L 18095-63
ACCESSION NR: AP3005661

$$\eta_{n+1} = \begin{cases} \eta_n + \chi_n - \tau_n & \text{for } \eta_n + \chi_n - \tau_n > 0, \\ 0 & \text{for } \eta_n + \chi_n - \tau_n < 0 \end{cases} \qquad (1)$$

and the condition of stationarity has the form $M\chi \leq M\tau$. Now assume $M\chi = 1$, $\lambda = 1 - \delta$ and consider the case $\delta \to 0$. H is assumed fixed. Let $\eta = \eta\delta$ be a random variable with distribution

$$F(x) = \lim_{n \to \infty} F_n(x). \qquad (2)$$

Theorem 1. If $M\chi^2 < \infty$, then the random variable $\delta\eta$ has asymptotically exponential distribution

where $\Lambda = M\chi^2/2$. $\qquad P\{\delta\eta < x\} \to 1 - e^{-\Lambda x}, \qquad (3)$

Card 2/4

L 18095-63
ACCESSION NR: AP3005661

Theorem 2. If $M\chi^2 < \infty$, then for $\delta \to 0$, $n\delta^2 \to \infty$

$$P\{\delta \eta_n < x\} \to 1 - e^{-\Lambda x}. \tag{4}$$

Thus the "time of occurrence" of the system into a stationary regime has order greater than δ^{-2}. Now let $\xi(t)$ be the number of customers in the system at time t. Theorem 3. For any T and $\delta \to 0$

$$\frac{1}{T}\int_0^T P\left\{\xi\left(\frac{\tau}{A(\delta)\cdot\delta^2}\right) \geq \frac{x}{\delta}\right\}d\tau \to e^{-x}. \tag{5}$$

"I use this opportunity to express my deep gratitude to Yu. V. Prokhorov for the statement of the problem and his help with the completion of this work, and to A. N. Kolmogorov for the advice which furthered its clarification." Orig. art. has: 4 formulas.

Card 3/4

L-16095-63
ACCESSION NR: AP3005661

ASSOCIATION: Matematicheskiy institut im. V. A. Steklova AN SSSR (Mathematical Institute, Academy of Sciences, SSSR)

SUBMITTED: 19Jan63   DATE ACQ: 06Sep63   ENCL: 00

SUB CODE: MM   NO REF SOV: 002   OTHER: 003

Card 4/4

SAMANDUYEV, A.Ya., inzh.; IVANOV, V.I., inzh.; BUDAYEV, E.S., inzh.

Automation of water-pumping stations of petroleum refineries.
Vod. i san. tekh. no.11:4-6 N '65.   (MIRA 18:12)

I. 57786-65

ACCESSION NR: AR5014269

UR/0282/65/000/004/0002/0002
622.692.4.002.5   5
B

SOURCE: Ref. zh. Khimicheskoye i kholodil'noye mashinostroyeniye. Otdel'nyy vypusk, Abs. 4.47.12

AUTHOR: Samanduyev, A. Ya.; Ivanov, V.I.; Sultanovich, A.I.

TITLE: Automation of petroleum product pumping

CITED SOURCE: Mashiny i neft. oborud. Nauchno-tekhn. sb., no. 11, 1964, 38-39

TOPIC TAGS: petroleum refinery equipment, automated gasoline pumping, automatic control circuit, automatic equipment design, sparkproof circuitry

TRANSLATION: The Groznyy branch of VNIIKAneftegaz has designed equipment for the automatic regulation of gasoline pumping processes computing the number of pumping cycles for one of the cracking units oi the plant. The control and counting circuits are spark-proof. This has made it possible to develop a simple, reliable and safe electrical apparatus with bare and spark-proof electrical circuits. The automated gasoline pumping assembly can be employed in explosion hazard facilities of classes V-1, V-1a and V-1b and in outdoor facilities of class V-1g. The automated gasoline

Card 1/2

L. 57736-65

ACCESSION NR: AR5014269

pumping assembly consists of a control block designed for automatic control of magnetic starters and switches of any dimensions, a spark-proof electrical pulse counter of type SB-1J and a level indicator incorporating a float with magnetic elements and hermetically sealed, polarized, magnetic upper-and lower-level relays. The basic electrical circuitry of the automated assembly for gasoline pumping is illustrated. One unit had been in operation for two months prior to the date of the report at the Croznyy cracking plant and had completed more than 2500 pumping cycles without a single failure. One illustration.

SUB CODE: IE, FP   ENCL: 00

Card 2/2

SAMANDUYEV, A.Ya.; IVANOV, V.I.; BUDAYEV, E.S.

Designing and operating automated compressor stations. Mash. i neft.
obor. no.1:32-36 '65.   (MIRA 18:4)

1. Groznenskiy filial Vsesoyuznogo nauchno-issledovatel'skogo i
proyektno-konstruktorskogo instituta kompleksnoy avtomatizatsii
neftyanoy i gazovoy promyshlennosti i Giprogrozneft'.

DAMBORSKA, Marie, MUDr.; SAMANEK, Milan

Considerations on guidance of infants in institutions. Cesk.
pediat. 11 no.7:537-542 July 56.

1. Ze statniho kojeneckeho ustavu v Luhacovicich (red, MUDr.
M. Damborska).
    (INFANT CARE,
        guidance of institutionalized inf. (Cz))

SAMANEK, Milan

Hyperglycemic coma in an 8 year-old boy, after parotitis,
with high blood sugar level. Cesk. pediat. 12 no.1:58-60
Jan 57.

1. Detske odd. OUNZ v Uh. Hradisti; prednosta MUDr. A. Palacky
Infekcni odd. OUNZ v Uh. Hradisti; prednosta MUDr. R. Vana.
    (HYPERGLYCEMIA, in inf. & child
        coma, after parotitis (Cz))
    (PAROTITIS, in inf. & child
        with subsequent hyperglycemic coma (Cz))

DAMBORSKY, Vaclav; DAMBORSKA, Marie; SAMANEK, Milan

Epidemic nausea and vomiting. Cas. lek. cesk. 46 no.10:
307-310 8 Mar 57.

1. OUNZ Uh. Brod a SKU Luhacovice. V. D., Luhacovice, U
Prehrady 210.
(VOMITING, epidemiol.
with nausea (Cz))
(NAUSEA, epidemiol.
with vomiting (Cz))

SNOBL, O.; SAMANEK, M.

Concomitant rib shadows on x-ray. Cesk.pediat. 15 no.3:197-203
Mr '60.

1. II. detska klinika v Praze, prednosta prof.dr. J. Houstek.
            (RIBS radiography)
            (THORAX radiography)

SNOBL, Oldrich; SAMANEK, Milan

Roentgenographic picture of the syndrome of intrathoracic cavities in children. Cesk.pediat.15 no.6/7:560-567 Jl'60.

1. II. detska klinika KU v Praze, prednosta prof.dr. J.Houstek.
        (LUNGS abnorm)

HAVLIKOVA, Dana; STREJCHYR, Vladimir; SAMANEK, Milan

Role of pancreatic fibrosis in chronic diseases of the respiratory
tract. Cesk.pediat. 15 no.8:710-714 Ag '60.

1. I. detska klinika KU, prednosta prof. dr. J.Houstek. III detska
klinika KU, prednosta prof. dr. O.Vychytil.
        (PANCREATIC CYSTIC FIBROSIS compl)
        (RESPIRATORY SYSTEM dis.)

BOR, Imrich; SAMANEK, Milan

Pulmonary lesions in cardiopathies in children. Cesk.pediat. 15
no.8:725-733 Ag '60.

1. II. detska klinika KU v Praze, prednosta prof. MUDr J.Houstek
    (LUNG DISEASES in inf. & child)
    (HEART DISEASES in inf. & child)
    (HEART DEFECTS CONGENITAL compl)

ZAJIC, F.; SAMANEK, M.

Determination of the heart minute volume in rabbits by the ther-
modilution method. Cesk. fysiol. 13 no.2:165-169   Ja'64

1. Ustav pro choroby obehu krevniho, Praha.

*

SAMANEK, M.; VAVROVA, V.; ZAJIC, F.; VOKAC, Z.

Diagnosis of disorders of acid-base equilibrium by analysis of
expired air. Cesk. pediat. 19 no.8:707-712 Ag '64.

1. Katedra fakultni pediatrie a Ustav vyzkumu vyvyje ditete
fakulty detsekho lekarstvi v Praze (vedouci prof. dr. J.
Houstek) a Ustav pro choroby obehu krevniho v Praze (reditel
prof. dr. J. Brod).

SAMANEK, M.; ZAJIC F.

Determination of the dead space and alveolar ventilation with
reference to pediatrics. Cesk. pediat. 19 no.12:1078-1083 D '64

1. Katedra fakultni pediatrie fakulty detskeho lekarstvi Karlovy
University v Praze (vedouci prof. dr. J.Houstek, DrSc.) a Ustav
pro choroby obehu krevniho v Praze (reditel prof. dr. J. Brod.
DrSc.).

Physiology

CZECHCSLOVAKIA   UDC   616.24-003.4:616.131-008

SAMANEK, M.; 2nd Pediatric Clinic, Faculty of Pediatrics, Charles
University (II. Detska Klinika Fakulty Detskeho Lekarstvi KU),
Prague, Head (Prednosta) Prof Dr J. HOUSTEK.

