SOFRONOV, B.N.

Mechanism and use of Boyden's reaction.  Lab. delo no.9:
542-545  '64.                                      (MIRA 17:12)

1. Otdel mikrobiologii (zaveduyushchiy - chlen-korrespondent
AMN SSSR prof. V.I. Ioffe) Instituta eksperimental'noy meditsiny
(direktor - deystvitel'nyy chlen AMN SSSR prof. D.A. Biryukov),
Leningrad.

SOKOLOV, E.N.; DIL'MAN, V.A.

Immunologic determination of ... antibodies in the diagnosis
of pregnancy and chorionepithelioma. ... 3 pts. ... '65.
(MIRA 18:10)

1. Institut onkologii (direktor - deystvitel'nyy chlen AMN SSSR - of.
A.I.Serebrov) AMN SSSR i Institut eksperimental'noy meditsiny
(direktor - deystvitel'nyy chlen AMN SSSR - prof. D.A.Biryukov) AMN
SSSR, Leningrad.

DIL'MAN, V.M.; SOFRONOV, B.N.

Induction of immunological tolerance to protein hormones. Vop.
onk. 11 no.3:61-63 '65.
(MIRA 18:6)

1. Iz laboratorii endokrinologii Instituta onkologii AMN SSSR
(dir. - deystvitel'nyy chlen AMN SSSR prof. A.I. Serebrov) i
otdela mikrobiologii (zav. - chlen-korrespondent AMN SSSR prof.
V.I. Ioffe) Instituta eksperimental'noy meditsiny AMN SSSR (dir. -
deystvitel'nyy chlen AMN SSSR prof. D.A. Biryukov).

KOROLEV, A. A.;  SOFRONOV, F. P.

Asbestos

Mechanization of laborious processes at asbestos concentrating plants. A. A. Korolev,
F. P. Sofronov. Mekh. trud. rab  6 No. 6 1952.

Monthly List of Russian Accessions, Library of Congress, September 1952.  UNCLASSIFIED.

SOFRONOV, F.P.

Studying the establishment of norms of developed reserves for
the open pit mining of Bazhenovo asbestos deposits. Trudy
NIIasbest no.2:30-69 '62.                    (MIRA 16:12)

SOFRONOV, F.P.; TITARENKO, P.Ya.; TUTOV, M.P.; LISIN, G.Ya.; SONIN, B.A.

"Deep open-pit mines" by M.G.Novozhilov, V.G.Selianin. Gor. zhur no.4:
77-78 Ap '63.                                                   (MIRA 16:4)
        (Strip mining)        (Novozhilov, M.G.)     (Selianin, V.G.)

TITARENKO, Petr Yakovlevich; TEREKHIN, Vyacheslav Nikolayevich;
        REMENNIK, Lev Moiseyevich; SUKHANOV, Afanasiy Filimonovich;
        NAZAROV, Petr Petrovich; KUTUZOV, Boris Nikolayevich;
        TOKAR',Moisey Grigor'yevich; SONIN, Boris Aleksandrovich;
        SOFRONOV, Fedor Petrovich; GEYMAN, L.M., red.izd-va;
        LAVRENT'YEVA, L.G., tekhn. red.

[New developments in boring and blasting operations in
asbestos open pit mines] Novoe v burovzryvnykh rabotakh na
asbestovykh kar'erakh.  Moskva, Gosgortekhizdat, 1963. 68 p.
                                            (MIRA 16:10)

    (Asbestos mines and mining)    (Blasting)

4091   SOFRONOV, G. A.

Vliyanie intensivnosti vtorichnogo progreva pressovannoy drevesiny na
prochnost' ee pri nekotorykh vidakh deystviya sil. L., 1954 18 c. 20 cm.
(Leningr. ordea Lenina lesotekhn. Akad. im. S. M. Kirova).  100 ekz.
Bespl. - (54-56591)

SOFRONOV, G. A.

"Influence of Intensity of Secondary Heating of Compressed Lignin on Its Strength in the Presence of Certain Kinds of Forces." Cand Tech Sci, Leningrad Order of Lenin Forestry Engineering Acad imeni S. M. Kirov, Leningrad, 1954. (KL, No 3, Jan 55)

Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (12)
SO: Sum. No. 556, 24 Jun 55

AGEYEV, L.M., kand. tekhn. nauk, dotsent; BABIN, F.P., kand. tekhn. nauk,
dotsent; SMIRNOV, V.A., doktor tekhn. nauk, prof.; SOFRONOV, G.F.,
kand. tekhn. nauk, dotsent, red.; IVANOV-RECHNOY, I.Ya., red.;
NAUMOV, K.M., tekhn. red.

[Technology of the main branches of industry] Tekhnologiia vazhnei-
shikh otraslei promyshlennosti; uchebnoe posobie dlia vysshikh partii-
nykh shkol. Pod red. G.V.Sofronova. Moskva, Izd-vo VPSh i AON pri
TsK KPSS. Part 4. [Food industry] Pishchevaia promyshlennost'. 1961.
189 p.                        (MIRA 14:6)
                        (Food industry)

FISHMAN, Mark Veniaminovich; GOLDIN, Boris Alekseyevich;
    SOFRONOV, G.P., kand. geol.-miner. nauk, otv. red.;
    ZHUKOVA, T.P., red.izd-va; BOCHEVER, V.T., tekhn.red.

[Granitoids of the central part of the subarctic Ural
Mountain region] Granitoidy tsentral'noi chasti Pripo-
liarnogo Urala.  Moskva, Izd-vo AN SSSR, 1963.  105 p.
                                        (MIRA 17:1)

24579          S/137/61/000/005/032/060
                    A006/A106

15 2 240

AUTHORS:       Kudryavtsev, V. I., and Sofronov, G. V.

TITLE:         Accurate determination of the periods of a boron carbide lattice
               composed of $B_{2.75}C$ - $B_{6.75}C$ from roentgenograms obtained in the
               range of large dispersion angles (θ → 90°)

PERIODICAL:    Referativnyy zhurnal. Metallurgiya, no. 5, 1961, 11-12, abstract
               5Zh85 ("Tr. Seminara po zharostoykim materialam" [In-t metallo-
               keramiki i spets. splavov AN USSR, no. 5] Kiyev, 1960, 52-64)

TEXT:          A roentgenographical investigation was made of solid solutions on
B-carbide base. Acicular designs of collimators are suggested for a Debye camera
and a camera with rear exposure on a flat container, so that lines may be obtain-
ed through angles θ approaching 90°. Exposure conditions are found (on Cu- Co,
Ni, and Cr radiation) where the lines are obtained through θ > 85°. The accuracy
of determining the periods is 0.001% (without any extrapolation precision). In
the $B_{2.75}C$ - $B_{4.75}C$ range the periods are practically constant ( a 5.5883 - 5.5905,
c 12.044 - 12.055 kX). It is supposed that in this zone solid solutions with
vacancies are formed in the boric or carbon portions of the lattice. Within the

Card 1/2

SOFRCNCV, I. D.

