given boundary conditions type 1-4 on electric models -
             resistance networks

PERIODICAL: Referativnyy zhurnal, Elektrotekhnika i energetika,
             no.1, 1963, 5, abstract 1 G26. (Dokl. 4-y Mezhvuz.
             konferentsii po primeneniyu fiz. i matem.
             modelirovaniya v razlichn. otraslyakh tekhn. Sb. 1.
             (Reports of the 4th Intercollegiate Conference on the
             Application of Physical and Mathematical Modelling in
             Various Branches of Technology. Collection 1)
             Moscow, 1962, 251-265)

TEXT: There is an analogy between the equations of heat
conductivity in the form of finite differences for given boundary
conditions of type 1-4 with variable heat sources and variable
thermo-physical properties of the materials and the Kirchoff's
law.   Therefore, many practical problems of non-steady state heat
Card 1/2

Solution of the problem ...

S/196/63/000/001/021/035
E073/E435

conductivity with heat sources can be solved by the method of simulation on resistance networks. The parameters of the simulating resistance network are determined as a function of the geometry and the thermo-physical properties of the body under investigation. Solution examples are given for: a) heat propagation during welding or facing of bodies of any arbitrary shape; b) on non-steady state heat conductivity in presence of latent heat sources; c) investigation of the influence of the accumulation capacity of buildings on their heating up (cooling down). 10 references.

[Abstractor's note: Complete translation.]

Card 2/2

S/124/63/000/001/014/080
D234/D308

AUTHOR: Kozdoba, L.A.

TITLE: Some results of an investigation of the temperature
                 fields of rotors of gas turbines in stationary and
                 transitional operation, by the method of electrical
                 simulation on networks of ohmic resistances

PERIODICAL: Referativnyy zhurnal, Mekhanika, no. 1, 1963, 37,
                 abstract 1B217 'Dokl. 4-y Mezhvuz. konferentsii po
                 primeneniyu fiz. i matem. modelirovaniya v razlichn.
                 otraslyakh. Sb. 1. M., 1962, 277-288)

TEXT: For determining temperature fields of gas turbine
rockets, electric simulation was used, based on electrothermal ana-
logy, with a measuring circuit ЭГДА-6/53 (EGDA-6/53), EGDA-9/60
mass-produced integrators with additionally manufactured voltage
dividers having 100 and 200 points. The author investigated the
effects of various factors (different heat transfer coefficients,
gas temperature in the section between inlet and outlet valve, heat

Card 1/2

Some results of an investigation ...

S/124/63/000/001/014/080
D234/D308

conduction coefficient, initial temperatures and heating of the cooling air, etc.) on temperature fields of disc and drum rotors of gas turbines, as well as compound and solid rotors of a gas turbine installation consisting of a centripetal turbine and a centrifugal compressor. Some results of these investigations for transitional and stationary operation are given.
/¯Abstracter's note: Complete translation_/

Card 2/2

S/114/62/000/004/008/008
E114/E454

26.2120

AUTHOR: Kozdoba, L.A., Candidate of Technical Sciences, Docent

TITLE: Steady state temperature distribution in a built-up
             rotor of a radial, inward flow gas turbine

PERIODICAL: Energomashinostroyeniye, no.4, 1962, 41-43 and 45

TEXT: Influence of boundary conditions and of variations in the
assumed coefficients of heat transfer and heat conductivity on
the temperature distribution in a built-up rotor were
investigated by means of an electrical analogue machine
comprising a rectangular mesh grid of variable resistances,
having class 0.2 accuracy, fed from 200-point potential divider,
and with 91 points at which measurements were taken by means of
integrating measuring equipment ЭГДА-6/53 (EGDA-6/53). Radial
dimension of the mesh varied between 0.0216 and 0.078 m.
Axial dimension of the mesh varied between 0.0025 and 0.033 m.
In optimum conditions the error did not exceed 1 to 3% which was checke
checked against analytical solutions for easy configurations.
The inlet gas temperature was taken as 650, 700 and 720°C
at 1.65 atm pressure.   Values of heat transfer coefficients were
Card 1/2

Steady state temperature ...