"Local Regulation of Mutual Harmony of Ventilation and Pulmonary
Blood Flow."

Abstract /Author's English summary modified_7:   On the basis of
experiments with 40 dogs the author presents a graphical repres-
entation of the local regulation of the V/Q ratio, and of the
mechanism by which the normal V/Q ratio is maintained. Situa-
tions caused by uneven distribution of the inspired air, or by
irregular flow of blood through the pulmonary capillaries are
discussed; the mechanism of autoregulation is described. This
mechanism is not of a reflex type, but is due to changes in the
alveolar tension of gases. 6 Figures, 13 Western, 4 Czech ref-
erences. (Manuscript received Apr 66).

1/1

SAMANEK, Svatopluk, inz.

Assembly of furniture on mechanised lines. Drevo 18 no.1:
21-24 Ja '63.

1. Umelecko-prumyslove zavody, narodni podnik, Rousinov.

SAMANEK, Svatopluk, inz.

New technology in the furniture industry. Tech praca 16
no.11:905-906 N '64.

ZAMANEK, Svatopluk, inz.

Modern woodworking machines in the furniture industry.
Drevo 19 no.1:9-18 Ja'64.

1. Umelecko-prumyslove zavody, Rousinov.

SAMANEK, V.: COKA, D.

SAMANEK, V; COKA, D. Evaluation of the calculation of standards in
investment works. p. 544.

Vol. 4, no. 6, 1955
SOVETSKA VEDA: STAVEBNICTVI
TECHNOLOGY
Praha, Czechoslovakia

So: East European Accessions, Vol. 5, no. 5, May 1956

HOUSTEK, Josef; BENESOVA, Dagmar; SAMANKOVA, Ladislava

Relation of pulmonary anomalies to recurrent respiratory diseases.
Cesk.pediat.15 no.6/7:545-551 Jl'60.

1. Katedra patologicke anatomie a mikrobiologie, vedouci doc.dr.
Dagmar Benesova a detska klinika fakulty detskeho lekarstvi v
Praze, prednosta prof.dr. Josef Houstek.
          (LUNG abnorm)
          (RESPIRATORY SYSTEM dis)

BRUCKOVA, M.; SAMANKOVA, L.

Isolation of RS virus in Czechoslovakian SSR. Preliminary report.
Cesk. epidem. 12 no.1:44-47 Ja '63.

1. Ustav epidemiologie a mikrobiologie v Praze — Katedra preventivni
pediatrie fakulty detskeho lekarstvi KU v Praze.
(VIRUS DISEASES)   (ANIMAL VIRUSES)
(RESPIRATORY TRACT INFECTIONS)

SOBESLAVSKY, O.; SYRUCEK,L.; BRUCKOVA,M.; HERDEGEN,L.; STICHEN-WIRTHOVA.B.;
    ZAPLETAL,A.; SAMANKOVA, L.; DANESOVA, J.; ABRAHAMOVIC, M.; K JCI,
    D.; FIRKOVA, Z.

A contribution on the ecology of Mycoplasma pneumoniae infections.
J. hyg. epidem. (Praha) 9 no.1:86-94 '65

1. Institute of Epidemiology and Microbiology, Prague, 2nd and
4th Pediatric Clinics of the Medical Faculty, Chair of Preventive
Pediatrics of the Medical Faculty, Paediatric, otorhinolaryngologic-
al and Medical Clinics of the Medical Hygiene Faculty, Charles
University, Prague.

BRUCKOVA, M.; SYRUCEK, L.; SOBESLAVSKY,O.; SAMANKOVA, L.

Contribution to the ecology of the respiratory syncytial virus in Czechoslovakia. Cesk. epidem. 14 no.3:136-142 My '65

1. Ustav epidemiologie a mikrobiologie, Praha, a Katedra preventivni pediatrie fakulty detskeho lekarstvi Karlovy University, Praha.

SAMANKOVA, VLASTA

SURNAME, Given Names

(3)

Country: Czechos...

Academic Degrees: ...

Affiliation: Pediatric Internal Department, Thomayer Hospital (Detske interni oddeleni Thomayerovy nemocnice) Director: Dr E. KRATKOVA, Prague / Kre

Source: Prague. Prakticky Lekar, Vol 41, No 15-16, Aug 21, 1961; pp 668-672

Data: "A...   ...ation of Poisonings in Children"

SLANSKY, Jiri
SAMANKOVA, Vlasta

GPO 981643

SAMANKOVA, Vlasta
SURNAME, Given Names

Country: Czechoslovakia

Academic Degrees: MD

Affiliation: Pediatric Internal Department Thomayer Hospital (Detske interni oddeleni Thomayerovy nemoenice) Chief Dr E. KRATKOVA, Prague - Kre

Source: Prague, Prakticky Lekar, Vol 41, No 15-16, Aug 21, 1961; pp 682-684

Data: "Poisoning with Phenergan in a Five-Year-Old Child"

GPO 901643

SAMANOV, V.V.; GAVRIKOV, K.V.; GERASIMENKO, I.F.; PRIYMA, G.Ya.

Programming device for the study of human reflex activity. Zhur.
vys.nerv.deiat. 12 no.1:181-183 Ja-F '62.   (MIRA 15:12)

1. Chair of Physiology and Morphology, Pedagogical Institute,
and Scientific Pedagogical Laboratory, R.S.F.S.R. Academy of
Pedagogical Sciences, Volgograd.
                           (REFLEXES)

GAVRIKOV, K.V.; PRIYMA, G.Ye.; SAMANOV, V.V.; KOTIN, Ye.M.

Visual speech reflexometer. Vop. psikhol. 11 no. 161-162
Mr-Ap '65.

Audio-speech reflexometer. Ibid.:163-164   (MIRA 18:6)

1. Kafedra fiziologii i morfologii Pedagogicheskogo instituta,
Volgograd.

VALIYEV, A.; SAMANOV, Zh.; USMANOV, Kh.

Division and comparison of Cretaceous sediments in the eastern
part of the Barsakel'mes trough. Uzb.geol.zhur. 8 no.3:19-23
'64.
(MIRA 18:12)

1. Institut geologii i razrabotki neftyanykh i gazovykh
mestorozhdeniy Gosudarstvennogo geologicheskogo komiteta
SSSR. Submitted Jan. 14, 1964.

MAKKAVEYSKIY, P.A., kand.med.nauk; SAMANYAN, E.A., kand.med.nauk

Some problems in the diagnosis of arachnoiditis of the brain
in disability evaluation connected with it. Trudy LETIN 2:
232-237 '59.   (MIRA 13:7)
              (BRAIN--DISEASES)   (DISABILITY EVALUATION)

SAMAR, F.N., ordinator

    Classification of residual defects of the palate following uranoplasty.
    Trudy TSIU 64:79-81 '63.

    Surgical anatomy of residual defects of the palate following
    uranoplasty. Ibid.:82-86   (MIR. 17:5)

DERKACH, G.I.; SHOKOL, V.A.; SAMARAY, L.I.; KIRSANOV, A.V.

New method of preparing trichlorophosphazoacyls. Zhur. ob. khim.
32 no.1:159-160 Ja '62.   (MIRA 15:2)

1. Institut organicheskoy khimii AN Ukrainskoy SSR.
                        (Phosphazo compounds)

DERKACH, G.I.; SAMARAY, L.I.

   Reaction of antimony pentochloride with alkyl esters of iminocarboxylic
   acids. Zhur.ob.khim. 32 no.6:2058 Je '62.   (MIRA 15:6)

   1. Institut organicheskoy khimii Akademii nauk Ukrainskoy SSR.
                 (Antimony chlorides) (Esters)

DERKACH, G.I.; SAMARAY, L.I.; SHOKOL, V.A.

 Trichlorophosphazo acyls. Zhur.ob.khim. 32 no.6:2059 Je '62.
                   (MIRA 15:6)
 1. Institut organicheskoy khimii Akademii nauk Ukrainskoy SSR.
       (Phosphazo compounds)

DERKACH, G.I.; SAMARAY, L.I.; SHTEPANEK, A.S.; KIRSANOV, A.V.

Alkyl esters of phosphazocarbonic acid. Zhur.ob.khim.
32 no.11:3759-3761 N '62.   (MIRA 15:11)

1. Institut organicheskoy khimii AN UkrSSR.
                    (Phosphazo compounds)
                    (Carbonic acid)

DERKACH, G.I.; SAMARAY, L.I.; KIRSANOV, A.V.

Reaction of iminoesters with phosphorus pentachloride.
Zhur.ob.khim. 32 no.11:3761-3764 N '62.   (MIRA 15:11)

1. Institut organicheskoy khimii AN UkrSSR.
                        (Esters)
                (Phosphorus chloride)

DERKACH, G.I.; GUBNITSKAYA, Ye.S.; SAMARAY, L.I.; SHOKOL, V.A.

Diaroxychloro- and triaroxyphosphazoacyls. Zhur.ob.khim. 33
no.2:557-562 F '63.   (MIRA 16:2)
                        (Phosphorus organic compounds)

DERKACH, G.I.; SAMARAY, L.I.

Derivatives of isocyanatophosphoric acid. Zhur. ob. khim. 33
no.5:1587-1591 My '63.   (MIRA 16:6)

1. Institut organicheskoy khimii AN UkrSSR.
        (Phosphoric acid)   (Isocyanic acid)

ALEKSANKIN, M.M.; SAMARAY, L.I.; DERKACH, G.I.

