ZYKOV, D. D., DMITRIYEV, M. M. and YEGOROV, N. N.

"Desulfurization of Coke Gas and Other Combustible Gases," Metallurgizdat, 1950

Commentary, preface, selected excerpts, etc.   W-19772, 28 Sep 51

Card 1/1   : Pub. 41-13/18

Author   : Karavayev, N. M., Corresponding Member, Academy of Sciences, USSR;
              Zykov, D. D., and Kondukov, N. B.

Title   : Unused possibilities of periodic rectification of complex mixtures

Periodical : Izv. AN SSSR. Otd. tekh. nauk 3, 123-129, Mar 1954

Abstract   : Presents the principles of method of rectification with introduction
              of intermediate fractions which intensifies the periodic process of
              rectification. Shows a method for practical use of the process in
              the distillation of coal-tar fraction for obtaining naphthalene.
              Tables, diagrams. Two references.

Institution :

Submitted : January 11, 1954

BOGOSLOVSKIY, B.M.; ZMIY, P.N.; ZYKOV, D.D., dotsent; PIK, I.Sh.; STRE-
PIKHEYEV, A.A.; YUKEL'SON, T.I.; AVRAMOVA, N.S., redaktor; IUR'YE,
M.S., tekhnicheskiy redaktor.

[General chemical technology of organic substances] Obshchaia khimi-
cheskaia tekhnologiia organicheskikh veshchestv. Pod red. D.D.Zyko-
va. Moskva, Gos. nauchno-tekhn.izd-vo khim. lit-ry, 1955. 463 p.
        (Chemistry, Technical)   (MIRA 8:4)

Problems of mass transfer ...

... A method of computation ... in the vapor phase along the height of ... posed ... on the concept of a plate ... of the cross-over type. The ... equations were derived. The equations ... firmed experimentally. The computation method derived is based on an old method first proposed by F. ... rectification de l'alcohol, 1883... and is a method which assumes a heat and material balance on every plate, that the compn. of the liquid is the same at every point of the plate,

and that the vapors on the plate are in equil. with the liqu... Plates operating on this principle were subsequently called the theoretical plates. — A. M. Sternberg.

USSR/Chemistry - Physical chemistry

Card 1/1   Pub. 116 - 6/24

Authors   :   Karavayev, N. M.; Zykov, D. D.; and Garber, Yu. N.

Title   :   Study of phase equilibriums of a naphthalin-beta-methylnaphthalin system

Periodical :   Ukr. khim. zhur. 21/2, 176-181, 1955

Abstract   :   The naphthalin-beta-methylnaphthalin system was investigated for the pur-
                pose of obtaining a high-temperature mixture especially suitable for the
                distillation of al tar fractions. The phase equilibrium of the system
                and the heat of mutual solution were established. Both components of
                the system studied were found to be component parts of coal tar and by prac-
                tical ... an intermediate position in the tar. The relation
                between the crystallization heat and composition of the systems is ex-
                plained. USSR reference 1-53. Tables, graphs; drawing.

Institution :   The I. V. Stalin Metallurgical Inst., Dnepropetrovsk, and the Moscow
                Inst. of Chem. Machine Building

Submitted :   November 26, 1953

KARAVAYEV, N.M.; ZYKOV, D.D.; KONDUKOV, N.B.

Single stages evaporator designed for the study of high-boiling
point mixtures. Zav.lab. 21 no.2:245-246 '55   (MIRA 8:6)

1. Moskovskiy institut khimicheskogo mashinostroyeniya
        (Boiling points) (Evaporating appliances)

USSR/ Chemistry - Chemical technology

Card 1/1   Pub. 116 - 26/30

Authors   : Karavayev, N. M.; Zykov, D. D.; Garber, Yu. N.; Gumenyuk, T. D.; and
              Sandul, T. V.
Title   : Phase equilibriums of naphthalin with coal tar fractions

Abstract   : The phase conversions of naphthalin with various coal tar fractions was
              investigated on a laboratory rectification column to determine the effect
              of low boiling components (heavy fractions) on the phase equilibrium curve.
              The fact that coal tar and oil form a polyazeotropic mixture was taken into
              consideration and the results are evaluated. One USSR reference (1955).
              Tables: graphs.

Institution : The I. V. Stalin Metallurgical Inst., Dnepropetrovsk and the Inst. of
               Chem. Machine Constr., Moscow

Submitted : December 24, 1953 and January 14, 1955

ZYKOV, D.D.

USSR/Chemical Technology. Chemical Products and Their   I-13
       Application--Treatment of solid mineral fuels

Abs Jour: Ref Zhur-Khimiya, No 3, 1957, 9217

Author   :   Garber, Yu. N., Zykov, D. D., and Karavayev, N.M.
Inst   :   Academy of Sciences USSR
Title   :   Vapor Pressure of Coal Tar Fractions

Orig Pub: Izv. AN SSSR, Section on Technical Sciences, 1956,
           No 4, 101-105

Abstract: A method is described for determining the temper-
ature dependence of the vapor pressure of various
coal tar fractions. The coal tar fractions are
treated as binary mixtures, one component being
a substance, the temperature dependence of the
vapor pressure of which is known and the other com-
ponent being all the other substances boiling above
or below the individual substance. A phase equil-
ibrium curve is plotted on the basis of experimental
data, and the average vapor pressure of the complex

Card 1/2

Abstract: component is determined from the curve. Next,
the coefficients A and B (which are quantities
characteristic of a given substance) in the equa-
tion $\log p = -(0.0223 \, T) \, A + B$, where p is the
average vapor pressure and T the absolute temper-
ature, are determined from two points on the curve.
A graph of the average bp of the fractions vs.
their average molecular weight is also presented.

Card 2/2

ZYKOV, D.D., kandidat tekhnicheskikh nauk.

Chemical products of cocking (their utilization in the United
States). Koks i khim. no.8:57-58 '56.   (MIRA 10:1)

1. Moskovskiy institut khimicheskogo mashinostroyeniya.
              (United States--Coke industry)

KARAVAYEV, N.M.; ZYKOV, D.D.

Answer to the remarks of B.M. Pats. Ukr.khim.zhur. 22 no.2:265
'56.   (MLRA 9:8)
    (Phase rule and equilibrium) (Naphthalene) (Pats, B.M.)

ASTAKHOV, V.I. (Moskva); ZYKOV, D.D. (Moskva); KOLTVAGIN, A.A. (Moskva); SEMENOVA, I.M. (Moskva)

Calculating the distillation process on a computing machine. Izv.-AN SSSR. Otd.tekh.nauk. Met.i topl. no.4:165-170 Jl-Ag '62.
(MIRA 15:8)

(Distillation, Fractional) (Calculating machines)

ZYKOV, D.D., kandidat tekhnicheskikh nauk.