S/114/62/000/004/008/008
E114/E454

assumed, based on previous experimental data.   Forty-eight different boundary conditions were tried.   It was found that temperature distribution depended a great deal on the initial gas temperature and on the cooling air temperature: but variations in heat conduction and heat transfer coefficients had negligible effect.   It was concluded that heat transfer coefficient between the gas and the blading could vary by plus or minus 25% and coefficients of heat transfer between compressor blading and main air, and between the turbine blading and cooling air could vary by plus or minus 50% and still give a result within 25 to 35°C of the original.   Temperature of gas and of the cooling air could lead to errors of 50 to 60°C.   Whenever surfaces are rifled or ribbed, the assumptions normally made should be carefully examined. It is necessary to make allowance for the heating of the cooling air on its passage through the turbine before it reaches points of its application.

Card 2/2

KOZDOBA, L.A., kand.tekhn.nauk; SEMENOV, V.S., inzh.

Use of electrical simulation for determining the temperature field of an internal combustion engine. Izv. vys. ucheb. zav.; energ. 5 no.2:79-84 F '62. (MIRA 15:3)

1. Odesskiy institut inzhenerov morskogo flota. Predstavlena kafedroy dvigateley vnutrennego sgoraniya.
(Gas and oil engines) (Heat—Transmission)

S/170/62/005/003/012/012
B108/B104

AUTHOR: Kozdoba, L. A.

TITLE: Use of electric simulators in heat engineering problems

PERIODICAL: Inzhenerno-fizicheskiy zhurnal, v. 5, no. 3, 1962, 118 - 131

TEXT: This article is a survey on methods of solving heat conduction
problems, chiefly with electric simulators. There are 1 table and
230 references: 115 Soviet and 115 non-Soviet. The four most recent
references to English-language publications read as follows: Cima R. M.,
London A. L. Trans. ASME, 80, 5, 1169, 1959; Horvay G. Trans. ASME, Ser.
C., J. of Heat Transfer, 82, NL, 37, 1960; Kayan C. F., McGague J. A.
ASHRAE Journal, 1, 3, 77, 1959; Paschkis V. Trans. ASME, 81, Ser. C, N 2,
144, 1959.

ASSOCIATION: Institut inzhenerov morskogo flota, g. Odessa (Institute of
            the Engineers of the Ocean Fleet, Odessa)

SUBMITTED: September 25, 1961

Card 1/1

KOZDOBA, L.A., kand.tekhn.nauk, dotsent; MAKHNENKO, V.I., inzh.

Calculation of the parameters of the resistance network of an electric
model used for solving a nondimensional equation of transient heat
conductance. Izv. vys. ucheb. zav.; energ. 5 no.6:98-103 Je '62.
(MIRA 15:6)

1. Odesskiy institut inzhenerov morskogo flota. Predstavlena
kafedroy termodinamiki i obshchey teplotekhniki.
        (Heat—transmission) (Thermodynamics—Electromechanical analogies)

KOZDOBA, L.A., kand.tekhn.nauk, dotsent

Temperature fields of the composite rotor of a radial centripetal
gas turbine operating under steady conditions. Energomashino-
stroenie 8 no.4:41-43,45 Ap '62.   (MIRA 15:4)
                        (Heat—Transmission)
            (Impellers—Electromechanical analogies)

S/170/63/006/002/009/018
B164/B102

AUTHOR: Kozdoba, L. A.

TITLE: Simulation solution of a system of differential equations
               of the heat and mass transfer by means of ohmic resistance
               grids

PERIODICAL: Inzhenerno-fizicheskiy zhurnal, v. 6, no. 2, 1963, 69-74

TEXT: The system of differential equations for the heat and mass
transfer set up by A. V. Lykov for the one-dimensional case (GITTL, 1954,
Gosenergoizdat 1956) has the form

$$\frac{\partial l}{\partial \tau} = \frac{1}{c \gamma_0} \frac{\partial}{\partial x} \left(\lambda \frac{\partial l}{\partial x} \right) + \frac{\varepsilon \rho}{\iota} \frac{\partial u}{\partial \tau} \cdot \qquad (1).$$

$$\frac{\partial u}{\partial \tau} = \frac{\partial}{\partial x} \left(a' \frac{\partial u}{\partial x} \right) + a' \delta \frac{\partial l}{\partial x} ,$$

Card 1/3

S/170/63/006/002/009/018
B164/B102

Simulation solution of a ...