Study of the thermal decomposition of ethyl ester of
trichlorophosphazocarbonic acid by means of O^{18}. Zhur.
ob. khim. 35 no.5:923-925 My '65.   (MIRA 18:6)

1. Institut organicheskoy khimii AN UkrSSR i Institut fizicheskoy
khimii AN UkrSSR.

L 35557-65   EWT(m)/EPF(c)/EWP(j)/EWA(c)   Po-4/Pr-4   RM
                                                           S/0286/65/000/005/0023/0023
ACCESSION NR: AP5008147

AUTHORS: Derkach, O. I.; Samaray, L. I.

TITLE: A method for obtaining derivatives of isocyanate phosphoric acid. Class
12, No. 168699

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 5, 1965, 23

TOPIC TAGS: phosphoric acid, ester, chloriminocarbonic acid, phosphorus compound

ABSTRACT: This Author Certificate presents a method for obtaining derivatives of
isocyanate phosphoric acid by the interaction of N-chloriminocarbonic acid esters
with trivalent phosphorus compounds. To increase the assortment of raw materials,
chlorine derivatives of phosphoric acid are used as the trivalent phosphorus
compound.

ASSOCIATION: none

                                                           SUB CODE: GC

SUBMITTED: 13Jul62   ENCL: 00

NO REF SOV: 000   OTHER: 000

Card 1/1

SAMARAY, L.I.; DERKACH, G.I.

    Phosphorylated derivatives of oxalic acid amides. Zhur. ob. khim.
    35 no.4:755 Ap '65.   (MIRA 18:5)

    1. Institut organicheskiy khimii AN UkrSSR.

SHMARAY, L.I.; BONDAR', V.A.; DERKACH, G.I.

Reaction of carboxylic acid amidines with cxalyl chloride,
Zhur. org. khim. 1 no.11:2004-2008 N '65.   (MIRA 18:12)

1. Institut organicheskoy khimii AN UkrSSR. Submitted
January 18, 1965.

SAMARCHANTS, V.F., inzh.; ROGOV, F.M., inzh.; SUSTAN, V.G., inzh.

New rotary-type device for making up sets of articles. Vest.
mashinostr. 44 no.9:60-62 S '64.

(MIRA 17:11)

SAMARCHYAN, K.

Die with a simplified design. Prom.Arm. 5 no.12:43 D '62.

(MIRA 16:2)

1. Yerevanskiy elektrotekhnicheskiy zavod.
(Armenia—Dies(Metalworking))

SAMARCHYAN, R.S.; MUKHINA, V.N.; SULTANOV, K.I.; PRANULIS, M.F.

Torch lines and safety valves inoil and gas refineries. Azerb.
neft.khoz. 35 no.10:33-35 O '56.   (MIRA 10:1)
        (Petroleum--Refineries)

SAMARCHYAN, V., inzh.

Absorption of tail nitrous gases by manganous oxide hydrate.
Prom.Arm. 4 no.6:61-63 Je '61.   (MIRA 14:8)
                    (Absorption) (Nitrogen oxide)

SAMARDAK, Leonid

      We are responsible for everything. Na stroi. Ros. 4 no.1:24 Ja '63.
                                                      (MIRA 16:3)

1. Rukovoditel' kompleksnoy brigady kommunisticheskogo truda
Otdelochnikov UNR-852 tresta Khabarovskzhilistroy.
                      (Khabarovsk---Construction industry)

SAMARDZHIYEV, D. T.

8.1–282

Krustanov, L. and Samardzhiev, D. T.. Vurkhu ugolemiavaneto na obachni kapki vuv

551 576.11 :551.574.1

2

SAMARDZHIYEV, D. T.

7.8-117

Baroff, V. B. and Samardzhiev, D. T. Vrkhu prymenite na viatra s visochinata pri promenliv koefitsient na vertikalna turbulentna obmian/ po modela na B. L. Izvekov. [Vertical wind variations with variable coefficients of vertical turbulent exchange according to the Izvekov model.] *Bulgarska Akademiia na Naukite, Sofia, Izvestiia, Otdelenie za Fisiko-Matematicheski i Tekhnicheski Nauk, Ser. Fisicheska*, 4:239-248, 1954. pub. 1955. 3 figs., tables, 7 refs., eqs. DWB, DLC—The theory of vertical turbulent exchange is first developed according to the Izvekov formula which calls for a coefficient of turbulent exchange which increases with height This is applied to the equations of motion and quantitative examples worked out and compared with experimental data, showing good agreement. *Subject Head-in* 1 Wind profile theory 2. Turbulent exchange coefficient.— *M R*.

(6)

PHASE I BOOK EXPLOITATION   BOV/5213

Akademiya nauk SSSR. Mezhduvedomstvennyy komitet po provedeniyu Mezhdunarodnogo geofizicheskogo goda. V. razdel programmy MGG: Ionosfera.

Issledovaniya neodnorodnostey v ionosfere (Investigations of Inhomogeneities in the Ionosphere) Moscow, Izd-vo AN SSSR, 1960. 96 p. 2,000 copies printed. (Series: Its: Sbornik statey, No. 4)

Resp. Eds. Yu.V. Kushnerevskiy and S.F. Mirkotan, Candidate of Physics and Mathematics; Ed.: Ye.P. Shchukina; Tech. Ed.: O.M. Gus'kova.

PURPOSE: This publication is intended for geophysicists. It will be of particular interest to researchers specializing in studies of the structure of the ionosphere and its effect on radio wave propagation.

COVERAGE: This collection of articles on the properties of ionospheric inhomogeneities was published by the IGY Committee of the AS USSR, as the fourth serial contribution to the fifth section of the IGY program (the ionosphere). Individual articles deal with various types of ionospheric inhomogeneities and their drifts, a study of the state of polarization, and a method of correlation analysis of the measurements of inhomogeneities and drifts in the ionosphere. No personalities are mentioned. References follow individual articles. A brief English abstract is appended to each article.

TABLE OF CONTENTS:

AVAILABLE: Library of Congress

Card 3/3

JK/bm/grp
7-3-61

28424
S/169/61/000/007/091/104
A006/A101

9.9100

AUTHORS: Samardzhiyev, D.T., Kushnerevskiy, Yu.V.

TITLE: Disturbance displacement in F2 layer

PERIODICAL: Referativnyy zhurnal. Geofizika, no. 7, 1961, 39, abstract 7G273 (V
              sb. "Issled. neodnorodnostey v ionosfere no. 4", Moscow, AN SSSR,
              1960, 38 - 44, English summary)

TEXT: The author describes a method of determining displacement of distur-
bances in layer F2. The f-graphs from 5 ionospheric stations from March 1958
to December 1959 were used. Results of analysis show that in layer F2, the dis-
turbances move at an average speed of about 173 m/sec. Most probable speed
values are within 60 - 100 and 140 - 180 m/sec. Two main directions of motion
were observed, namely from the east to the west and from the north to the south.
West-east motion was almost absent.

The authors' summary

[Abstracter's note: Complete translation]

Card 1/1

BAEV, G.; SAMARDJIEV, D. [Samardzhiev, D.]; HRISTOSKOV, L. [Khristoskov, L.];
    YUSKISELIEVA, L. [IUskeselieva, L.]

Observation of the fleeting umbrae during the solar eclipse of February
15, 1961. Doklady BAN 15 no.4:369-372 '62.

1. Submitted by Academician L. Krastanov [Krustanov, L.]. Chlen
Redaktsionnoy kollegii i otvetstvennyy redaktor, "Doklady Bolgarskoy
akademii nauk."

ACCESSION NR: AT4013671   B/2506/63/004/000/0109/0125

AUTHOR: Samardzhiev, D.; Serafimov, K.

TITLE: Some regularities of the E2 layer above Sofia observed in 1961

SOURCE: B"lgarska akademiya na naukite, Geofizichen institut, Izv., v. 4, 1963,
109-125

TOPIC TAGS: E2 layer, E layer, F layer, critical frequency, reflection, ionosphere

ABSTRACT: Refined in the work are distinguishing criteria for classifying radio
reflections from the intermediate E-F region -- a region for which very few data
have been accumulated and which is very poorly illuminated in the literature. Var-
ious methods of investigating the E2 layer are indicated. Obtained from analysis
of ionograms made by the Sofia ionospheric station is the seasonal histogram of
instances when reflection from the E2 layer appears (Fig. 1 of the Enclosure). This
histogram shows a significant minimum in the summer and maximum during December.
The intermediate E region is shown to be in constant intensive movement, and this
often leads to changes in the type of layerlike structures in it. A monthly dia-
gram of f_oE2 frequencies (Fig. 2 of the Enclosure) was constructed for the month
(December) with especially frequent appearance of reflections from the E2 layer,