Regarding the review of Fu Chu-fu of I. B. Korobchanskii and
M. D. Kuznetsov's book "Computation of equipment used for the
recovery of chemical products in coking". Koks i khim. no.3:64
'57..   (MLRA 10:5)

1. Moskovskiy institut khimicheskogo mashinostroyeniya.
        (Coke industry--Equipment and supplies)

Zykov, D. D.

AUTHOR: Zykov, D.D., Candidate of Technical Sciences.   68-6-11/19

TITLE: Calculation of Compositions of Equilibrium Phases for
            Chemical Coking Products. (Raschet sostavov ravnovesnykh
            faz dlya khimicheskikh produktov koksovaniya)

PERIODICAL: Koks i Khimiya, 1957, No.6, pp. 37 - 41 (USSR)

ABSTRACT: A nomogram for calculating vapour pressures from temp-
            eratures and temperatures from vapour pressures as an aid for
            calculating distillation processes is proposed. Its use is
            demonstrated on an example of distillation of tar (composition
            in Table 3). The difference in the determined and calculated
            value of the final concentration did not exceed 4% and that of
            temperature - 1%. The method proposed can be used for calcul-
            ating columns "from plate to plate", checking the behaviour of
            the individual components of a complex mixture along the height
            of the column, etc.
            There are 5 tables, 1 figure and 4 Slavic references.

ASSOCIATION: Moscow Institute of Chemical Machine Building.
             (Moskovskiy Institut Khimicheskogo Mashinostroyeniya)

AVAILABLE: Library of Congress
Card 1/1

68-12-13/25

AUTHORS: Zykov, D.D., Karavayev, N.M. and Kondukov, N.B.

TITLE: Vapour Phase Purification of Benzole from Sulphurous
            Compounds (Parofaznaya ochistka benzola ot sernistykh
            soyedineniy)

PERIODICAL: Koks i Khimiya, 1957, No. 12, pp. 33 - 37 (USSR).

ABSTRACT: The possibility of a continuous purification of benzole
            from thiophene and other sulphurous compounds by passing a
            mixture of benzole vapours and hydrogen through a purifying
            layer in a static or a fluidised state was investigated. The
            laboratory apparatus used for the investigation is described
            (Fig.1). The addition of hydrogen or some other diluting gas
            was necessary as when the fluidisation is obtained by benzole
            vapours alone, the concentration of sulphur in the vapour is
            too high. As a purifying medium, iron ore reduced in hydrogen
            was used. This was activated by a 5% addition of sodium
            hydroxide. The preparation of the ore is described in some
            detail. Some of the experimental results obtained are shown
            in Tables 1 and 2. The results indicated that a complete
            purification of benzole from all forms of sulphur (including
            thiophene) can be achieved by passing it through a fluidised
            or static bed of activated iron ore at 400-450 $^{\circ}$C. The optimum
Card1/2   velocity of purification in the fluidised bed 9-11 cm/sec at

Vapour Phase Purification of Benzole from Sulphurous Compounds

the initial velocity of fluidisation 5-6 cm/sec (400-450 $^{\circ}$C).
In a static layer, the optimum velocity is below 0.5 cm/sec.
Summary height of iron ore layer, necessary for complete puri-
fication of benzole for the fluidised bed is 300-350 mm and
for the static bed 90-100 mm. The sulphur-removing capacity
of the purifying mass in respect of thiophene sulphur is 5-6%.
Regeneration of the mass restores its purifying properties.
Laboratory tests and analyses were carried out by Z.I. Anisimova.
There are 2 tables.

ASSOCIATION: MIKhM

AVAILABLE: Library of Congress
Card 2/2

AUTHORS   Zykov, D.D.,   Khlebnikova, V.V.   32-8-48/61
               Sobolev, G.V.

TITLE   Heating Devices for Laboratory Rectification Columns.
               (Sposob obogreva laboratornykh rektifikatsionnykh kolonn.)

PERIODICAL   Zavodskaya Laboratoriya, 1957, Vol. 23, Nr 8,
               pp. 995-995 (USSR)

ABSTRACT   In order to obtain the most favorable a diabatic conditions
               in the heating plant of rectification columns a new heating
               system is suggested in this paper, which is characterized
               mainly by the fact that the principal column as well as
               its covering are made of the same material in order that
               equal linear expansion of both be attained. The device is
               described as follows: Its basic component is the boiler
               upon which the rectrification column rests. In the upper
               part of the column there is the column head with a conden-
               ser and an outlet pipe for fractions with a straight-way
               cock. The boiler receives its heat from the electric
               heating coil, which is wound round the main column. The
               outer encasing column also has a heating network. By
               automatically switching on the two heating systems alter-
CARD 1/2   natingly a uniform heating of the entire rectification
               column is warranted, i.e. for the case that the interior
                                                              column

Heating Devices for Laboratory Rectification Columns.   32-8-48/61

receives more heat by rising vapors in the interior, it simultaneously expands to a greater extent than the exterior encasing column. This fact itself causes switching on of the heating network in the external encasement column, and the switching off of the interior heating, so that the difference in temperature is soon equalized. This arrangement of the heating order in the rectification column was found to be satisfactory.

There is 1 figure.

ASSOCIATION: Moscow Institute for the Construction of Machines Used in the Chemical Industry
(Moskovskiy Institut khimicheskogo mashinostroyeniya).

AVAILABLE: Library of Congress.

CARD 2/2

Zykov, D.D.

AUTHOR: Zykov, D. D. (Moscow).   24-1-13/26

TITLE: Rectification of complex mixtures, method of calculation.
          (Rektifikatsiya slozhnykh smesey, metod rascheta).

PERIODICAL: Izvestiya Akademii Nauk, Otdeleniye Tekhnicheskikh
          Nauk, 1958, No.1, pp. 100-106 (USSR).

ABSTRACT: The fundamental difficulty of rectification calculations
          of complex mixtures is the determination of the
          compositions of distillates and the residue obtained
          during the distillation.   A number of authors (Refs.1-9)
          determined these values by means of successive
          approximation applying a number of assumptions which are
          accurate to a greater or lesser extent. In this paper
          the conception of the temperature boundary of division
          of the mixture is introduced by means of which it is
          convenient to analyse the distribution of each of the
          components between the distillate and the residue. A
          numerical calculation example is included to illustrate
          the use of the relations derived in the paper.
          There are 3 figures, 2 tables and 12 references -
Card 1/1 6 Russian, 5 English, 1 German.

SUBMITTED: March 27, 1957.
AVAILABLE: Library of Congress.

Zykov, D. D.

32-2-39/60

AUTHORS: Zykov, D. D. , Lytkin, I. A. , Sobolev, G. V. , Khlebnikova, V. V.