SOFRCNCV, I. D. -- "Approximate Solution of Singular Integral Equations."
Moscow State U imeni M. V. Lomonosov, Moscow, 1955.  (Dissertations for
the Degree of Candidate in Physicomathematical Science)

SO:  Knizhnaya Letopis:  No. 39, 24 Sept 55

SOFRONOV, I. D.

Call Nr:  AF 1108825

Transactions of the Third All-union Mathematical Congress  (Cont.) Moscow,
Jun-Jul '56, Trudy '56, V. 1, Sect. Rpts., Izdatel'stvo AN SSSR, Moscow, 1956, 237 pp.

Sofronov, I. D. (Moscow).  On Approximate Solution of          102-103
Singular Integral Equations.

Stechkin, S. B. (Moscow).  Problem of Absolute Convergence      103
of the Orthogonal Series.

There is 1 USSR reference.

Suvorov, G. D. (Tomsk).  On the Continuity of Univalent         103-104
Mappings of     Arbitrary Closed Regions.

Mention is made of Lavrent'yev, M. A.

Suyetin, P. K. (Ural'sk).  On Polynomials, Which are            105
Orthogonal in Area.

Talalyan, A. A.(Yerevan).  On the Convergence Almost            105
Everywhere of Orthogonal Series.

Card 32/80

SOFRONOV, I. P.

Sofronov, I. D.  On certain properties of singular operators and solutions of singular integral equations. Dokl. Akad. Nauk SSSR (N.S.) 110 (1956), 940–942. (Russian)

The author considers integral operators $f = K\varphi$ defined by equations of the form

(1)    $f(x) = a(x)\varphi(x) + \dfrac{1}{2\pi} \displaystyle\int_0^{2\pi} n(t, x) \cot \tfrac{1}{2}(t-x)\varphi(t)\,dt,$

where $a(x)$ and $n(t, x)$ satisfy a Hölder condition of order $\alpha$, and $0 < \alpha \leq 1$. He states (i) that if $\varphi$ satisfies a Hölder condition of order $\alpha$, then $f(x)$ satisfies a Hölder condition of order $\beta$ for all $\beta < \alpha$, and (ii) that if (1) has a unique solution $\varphi$ for all $f$, and $f$ satisfies a Hölder condition of order $\alpha$, then $\varphi$ satisfies a Hölder condition of order $\beta$ for all $\beta < \alpha$. Explicit inequalities for the Hölder constants are given. In the particular case

$$f(x) = a(x)\varphi(x) + \frac{n(x,x)}{2\pi} \int_0^{2\pi} \cot \tfrac{1}{2}(t-x)\varphi(t)\,dt,$$

one can take $\beta = \alpha$. Relations between the differentiability properties of $f(x)$ and $\varphi(x)$ are also stated. No proofs are given.        F. Smithies (Cambridge, England).

SOFRONOV, I.D.

| | | | |
|---|---|---|---|
| SUBJECT | USSR/MATHEMATICS/Integral equations | CARD 1/2 | PG - 601 |
| AUTHOR | SOFRONOV, I.D. | | |
| TITLE | On the approximative solution of integral equations. | | |
| PERIODICAL | Doklady Akad.Nauk 111, 37-39 (1956) | | |
| | reviewed 2/1957 | | |

Let be well-known that the singular integral equation

$$K\varphi = a(x)\ \varphi(x) + \frac{1}{2\pi} \int_0^{2\pi} n(t,x)\ \mathrm{ctg}\ \frac{t-x}{2}\ \varphi(t)\ dt = f(x)$$

for an arbitrary $f(x)$ posesses a unique solution $\varphi$. The author's problem is
to construct a simpler equation $\overline{K}\ \widetilde{\varphi} = \overline{f}$, the solution $\widetilde{\varphi}$ of which satisfies the
following conditions: 1) in a certain sense $\widetilde{\varphi}$ is little different from $\varphi$ ;
2) $\widetilde{\varphi}$ can be found by aid of modern computers. Two methods are proposed:
1. As an approximative equation $\overline{K}\ \widetilde{\varphi} = \overline{f}$ one takes a system of linear alge-
braic equations

$$a_i\ \widetilde{\varphi}_i + \sum_{k=0}^{n-1} a_{ik}\ \psi_k = f_i \qquad (i=0,1,\ldots n-1)$$

where $x_i = ih$,  $h = \frac{2\pi}{n}$,  $a_i = a(x_i)$,  $f_i = f(x_i)$,

Doklady Akad.Nauk <u>111,</u> 37-39 (1956)            CARD 2/2          PG - 601

$$a_{ik} = \frac{1}{2\pi} \int_{x_{k-1}}^{x_{k+1}} n(f,x_i) ctg \frac{t-x_i}{2} \eta_k(t) dt; \qquad \eta_k(t) = \begin{cases} \dfrac{t-x_{k-1}}{h}, & t \leqslant x_k \\ \dfrac{x_{k+1}-t}{h}, & t \geqslant x_k. \end{cases}$$

For the computation of $a_{ii}$ the principal value of the integral is taken.

2. One takes the system

$$a_i \widetilde{\varphi}_i + \frac{2}{2n+1} \sum_{k=0}^{2n}{}' n_{ik} ctg \frac{x_k-x_i}{2} \widetilde{\varphi}_k = f_i \qquad (i=0,1,\ldots 2n-1),$$

where $x_i = ih$, $h = \frac{\pi}{n}$, $n_{ik} = n(x_i,x_k)$, $a_i = a(x_i)$, $f_i = f(x_i)$.

$\sum'$ means that the summation runs with respect to those k only for which k-i is odd.
The second method is commended to be more suitable, the solvability for $\widetilde{\varphi}$ is proved and the appearing error is estimated.

INSTITUTION: Lomonossow University, Moscow.

*moccow State Pedagogical Inst. im V. I. Lenin*

S/208/62/002/003/010/011
I040/I219

AUTHOR        Sofronov, I. D. (Moscow)

TITLE·        On the problem of motion of a tangential discontinuity in an ideal incompressible fluid

PERIODICAL    Zhurnal vychislitel'noy matematiki i matematicheskoy fiziki, v. 2, no. 3, 1962, 494-499

TEXT·    The equation of motion of a curve $L$ of tangential discontinuity in an ideal incompressible fluid is obtained in the complex form

$$\frac{\partial \bar{z}_0}{\partial t} = -\frac{1}{2\pi_i} \int_L \frac{\Gamma(\sigma)d\sigma}{z - z_0}$$

where $\sigma$ is a parameter along the curve and $\Gamma(\sigma)$ is the intensity of the whirls distributed on $L$. The particular cases treated are those when $\Gamma$ is constant and $L$ is either a straight line parallel to the x axis or a circle with center at the origin, and when the initial data are periodic. In the latter case examples are given when $L$ is sinusoidal, elliptical, or quadratic based on the reduction of the singular integro-differential equation (1) to a system of difference equations. There are 6 figures.