Card 1/$\not{6}$ 3

ACCESSION NR: AT4013671

and a determination made of the diurnal variation of median values (Fig. 3 of the Enclosure). Critical frequencies of the E2 layer have little scattering and are well grouped. Also analyzed is the daily variation of instances of appearance of reflections from the E2 layer during December. Such analyses are indicated to be correct only when allowance is made for the screening capabilities of the sporadic E layer. With these corrections made, a unimaximal distribution of instances of appearance of reflections from the E2 layer is obtained, with greatest probability during the period 0900-1000 hours local time (Figure 4 of the Enclosure). Also investigated is the duration of reflections from the E2 layer in December and April 1961 (Fig. 5 of the Enclosure). On the basis of the monthly picture of f_oE2 for December 1961 and the obtained diurnal variations of f_oE2 for individual days of the same month, the conclusion is drawn that there is a close association between electron concentration of the E2 layer and the zenith angle of the Sun. Established on the basis of this is the law governing the variation of critical frequencies:

$$f_o E2 \sim (\cos x)^n$$

Exponent n is in every case smaller than the corresponding exponent in the known dependence for the E layer:

$$f_o E \sim (\cos x)^m \sim \text{ т. е, } \quad n < m.$$

Card 2/5 3

ACCESSION NR: AT4013671

Explained on the basis of this law is the disappearance of reflections from the E2 layer during the summer (the reason being the slower increase in ionization in the E2 layer as compared with the relatively rapid increase of critical frequencies of the E layer, screening the higher-lying E2 layer). Also derived is an equation relating to the possibility of obtaining reflections from the E2 layer. Through the use of the obtained dependence

$$\frac{f_0 E2}{f_0 E2_s} = \left[\frac{\cos\varkappa}{\cos\varkappa_s}\right]^n ,$$

the summer daily variation of the critical frequencies of the E2 layer can be constructed. Orig. art. has: 9 formulas, 11 figures.

ASSOCIATION: none

SUBMITTED: 03Dec62   DATE ACQ: 04Mar64   ENCL: 03

SUB CODE: AS, CO   NO REF SOV: 004   OTHER: 005

Card 3/5

SERAFIMOV, K.; SAMARLJIEV, D. [Samardzhiev, D.]

   Regularity in the development of ionospheric E2-layer.
   Doklady BAN 16 no. 4: 365-368 '63.

   1. Vorgelegt von Akademiemitglied L. Krastanov [Krustanov,
      L.].

L 636 2-65   EEC-4/EWG(v)/EMA(h)/FCC   Pe-5/Pi-4/Po-4/Pq-4/Pae-2/Pab   GW
ACCESSION NR: AP4031635   UR/0203/64/004/002/0301/0306
                                              550.388.2   44
                                                                            43
                                                                             B

AUTHOR: Nestorov, G.; Samardzhiyev, D.

TITLE: The appearance of the daylight E layer and the D-region absorption at sunrise

SOURCE: Geomagnetizm i aeronomiya, v. 4, no. 2, 1964, 301-306

TOPIC TAGS: daylight E layer, ionospheric D region, ionospheric absorption, E layer,
D region

ABSTRACT: A new method is proposed for the determination of the instant of appearance
of the daylight E layer of the ionosphere, and of the altitude at which the D-region
absorption begins at sunrise. It is based on the interpretation of short wave radio
signals, and the authors applied it to their measurements of the 2.5 Mc electromagnetic
field between the OMA transmitter in Prague (Czechoslovakia) and the Ionospheric
Observatory in Sofia (Bulgaria) made from September 1960 to July 1962. Results,
checked by data from the Budapest ionospheric station (located in Hungary near the
point of reflection of the Prague-Sofia channel) show that the electron concentration
within the E layer reaches $8-10 \cdot 10^{13}$ el·cm^{-3} for sun's altitude between -1 and +3°.

Card 1/2

L 63632-65
ACCESSION NR: AP4031635

The altitude of the beginning of the absorption layer within the D-layer is subject to seasonal variations within the 70 (summer) and 80 km (winter) limits. Orig. art. has: 2 formulas and 3 figures.

ASSOCIATION: Geofizicheskiy institut Akademii nauk Bolgarskoy Narodnoy Respubliki (Geophysics Institute, Academy of Sciences of the Bulgarian People's Republic)

SUBMITTED: 02Dec63   ENCL: 00   SUB CODE: ES

NO REF SOV: 000   OTHER: 005

Card 2/2

L 18297-65   EWT(1)/EWG(v)/EEC-4/EEC(t)/EWA(h)/FCC   Pe-5/Pi-4/Po-4/Pq-4/
Pae-2/Peb   AS(mp)-2/ASD(p)-3/ASD(m)-3/ASD(a)-5/ESD(c)/ESD(t)   GW/WS
ACCESSION NR: AP5000520   S/0203/64/004/006/1052/1058

AUTHOR: Samardzhiyev, D.; Nestorov, G.   B

TITLE: A new method for the investigation of motions in the nocturnal
ionospheric E layer

SOURCE: Geomagnetizm i aeronomiya, v. 4, no. 6, 1964, 1052-1058

TOPIC TAGS: ionospheric drift, nocturnal E layer, terrestrial wave,
spatial wave, interferential attenuation, transmitter, receiver,
electron concentration.

ABSTRACT: A new method for investigating drift motions in the noc-
turnal E layer of the ionosphere is developed. The ground wave is
eliminated by an antenna of special structure used to record the
amplitude fluctuations of the signal. This procedure eliminates at-
tenuation due to interference between the ground and space waves and
records only the space wave reflected from the ionosphere. Velocities
and directions of drifts are functions of the height. It is more con-
venient to record the intensity of reflected waves of three transmit-
ters sent from the same point with different frequencies. The places

Card 1/2

L 18297-65
ACCESSION NR: AP5000520

for receiving the reflected waves must be equipped with receivers of
equivalent frequencies. This method is suitable for studying drifts
in ionsphere with low electron concentrations. Three transmitters in
the Sofiya Observatory have receivers in Bucharest operating on a
frequency of 854 kc, at Varna on 1124 kc, and at Pleven on 593 kc.
Observational data from these stations were processed and the drift
velocities and directions for the interval from 6 p.m. to midnight
were obtained. The more probable velocities are from 20 to 40 m/sec,
with two maxima and one minimum. The direction of motion varies
greatly. In the winter the southwest direction is predominant and in
the spring, the northeast direction. Orig. art. has: 7 figures.

ASSOCIATION: Geofizicheskiy institut Bolgarskoy akademii nauk,
Sofiya (Geophysical Institute, Bulgarian Academy of Sciences)

SUBMITTED: 26Jun64   ENCL: 00   SUB CODE: ES, EC

NO REF SOV: 006   OTHER: 014   ATD PRESS: 3156

Card 2/2

DANEV, Kiril, Docent

Heterogeneities and movements in the ionosphere. Prircda Bulg
13 no.3:61-64 My-Je '64.

TREHISKOVA, C.; NESTOROV, G.; SAMARDZHIYEV, S. (Samardzhiev, S.)

Some characteristics of radio signals reflected from ionized
meteor trails. Doklady BAN 17 no.5:463-466 '64

1. Predstavleno akad. J. Krystanovym (Krustanov, J.).

L 62154-65   EWT(1)/EEC(k)-2/EWG(v)/FCC/EEC-4/EWA(h)   Pn-4/Po-4/Pe-5/Pg-4/Pq-4/Pae-2/
ACCESSION NR: AP5016792 Pt-7/Peb/Pl-4/Pl-4   GW/WS-4 CZ/0023/65/009/003/0306/0308

AUTHOR: Triskova, L.; Samardzhiyev, D. T.

TITLE: Statistical properties of the E_s layer studied through forward scattering at 40 Mc

SOURCE: Studia geophysica et geodaetica, v. 9, no. 3, 1965, 306-308

TOPIC TAGS: E_s layer statistical property, forward scattering, ionosphere, radio wave propagation

ABSTRACT: The properties of the E_s layer have been studied along two experimental meteoric forward scattering routes from 1 April 1963 to 31 April 1964. The first route (Sofia-Warnsdorf) was 1120 km long with the middle point coordinates $\varphi_1 = 46°31'$ N, $\lambda_1 = 19°15'$ E and the transmitted frequency $f_1 = 40.5$ Mc. The second route (Stropkov-Warnsdorf) was 550 km long, $\varphi_2 = 50°18'$ N, $\lambda_2 = 18°10'$ E, $f_2 = 40.25$ Mc. For four days a week, 600-w transmitters worked continuously. The duration of the signal scattered on the E_s layer was registered at a level 10 db above the noise which corresponded to 1 μv at the receiver input. On the basis of 201 cases of the appearance of an E_s layer, the authors established the seasonal and daily variations of E_s occurrence, the statistical distribution of signal duration, and the distribution of the filling coefficient. The daily variation curve averaged over a year

Card 1/2

L 62154-65

ACCESSION NR: AP5016792

was in good agreement with the average course of E_s appearance for $f_0 \geq 5$ Mc established by the vertical probing station Bekescsaba (Hungary) (46°40' N, 21°40' E) near the reflecting point of the first route. Orig. art. has: 4 figures. [08]

ASSOCIATION: Geofizicheskiy institut ChSAN, Prague (Geophysics Institute, ChSAN); Geofizicheskiy institut BAN, Sofia (Geophysics Institute, BAN)

SUBMITTED: 28Nov64   ENCL: 00   SUB CODE: ES, EC

NO REF SOV: 000   OTHER: 000   ATD PRESS: 4048

Card 2/2

L 33300-66   EWT(1)/FCC   GW

ACC NR: AP6011705   SOURCE CODE: UR/0203/66/006/002/0357/0360

AUTHOR: Samardzhiyev, D.