TITLE: A Device for Recording the Distillation Curve (Pribor dlya zapisi krivoy razgonki)

PERIODICAL: Zavodskaya Laboratoriya, 1958, Vol. 24, Nr 2, pp. 222 - 223 (USSR)

ABSTRACT: An automatic device recording the boiling temperature and the amounts of distilled substance in rectification columns was developed (according to WTK) at the institute mentioned below. The distillate flows into a container, which is in equilibrium on beam scales with weights (from an automatic apparatus). The weight of the distillate causes a lowering of the beam, which short-circuits a contact and thus causes the operation of a relay, which again starts off an automatic device. A paper slip begins to move, which is adjusted according to temperature by a thermocouple, the temperature being recorded on the slip. A galvanometer records the curve until the appliance released at the same time for the balancing of the weight

Card 1/2

A Device for Recording the Distillation Curve   32-2-39/60

re-establishes equilibrium and thus releases the trip-up
contact. A figure showing the apparatus and a distillation
curve (ИГК) is given. There are 2 figures, and 1 reference,
which is Slavic.

ASSOCIATION: Moscow Institute of Chemical Machine-Building
                (Moskovskiy institut khimicheskogo mashinostroyeniya)

AVAILABLE: Library of Congress

                1. Distilling plants-Equipment

Card 2/2

KONTIKOV, V.S.; DYKOV, N.B.

Infinite reflux operation of a packed column in the rectifica-
tion of multicomponent mixtures. Izv. vys. ucheb. sav.; neft'
i gaz 6 no.7:55-59 '63.
(MIRA 17:8)

1. Moskovskiy institut khimicheskogo mashinostroyeniya.

AKOPYAN, L.A.; VARYGIN, N.N.; GUTAREV, V.V.; ZYKOV, D.D.; KARAVAYEV, N.M.;
    KONDUKOV, N.B.; LASTOVTSEV, A.M.; MAKAROV, Yu.I.; MAZUROV, D.Ya.;
    MARTYUSHIN, I.G.; MASLOVSKIY, M.F.; NIKOLAYEV, P.I.; PLANOVSKIY,
    A.N.; RYCHKOV, A.I. [deceased]; CHEKHOV, O.S.; KHVAL'NOV, A.M.;
    SHAKHOVA, N.A.

Theory and practice of heterogeneous processes in a fluidized
bed. Trudy MIKHM 26:3-22 '64.   (MIRA 18:5)

KUZNETSOV, V.A.; ASTAKHOV, V.I.; ZYKOV, D.D.

Use of computers for calculating the process of the rectification
of a multicomponent mixture. Khim.prom. 41 no.4:62-65 Ap '65.
(MIRA 18:8)

ZYKOV, D.D.

Distribution of the components of a composite mixture under
the work conditions of rectification. Trudy MIKHM 26:50-59
'64.
(MIRA 18:5)

ALEKSANDROVA, I.M.; ZYKOV, D.D.

    True boiling point curves of heavy petroleum products. Khim. i
    tekh. topl. i masel 9 no.12:39-43 D '64.   (MIRA 18:2)

    1. Moskovskiy institut khimicheskogo mashinostroyeniya.

BELENOV, Ye.A.; BOYARCHUK, P.G.; ZYKOV, D.D.

Method of calculating mass transfer coefficients. Khim. prom.
40 no.10:754-756 O '64.   (MIRA 18:3)

ASTAKHOV, V.I.; ZYKOV, D.D.; KORTIKOV, V.S.

Number of units of transfer in the rectification of binary
mixtures. Khim. prom. 40 no.10:763-764 O '64.   (MIRA 18:3)

BELENOV, Ye.A.; ZYKOV, D.D.

Method of calculation of mass transfer in the rectification of
binary mixtures. Izv. vys. ucheb. zav.; khim. i khim. tekh. 7
no.4:661-664 '64.   (MIRA 17:12)

1. Kafedra mashiny i apparaty zavodov po khimicheskoy pererabotke
topliva Moskovskogo instituta khimicheskogo mashinostroyeniya.

ZYKOV, D.D.; MAYKOV, V.P.; NIKITIN, V.A.; TREBIN, A.G.

Plotting the mathematical model of the rectification process of a
multiple-component mixture using the data of the column performance.
Khim.prom. no.12:889-894 D '63.   (MIRA 17:3)

ZYKOV, D.D.

New book on the purification of gases. Koks i khim. no.9:62 '62.

(MIRA 16:10)

(Gases—Purification)

KORTIKOV, V.S.; ZYKOV, D.D., doktor tekhn.nauk

Calculating the distillation process of a multicomponent mixture by
conditional equilibrium curve. Koks i khim. no.11:49-53 '63.

(MIRA 16:12)

1. Moskovskiy institut khimicheskogo mashinostroyeniya.

SELIVANOV, L.M. (Moskva); ZYKOV, D.D. (Moskva)

Motive force of mass exchange during the distillation process
in cross flow conditions. Izv. AN SSSR. Otd. tekh. nauk. Met.
i topl. no.2:168-173 Mr-Ap '62. (MIRA 15:4)
    (Mass transfer) (Distillation apparatus)

ASTAKHOV, V.I. (Moskva); ZYKOV, D.D. (Moskva)

Analytical method of calculating the number of theoretical
plates in the distillation of binary mixtures. Izv. AN SSSR.
Otd. tekh. nauk. Met. i topl. no.6:177-180 N-D '61. (MIRA 14:12)
(Distillation apparatus)

ASTAKHOV, V.I. (Moskva); ZYKOV, D.D. (Moskva)

Method of calculating the number of plates in the distillation
of multicomponent mixtures. Izv. AN SSSR. Otd. tekh. nauk.
Met. i topl. no.1:188-191 Ja-F '62.   (MIRA 15:2)
                         (Distillation apparatus)

RIECHE, Alfred; LEVINA, Ye.M. [translator]; BYKOV, D.D., red.

[Fundamentals of the technology of organic substances] Osnovy
tekhnologii organicheskikh veshchestv. Moskva, Goskhimizdat,
1959. 532 p.   (MIRA 14:3)
                (Chemistry, Organic)

YEGOROV, Nikolay Nikolayevich; DMITRIYEV, Mikhail Mikhaylovich; ZYKOV,
Dmitriy Dmitriyevich; BRODSKIY, Yuriy Nikolayevich; NEZDOKOVA,
M.L., red.izd-va; KLEYNMAN, M.R., tekhn.red.