SUBMITTED·    November 24, 1961

Card 1/1

SOFRONOV, I.D. (Moskva)

Use of the difference method in solving the heat conduction
equation in curvilinear coordinates. Zhur. vych. mat. i mat.
fiz. 3 no.4:786-788   Jl-Ag '63.
                                                    (MIRA 16:7)

SOFRONOV, I.D. (Moskva)

Use of the drift method in solving boundary value problems for difference systems. Zhur. vych. mat. i mat. fiz. 4 no.2:256-266 Mr-Ap '64. (MIRA 17:7)

L 56470-65   EWT(d)   IJP(c)

ACCESSION NR:  AP5009398

AUTHOR:  Sofronov, I. D. (Moscow)

*/6*
*B*

TITLE:  A difference method using diagonal paths for the solution of the heat equation

SOURCE:  Zhurnal vychislitel'noy matematiki i matematicheskoy fiziki, v.5, no. 2, 1965, 347-350

TOPIC TAGS:  heat conduction equation, parabolic equation, approximation method, numerical solution

ABSTRACT:  A usual method for the numerical solution of the heat equation

$$\frac{\partial u}{\partial t} = a\left(\frac{\partial^2 u}{\partial \xi^2} + \frac{\partial^2 u}{\partial \eta^2}\right) + b\frac{\partial u}{\partial \xi} + c\frac{\partial u}{\partial \eta}$$

in a curvilinear qadrilateral $D$ with boundary $\Gamma$, along which $u|_\Gamma = f$, is to map the region $D$ onto a square in plane $(x,y)$ according to the transformation $\xi = \varphi(x, y)$, $\eta = \psi(x, y)$, obtaining the new equation:

Card 1/2

L 56470-65
ACCESSION NR:  AP5009398

$$\frac{\partial u}{\partial t} = A\,\frac{\partial^2 u}{\partial x^2} + 2B\,\frac{\partial^2 u}{\partial x \partial y} + C\,\frac{\partial^2 u}{\partial y^2} + D\,\frac{\partial u}{\partial x} + E\,\frac{\partial u}{\partial y},$$

for which a difference method is constructed.  It then appears that the derivative $\partial^2 u/\partial x \partial y$ is either completely or partially diffused over an already known layer. This latter difficulty may sometimes be by-passed by the introduction of supplementary diagonal paths.  The expanded difference scheme is constructed and an estimate is made of its accuracy.  Limitations of the method are briefly noted.
Orig. art. has:  35 formulas, 2 figures.

ASSOCIATION:  none

SUBMITTED:  31Jul64          ENCL:  00          SUB CODE:  MA

NO REF SOV:  004             OTHER:  000

Card 2/2

SOFRONOV, I.D. (Moskva)

Difference scheme with diagonal drift directions for solving a
heat conduction equation. Zhur. vych. mat. i mat. fiz. 5 no.2:
347-350 Mr-Ap '65.
(MIRA 18:5)

SOTTONOV, .

A volume indicator for frequency range from 300c/per se:. to 300 kc/per sec.
p. 305

SDELOVACI TECH IKA (Ministrestvo strojirenstvi), Vol. 4, No. 10, Oct. 1956

Praha, Czechoslovakia

SOURCE:  East European List (EEAL) Librar y of
         Congress, Vol. 4, No. 1, January 1957

SOFRONOV, K.

SOFRONOV, K.

Telecommunication measuring instruments.

p. 10 (Kovoexport)  Vol. 3, no. 8, 1957, Praha, Czechoslovakia

SO:  MONTHLY INDEX OF EAST EUROPEAN ACCESSIONS (EEAI) LC, VOL. 7, NO. 1, JAN. 1958

Sofronov, K.

Sofronov, K.  Intermediate-frequency measurement set for communications
            engineering.  p. 58.


Vol. 18, no. 1, Jan. 1957
SLAEOPROUDY OBZOR
TECHNOLOGY
Czechoslovakia


So.  East European Accessions, Vol. 6, May 1957.
                              No. 5

SOFRONOV, K.

6424.    LABORATORY SET FOR THE MEASUREMENT OF THE
LOSSES IN IRON-POWDER CORES.  K.Sofronov.
Slaboproudý Obzor, Vol. 18, No. 4, 224-30 (1957).  In Czech.
      The equipment described is suitable for the measurement of
the loss v.frequency characteristics (from 3 kc/s to 250 kc/s) of
cores having permeabilities ranging from 6 to 60.  The following
items are included:  a resonance bridge (which is also used as a
Wheatstone bridge), an RC oscillator (3 to 250 kc/s) which is used
as an a.c. source, a d.c. zero indicator and a selective a.c. zero in-
dicator, a.c. and d.c. ammeters and power supplies.  Design of the
bridge is dealt with in detail.                      R.S.Sidorenko

4                   621.317.74 : 621.395.6

5796.    AUDIO-FREQUENCY MEASUREMENT BENCH FOR
TELEPHONE ENGINEERING. K.Sofronov.
Slaboproudý Obzor, Vol. 19, No. 6, 363-5 (1958). In Czech.
      A general description (with block diagram and technical data) of
the equipment is given. The device consists principally of a stand-
ard oscillator and wideband level meter; it is also fitted with an
impedance-measuring unit and bridge for the measurement of un-
balance loss. The oscillator covers the frequency range of 0.2 to
6 kc/s, has an output resistance of 600 Ω and gives an output level
from −4.5N to +1.7N; the level meter covers the same frequency

range and has an input impedance of 25 kΩ. The impedance meter
gives an accuracy of ± 10% and can measure values from 10 Ω to
300 kΩ. The unbalance loss meter has a range from 0 to 5 N and
gives an accuracy of ± 10%.                         R.S.Sidorowicz

SOFRONOV, K.

"Instrument for measuring the h-parameters of transistors." p. 157.

SLABOPROUDY OBZOR. (MINISTERSTVO PRESNEHO STROJIRENSTVI, MINISTERSTVO SPOJU A
VEDECKA TECHNICKA SPOLECNOST PRO ELEKTROTECHNIKU PRI CSAV.) Praha, Czechoslovakia,
Vol. 20, no. 3, Mar. 1959.

Monthly List of East European Accessions (EEAI), LC, Vol. 8, No. 9, September 1959.
Uncl.

SOFRONOV, K.

Instrument for measuring the phase shift, loss and gain, within the
20 kc/s to 5 Mc/s frequency range.  P 762

SLABOPROUDY OBZOR (Ministerstvo vscobenibo strojirenstvi, Ministerstvo spoju
a Ceskoslovenska vedecko-technicka spolecnost, sekce elektrotechnika) Praha,
Czechoslovakia, Vol. 20, no. 12  Dec. 1959

Monthly List of East European Accessions (EEAI), LC. Vol. 9, no. 2,
Feb. 1960

Uncl.

SOFRONOV, Kvetoslav, inz.

Prague exhibition of measuring instruments. Sdel tech 10
no.6:208-210 Je '62.

SOFRONOV, Kvetoslav, inz.

    Medium-frequency characterograph. Slaboproudy obzor  24  no.10: 590-596  O  '63.

1. Vyzkumny ustav telekomunikaci, Praha.

SOFRONOV, Kvetoslav, inz.

New measu ing instruments for wire communication engineering.
Cs spoje 9 no.6:21-23  D '64.

1. Research Institute of Telecommunication.

SOFRONOV, L.