The boundary conditions for x = R of a 2R thick wall having a temperature
and moisture distribution symmetrical with the central plane x = 0 are:

$$-\lambda \left(\frac{\partial t}{\partial x} \right)_{x=R} + \alpha [t_c - t(R, \tau)] + \rho (1 - s) q''(\tau) = 0 , \qquad (2)$$

$$a' \gamma_0 \left(\frac{\partial u}{\partial x} \right)_{x=R} + a' \gamma_0 \delta \left(\frac{\partial t}{\partial x} \right)_{x=R} + q'(\tau) = 0. \qquad (3)$$

t is the temperature, u the moisture, $\lambda = \lambda(t,u)$ and $a' = a'(t,u)$ are the
transfer coefficients, τ the time. Assuming $a'\delta = 0$, expressions are
obtained for the parameters of an ohmic resistance grid which are
analogous to those given by the author (IFZh, no. 7, 1960; Energetika,
2, 1960) for non-stationary heat conduction and which give the solution
for the temperature (R^t-net) and the moisture distribution (R^u-net). The
iteration process for the electrical grid parameters is described with
which the distribution can later be determined if the boundary conditions
and the initial distribution of t and u are known. As an example the
Card 2/3

Simulation solution of a ...

problem of a wall (thickness 9 cm, initial temperature $t = 10^\circ C$, initial moisture $u = 0.27$) treated numerically by P. P. Yushkov (Izd. AN BSSR, Minsk 1958) is solved in a medium of $t = 90^\circ C$ using the iteration process and both results are compared in tables. An agreement sufficiently good for practical use is obtained. Sources of error are discussed. There are 2 figures and 2 tables.

ASSOCIATION: Institut inzhenerov morskogo flota, Odessa (Institute for Naval Engineers)

Card 3/3

KOZDOBA, L. A.; MAKHNENKO, V. I.

Use of electric modeling on ohmic resistance grids for the investigation of heat distribution during welding and hard facing. Avtom. svar. 15 no.11:8-15 N '62.
(MIRA 15:10)

1. Odesskiy institut inzhenerov morskogo flota.

(Welding)   (Heat—Transmission)

S/271/63/000/003/046/049
A060/A126

AUTHORS: Kozdoba, L.A., Makhnenko, V.I.

TITLE: Solving problems of transient heat conduction with variable heat
                sources (sinks) with specified boundary conditions of the I — IV-th
                kind using electrical resistor-grid simulators

PERIODICAL: Referativnyy zhurnal, Avtomatika, telemekhanika i vychislitel'naya
                tekhnika, no. 3, 1963, 80, abstract 3B473 (Dokl. 4-y Mezhvuz. kon-
                ferentsii po primeneniyu fiz. i matem. modelirovaniya v razlichn.
                otraslyakh tekhn. Sb. I, Moscow, 1962, 251 - 265)

TEXT: A method is cited for simulation on resistor grids. The method
consists in the following: on the basis of general considerations of the theory
of similarity the differential equations of heat conduction, the initial and
boundary conditions are reduced to a dimensionless form. In writing these equa-
tions in terms of finite differences and in the rectangular coordinate system
the analogy to the expression for Kirchoff's law is apparent if the potential at
a node is appropriately set. The resistors correspond to the coefficients in

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S/271/63/000/003/046/049
A060/A126

Solving problems of transient heat conduction ....

the finite-difference expressions. A number of examples are cited of the appli-
cation of the method to the solution of problems of transient heat conduction:
heat propagation under welding or building up of bodies of arbitrary shape, the
investigation of problems of transient heat conduction in the presence of hidden
sources (heat sinks), the study of the influence of the heat capacity of parts
upon their heating (cooling). The conclusion is drawn that the method of resis-
tor grids may be successfully applied to the solution of many problems of tran-
sient heat conduction. A distinction of the method is the possibility of its
application to research and development organizations and to production, since
the capital and operating expenditures are very small. There are 4 figures and
10 references.