[Removal of sulfur from coke-oven gas and other fuel gases]
Ochistka ot sery koksoval'nogo i drugikh goriuchikh gasov. Izd.2.,
perer. i dop. Pod red. N.N.Yegorova. Moskva, Gos.nauchno-tekhn.
izd-vo lit-ry po chernoi i tsvetnoi metallurgii, 1960. 341 p.
(MIRA 14:3)

(Gases--Purification)   (Sulfur)

ZYKOV, D., kand.tekhn.nauk

At a coke plant. IUn. tekh. 2 no.7:36-41 Jl '58.   (MIRA 11:10)
(Coke industry)

SOV/24-58-6-12/35

AUTHORS: Yevstaf'yev, A.G., Zykov, D.D. and Karavayev, N.M.
(Moscow)

TITLE: Relative Effect of Certain Factors on the Mass-Exchange
Process in a Plate-Type Column Installation (Otnositel'-
noye vliyaniye nekotorykh faktorov na protses massoobmena
v kolonnom apparate tarel'chatogo tipa)

PERIODICAL: Izvestiya Akademii Nauk, Otdeleniye tekhnicheskikh nauk,
1958, Nr 6, pp 77-83 (USSR)

ABSTRACT: It has already been shown (eg refs 1-3) that among factors
influencing the change in concentration along a plate-type
column is mass-transfer between adjacent layers of the
moving liquid and the analogous mass transfer in the
vapour. The author has previously analysed (ref 1) the
change in the concentration of the low-boiling fraction
allowing for mixing of liquid and vapour. In the present
work the attempts to deduce the influence of this and
other factors on the change of concentration of the com-
ponents along a plate-type column are described.   He
shows that mass exchange in the inter-plate space can be
regarded as the sum of three mass-exchange processes:
Card 1/3   between liquid and vapour, between adjacent moving liquid

SOV/24-58-6-12/35

Relative Effect ... of Certain Factors on the Mass-Exchange Process
in a Plate-Type Column Installation

layers, and between layers of vapour. Using his previous
(ref 1) relations he shows that the degree of attainment
of vapour/liquid equilibrium should always be considered
in column design. Because of the complexity of their
effect on the overall process the author considers the
other two processes by taking the example of a toluene-
carbon tetrachloride mixture and examining seven particular
cases. These cover various combinations of degrees of
mixing in the liquid and the vapour but apply only to the
bottom two plates. The results (table 1 and fig 2) show
that mixing in the liquid is an important (table 2) but
not controlling factor, while mixing in the vapour can be
ignored. On this basis column calculations can be
classified in four degrees of approximation, depending on
the number of the above factors they take into considera-
tion: most methods used for plate coolers belong to the
second approximation group, in which only mass exchange
between liquid and vapour is considered and can lead to
errors of up to 40%. The author elaborates on the weak-
Card 2/3   nesses of this approach and recommends for technical

Relative Effect ... of Certain Factors on the Mass-Exchange Process
in a Plate-Type Column Installation

SOV/24-58-6-12/35

calculations the third-approximation method, in which the
only factor ignored is mass exchange between adjacent
vapour layers and errors of $\pm 2\%$ are obtained. He deduces
suitable equations from the more exact fourth approach
method and concludes with a numerical example.
There are 2 figures, 3 tables and 3 references (1 Soviet,
1 English and 1 German)

Card 3/3

KHASDAN, S.M.; KONOVALOV, V.A.; POTKIN, Yu.M.; ZYKOV, P.I.

~awing force of a double-deck frame saw. Der. prom. 13 no.12:14-15
D '64   (MIRA 18:2)

USTIMENKO, V.F., starshiy dorozhnyy master; ZYKOV, F.M., starshiy dorozh-
nyy master; KIREY, P.I.; IVANITSKIY, M.V.; LOBANOV, Ye.I., doroxh-
nyy master; GAYDAR, P.R.; SIDOROV, B.N.; SAVKOV, Ye.I.; SAFONKIN,
A.N.; PETROV, A.S.; BURLAK, F.V., inzh.

Letters to the editor. Put' i put.khoz. 5 no.5:42-44 My '61.
(MIRA 14:6)
1. Stantsiya Kupino,Omskoy dorogi (for Ustimenko). 2. Stantsiya
Kotel'nich, Gor'kovskoy dorogi (for Zykov). 3. Stantsiya Petro-
pavlovsk, Omskoy dorogi (for Kirey, Ivanitskiy). 4. Stantsiya
Stupino, Moskovskoy dorogi (for Lobanov). 5. Zamestitel' nachal'-
nika distanstsii puti, st., Izyum, Donetskoy dorogi (for Gaydar).
6. Nachal'nik distantsii puti, st. Berlik, Kazakhskoy dorogi
(for Sidorov). 7. Nachal'nik PMS-62, st. Nikitovka, Donetskoy
dorogi (for Savkov). 8. Smennyy master shchebenochnogo kar'yera
st. Chokpar, Kazakhskoy dorogi (for Safonkin). 9. Nachal'nik
tekhnicheskogo otdela sluzhby puti, g. Yaroslavl' (for Petrov).
10. Distantsiya zashchitnykh lesonasazhdeniy, st. Artemovsk, Do-
netskoy dorogi (for Burlak).
(Railroads)

ACC NR: AP7007567   SOURCE CODE: UR/0452/66/000/003/0023/0025

AUTHOR: Zykov, E. N.; Krivich, G. I.; Petrusenko, S. K.

ORG: none

TITLE: Long term memory device

SOURCE: Mekhanizatsiya i avtomatizatsiya upravleniya, no. 3, 1966; 23-26

TOPIC TAGS: computer memory, electronic amplifier

SUB CODE: 09

ABSTRACT: The Institute of Cybernetics of the Academy of Sciences of the
Ukranian SSR has developed a diode-transformer long term memory device with
a capacity of 8,192 52-digit numbers. The device consists of an address
decoder, 64 commutating switches and a numerical section plus 55 readout
amplifiers. In order to increase the reliability of the memory unit, built-
in control of the units which determine the address of a number cell is a feature.
The memory volume is divided into three portions (built-in control on modulus 3).
Components of the unit was tested using an experimental model with a capacity
of 512 52-digit numbers. Primarily attention was given to the quantity and
nature of the noises at the output of the cells. Inductive and capacitive
noises did not exceed the signal level. Accessing frequency is 600 KCS.
Orig. art. has: 3 figures. [JPRS: 37,757]

Card 1/1   UDC: 681.142.65

0938/535

ZYKOV, F.N.

Memory device for a controlling machine. Zbir. prats' z
obchys. mat. i tekh. 3:104-110 '61.   (MIRA 15:2)
        (Magnetic memory (Calculating machines))
                (Cores (Electricity))

L 36046-66   EWT(d)/T/EWP(1)   IJP(c)   CG/BB/GD

ACC NR: AT6017030   SOURCE CODE: UR/0000/65/000/000/0051/0058

AUTHOR: Zykov, F. N.   43

ORG: None   16U   B+

TITLE: A method for the synthesis of decoders with a separated load

SOURCE: AN UkrSSR. Kiberneticheskaya tekhnika (Cybernetic techniques).
Kiev, Naukova dumka, 1965, 51-58

TOPIC TAGS: digital decoder, circuit design, coding

ABSTRACT: Standard decoding circuits with a separated load require a consider-
able code excess at the input, which leads to substantial expenditures for the de-
vices. The present author examines the feasibility of constructing decoders on the
basis of reduced codes which use "determining" classes of the orthogonal code.
The employment of this code in conjunction with the simultaneous use of summation
of current and voltages makes it possible to save on the equipment and to simplify
the manufacture of decoders. Designs of several decoders are studied as an ex-
ample. An investigation is made of the effectiveness of a decoder which combines
the functions of decoding and multiplication of matrices with the simultaneous use
of the method of summation of current and voltage, as compared, for example,
with a decoder designed according to the principle of voltage summation. It is
found that the proposed combined method produces a design of a decoder more

Card 1/2

L 36046-66

ACC NR: AT6017030

effective than known designs, since it requires less components. The effectiveness of the circuit rises with an increase in the number of decoder outputs. Orig. art. has: 4 figures and 1 table.