"People with weapons" by Ivan Stadniuk.  Reviewed by L.Sofronov.
Voen.znan. 33 no.5:39 My '57.                              (MLRA 10:7)
                          (Stadniuk, Ivan)

SOFRONOV, Lev

Mistress of the land. Rabotnitsa 36 no.9:4-5  S '58.  (MIRA 11:12)
(Bobrov District--Collective farms)

SOFRONOV, Lev.

      Competition continues. Rabotnitsa 36 no.11:1-2 N '58.
                                                (MIRA 12:2)

                  (Tiflis--Shoe industry)

SOFRONOV, Lev(Chukotskiy natsional'nyy okrug)

She is staying in Chukotka. Rabotnitsa 37  no.9:4-5
S  '59.          (MIRA 13:1)
         (Chukchi National Area--Medical care)

SOROKIN, M.A.

Resources of herbaceous cover and plant remnants in tree types of
forest of the Western Sayan and Tonnu-Ola Ridge. Izv. SO AN SSSR
no.4 Ser. biol.-med.nauk no.1:135-137 '65.                  (MIRA 18:8)

1. Institut lesa i drevesiny Sibirskogo otdeleniya AN SSSR,
Krasnoyarsk.

SOFRONOV, N.

Stereoscopic photography. Sov.foto 20 no.2:34 F '60.
(MIRA 13:7)

(Photography, Stereoscopic)

SOFRONOV, N. S.

· "Experimental Study of Pharmacological Preparations Used in Sleep Therapy,"
No.I "Soporific Action of Barbamyl, Hedonal, Narcolane, Chloral Hydrate, Ethyl
Alcohol, and Double Combinations of Them," Trudy Instituta fiziologii im. Pavlov,
No.1, pp 243-250, 1952

Laboratory of Experimental Pharmacology

Translation    No.493, 5 Dec 55

SOFRONOV, N.S.; TSOBKALLO, G.I., zaveduyushchiy.

Experimental study of pharmacological agents for sleep therapy. Second report: Study of the soporific effect of three- and four-component mixtures of narcotics. Trudy Inst.fiziol. 1:251-258 '52. (MLRA 6:8)

1. Laboratoriya eksperimental'noy farmakologii. (Narcotics)

SOFRONOV, N.S.

Effect of narcolan (tribromoethyl alcohol) on higher nervous
function in dogs.  Zhur.vyssh.nerv.deiat. 5 no.4:537-546 Jl-
Ag '55.                                  (MLRA 8:11)

1. Laboratoriya eksperimental'noy farmakologii Instituta
fiziologii im. I.P.Pavlova Akademii nauk SSSR.
      (ETHANOL, effects,
          on conditioned reflex funct. in dogs)
      (REFLEX, CONDITIONED,
          eff. of tribromoethanol)

SOFRONOV, N.S.

USSR

Influence of harmine on the higher nerve functions in animals. N. S. Sofronov and Niki. K. Fedorov. *Farmakol. i Toksikol.* 18. No. 4, 7-9(1955).—Mice were given 0.05-1 mg. harmine-HCl in aq. soln., subcutaneously; dogs were given 0.5, 1, and 2 mg./kg. Small doses act against the selective, impulse-feeling, and impulse-blocking modes of inhibiting nerve action by internal influences. Harmine lessens the mobility of the nerve functions and inhibits nerve irritants. In general, its effects are those of lowered tonus in the cerebral cortex.         Julian F. Smith

SOFRONOV, N.S.; FEDOROV, Viktor K.

Effect of harmine on conditioned reflex activity in mice. Trudy
Inst.fiziol. 5:125-130 '56.                                    (MIRA 10:1)

1. Laboratoriya eksperimental'noy farmakologii, zaveduyushchiy -
G.I.TSobkallo, i Laboratoriya eksperimental'noy genetiki vysshey
nervnoy deyatel'nosti, zaveduyushchiy - V.K.Krasuskiy
      (HARMINE)      (CONDITIONED RESPONSE)

SOFRONOV, N.S.

Effect of harmine on the duration of drug-induced sleep in rabbits.
Trudy Inst.fiziol. 5:131-134 '56.                    (MIRA 10:1)

1. Laboratoriya eksperimental'noy farmakologii. Zaveduyushchiy -
G.I.TSobkallo.
        (HARMINE)    (SLEEP)

SOFRONOV, N S

Changes in canine conditioned reflex activity under the influence of promedol. N. S. Sofronov. *Farmakol. i Toksikol.* 19, No. 5, 13-15(1956).—Subcutaneous promedol (0.01, 0.05, and 0.1 mg./kg. in aq. soln.) in dogs weakened conditioned reflex responses to pos. stimuli in some cases, intensified them in others. Medium doses, 0.05-1 mg./kg., generally lowered the level of pos. conditioned reflexes. All the observed effects of decreased nerve functioning due to promedol were connected in some way with changes in the conditioned reflex act. P. Smith

SOFRONOV, N.S.

Changes in the higher nervoys activity of dogs following various doses of quital (ncctal). Trudy Inst.fiziol.  8:426-432 '59.
(MIRA 13:5)

1. Laboratoriya farmakologii tsentral'noy nervnoy sistemy (zave-duyushchiy - G.I. Tsobkallo) Instituta fiziologii im. I.P. Pavlova AN SSSR.
          (NOSTAL)              (CONDITIONED RESPONSE)

SOFRONOV, N.S.; TSOBKALLO, G.I.

Changes in the higher nervous activity of dogs following the chronic administration of amobarbital. Trudy Inst.fiziol. 8: 433-440 '59.
(MIRA 13:5)

1. Laboratoriya farmakologii tsentral'noy nervnoy sistemy (zave-duyushchiy - G.I. Tsobkallo) Instituta fiziologii im. I.P. Pavlova AN SSSR.
(AMOBARBITAL)          (CONDITIONED RESPONSE)

SOFRONOV, N.S., BOLODINSKIY, V.K.

Reaction of dogs with the weak type nervous system to the effect of neurotropic substances. Zhur.vys.nerv.deiat. 14 no.9:1013-1018 N-D '64.
(MIRA 18:6)

1. Pavlov Institute of Physiology, U.S.S.R. Academy of Sciences, Kaltushi.

SOFRONOV, N.S.

Change in conditioned reflexes in dogs after a single dose of
barbamyl.  Zhur.vys.nerv.deiat. 10 no.6:880-883 N-D '60.
                                                    (MIRA 14:1)

1. Laboratoriya farmakologii tsentral'noy nervnoy sistemy Instituta
fiziologii im. I.P.Pavlova Akademii nauk SSSR.
         (CONDITIONED RESPONSE)          (AMOBARBITAL)

MICHEL'SON, V.A.; OSIPOV, N.I.; TELEKALLO, G.I.

Effect of amphytal on the conditioned response activity. Nauch.
dokl. Inst.fiziol. AN SSSR no.3:91-94  '66.

1. Laboratoriya neyrofarmakologii (zav. - G.I.Telekallo) Instituta
fiziologii imeni Pavlova AN SSSR.

(MIRA 18:5)

SOFRONOV, N. V.