A. K.

[Abstracter's note: Complete translation]

Card 2/2

S/271/63/000/003/025/049
A060/A126

AUTHOR: Kozdoba, L.A.

TITLE: Some problems of the technology of electrical simulation of problems of transient heat conduction using resistor grids

PERIODICAL: Referativnyy zhurnal, Avtomatika, telemekhanika i vychislitel'naya tekhnika, no. 3, 1963, 7, abstract 3B37 (Dokl. 4-y Mezhvuz. konferentsii po primeneniyu fiz. i matem. modelirovaniya v razlichn. otraslyakh tekhn. Sb. 1, Moscow, 1962, 267 - 276)

TEXT: It is noted that the resultant error of solution of differential equations on resistor grids consists in the error of the method of solution arising as a result of replacing the differential equation by a finite difference equation, the systematic error connected with the inexact manufacture of the resistors, errors arising on account of inexact setting of potentials, and errors of measurement. The paper is devoted to the investigation of the influence of the values of time- and space-intervals on the resultant error under the condition that the last-mentioned three types of errors remain constant. The resis-

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S/271/63/000/003/025/049
A060/A126

Some problems of the technology of electrical ....

tor grid consisted of variable resistance boxes of precision class 0.2. The selection of the optimal time and space interval ensuring the desired accuracy with a minimum time expenditure was carried out by solving with a doubled and halved interval. As an example, the author cites the determination of a transient field of a rod and considers the influence of the magnitude of the time and space interval on the precision of the solutions. There are 4 figures and 10 references.

A. S.

[Abstracter's note: Complete translation]

Card 2/2

S/271/63/000/001/042/047
D413/D308

AUTHOR: Kozdoba, L.A.

TITLE: Some results of the investigation of the temperature
                  fields of gas turbine rotors under stationary and
                  transient conditions, using the technique of elec-
                  trical simulation by resistive impedance networks

PERIODICAL: Referativnyy zhurnal, Avtomatika, telemekhanika i
                  vychislitel'naya tekhnika, no. 1, 1963, 51, abstract
                  1B283 (Dokl. 4-y Mezhvuz. konferentsii po primenen-
                  iyu fiz. i matem. modelirovaniya v razlichn. otras-
                  lyakh tekhn. Sb. 1, M., 1962, 277-288)

TEXT: In investigating the temperature fields of gas tur-
bines, one normally has to solve the differential equations of heat
conduction in cylindrical coordinates and for the case of axial sym-
metry. For the solution of the equations, it is proposed to use
electrical simulation by networks of resistive impedances for cer-
tain sections of the turbine rotor. For investigating the tempera-

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S/271/63/000/001/042/047
D413/D308

Some results of the investigation ...

ture fields it is proposed to use a measuring circuit of type ЭГДА-6-63 (EGDA-6-63) or ЭГДА-9/60 (EGDA-9/60) integrators with the addition of voltage dividers made up with 100 and 200 positions. The test results from apparatus of various designs are presented. The temperature field is given for a compound rotor of a radial centripetal gas turbine, and also the temperature distribution in the rotors of the high- and low-pressure turbines under 100% power operating conditions for a marine gas turbine installation and for the drum rotor of a multistage gas turbine. 3 figures.
/Abstracter's note: Complete translation_7

Card 2/2

S/114/63/000/004/005/005
A004/A127

AUTHOR: Kozdoba, L.A., Lecturer, Candidate of Technical Sciences

TITLE: The temperature fields of the runner of the radial centripetal
             gas turbine under starting conditions

PERIODICAL: Energomashinostroyeniye, no. 4, 1963, 40 - 42

TEXT: The author presents the results of investigating the influences
of certain factors on the temperature field of the built-up runner of radial
centripetal gas turbines under starting conditions, using the methods of
electrical simulation. He points out that a starting time in the range of
0 - 30 sec, other conditions being equal, does not substantially affect the
temperature field of the turbine wheel within 100 sec after beginning of
the start. The maximum temperature drop over the radius of the gas turbine
wheel may exceed the temperature drop over the radius under stationary con-
ditions by a factor of 3. The ratio between the maximum temperature drop
at the start and the temperature drop under stationary conditions depends
on the gas temperature in front of the gas turbine runner blades. Appropriate
formulae and graphs are presented. There are 4 figures and 1 table.