ORG: Geophysical Institute, Bulgarian Academy of Sciences (Geofizicheskiy institut, Bolgarskaya Akademyia Nauk)

TITLE: Appearance of the E_s layer in the zone of polar auroras

SOURCE: Geomagnetizm i aeronomiya, v. 6, no. 2, 1966, 357-360

TOPIC TAGS: E layer, aurora, ionosphere, atmospheric sounding

ABSTRACT: In this article the author examines certain characteristics of the E_s layer based on data of vertical sounding of the ionosphere at the Murmansk station. The hourly values of the limiting frequency of the E_s layer during the period from January 1 to December 31 1958 were used. The diurnal and seasonal dependence of the probability of the appearance of the sporadic layer PE_s with frequencies $f_0E_s \geq 3$ Mc was investigated. Along with this characteristic the author examines the relative number of P_1E_s layers with frequencies $f_0E_s \geq 3$ Mc. This new parameter expresses the ratio between the number of layers with frequencies $f_0E_s \geq 3$ Mc and the number of observed sporadic layers at a given hour of the day. From the data of the vertical sounding of the ionosphere at the Murmansk station, which is in a zone of maximal recurrence of polar auroras, complete absorbtion is very frequently observed. Furthermore, the D region of the ionosphere is quite pronounced and f_{min} with

Card   1/2   UDC 550.388.2

L 33300-66

ACC NR: AP6011705   O

rather high values exceeding 3-4 Mc is often observed on the ionograms. To elicit the effect of f_{min} on the probability of the appearance of the sporadic layer PE_s, its diurnal variation was investigated. The parameter characterizing the changes of f_{min} is taken to be the probability of the appearance of f_{min} with frequencies of ≥ 3 Mc (Pf_{min}); the ratio is expressed in the percent of the number of cases with $f_{min} \geq 3$ Mc to the total number of observations made at a certain hour of the day. It is shown that Pf_{min} has a maximum during the midday hours. It is shown that Pf_{min} has a maximum during the midday hours. The diurnal relationships of PE_s and Pf_{min} are compared. An inverse correlation exists between these characteristics ($R > 70\%$). The conclusion is made that the diurnal variation of PE_s with minimal values near midday is under the strong influence of f_{min}, since in this interval Pf_{min} has maximal values. A diurnal and seasonal relationship was not established for P_1E_s. Orig. art. has: 3 figures.

SUB CODE: 04 / SUBM DATE: 07Oct65 / ORIG REF: 006 / OTH REF: 001

Card   2/2

ACC NR: AT7005560   SOURCE CODE: BU/2506/66/008/000/0031/0044

AUTHOR: Samardzhiev, Dimitur

ORG: none

TITLE: The emergence and certain peculiarities of the sporadic E layer

SOURCE: Bulgarska a ademiya na naukite. Geofizichniya institut. Izvestiya, v. 8, 1966, 31-44

TOPIC TAGS: sporadic layer, ionosphere, geomagnetism, ionospheric sounding, E layer, DIURNAL VARIATION

ABSTRACT: Certain peculiarities of the sporadic layer are examined on the basis of data from vertical ionospheric sounding at ten stations located between 40° and 80° N latitude. The diurnal and seasonal variations over a period of one year, as well as the geographical and geomagnetic correlations of the probability of the emergence of the sporadic layer (PE_s), for layers with frequency $f_0E_s \geq 3$ mc and the relative number of P_1E_s and P_2E_s for layers with frequencies $f_0E_s \geq 3$ and 5 mc were investigated. For the medium geographical latitudes, these parameters exhibited well-expressed diurnal and seasonal variations with maximum values near midday and in the summer months. In June between 06.00 and 18.00 hrs all the sporadic layers observed had boundary frequencies over 3 mc. Minimum sporadic activity was observed in the morning and evening hours and in March and November. The diurnal and seasonal variations of the probable emergence of $f_{min} \geq 3$ mc were studied in the zone of the northern lights (Murmansk station). It was found that the diurnal variation of Pf_{min}

Card 1/2   UDC: none

ACC NR: AT7005560

has a maximum near the midday and a seasonal maximum—in March and September. A negative correlation was established between the diurnal variation of the PE_s and Pf_{min} probabilities correlation coefficient $R \simeq -0.80$. The relative P_1E_s and P_2E_s numbers do not show a diurnal or seasonal dependence. The absence of such a dependence shows that in the zone of the northern lights, the solar wave radiation does not have a direct ionizing effect on the formation of a sporadic layer. A geographical dependence of the PE_s probability was also established. The values of PE_s diminish with increasing latitude (in the summer they decrease from 80% for stations situated at about 40°, to 30% for stations located further to the north. On the other hand, the relative P_1E_s and P_2E_s numbers show a well-expressed geo-magnetic ratio. Their values at geomagnetic latitudes of 30° and 65—70° are considerably higher than those between 45° and 55°. This difference is partic...arly pronounced during the winter period. The increase in P_1E_s and P_2E_s may be related to the ejection of electron fluxes radiated by the internal and external radiation layers into the atmosphere at these geomagnetic latitudes. Orig. art. has: 7 figures and 1 table.   [CS]

SUB CODE: 08/   SUBM DATE: none/

Card   2/2

SAMARDZIC, B.

"Second Competition of Indoor Models in Bosnia and Hercegovina"   p. 2
(AERO SVET, Vol. 3, no. 53, Dec. 1953, Beograd, Yugoslavia)

SC: Monthly List of East European Accessions, LC, Vol.3, no. 5, May 1954/Uncl.

SAMARDZIC, M.

SAMARDZIC, M. Importance and purpose of technical conditions in the manufacture
of military uniforms p. 825.

Vol. 4, no. 8, Aug. 1955
TEKSTIL
Zagreb, Yugoslavia

So: Eastern Eur

SAMARDZIC, M.

The maintenance of tents in camping.

p. 44 (Vojni Glasnik. Vol. 10, no. 8, Aug. 1956. Beograd, Yugoslavia)

Monthly Index of East European Accessions (EEAI) LC. Vol. 7, no. 2,
February 1958

SAMARDZIJA, Miroslav, inz.

Noise of transformers in Belgrade settlements. Elektroprivreda 15
no.11/12:527-531 N-D '62.

1. Elektroistok, Beograd.

CHERNIKOV, Lev Nikitovich, zhurnalist; SAMARETS, Aleksandr
     Yakovlevich, zhurnalist; PESHKOV, V.P., red.

     [Farms, machines, people...] Fermy - mashiny - liudi...
     Voronezh, TSentral'no-Chernozemnoe knizhnoe izd-vo, 1964.
     53 p.   (MIRA 18:1)

AUTHOR: Samarets, R.R.

TITLE: Automation and Mechanization of Cold-forming Processes (Avtomatizatsiya i mekhanizatsiya protsessov kholodnoy shtampovki)

PERIODICAL: Tekhn.-ekon. byul. Sov. nar. kh-va Chelyab. ekon. admini-strat. r-na, 1957, Nr 2, pp 38-41

ABSTRACT: Descriptions are provided of the designs of a number of mechanisms providing more complete utilization of press equipment in the cold-forming shops of the Chelyabinsk Trac-tor Plant. In the stamping of cooling disks for oil and water radiators, automatic delivery of strip to the die (D) by rollers actuated by the crankshaft of the press via a ratchet sleeve and a rack and pinion coupling has been introduced. First the strip passes through a special fixture to roll the edges. To cut down time when a new reel is being put in place and to reduce waste, the strip ends are spot lap welded. A turret head is employed to automate delivery of individual parts to the coining opera-tion. The head is rotated by the slider of the press by means

Card 1/2

SOV/137-58-8-16938

Automation and Mechanization of Cold-forming Processes

of worm and rack and pinion couplings. Quick-change punches and dies are installed in the D for the coining operation. Parts are removed from the D by inexpensive and easily-manufactured mechanical ejectors. The introduction of all these mechanisms in cold-stamping operations has resulted in a 20-30% increase in labor productivity and has improved safety on the job.

V.F.

1. Brakes (Metalworking)—Equipment
2. Presses—Design
3. Rolling mills—Performance
4. Industrial plants— Equipment

Card 2/2

SAMARETS, V.D., inzh.; LOPATO, V.V., monter.

Increasing the dielectric strength of all-purpose measuring gauges.
Energetik 5 no.12:21 D '57.   (MIRA 10:12)
                              (Gauges)

KOLENDROVSKIY, A.S., inzh.; SAMARETS, V.D., inzh.

Damage of RVVM-3 dischargers installed in the neutral of synchro-
nous compensators. Elek.sta. 29 no.8:90 Ag '58.

(MIRA 11:11)

(Electric discharges)

8(2)

SOV/91-59-6-19/33

AUTHOR: Samarets, V.D., Engineer

TITLE: An Instance of Insulation Damage on 35kv Lines

PERIODICAL: Energetik, 1959, Nr 6, p 23 (USSR)

ABSTRACT: The author describes an instance when a 35kv power
             line traversing a ravine went out of order during a
             rainfall accompanied by a stormy wind. The injury
             was found to have been caused by faulty singular
             fastening of the wire to the transverse beam of the
             support standing in the ravine. The author suggests
             replacing such fastenings by double fastenings. In a
             footnote, the editorial board states that the measure
             suggested by the author is but one of many possible
             measures, which include the application of compensatory
             weights, the use of V-shaped twin chains, or replace-
             ment of the intermediate supports by anchor type sup-
             ports. There is 1 sketch.