Improving working conditions in leather and fur enterprises.
Sots.trud no.2:126-127 F '57.                    (MLRA 10:5)

1.Nauchnyy sotrudnik Kazanskogo nauchno-issledovatel'skogo instituta
okhrany truda.
                         (Chromium compounds)
                              (Tanning)

*Sofronov, N V*

SOFRONOV, N. V.

New equipment for the preparation of chrome tanning liquor. Leg.
prom. 17 no.10:22-24 O '57. (MIRA 10:12)
(Tanning materials)

SOFRONOV, N. V.; LYSOV, N. V.

Sheep Botfly

Control of larvae of the sheep botfly in karakuls, Kar. i zver., 5, No. 3, 1952.

Monthly List of Russian Accessions, Library of Congress, October 1952.  UNCLASSIFIED.

SOFRONOV, N.V., mladshiy nauchnyy sotrudnik.

Diagnostic value of the blood drop method in brucellosis of sheep; author's
abstract. Veterinariia 30 no.10:39-41 O '53.                (MLRA 6:9)

1. Uzbekskiy nauchno-issledovatel'skiy veterinarnyy institut.
                                          (Brucellosis in sheep)

SOFRONOV, N.V., kand.vet.nauk; NOVAYEV, N.N.

Our experience in immunizing sheep with vaccine from strain 19.
Veterinariia 35 no.10:28-31 O '58.                     (MIRA 11:10)

1.Uzbekistanskiy nauchno-issledovatel'skiy veterinarnyy institut
(for Sofronov).   2. Glavnyy vetvrach sovkhoza "Ulus." (for Novayev).
                  (Brucellosis in sheep)

SOFRONOV, N.V., kand.veterin.nauk

Thermal apparatus for the disinfection of sewage contaminated
with brucella. Veterinariia 36  no.10:58  O  '59.
(MIRA 13:1)

1. Nauchno-issledovatel'skiy institut veterinarii Uzbekskoy
Akademii sel'skokhozyaystvennykh nauk.
(Sewage--Purification)  (Brucella)

SOFRONOV, N.V., kand.veterinarnykh nauk

Vaccination of farm animals against brucellosis on collective
and state farms of the Uzbek S.S.R.  Trudy Uz.nauch.-issl.inst.
vet. 14:73-80 '61.                                    (MIRA 16:2)
    (Uzbekistan—Brucellosis—Preventive inoculation)

SOFRONOV, N.V., kand.veterinarnykh nauk

Effectiveness of a thermal unit in disinfecting waste water
contaminated with Brucella.  Trudy Uz.nauch.-issl.inst.vet.
14:81-83 '61.                                                 (MIRA 16:2)
          (Sewage—Purification)    (Brucella)

ACCESSION NR: AP4018390                    S/0120/64/000/001/0190/0193

AUTHOR: Vasil'yeva, I. A.; Sofronov, P. A.

TITLE: Measuring the speed of hot-gas flow by photographing a spark mark

SOURCE: Pribory* i tekhnika eksperimenta, no. 1, 1964, 190-193

TOPIC TAGS: hot gas, hot gas flow, spark mark, SFR photorecorder, combustion chamber

ABSTRACT: A method for measuring the speed of a high-temperature gas flow is described. An electric spark excites the gas and forms a comet-shaped gas mark. The motion of the spark is recorded on a photofilm by mirror scanning. The method is suitable for recording the speed fields both along and across the hot gas stream. As the layout (see Enclosure 1) shows, the gas flow is upward and the spark gap is horizontal. The gas region optically excited by this spark is carried along in the gas flow. The image is scanned horizontally by a mirror so that the inclined trace of the luminous mark is formed on the photofilm. Then, the speed of the gas flow can be determined from the known scanning speed and

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ACCESSION NR: AP4018390

the enlargement. A Soviet-make SFR photorecorder was used in the experi-
ments. It was estimated that the minimum measurable flow speed is 40 m/sec
and the maximum speed is 25,000 m/sec. The error depends on the speed
measured; at extreme speeds, the error is as high as 30%, in the middle it is 3%
or less. Speeds from 280 to 880 m/sec were measured in the experiments at an
estimated flow temperature of about 3,000C. "The authors are deeply thankful to
V. L. Granovskiy for his constant attention and valuable advice. E. V.
Py*senkov, B. N. Samodelov, and A. M. Kopy*lova took part in preparing and
conducting the experiments, for which the authors wish to thank them."
Orig. art. has: 5 figures, 1 formula, and 1 table.

ASSOCIATION: Vsesoyuzny*y elektrotekhnicheskiy institut (All-Union
Electrotechnical Institute)

SUBMITTED: 04 Dec62        DATE ACQ: 18 Mar64        ENCL: 01

SUB CODE: PH, PR          NO REF SOV: 002           OTHER: 009

Card  2/3

SOFRONOV, P.A.; KRAYTSBERG, M.I.; MYL'NIKOV, I.I.; SMIRNOV, B.V.

Silicon rectifiers for enterprises of the refractories industry.
Ogneupory 29  no. 5:201-205  '64.                    (MIRA 17:7)

1. Moskovskiy inzhenerno-stroitel'nyy institut imeni V.V.
Kuybysheva (for Sofronov, Kraytsberg).  2. Chasov-Yarskiy kombinat
ogneupornykh izdeliy (for Myl'nikov).

SOFRONOV, P.A.; MYL'NIKOV, I.I.

Thyristor controlled rectifier for feeding magnetic separators.
Ogneupory 29 no.12:541-544 '64.                    (MIRA 18:1)

1. Moskovskiy inzhenerno-stroitel'nyy institut im. V.V.Kuybysheva
(for Sofronov). 2. Chasov-Yarskiy kombinat ogneupornykh izdeliy
(for Myl'nikov).

SOFRONOV, P.A.; GLUSHKOV, G.V.; MYL'NIKOV, I.I.; SMIRNOV, B.V.

Substation with semiconductor rectifiers for current supply
of electric trucks. Ogneupory 30 no.10:7-9 '65.

(MIRA 18:10)

1. Moskovskiy inzhenerno-stroitel'nyy institut im. V.V. Kuybysheva
(for Sofronov, Glushkov). 2. Chasov-Yarskiy kombinat cgneupornykh
izdeliy (for Myl'nikov).

SOFRONOV, P.I.

At the "Frezer" Plant. Izobr.v SSSR 2 no.2:40-41 F '57.

(MIRA 12:3)

(Moscow--Machine-tool industry)

POPOLOV, Ya.N., inzhener; SOFRONOV, P.I.

On the way to technical progress. Izobr. v SSSR 2 no.3:29-35 Mr '57.
(MLRA 10:3)
(Moscow--Bearing industry)

SOFRONOV, P.S.; FEDOROV, V.K.

Mechanism of the action of harmine on the higher nervous activity
in animals. Trudy Vses. ob-va fiziol., biokhim. i farm. 4:175-179
'58.                                                    (MIRA 14:2)

1. Laboratoriya eksperimental'noy farmakologii (zav. prof. G.I.
TSobkallo) i laboratoriya eksperimental'noy genetiki vysshey
nervnoy deyatel'nosti (zav. V.K. Krasusskiy) Institut fiziologii
imeni I.P. Pavlova AN SSSR.
          (HARMINE)  (NERVOUS SYSTEM)

SOFRONOV, S.Ye.