SUB CODE: 09/ SUBM DATE: 28Jul65/ ORIG REF: 002/ OTH REF: 002

Card 2/2

3h613

S/696/61/003/000/010/011
D251/D304

9.7/40

AUTHOR: Zykov, F.N.

TITLE: Memory unit for a control machine

SOURCE: Akademiya nauk Ukrayins'koyi RSR. Obchyslyuval'nyy
             tsentr. Zbirnyk prats' z obchyslyuval'noyi matematyky
             i tekhniky, v. 3, 1961, 104 – 110

TEXT: The article discusses the use of semiconductors in the ope-
rative memory units (OMU's) of control machines and systems. Such
a memory unit was constructed at the Obchyslyuval'nyy tsentr (Com-
puter Center) capable of operating under local temperature oscilla-
tion of ± 60°C. As well as the OMU, the apparatus contained a pas-
sive memory unit (PMU) with modulus in 1024 numbers. A block-dia-
gram and the working scheme of the OMU is given. A diode-transfor-
mer rectifier is used to reduce loss in the address net. This rec-
tifier consists of a double two-coordinate net. The reverse code is
used in the odd-number matrix and the direct code in the even. In
the experiment a number core of ВТ-1 (VT-1) ferrite was used, measu-

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Memory unit for a control machine   S/696/61/003/000/010/011
                                       D251/D304

suring 1.2 x 0.7 x 0.8 mm^3. The working parameters of the ferrite are given in tabular form. In practice the temperature range was reduced by use of a thermostat. The non-standard elements of the OMU are discussed, namely, the address formulator, the key element, the discharge recording formulator, and the amplifier. In all the elements except the first cascade where a Π-403 (P-403) triode is used, the triodes employed are Π16Б (P16B). All elements are tested in the defective regime. Tests show that the elements are suitable for use in an OMU scheme with the reduction of highly technical data. There are 1 table and 9 figures.

Card 2/2

DUBROV, N.F.;   ZYKOV, G.A.;   KOROLEVA, V.A.

Improved annealing of electrical steel. Metallurg no.10:27-28
O '56.   (MLRA 9:11)

1. Verkh-Isetskiy metallurgicheskiy zavod.
            (Steel--Heat treatment)

Card 1/2

SHTEYNBERG, M.M.; BOGACHEV, I.N.; ZYKOV, G.A.; SHKLYAR, R.Sh.

Study of the plasticity of transformer steels. Fiz.met.i metal-
loved. 1 no.1:167-175 '55.   (MLRA 9:3)

1. Ural'skiy politekhnicheskiy institut imeni S.M. Kirova i
Verkh-Isetskiy metallurgicheskiy zavod.
                    (Sheet steel)

SOV/109-3-8-8/18

AUTHORS: Zykov, G.A. and Nakhodkin, N.G.

TITLE: Influence of Certain Gases on the Emission of Oxide
             Cathodes (Vliyaniye nekotorykh gazov na emissiyu oksidnogo
             katoda)

PERIODICAL: Radiotekhnika i Elektronika, 1958, Vol 3, Nr 8,
             pp 1031 - 1039 (USSR)

ABSTRACT: Investigations were carried out on the oxide cathodes
             of the standard vacuum tubes, type 6Zh2P. For the
             purpose of investigation, a special method of unsealing
             tubes was developed and the pressure of the poisoning
             gases was maintained constant. The equipment and the
             methods of measurement are similar to those described
             by the authors in an earlier work (Ref 1). The oxygen
             employed in the experiments was obtained by chemical
             decomposition of potassium permanganate; the hydrogen
             was applied by means of a palladium capillary tube; the
             carbon monoxide was obtained by heating a mixture of zinc
             and calcium carbonate and the chlorine was obtained by
             thermal decomposition of potassium chloride. The gases
             were dessicated by means of P_2O_5. The emission current
             as a function of time for a cathode operating at a

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SPV/109-3-8-8/18

Influence of Certain Gases on the Emission of Oxide Cathodes

temperature of 1 020 $^{\circ}$K and oxygen pressure of 7.10^{-7} mmHg, is represented by the curves of Figure 1; the falling portions of the curves represent the decay of current as a function of time, while the rising portions represent the recovery of the cathode after the evacuation of the gases. The numbers on the curves refer to successive admission cycles for the oxygen. Similar curves are shown in Figure 2 (for the same temperature and pressure). The poisoning and the recovery effect in a cathode subjected to the action of carbon monoxide is represented by the curves of Figure 3. These curves were taken at temperatures ranging from 3.10^{-6} to 6.10^{-5} mmHg. Figure 4 shows similar curves but these were taken at various temperatures (ranging from 860 $^{\circ}$K to 1 020 $^{\circ}$K). It was found that in the temperature range of 900 – 1 020 $^{\circ}$K and at pressures up to 10^{-5} mmHg, the presence of hydrogen had no effect on the emission of the cathodes; in fact, in some cases, it appeared to enhance the emission. The effect of chlorine poisoning is illustrated in Figures 6, 7 and 8. From these, it is seen that at a

Card2/4

SOV/109-3-8-8/18

Influence of Certain Gases on the Emission of Oxide Cathodes

certain temperature (1,020 °K), the presence of chlorine does not affect the emission; this temperature is very critical and, consequently, upward or downward changes lead to a quick deterioration of the cathode. The main conclusion of this investigation is that the poisoning effect of the gases is primarily dependent on the pressure of the gas, the temperature and activity of the cathode. Under certain conditions, such poisonous gases as water vapour or chlorine have no poisoning effect and, in fact, can enhance the emission. It was found that oxygen, carbon monoxide and chlorine have a critical pressure, below which the gas does not have any noticeable ill effect on the cathode. At a temperature of 1 020 °K, the critical pressure for hydrogen is about $5 \cdot 10^{-8}$ mmHg, for

carbon monoxide it is about $5 \cdot 10^{-7}$ mmHg and for chlorine it is about $1 \cdot 10^{-6}$ mmHg. The authors make acknowledgment to Corresponding Member of the Ukrainian Ac.Sc. N.D. Morgulis for his interest in this work and to G.Ya. Pikus for his help in carrying out the experiments.