Card 1/1

KOVALENKO, V.P., inzh.; SAMARETS, V.D., inzh.

Raising discharge voltages in the RVP series 35kv. excess
voltage supressor. Energetik 8 no.1:24-25 Ja '60.
(MIRA 13:5)

(Voltage regulators)

8(6)   SOV/112-59-4-6815

Translation from: Referativnyy zhurnal. Elektrotekhnika, 1959, Nr 4,
    pp 58-59 (USSR)

AUTHOR: Toroptsev, N. D., and Samarich, A. A.

TITLE: Operating a 2-Wire-Ground-Return System

PERIODICAL: S. kh. Sev. Kavkaza, 1958, Nr 4, pp 86-87

ABSTRACT: Operating a 2-wire-ground-return system in the rural networks of
    Stavropol' kray revealed serious shortcomings. The principal difficulty lies
    in the fact that the insulation with respect to the ground of an ShD-35 insulator
    at 35 kv and an Sh-10 insulator at 10 kv has proved inadequate. Insulator
    failures often occur in humid weather, fog, or snow storm; they cause
    prolonged power interruptions. The impossibility of connecting a 2-wire-
    ground-return system in parallel with conventional lines, without special
    isolating transformers, as well as noise induced in communication circuits
    constitute other shortcomings. The need for special high-electric-strength

Card 1/2

SOV/112-59-4-6815

Operating a 2-Wire-Ground-Return System

insulators for a 2-wire-ground-return system makes the economic expediency
of using this system for new transmission lines doubtful.

S.Sl.L.

Card 2/2

SAMARIN, A.

Mechanical ventilation assures good storage of grain. Muk.-elev.
prom. 27 no.2:15 F '61. (MIRA 14:4)

1. Zamestitel' direktora Presnovskogo khlebopriyemnogo punkta
Severo-Kazakhstanskogo upravleniya khleboproduktov.
(Grain—Storage)   (Ventilation)

S/137/62/000/001/209/237
A154/A101

AUTHORS: Stepanov, A. N., Samarin, A. A.

TITLE: Obtaining sheet steel by decarbonizing sheet cast-iron

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 1, 1962, 96, abstract 1I687
(V sb. "Polucheniye, izdeliy iz zhidk. met. s uskoren. kristalli-
zatsiyey" Moskva-Kiyev, Mashgiz, 1961, 262 - 276)

TEXT: Tests were made for developing a technological process for obtaining
sheet steel by decarbonizing sheet cast-iron in a solid medium. In order to
thus obtain sheet steel with good mechanical properties and corrosion-resistance,
the sheet cast-iron should be made of metal with 0.5 - 0.8% Cr and 0.2% Cu. The
decarbonizing should be carried out in a mixture of class II iron ore (hematite)
(85 - 90%), chalk (8 - 10%) and carbon (peat coke) (2 - 5%). Decarbonizing an-
nealing should be carried out at 980 - 1,020°C for 4 - 5 hrs for 1 mm sheet and
7 -9 hrs for 1.5 mm sheet. There are 5 references.

T. Fedorova

[Abstracter's note: Complete translation]

Card 1/1

SAMARIN, A.A., inzh.; LERNER, Yu.S., inzh.

Casting piston rings of magnesium cuprous cast iron for diesel engines. Mashinostroenie no.4:64-65 Jl-Ag '65.   (MIRA 18:8)

SAMARIN, A.

For a pneumatic gas grain dryer. Muk.-elev.prom. 30 no.1:11 Ja
'64.   (MIRA 17:3)

1. Zamestitel' direktora Presnovskogo khlebopriyemnogo punkta
Severo-Kazakhskoy oblasti.

ACCESSION NR: AP4025736   S/0184/64/000/001/0009/0011

AUTHORS: Popandopulo, Yu. G. (Engineer); Samarin, A. A. (Engineer); Starkova, M. G. (Engineer)

TITLE: Installation for the regeneration of hydrogen

SOURCE: Khimicheskoye mashinostroyeniye, no. 1, 1964, 9-11

TOPIC TAGS: hydrogen, hydrogen regeneration, nichrome catalyst, silica gel, drying unit, heating unit, reduction furnace, cooling unit

ABSTRACT: NIIkhimmash has developed an installation for the regeneration of hydrogen from reduction ovens of tungsten and molybdenum recovery plants. The estimated capacity of the unit was 200 m^3/hr hydrogen with a residual moisture content of 0.15 gm/m^3, which corresponds to a dew point of -40C. The hydrogen from the reduction ovens is passed through a contact apparatus containing nichrome catalyst to bring the oxygen content down to 10^{-6}%. It is then mixed with hydrogen from the system's leak traps. From there hydrogen moves to a cooler where most of the moisture is condensed at 12-14C and is subsequently pumped by a rotary blower to an electric oven where it is heated to 300C. The final step consists in

Card 1/2

ACCESSION NR: AP4025736

passing the hydrogen through two drums of 0.75m^3 capacity, filled with silica gel. The first drum contains hydrous silica gel, while the second, separated from the first by a cooling device, is filled with anhydrous silica gel. During passage through the first drum the hot hydrogen removes the moisture from the silica gel and deposits it in the condenser. The capacity of this installation under working conditions was 420-450 m^3/hr, the oxygen content of the inflowing hydrogen averaged 0.4%, and the moisture content of the regenerated hydrogen amounted to 1-2%. Orig. art. has: 6 figures and 1 table.

ASSOCIATION: NIIkhimmash

SUBMITTED: 00   DATE ACQ: 14Feb64   ENCL: 00

SUB CODE: IE, CH   NO REF SOV: 000   OTHER: 000

Card 2/2

Samarin, A. F.

"On the Problem of the Calculation of the Reduction in Rolling Sheet", Trudy
Stalinskogo Oblast Otd. ENITON, 1949, Nr 1.

BELYAKOV, R.S.; SAMARIN, A.M.

Effect of the method of manufacture on the properties of stainless steel. Trudy Zapor. mashinostroi. inst. 4:33-44 '59. (MIRA 17:1)
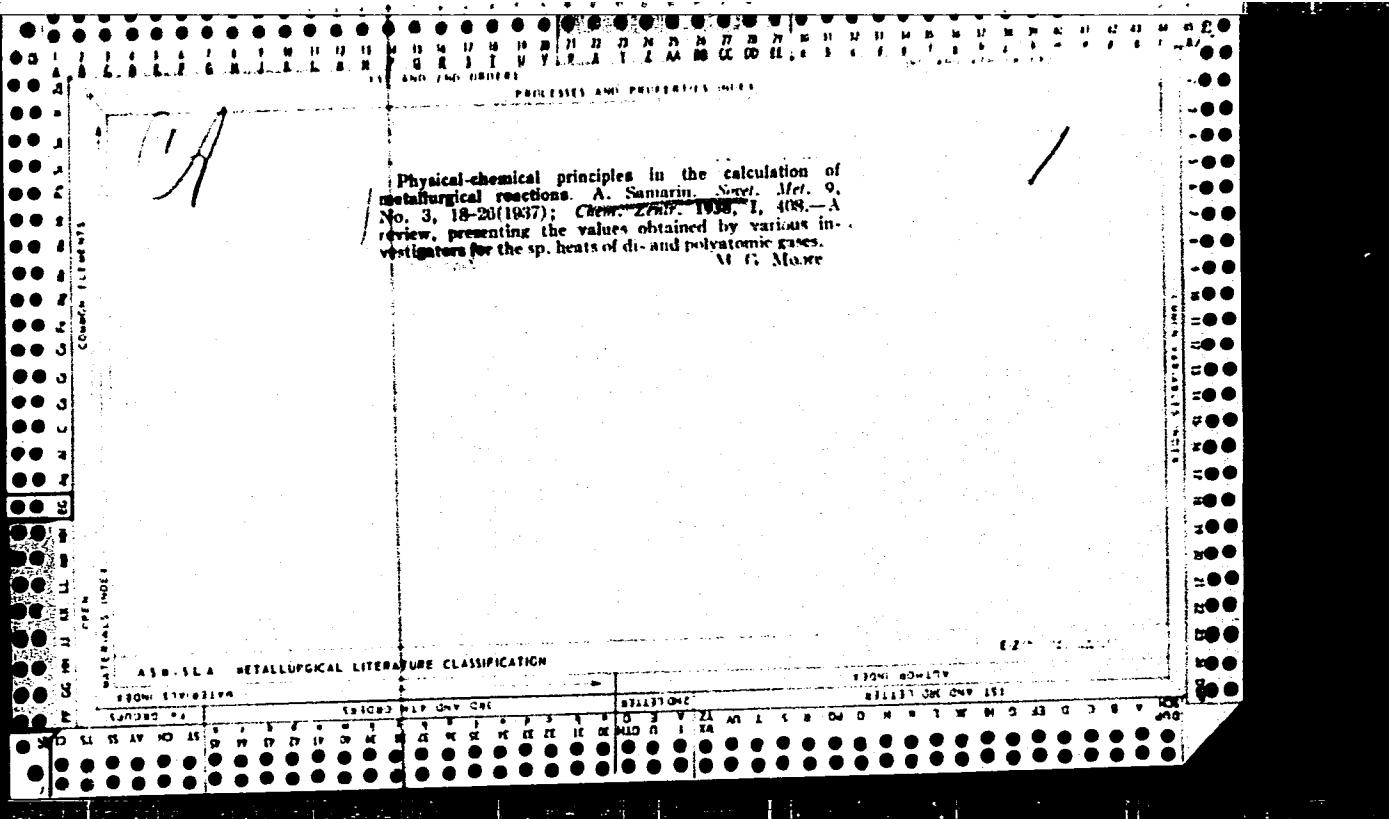
SAMARIN, Aleksandr Mikhaylovich, ed.