Card 1/1

L 10122-63   EPF(c)/EWT(1)/EPF(n)-2/BDS--AFFTC/ASD/SSD--Pr-4/Pb-4--
WW/IJP(C)
ACCESSION NR: AP3000975   S/0229/63/000/005/0021/0023

AUTHOR: Kozdoba, L. A., Candidate of Technical Sciences

TITLE: Investigation of the temperature fields in the rotors of naval
gas-turbine powerplants in transitional regimes.

SOURCE: Sudostroyeniye, no. 5, 1963, 21-23

TOPIC TAGS: Naval powerplants, ship powerplants, ship gas turbine, naval gas
turbine, transitional operational regimes, temperature distribution in gas
turbines, temperature distribution in turbine rotors, gas-turbine rotor

ABSTRACT: The paper sets forth results obtained by investigation, by means
of electrical analog simulation on ohmic-resistance networks, of the temperature
fields during transition regimes of the high-pressure and low-pressure rotors of
a naval gas-turbine powerplant. In the analog simulation the variability of the
thermophysical characteristics of the materials with temperature was taken into
account. Changes in the time interval in the process of the solution and the
variability and changes in the boundary conditions were made possible. It was
found that the accuracy of the solution depends on the selection and time and

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ACCESSION NR: AP3000975

diseintervals, but that the convergence and stability of the solutions do
not depend on the relationships between these intervals. It is concluded that
the exact determination of the thermal state of a rotor during transitional
regimes must be investigated with due consideration of the changes of temperature
of the media, and it is desirable that the changes in the heat-exchange
coefficients be taken into account. The investigation of transitional regimes
with changes in the gas temperature according to the "thermal-shock" law have
yielded incorrect results both as to temperatures and to temperature gradients
and changes, and also as to the time of the appearance of the maximal temperature
gradients and changes. It is indispensable that experimental and theoretical
work on the determination of the heat-exchange coefficient in major elements of
turbomachines be developed for transitional regimes. The method of electrical
analog simulation of nonstationary temperature fields on resistance networks
can be successfully applied to the investigation of the temperature fields of
parts of turbomachines during transitional operating regimes. There are 2
figures.

ASSOCIATION: none

SUBMITTED: 00   DATE ACQ: 01Jul63   ENCL: 00

SUB CODE: PR   NR REF SOV: 005   OTHER: 000

Card 2/2

KOZDOBA, L.A.

      Use of grid resistors in electric modeling of the solution to a
system of differential equations describing heat and mass
transfer. Inzh.-fiz.zhur. 6 no.2:69-74 F '63.   (MIRA 16:1)

    1. Institut inzhenerov morskogo flota, Odessa.
        (Electric resistors)   (Electromechanical analogies)
               (Differential equations)

KOZDOBA, L.A., kand.tekhn.nauk

Investigating temperature fields in the rotors of marine gas
turbine plants in transient conditions. Sudostroenie 29 no.5:
21-23 My '63.   (MIRA 16:9)
    (Marine gas turbines) (Transients (Dynamics))

KOZDOBA, L. A. (Odessa institute of naval engineers)

"Application of electric models for resolution of certain nonlinear problems of non-stationary thermal and mass transfer."

Report presented at the Section on Thermal-physical Properties and Non-stationary Thermal Capacity, Scientific Session, Council of Acad. Sci. Ukr SSR on High Temperature Physics, Kiev, 2-4 Apr 1963.

Reported in Teplofizika Vysokikh temperatur, No. 2, Sep-Oct 1963, p. 321, JPRS 24,651. 19 May 1964.

KOZDOBA, L.A., kand.tekhnnauk, dotsent; MAKHNENKO, V.I., inzh.

Choice of the values of the magnitudes of thermal and
physical characteristics of a material in a linearized
network for solving a nonstationary heat transmission
problem. Izv. vys. ucheb. zav.; energ. 6 no. 12:84-90
D '63.   (MIRA 17:1)

1. Odesskiy institut inzhenerov morskogo flota. Predstavlena
kafedroy sudovykh silovykh ustanovok i kafedroy tekhnologii
metallov.