Card 3/4

SOV/109-3-8-8/18

Influence of Certain Gases on the Emission of Oxide Cathodes

There are 8 figures and 16 references, 7 of which are English, 2 German and 7 Soviet (4 of these are translations).

ASSOCIATION: Kiyevskiy gosudarstvennyy universitet im. T.G. Shevchenko (Kiyev State University imeni T.G. Shevchenko)

SUBMITTED: January 29, 1958

Card 4/4

1. Cathodes (Electron tube)—Performance 2. Metal oxides —Properties 3. Thermionic emission 4. Gases—Electrical effects

SOV/137-59-1-1268

Translation from: Referativnyy zhurnal. Metallurgiya, 1959, Nr 1, p 171 (USSR)

AUTHORS: Trakhtenberg, B. F.; Zykov, G. A.

TITLE: The Effect of Annealing Temperature on the Magnetic Properties of
            Hot-rolled Transformer Steel (Vliyaniye temperaturv otzhiga na
            magnitnyye svoystva goryachekatanoy transformatornoy stali)

PERIODICAL: Sb. nauchn. tr. Kuybyshevsk. industr. in-ta. Mekhanika, 1958,
            Nr 7, pp 159-168

ABSTRACT: Investigations were carried out in order to evaluate the effect of
          annealing temperatures ranging from 750 to 1200°C, with a soaking
          period of 4-8 hours, on the magnetic properties of a series of hot-
          rolled transformer steels. It was established that a high-temperature
          anneal introduces an anomaly into the shape of the magnetization
          curves in regions corresponding to strong (greater than 5-15 oersted)
          and medium magnetic fields (0.2-0.5 amp-turns/cm). A number of
          magnetic characteristics are presented graphically as a function of
          the annealing temperature, and practical indications are given for
          the manufacture of transformer steel possessing an increased per-
          meability in weak and medium fields (E45, E46, E47, and E48 grades).
          M. Ch.

Card 1/1

DRUZHININ, V. V., kand.fiz.-matem.nauk; ZYKOV, G.A., inzh.; NEKRASOVA, M.I.; inzh.

Repeated annealing of drop forgings made of E45 and E46. Vest. elektroprom. 31 no.5:41-43 My '60.   (MIRA 13:8)
                  (Steel forgings)
              (Steel--Heat treatment)

9,4110 (1140, 1144, 1331)

26.2357

S/181/61/003/005/016/042
B136/B201

AUTHORS: Nakhodkin, N. G. and Zykov, G. A.

TITLE: Effect of oxygen on the electrical properties of an oxide
             cathode at low pressures

PERIODICAL: Fizika tverdogo tela, v. 3, no. 5 , 1961, 1436 - 1444

TEXT: Insufficient attention has been paid in previous studies to the com-
position of residual gases in vacuum apparatus. The authors have therefore
conducted a thorough investigation, in which the sealed apparatus has repeat-
edly been filled with oxygen and evacuated to pressures 10^{-8} - 10^{-6} mm Hg.
The gas residue has been analyzed by means of an omegatron. First of all,
two peaks have been observed at $m = 16$ and $m = 32$, accounting for 94% of
the total amount. Comparative measurements with the 60° mass analyzer by
G. Ya. Pikus have shown the $m = 32$ peak to be higher. A small nickel tube
filled with barium peroxide served as an oxygen source. Two 3μ thick plati-
num probes were introduced into the oxide layers which had a thickness from
80 to 100μ . In addition to the cathode current, the measurements comprised
conductivity, thermo-emf, and other electrical parameters. The cathode cur-

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Effect of oxygen ...

S/181/61/003/005/016/042
B136/B201

rent was measured at normal cathode temperatures with exponential pulses
(f = 1 cycle), and at higher temperatures in d-c operation. Resistivity
was determined from the potential drop between probe and core, depending
upon the cathode current. The cathode temperature was determined by a
calibration curve and by means of a thin thermocouple. Experiments have
shown that both conductivity and thermionic emission current change almost
in parallel and without delay during poisoning and reduction, i.e., almost
all the oxide layers participate in both processes. Two mechanisms are re-
ferred to for an explanation: first, the oxygen is adsorbed on all exposed
and fully developed grain surfaces of the oxide-layer, and splits into
atoms, whereby the negative surface charge of the grains is augmented; this
is accompanied by a decrease of the work function, and, consequently, of
all other electrical parameters as well. Secondly, the diffusion of the
oxygen ions or atoms into the grains, which is directly proportional to
their surface concentration, reduces the number of oxygen vacancies which
may act as donor centers. Taking account of diffusion provides an explan-
ation for the experimental findings. N. D. Morgulis, Corresponding Member
AS USSR, is thanked for his interest in the work. There are 7 figures and
34 references: 11 Soviet-bloc and 23 non-Soviet-bloc. The three most recent
Card 2/3

Effect of oxygen ...

S/181/61/003/005/016/042
B136/B201

references to English-language publications read as follows: G. Higginson,
Brit. J. Appl. Phys., 8, 148, 1957; 9, 106, 1958; N. A. Surplice, Brit.
J. Appl. Phys., 10, 359, 1959.

ASSOCIATION: Kiyevskiy gosudarstvennyy universitet imeni T. G. Shevchenko,
               Kafedra elektroniki (Kiyev State University imeni T. G. Shev-
               chenko, Department of Electronics)

SUBMITTED: August 18, 1960 (initially) December 9, 1960 (after revision)

Card 3/3

KOLESNIKOV, P.T., inzh.; ZYKOV, G.D., agronom

Packing and preservation of silage covered with a polyethylene
film. Zhivotnovodstvo 21 no.5:37-40 My '59. (MIRA 12:7)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut sel'skokhozyay-
stvennogo mashinostroyeniya.
        (Ensilage) (Polyethylene)

SEROV, Ye.P., kand. tekhn. nauk; SMIRNOV, O.K., kand. tekhn. nauk;
ZYKOV, L.A., inzh., dissertant

Experimental study of the boundary of the stability of a flow in
parallel connected steam generating pipes with nonuniform heating
of the surface. Teploenergetika 11 no.10:70-72 O '64.

(MIRA 18:3)

1. Moskovskiy energeticheskiy institut.

ZYKOV, I.D.; ROZHKOV, V.A.

Calculation of wind-driven surface and depth currents based on the
example of the North Atlantic. Trudy GOIN no.81:37-53   '64.
(MIRA 17:11)

ZYKOV, I.D.

Use of deep-water anchors for erecting buoy stations in the ocean.
Meteor.i.gidrol. no.9:51-52 S '63.   (MIRA 16:10)

1. Gosudarstvennyy okeanograficheskiy institut, Leningradskoye
otdeleniye.

ZYKOV, I.D.

Radio transmitter for self-contained buoy stations. Meteor.
i gidrol. no.4:47-48 Ap '61.   (MIRA 14:3)
        (Bouys) (Radio—Transmitters and transmission)

Meteorological Abst.
V. 4 No. 10
October 1953
Part II
Bibliography on
Auroras.