Our practice in using consolidated norms.   Mashinostroitel' no.8:13
Ag  '61.                                      (MIRA 14:7)
    (Alma-Ata—Machinery industry—Production standards)

SOFRONOV, S. Ye.

Prisms instead of vises. Mashinostroitel' no.11:16  N'64
(MIRA 18:2)

SOFRONOV, V., geolog; NAUMOV, V., inzh.

Construction in regions of the Far North.  Sel'. stroi. 15 no.11:5-
8 N '60.                                        (MIRA 13:11)

1. Dal'stroyproyekt.
   (Arctic regions—Foundations)      (Frozen ground)

PHASE I BOOK EXPLOITATION          SOV/5136

Tereshin, Aleksey Il'ich, and Vladimir Aleksandrovich Sofronov

Spravochnik po ekspluatatsii radioizmeritel'nykh priborov  (Manual for the Operation
    of Radio Measuring Instruments) 2d ed., unrev.  Kiyev, Gostekhizdat UKrSSR, 1960.
    319 p.  10,000 copies printed.

Ed.: L. Polyanskaya; Tech. Ed.: S. Matusevich.

PURPOSE:   This manual is intended for technical personnel concerned with the de-
    sign, operation, and maintenance of radio engineering equipment and radio
    measuring apparatus.

COVERAGE:  The manual presents the basic technical  characteristics and operating
    principles of radio measuring instruments in general use.  Procedures for ready-
    ing them for use and basic problems of their operation are discussed.  No person-
    alities are mentioned.  There are 7 references, all Soviet.
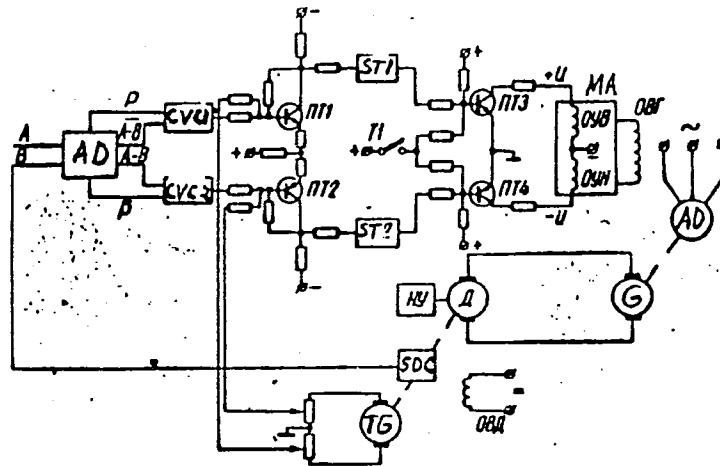
TABLE OF CONTENTS:

Foreword
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ACC NR: AP7000285



Fig. 1. Circuit of digital servo system: ST – Schmitt trigger circuit; MA –
magnetic amplifier; M – motor; G – generators; TG – tachogenerator

showed that the realization of near-to-optimum control ensured the required accuracy
of stopping the electric drive without using "creeping" speeds in various movements
of the upper roller. The dynamics of the electric-drive system is approximately
described by a second-order linear differential equation. The time constant is 1.2
sec. Orig. art. has: 1 diagram and 1 graph.
SUB CODE: 09,13/SUBM DATE: 26Apr65/ ORIG REF: 003
.Card 2/2

KOGAN, V.B., kandidat tekhnicheskikh nauk; SOFRONOV, V.M.

Calculation of gas content in an electrolyte in selecting electrolytic
cell sizes.  Khim.prom. no.2:94-96 Mr '54.                    (MLRA 7:6)

1. Gosudarstvennyy institut prikladnoy khimii, Laboratoriya fizicheskoy
khimii.          (Electrolytes--Conductivity)

SOFRONOV,V.S.

(From Material Received by the Editor on the Treatment and Prevention of Pneumonia).
2. Extract: "Treatment of Infectious Catarrh of the Upper Respiratory Passages" by Assistant V.S. Sofronov (Ul'yanov Agricultural Institute). Tests of a solution of streptocide -- according to the following prescription: streptocide -- 4 grams, caffeine -- 2 grams, ethyl alcohol -- 70 grams, glucose --75 grams, distilled water -- 500 grams, for one intravenous injection did not give positive results. Of 30 horses with infectious catarrh of the upper respiratory passes and subject to treatment with this solution (27 in the course of 1-2 months), 27 recovered and 3 died. Page 35 (Veterinariya,No.5,1952).
SO:        - U-5638;10 March 1954;p.19;                         de g

S/196/62/000/009/015/018
E114/E184

AUTHORS:    Yermolin, N.P., and Sofronov, V.V.

TITLE:      Peculiarities of the design and means of improving
            the accuracy of work of single phase selsyns

PERIODICAL: Referativnyy zhurnal, Elektrotekhnika i energetika,
            no.9, 1962, 16-17, abstract 9 I85. (Izv. Leningr.
            ·elektrotekhn. in-ta, no.45, 1961, 208-220)

TEXT:       In the design of single phase selsyns the following
are specified:  voltages of the field  $U_1$  and synchronizing
windings  $U_2$, the frequency ,of field current  $f_1$  c/s, specific
synchronizing torque  $m_y$ (g.cm/deg.), the working condition and
the completion.  The design begins by determining the internal
diameter of the stator from the formula

$$D_o = \sqrt[5]{\frac{m_y}{K} \cdot \frac{\xi + 2.7\lambda}{\xi^2}} \quad cm$$

and the length of the stack of laminations
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Peculiarities of the design and ...     S/196/62/000/009/015/018
E114/E184

$$\ell_o = \xi D_o \quad cm$$

where $\lambda = 0.78-0.88$ – ratio of the synchronizing winding pitch to the pole pitch; $\xi = 0.8-1.8$;

$$K = 2.8 \, f_1 \left( \frac{k_w \alpha_\delta \cdot B_\delta}{10000 \cdot K_\mu} \right)^2 \frac{k_M \cdot k_1}{k_r \cdot k_\vartheta} \cdot \frac{\beta_q}{1 + \beta_r^2} \quad (g/deg.cm^4),$$

where $B_\delta = 3000-6000$ – amplitude value of magnetic induction in the air gap, gauss; $k_w = 0.86-0.94$ – winding factor of the synchronizing winding; $k_m = 0.20-0.24$ – slot filling factor; $k_r = 1.4-2.0$ – coefficient of resistance increase of the synchronizing winding on the quadrature axis due to the action of the damping winding on the rotor; in the absence of a damping winding, $k_r = 1$; $k_\vartheta = (1-0.004)(\vartheta - 20)$ – coefficient of resistance increase of the synchronizing winding when the temperature increases from $20^\circ$ to $\vartheta^\circ$ C; $\beta_r = 0.8-2.4$ – ratio of the quadrature axis reactance of the equivalent circuit of

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Peculiarities of the design and ...    S/196/62/000/009/015/018
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the selsyn to its resultant resistance; $k_\Pi = S_\Pi \, q/100D_q^2$ - 0.10-0.14, where $S_\Pi$ = slot area, mm$^2$; q - number of slots per pole per phase. The design coefficient of pole overlap $\alpha_\delta = 0.45-0.55$ for salient pole machines; and $\alpha_\delta = \frac{2}{3}\sqrt[3]{K_3}$ for cylindrical machines. $k_3 = 1.1-1.3$ - saturation coefficient of stator and rotor teeth.

$$k_\Phi = \frac{\pi^2 \, \alpha_\delta}{8 \sin \frac{\alpha_\delta \pi}{2}} \qquad - \text{magnetic flux coefficient.}$$

The external diameter and length of the selsyn body can be approximately determined from the formulae $D_k = (1.9-2.1) \, D_a$; $L_k = (2.8-3.2) \, \ell_o$.