Electrometallurgy. Moskva. Glav. red. lit-ry po chernoi metallurgii, 1935. (Mic 53-166)

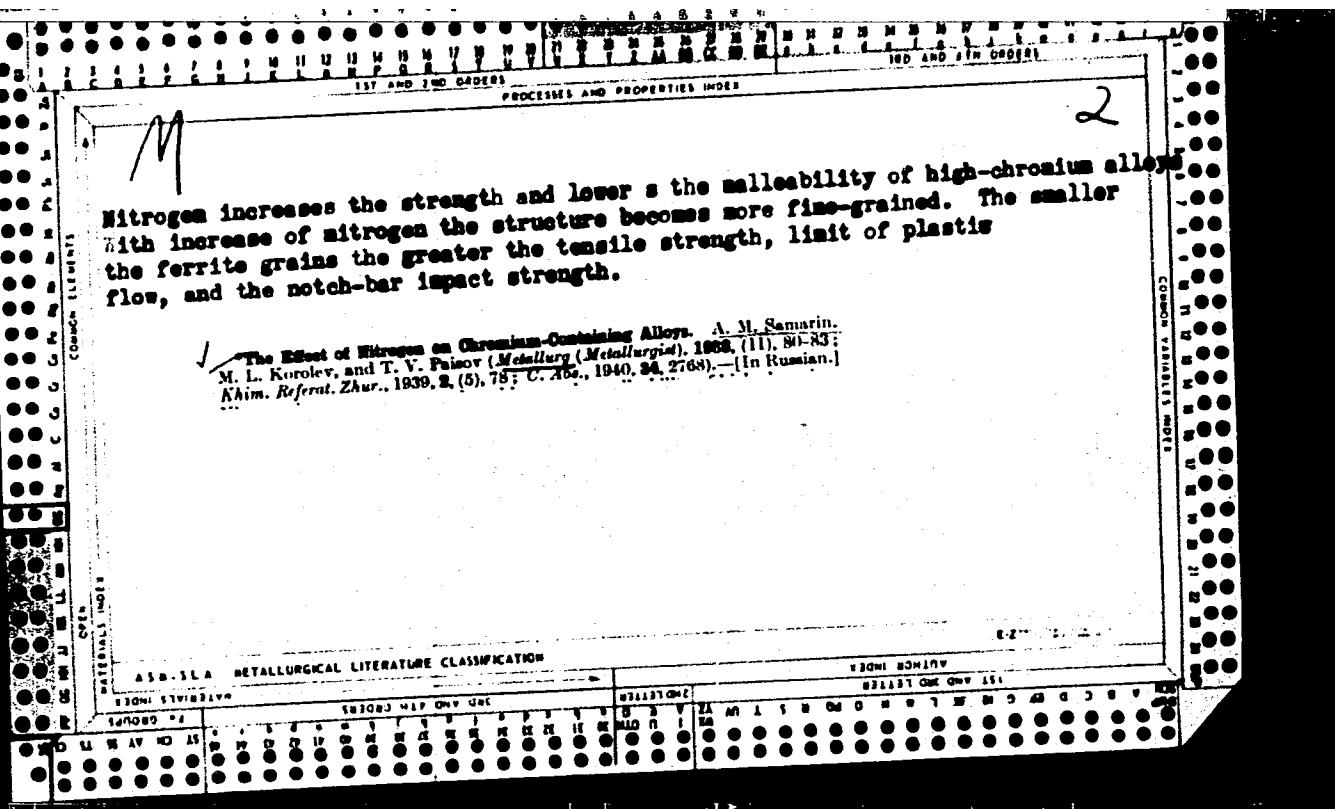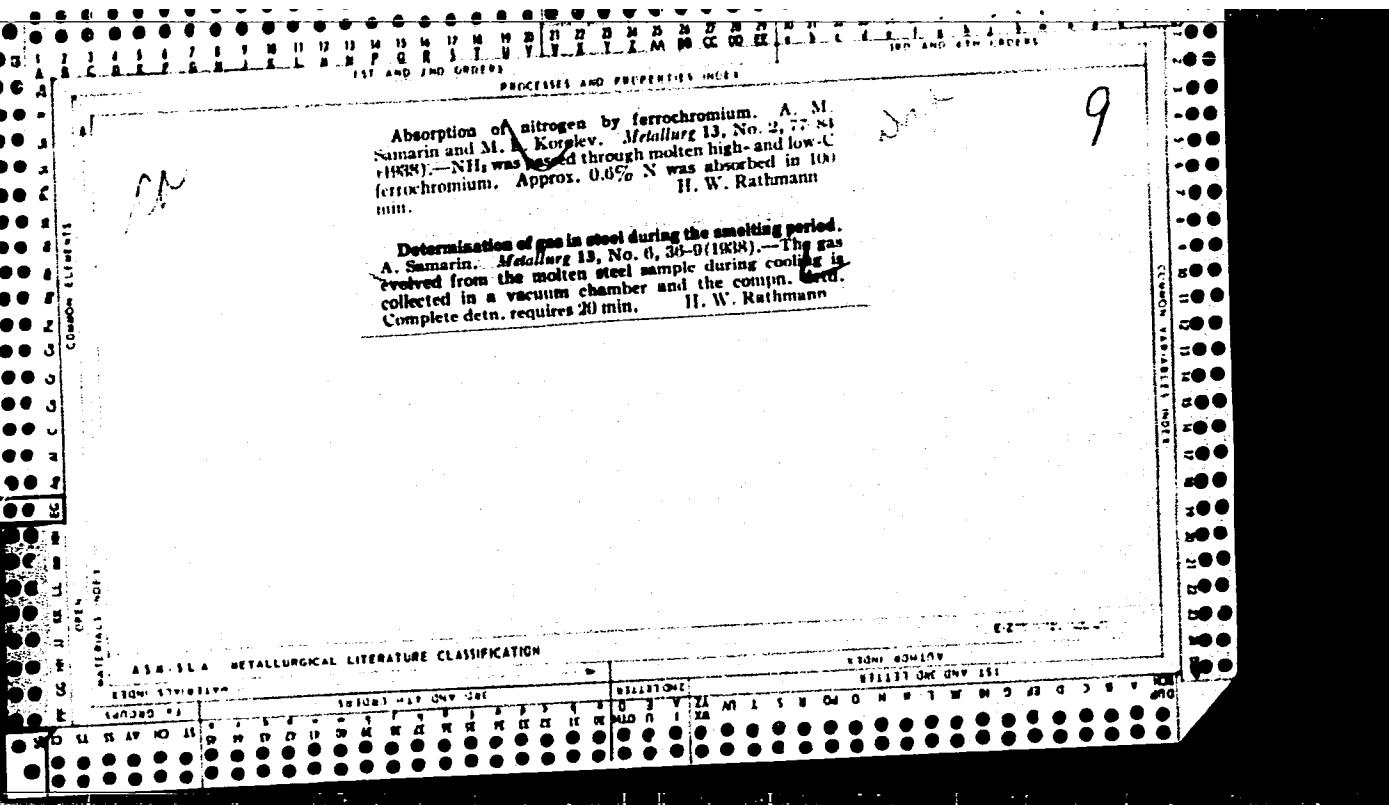Collation of the original as determined from the film: 289 p.

Microfilm TN-6

PROCESSES AND PROPERTIES INDEX

Physical-chemical principles in the calculation of metallurgical reactions. A. Samarin. *Sovet. Met.* 9, No. 3, 18-20(1937); *Chem. Zentr.* 1938, I, 408.—A review, presenting the values obtained by various investigators for the sp. heats of di- and polyatomic gases.
M. G. Moore

A.S.M.-S.L.A   METALLURGICAL LITERATURE CLASSIFICATION

Nitrogen increases the strength and lower s the malleability of high-chromium alloys. With increase of nitrogen the structure becomes more fine-grained. The smaller the ferrite grains the greater the tensile strength, limit of plastic flow, and the notch-bar impact strength.

The Effect of Nitrogen on Chromium-Containing Alloys. A. M. Samarin, M. L. Korolev, and T. V. Paisov (Metallurg (Metallurgist). 1968, (11), 80-83; Khim. Referat. Zhur., 1939, 2, (5), 75; C. Abs., 1940, 34, 2768).—[In Russian.]