4J-171

Zykov, I. V., Pollarnoe sianie v iuzhnoi chasti Sibiri. [Aurora borealis in the southern part of   551.594.5(57)]
Siberia.] *Priroda*, Moscow, 36(3):49-50, 1947. DLC—The phenomenon was observed on Sept.
28-29, 1946, in the Kemerovo district (Kuzbass) at 55°30'N., 87°40'E. Its great intensity is
explained by weather conditions and the unusual transparency of the atmosphere. Detailed de-
scription of forms and colors is given. In conclusion, the author points out the rapid change of
weather to anticyclonic type which set in after this night. Some observations on the relation
between the aurora borealis and weather conditions in northern areas (Pechora River region) are
mentioned. *Subject Headings:* 1. Aurora of Sept. 28-29, 1946 2. Weather influences 3. Kemerovo
District, Siberia.—*N.A.S.*

ZYKOV, I.V. (g. Mariinsk Kemerovskoy oblasti)

Special aspects of the wintering of birds in Southern Siberia.
Biol. v shkole no.5:71-72 S-O '62.   (MIRA 16:2)
        (Soviet Central Asia--Birds in winter)

ZYKOV, I.V. (g. Mariinsk Kemerovskoy oblasti)

Observations on starlings. Biol. v shkole no.3:84-85 My-Je '61.
(MIRA 14:7)

(Starlings)

ZYKOV, I.V. (Mariinsk)

Snow cover of the West Siberian wooded steppe. Priroda
51 no.11:103-105 N '62.   (MIRA 15:11)
                    (Siberia, Western--Snow)

ZVYKOV, I.V.

Feather grass in the forest-steppe region of Western Siberia.
Bot.zhur. 38 no.6:902-905 N-D '53.   (MLRA 7:1)
(Siberia, Western--Grasses) (Grasses--Siberia, Western)

ZYKOV, I.V. (g. Mariinsk, Kemerovskoy oblasti)

Some characteristics of Lake Bol'shoy Bazyr. Priroda 43 no.6:102-103
Je '54.   (MLRA 7:5)
        (Bol'shoy Bazyr, Lake)

DAVIDAN, I.N., kand. geograf.nauk; ZYKOV, I.D.; FILIPPOV, B.A., kand. geograf. nauk

The first oceanographic expedition of the Hydrometeorological Service of the U.S.S.R. to the North Atlantic. Meteor. i gidrol. no.6:40-43 Je '65.   (MIRA 18:5)

ZYKOV, I.V.

What is mountain tundra? Geog.v shkole no.1:62-63 Ja-F '54.

(MLRA 7:1)
(Tundras)

AMs/A+B

1950

10-144

Zukov, I. V., Snezhnik na gore Bol'shoi Taskyl v Kuznetskom Alatau. (Snow accumulation on the mountain Bolshoi Taskyl in Kuznetsk Alatau.) *Priroda, Moscow,* 39(6):65-67, June 1950. 2 figs., 4 refs. DLC—Account of the beginning of a glacier (firn) in summer 1948, which was studied in detail by the author. Elevation 1300 m. above sea level. *Subject Headings: Snow cover, Firn, Kuznetsk Alatau, U.S.S.R.—M.R.*

551.578.46:551.311.121(47)

ZYKOV, Il'ya Vasil'yevich; KUSTOVA, Ye.G., red.; RUDINA, G.V., tekhn.
          red.

     [Nature calendar of Kemerovo Province]Kalendar' prirody Keme-
     rovskoi oblasti. Kemerovo, Kemerovskoe knizhnoe izd-vo, 1960.
     126 p.   (MIRA 15:11)
          (Kemerovo Province—Nature study)

ZYKOV, I. V.

What changes take place in the Tret'yakovo Lake?   Izv Vses
geog ob-va   96   no. 1:57-60   Ja-F '64.   (MIRA 17:5)

AYKOV, I.V.

Migrations of squirrels in the Siberian taiga. Okhr. prir.
Sib. i Dal'. Vost. no.1:172-173 '62.   (MIRA 17:5)

ZYKOV, I.V.

Linden groves in Western Siberia and their preservation. Okhr.prir.
i zapov.delo v SSSR no.4:29-32 '60.   (MIRA 13:6)
                (Siberia, Western--Linden)

ZYKOV, I. V.

ZYKOV, I.V. (g. Mariinsk, Kemerovskoy oblasti).

The Pechora River as a route of migratory birds. Priroda 46 no.5:
124-125 My '57.   (MLRA 10:6)
                    (Pechora Valley--Birds--Migration)

ZYKOV, I.V.

Factors in the development of high grass stands on mountainous relief. Bot.zhur.41 no.8:1208-1212 Ag '56.   (MLRA 9:12)

1. Novosibirskiy otdel Geograficheskogo obshchestva SSSR.
   (Siberia, Western--Botany--Ecology)

ZYKOV, I.V.

A new geographical map, "Kuznetsk Basin." Reviewed by I.V. Zykov.
Izv.Vses.geog.ob-va 88 no.4:396-397 Jl-Ag '56.   (MLRA 9:10)

(Kuznetsk Basin--Geography)

ZYKOV, I.V.

The nature of bald mountain landscape. Geog. v shkole 18
no.3:57-59 My-Je '55.   (MIRA 8:9)
                    (Kuznetsk Ala-Tau)

1. ZYKOV, I. V.

2. USSR (600)

4. Cedar

7. Phenomenal cedars, priroda 42, no. 3, 1953.

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

1. ZYKOV, I. V.

2. USSR (600)

4. Arboriculture

7. Use planting practice of parks. Les i step' 5, No. 3, 1953.

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

AMS/A+B

/957

Zykov, I. V. Osobennosti snegotaianiia i znachenie lesnykh polos v sibirskei lesostepi. [Characteristics of snow thawing and the significance of forest strips in the Siberian forest steppe zone.] Pravda, Moscow, No 4:51-57, 1951. 2 figs., 4 refs. DWB. The significance of snow cover for winter crops and the characteristics and duration of the snow cover in forest steppe conditions are discussed. The role of wind in the thawing of snow in the Siberian steppe is considered and measures are suggested for preventing rapid thawing (evaporation) of snow under the action of wind by the use of forest strips. Subject Headings: Agricultural meteorology, Snow cover, Steppes, Siberia. I. L. P.

ZYKOV, I, V.

33065

Voskhozhdenie Na Eolyshoy Taskyl.(ocherk). Stalinskiy Kuzbass, No. 2, 1949, c. 162-70

SO: Letopis'Zhurnal'nykh Statey, Vol. 45, Moskva, 1949

ZYKOV, I. V.

USSR/ Geology-Lakes

Card   : 1/1

Authors   : Zykov, I. V., City of Mariinsk, Kemerovsk region.