The magnetic circuit of the selsyn is designed basically in the same way as any induction machine. The calculations for the synchronizing windings do not differ from those for a 3-phase stator winding of an induction motor. Specific synchronizing
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Peculiarities of the design and ...   S/196/62/000/009/015/018
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torque and changes in the total synchronizing torque  M  of the
slave selsyn as a function of the angle  $\ominus$ - the angular position
error with respect to the master selsyn under steady state
conditions - can be determined from the formulae:

$$m_y = \frac{20}{f_1} E_\gamma^2 \frac{x_q}{r_q^2 + x_q^2} \, , \quad \text{g.cm/degree};$$

$$M = \frac{3}{4} \frac{10^5}{9.81 \, \omega_1} E_\gamma^2 X \frac{x_q \sin \ominus}{\left(\dfrac{r_d + r_q}{2} - \dfrac{r_d - r_q}{2} \cos \ominus\right)^2 + \left(\dfrac{x_d + x_q}{2} - \dfrac{x_d - x_q}{2} \cos \ominus\right)^2} \quad \text{g.cm}$$

where:  $E_\gamma$ = phase e.m.f. of the synchronizing winding, volts;
$\omega_1 = 2\pi f_1 r_d$  and  $x_d$, $r_q$ and $x_q$  are the resulting parameters
of the equivalent circuits of selsyn in the direct and
quadrature axes.  To improve the accuracy of the indicating
selsyn, it is also useful to be guided by the following design
rules:  1) Choose the value of the pole overlap coefficient
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from the equation $\alpha mq$ = an integer, where m - number of phases.
2) Choose the number of slots in the rotor and stator of a
cylindrical machine guided by the following expressions:

$$z_R \neq z_s; \quad z_R \neq z_s \pm 2; \quad z_R \neq 6g \pm 1; \quad z_R \neq 6g \pm 2; \quad z_R \neq 2z_s;$$

$$z_R \neq 1/2 z_s; \quad z_R \neq 2z_s \pm 2; \quad z_R \neq 1/2 z_s \pm 1,$$

where:  g - any integer;  $z_s$ - number of stator slots;  $z_R$ - number
of rotor slots.
3) Use two-layer winding with the pitch shortened by 1/5 of the
pole pitch.  In the cylindrical selsyn, make two-layer windings
for the stator and the rotor by reducing the pitch of one winding
by 1/5 and of the second by 1/7 of the pole pitch.  To improve
the accuracy of the transformer selsyns it is necessary:
1) to choose the angle of the inclination of stator slots from
the formulae

$$\gamma_c = k\frac{2\pi}{r_s + 1}; \quad \gamma_c = k\frac{2\pi}{r_s}; \quad \gamma_c = k\frac{2\pi}{r_s - 1}.$$

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Peculiarities of the design and ...    S/196/62/000/009/015/018
E114/E184

where $\gamma_c$ is the resultant angle of skewness of the slots in radians; k - any integer except zero: 2) in the choice of slots for the stator and the rotor, be guided by the same expressions as for the indicating selsyn: 3) use the cylindrical construction, etc.

[Abstractor's note: Complete translation.]

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SOFRONOV, Ye., inzh.

"Airplanes of the commercial aviation."  Reviewed by E.Sofronov.
Grazhd.av.  18  no.11:31  N  '61.                        (MIRA 15:2)
                                    (Airplanes)

17.1151

33328

S/085/62/000/003/001/001
D045/D114

AUTHOR:     Sofronov, Ye., Engineer

TITLE:      High-altitude aircraft equipment

PERIODICAL: Kryl'ya Rodiny, no. 3, 1962, 29-31

TEXT:  Various types of high-altitude aircraft equipment are described.
In conventional oxygen apparatus. either a constant or periodical oxygen
flow enters the mask.  Oxygen from a high-pressure cylinder passes through
two reducing valves where the pressure is reduced to 10-4 and 2-1.5 atm
respectively,  The oxygen subsequently enters a non-hermetic mask via an
oxygen flow indicator.  The amount of oxygen entering the mask is auto-
matically regulated according to height by a special aneroid box.  The
main shortcoming of devices of this type is oxygen wastage during
expiration.  In oxygen apparatus with periodic flow, the oxygen enters the
mask only on inspiration.  During inspiration, a vacuum is created between
the mask and the apparatus proper.  As a result of pressure differences
caused by the vacuum, an elastic diaphragm is deflected inwards, moves

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D045/D114

High-altitude aircraft equipment

a lever and opens the valve. Oxygen then begins to pass into the mask.
During respiration, when the inspiratory valve in the oxygen mask is
closed, the oxygen flow increases the pressure within the apparatus, and
the diaphragm deflects to the reverse side. This deflection returns the
lever to the initial position and the valve closes, thus interrupting the
oxygen flow into the apparatus. Of Soviet brands of oxygen apparatus,
the KП-18 (KP-18) and KП -28 (KP-28) non-portable and KП-19 (KP-19) and
KП -21 (KP-21) portable devices are mentioned but not described. The
KП-23 (KP-23) and KП -27M (KP-27M) parachute oxygen devices (fig.3)
operate as follows: Oxygen is kept in a battery of containers linked in
sequence and having a total volume of 0.83 l. The working pressure is
150 atm. An inflation valve (1) is fixed to one side of the battery, a
manometer (2) and capillary tube (3) to the other. The battery is
connected by the capillary tube to a stopping-and-starting device. These
parachute oxygen devices are switched on automatically during ejection.
High-altitude pressure suits are used in cases when the cabin becomes

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High-altitude aircraft equipment

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D045/D114

depressurized at altitudes of more than 12-15 km. They are used in combination with an oxygen mask or hermetic headgear, the latter being used particularly in flights at altitudes of more than 15-17 km. The operational principle of the high-altitude equipment of an atmospheric hermetic cabin is as follows: Compressed hot air is fed to a reducing valve and then to the distributor of a heat regulator. Depending on the cabin temperature, the compressed air is directed along a cold or hot line, and then along a common tube into the cabin. In the heat exchanger of the cold line, the air is cooled by atmospheric air and can also be cooled below the temperature of the surrounding medium in a turborefrigerator. Cabin pressure is regulated automatically. The system also includes a vacuum valve for equilibrating cabin pressure with the surrounding medium when the aircraft is in descent, a jettison valve for rapidly depressurizing the cabin, and an oxygen-breathing apparatus with a reserve oxygen supply in cylinders usually placed outside the cabin. High-altitude strato-suits are based on the same principles as a hermetic cabin. There are 7 figures.