PROCESSES AND PROPERTIES INDEX

Absorption of nitrogen by ferrochromium. A. M. Samarin and M. I. Korolev. Metallurg 13, No. 2, 77-81 (1938).—NH₃ was passed through molten high- and low-C ferrochromium. Approx. 0.6% N was absorbed in 100 min.   H. W. Rathmann

Determination of gas in steel during the smelting period. A. Samarin. Metallurg 13, No. 6, 36-0(1938).—The gas evolved from the molten steel sample during cooling is collected in a vacuum chamber and the compn. detd. Complete detn. requires 20 min.   H. W. Rathmann

ASM-SLA   METALLURGICAL LITERATURE CLASSIFICATION

21

Comparison of Some Methods of Determining Nitrogen in Alloys Containing Chromium. B. G. Lebedev and A. M. Samarin. (Zavodskaya Laboratoriya, 1939, No. 6, pp. 635–637). (In Russian). Vacuum-melting and three distillation methods for the determination of nitrogen were compared from the point of view of the results obtained for the nitrogen content of several samples of chromium-iron alloys. The latter methods included Johnson's method (distillation with potassium hydroxide), distillation with magnesium oxide and distillation with lime. If the sample does not dissolve completely in 1 : 1 hydrochloric acid, it is recommended that the residue be fused with sodium bisulphate in the presence of concentrated sulphuric acid. Sufficiently good results are, however, also obtained if the residue is transferred to the distillation flask and distilled with concentrated caustic alkali. In carbon-free and carbon-bearing chromium-iron alloys the distillation with magnesium oxide gives results some 5–10% lower than those obtained by Johnson's method. Johnson's method, on the other hand, gives results which are higher than those obtained by melting in a vacuum.
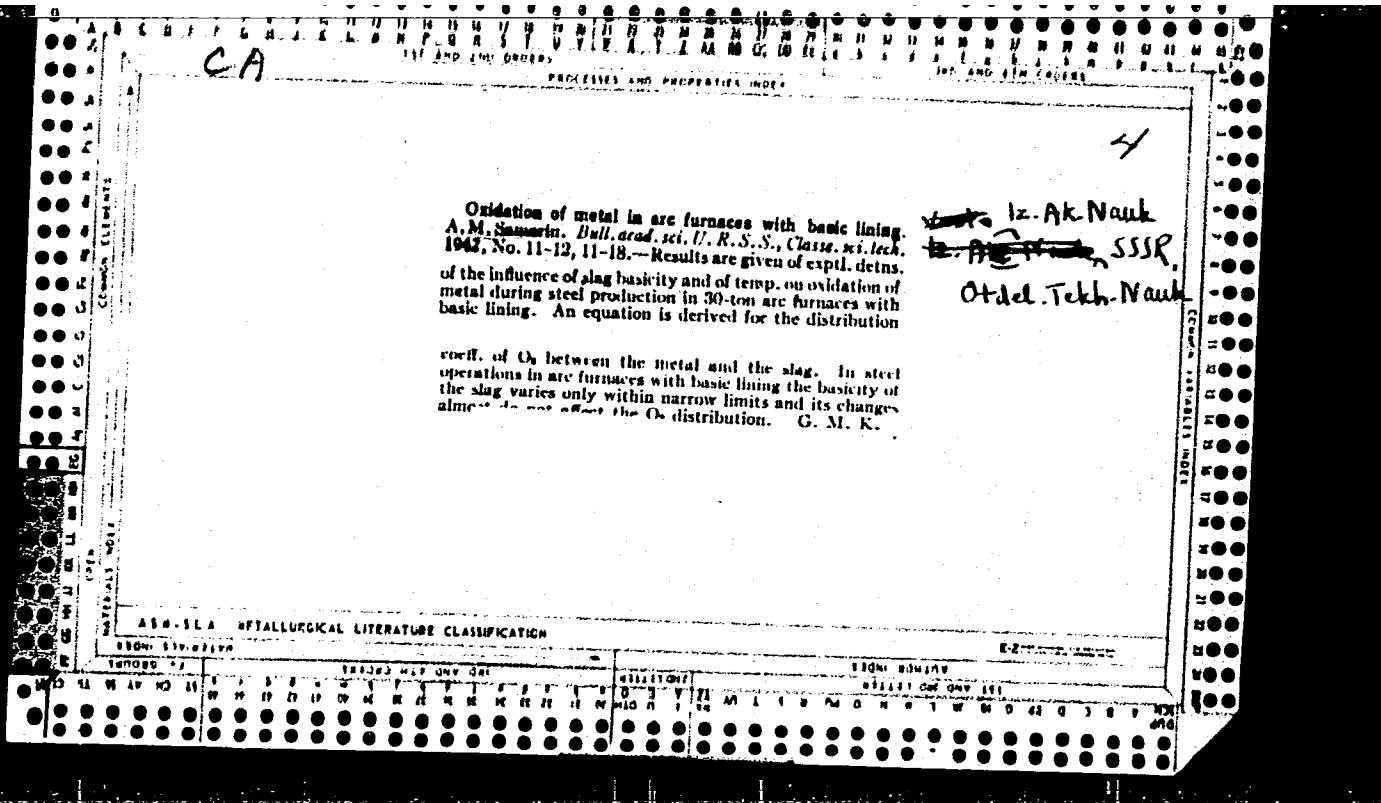
Method of Determining the Gas Content of Molten Steel. A. Samarin and I. Kovalenko. (Stal, 1939, No. 8, pp. 36–39). (In Russian). A somewhat fuller description than that previously given in Zavodskaya Laboratoriya, 1939, No. 7, p. 753 (see Journ. I. and S.I., 1940, No. I., p. 280 A), is presented of the construction and use of a gas pipette for taking samples of molten steel and collecting the gases which are evolved during its solidification in a vacuum. The gas sample is finally obtained in a glass bulb which is disconnected from the steel tube pipette used to collect the steel sample, and transferred to a gas analysis apparatus which is also briefly described. The main constituents of the gas samples from basic electric-furnace steel are carbon monoxide, hydrogen and nitrogen, and their determination takes about 15 min. A nomogram for use in calculating gas-sample compositions is given.

A.S.B.-S.L.A   METALLURGICAL LITERATURE CLASSIFICATION

Production and use of ferrochromium of high nitrogen content. A. M. Samarin and M. L. Korolev. *Trudy Moskov. Inst. Stali im. I. V. Stalina* 1939, No. 12, 3/23 (as given in *Chem. Zentr.*); *Chem. Zentr.* 1939, II, 3477-8; cf. *C. A. 33*, 1645.—Ferrochromium of high N content (up to 0.65%) was produced by blowing NH_3 through the molten bath. In both high- and low-C ferrochromium the rate and degree of satn. with respect to N depended upon the rate at which the NH_3 was supplied and the time it was supplied, the N content of the bath being a linear function of the time. When the NH_3 was supplied at a const. rate, the degree of satn. of the Cr alloys with respect to N was in direct proportion to the Cr content of the alloy. The higher the Cr content the more energetically was the N taken up. The coeff. of N enrichment in the alloy was lower the greater the rate at which the N was supplied. In the C-free ferrochromium the grain size decreased as the N content of the alloy increased. Annealing at high temps. increased the grain size, although the N content tended to hinder grain growth. With high-Cr alloys which had been melted with the addn. of Cr or ferrochromium high in N, the N content made it possible to eliminate transcrystn. and to produce a fine-grained structure. In the alloy Furodite (Cr 27.38-29.55, Mn 0.56-0.9, Si 0.29-0.35, N 0.14-0.49%) the N content increased the strength and reduced the forgeability. Moreover, the ferrite grain size was reduced by the N. The higher the N content of Furodite the finer the ferrite grains and, as a result thereof, the higher are the tensile strength, the creep limit and the impact resistance (notched-bar test) and the lower the values for necking and elongation.   M. G. Moore

Oxidation of metal in arc furnaces with basic lining.
A. M. Samarin. *Bull. acad. sci. U. R. S. S., Classe. sci. tech.*
1947, No. 11-12, 11-18.—Results are given of exptl. detns.
of the influence of slag basicity and of temp. on oxidation of
metal during steel production in 30-ton arc furnaces with
basic lining. An equation is derived for the distribution

coeff. of O_2 between the metal and the slag. In steel
operations in arc furnaces with basic lining the basicity of
the slag varies only within narrow limits and its changes
almost do not affect the O_2 distribution.   G. M. K.

Iz. Ak. Nauk
SSSR,
Otdel. Tekh. Nauk

SAMARIN, Aleksandr Mikhailovich.

Electrometallurgy; the manufacture of steel   Moskva,   Metallurgizdat, 1943.   516 p.
(49-33915)

TN750.S3

Replacing Ni with N in heat-resistant steel. A. M. Samarin. *Bull. acad. sci. U.R.S.S., Classe sci. tech.* 1944, 54-7.—Steel samples were made in a high-frequency furnace in basic crucibles (8 kg.). The temp. was measured by means of a Pt-PtRh thermocouple with a quartz protection tube. Hardness increased with increase in N content and decrease in Ni content. This hardness did not interfere with cold working of the steel. The hardness decreased on heating at 900°, and further on heating at 1200°. This is caused by the oxidation of the grain boundaries. Steel contg. Cr approx. 25, Ni 13, and N 0.20-0.25% was fully as good as heat-resistant steel contg. Cr 25 and Ni 20%. Such a substitution of Ni by N produced a pure austenite structure, which was stable after a prolonged heating at 600, 900, and 1200°. These steels were resistant to oxidation at high temps. and their impact strength increased after prolonged heating at 600, 900, and 1200°. W. R. Henn

Iz. Ak Nauk ~~Izvest. Akad.~~ SSSR, Otdel. Tekh. Nauk

U-1556, 14 Nov 51