Title   : Certain features of the Bol'shoy Bazyr Lake

Periodical : Priroda, 6, 102 - 103, June 1954

Abstract   : Certain characteristics of the Bol'shoy Bazyr Lake, which is situated
               in a forest clearing in the Northeastern section of the Kuznetsk-Alatau
               mountain system, are described. Illustrations.

Institution : ....

Submitted   : ....

ZYKOV, I.V.

Why does Zmeinoye Lake dry up? Izv.Vses.geog.ob-va 86 no.3:278-283
My-Je '54.   (MLRA 7:6)
    (Zmeinoye Lake)

ZYKOV, I. V.

PA 7779

USSR/Medicine - Soil
    Medicine - Plants

Mar 1948

"Observations on the Problem of the Formation of
'Pegs' in Kemerovo Oblast'," I. V. Zykov, 1 p

"Priroda" No 3

The "pegs" are islets of wood in the Siberian steppes.
Main flora are birches and pines. Author attributes
their presence to beds of vanished rivers.

FDB

77779

ZYKOV, I.V. (Mariinsk, Kemerovskaya oblast').

The nutcracker in Siberian forests. Priroda 41 no.7:112-114 Jl '53.

(MLRA 6:6)
(Siberia--Nutcrackers)

ZYKOV, I.V. (Mariinsk)

Early winter in southern Siberia. Priroda 54 no.12:127-128
D '65.   (MIRA 18:12)

ZYKOV, K.A.

Reduction of photogrammetric grid plans on the basis of fixed points
identified near the center lines. Geod. i kart. no.1:41-47 Ja '58.
       (Photogrammetry) (Grids (Cartography)）   (MIRA 11:4)

ZYKOV, K.A., assistent

Determining exposure station coordinates by simultaneous
processing of photogrammetric and radiogeodetic measurements.
Izv. vys. ucheb. zav.; geod. i aerof. no.5:73-78 '61.
(MIRA 15:3)

1. Moskovskiy institut inzhenerov zemleustroystva.
(Aerial photogrammetry)

S/270/63/000/003/002/005
A001/A101

AUTHOR: Zykov, K. A.

TITLE: Possibilities of further increasing the accuracy of determination
            of photographing point coordinates

PERIODICAL: Referativnyy zhurnal, Geodeziya, no. 3, 1963, 21, abstract
            3.52.140 ("Tr. Mosk. un-ta inzh. zemleustroystva", 1962, no. 16,
            15 - 28)

TEXT: In addition to radiogeodetic errors due to imperfection of equip-
ment and effect of external conditions on radio wave propagation, errors should
be taken into account which are connected with the finding and plotting on aerial
photographs of positions of the nadir points. The effect of these errors can be
reduced if the accuracy of gyrostabilization of aerial photographs is increased
up to 1 - 2'. In order to increase the accuracy of radiogeodetic determinations,
it is necessary to take into consideration the errors of initial data, changes in
propagation velocity of radio waves and other factors. The accuracy of results
can be increased by employing repeated radiogeodetic measurements and using the
images of neighboring centers of projection.
[Abstracter's note: Complete translation]   B. Serapinas
Card 1/1

ZYKOV, K.A., assistent

Feasibility of combining the phase sounding and radio lag
methods. Izv. vys. ucheb. zav.;geod. i aerof. no.2:51-56 '62.
(MIRA 15:9)

1. Moskovskiy institut inzhenerov zemleustroystva.
      (Radar in surveying)

VERKHOVSKAYA, V.A.; DEYNEKO, V.F., prof.; ZYKOV, K.A.; KISLITSYN,
        A.S.; MURASHEV, S.A.; OBIRALOV, A.I.; PETRUSHINA, R.S.;
        POPOV, A.F.; RUMER, A.O.; SKOBELEV, A.T.; KHIZHINSKIY, D.G.;
        SHURYGINA, A.I., red. izd-va; ROMANOVA, V.V., tekhn. red.

[Laboratory work in aerophotogeodesy for land utilization
faculties of higher agricultural schools]Laboratornye raboty
po aerofotogeodezii; dlia zemleustroitel'nykh fakul'tetov
sel'skokhoziaistvennykh vuzov. Pod obshchei red. V.F.Deineko.
Moskva, Izd-vo geodez.lit-ry, 1962. 109 p.   (MIRA 15:10)

1. Moscow. Institut inzhenerov zemleustroystva. 2. Kafedra
aerofotogeodezii Moskovskogo instituta inzhenerov zemleustroy-
stva (for all except Shurygina, Romanova).
                        (Aerial photogrammetry)

ACCESSION NR: AR4020480   S/0270/64/000/001/0019/0020

SOURCE: RZh. Geodeziya, Abs. 1.52.107

AUTHOR: Zy*kov, K. A.

TITLE: Some problems of determining the coordinates of photographic points by the phase sounding method

CITED SOURCE: Tr. Mosk. in-ta inzh. zemleustroystva, vy*p. 20, 1963, 31-42

TOPIC TAGS: phase sounding, radiogeodetic measurements, Poisk system, photograph point coordinates, aerial surveying

TRANSLATION: Increments of differences in distances from the airplane to base-line ground stations are determined by the phase sounding method in radiogeodetic measurements using the "Poisk" system. In addition, the phase sounding equation written for one pair of stations, expresses the relationship between increases in the difference in distances (between two points), the coordinates of the base-line stations and four unknown coordinates of these two points. It is proposed that instead of tying in the routes to the starting point, that simultaneous measurements be made with two "Poisk" systems using frequencies which permit their operation without

Card 1/2

ACCESSION NR: AR4020480

interference. In this case it will be possible to compile four equations for phase
sounding and find all four unknowns either exactly or approximately. The solution
of this problem by a method of successive approximations is examined in detail. The
use of two sets of "Poisk" radiogeodetic apparatus presents a number of advantages:
the area, in the limits of which the positional error of points does not exceed the
given value of 1.2 m, increases the working zone ensured by one unit by four times;
the number of apparatus changes is reduced by half. In addition, the use of two
"Poisk" units in aerial surveying on a scale of 1:25,000, makes it possible to
eliminate plotting the flight lines. B. Serapinas.

DATE ACQ: 03Mar64   SUB CODE: GE, AS   ENCL: 00

Card 2/2

3(4)

AUTHOR: Zykov, K. A.   SOV/6-59-10-10/21

TITLE: On the Reduction of Air Photographs to the Specified Scale

PERIODICAL: Geodeziya i kartografiya, 1959, Nr 10, pp 33-35   (USSR)

ABSTRACT: The author demonstrates here the simplest method of reducing
              air photographs to the specified scale. It is based on the
              application of nomographs and standard distances. The distance
              between the collimating points on XX and YY on the air
              photograph may serve as standard distance. The author first
              discusses the method itself, and then describes the order
              in which air photographs are reduced to the specified scale.
              There are 2 figures.

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