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SOFRONOV, Ye., inzh.

Altitude equipment of airplanes. Kryl. rod. 13 no.3:29-31 Mr
'62.                                                      (MIRA 18:5)

L 10641-63          ARG/ETR/EWG(s)-2/EPA(b)/EWT(d)/FCS(k)/EWT(1)/EWT(m)/
FBD, FBO/FCS/BIE/ES(t)-2    AFFTC/ASD/AFMDC/APGC/SSD    Ps-4/Pw-4/Pd-4
TT/WW                                                  S/018/63/000/005/001/001

AUTHOR:     Labzenkov, V. and Sofronov, Ye.

TITLE:      Aerodynamics of antiaircraft rockets

PERIODICAL: Voyennyy vestnik. No. 5, 1963, 84 - 86

TEXT:        Modern rockets are either winged or ballistic. Antiaircraft rockets are
winged. Their speed range is from 2500 - 7000 km/hr, with altitudes primarily from
10 - 30 km. During movement in an air medium, the rocket (missile) is subjected to
aerodynamic forces caused by unequal distribution of pressure on the surface of the
aircraft. The distribution of pressure, in turn, depends on the distribution of
air flow speeds. The components of complete aerodynamic forces are drag and lift.
Frictional forces act during the flow of air around the rocket. Moreover, in the
great range of subsonic speeds the uninterrupted flow is replaced by the interrup-
tion of the stream and the formation of a vortex. The difference in pressure be-
tween the nose and tail portions of the rocket leads to a braking of the rocket.
Lift is also caused by the pressure difference on the upper and lower surfaces.
Lift is caused primarily by wings. Hence, this class of rocket is used at compara-
tively low altitudes. Ballistic rockets have no wings and are controlled by gas

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Aerodynamics of ...                                  S/018/63/000/005/001/001

vanes or special turning engines. Winged rockets are controlled by aerodynamic as
well as gas dynamic vanes. The greater the speed, the more the role of air com-
pression, expressed in machs, becomes the main role. The greater the ratio of the
speed of current to that of sound, the greater the compressibility of gases. With
mach less than 1 air compression is insignificant and resistance is small. With
mach greater than 1, continuity of the flow's parameters is disrupted and there is
great agitation, leading to the phenomenon of shock waves and pressure bounds. Con-
tinuity is disrupted as the gas parameters on one side of the shock wave differ
sharply from those on the other side of its front. As a result of the braking of
the air flow ahead of the rocket's nose, the temperature of the air and the rocket
surface is raised. The optimum rocket shape for subsonic flight is drop-shaped. On
supersonic rockets, the rocket nose and leading edge of the wings are sharp and the
aerodynamic surfaces thin. The greater the rocket's speed, the longer its nose. The
center is cylindrical. With an increase in the angle of the center part, drag in-
creases. The tail part is either a cylinder or a truncated cone. There is no optimum
aerodynamic form for all speeds. At subsonic speeds, the wing profile should have a
blunt leading edge; with supersonic speeds, sharp. Depending on the locations of the
support and control surfaces, the aerodynamic patterns of winged rockets may be:
duck-shaped with air vanes ahead of the wings; normal, with air vanes behind the

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Aerodynamics of ...

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wings; with tail control, the air vanes coinciding with the supporting surfaces. In the duck-shaped rocket the lift force of the vanes and wings supplement each other and the support surfaces are less.  Three figures.

Card 3/3

GAMULIN, A., inzh.; SOFRONOV, Ye., inzh.

Instruments show the route (to be concluded). Kryl. rod.
15 no.1:24-25  Ja '64.                    (MIRA 17:2)

GAMULIN, A., inzh.; SOFRONOV, Ye.

Instruments show the route (conclusion). Kryl. rod. 15 no.5:
20-21 My '64.                                          (MIRA 17:8)

SOFRONOV, Ye. I.: Master Tech Sci (diss) -- "Theoretical and experimental investigation of the traverse of large hydraulic presses". Moscow, 1958, published by the TsBNTI of Heavy Machinebuilding. 18 pp (Main Admin of Sci Res and Design Organizations of the Gosplan USSR, Central Sci Res Inst of Technology and Machinebuilding TsNIITMash), 150 copies (KL, No 6, 1959, 136)

L 19190-63      EWT(d)/EWP(k)/EWP(q)/EWT(m)/BDS    AFFTC/ASD    Pf-4    JD/HW

ACCESSION NR: AR3004201                        S/0276/63/000/005/V005/V006  62

SOURCE: RZh. Tekhnologiya mashinostroyeniya, Abs. 5V24

AUTHOR: Sofronov, Ye. I.

TITLE: Study of fatigue strength of component crossarm of a heavy press

CITED SOURCE: Tr. Vses. n.-i. proyektno-konstrukt. in-ta metallurg. mashinostr.,
sb. 3, 1961, 211-219

TOPIC TAGS: fatigue strength, crossarm component, heavy press, wire tensometer,
loading, testing machine, GRM-2

TRANSLATION: The fatigue strength was investigated on the model of a component
mobile crossarm of a heavy press. The thrust of GRM-2 pulsating machine was taken
by a crossarm punchholder, and the load from press cylinders was modeled by a
special hydraulic arrangement. The change in the state of stress of crossarm
parts was parallelly determined by wire tensometers in the process of loading.
The tensometer deformation graphical record during loading from zero to a maximum
value consists of 2 sections. In the first section, at low loads deformations
increase more slowly than at further increase of loading (the second section)

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0

ACCESSION NR: AR3004201

because of diminishing of clearances in the design. In the fatigue tests a pre-
liminary loading is applied and the range of cycle loading changes occurs in the
second section. Therefore the loading pattern must be carried out by taking into
account stresses in dangerous places and not the force of the testing machine. The
test was carried out at a maximum stress of the cycle amounting to 100, 140 and
175% of the given nominal force of the press, and at a frequency of 550 cycle/min.
Investigation of the crossarm destroyed after 9.5 millions of cycles at a maximum
cycle stress equal 164% of the nominal, disclosed that contact corrosion and edge
effect caused the destruction. Conclusions were drawn from the investigations on
the advantages of fatigue tests on complex composite constructions as compared
with other methods for determining the most unsafe parts, particularly when the
carrying capacity of constructions is determined by the corrosion-edge effect.
Six figures. S. Topaler.

DATE ACQ: 21Jun63          SUB CODE: IE                          ENCL: 00

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L 41293-65   EWT(m)/EWP(w)/EWP(v)/EWP(k)   Pf-4   EM
ACCESSION NR: AR5005685            S/0276/64/000/008/V008/V008

*13*

SOURCE:  Ref. zh. Tekhnologiya mashinostroyeniya. Svodnyy tom, Abs. 8V38   *B*

AUTHOR:  Sofronov, Ye. I.

TITLE:  A study of the stressed state of beam walls

CITED SOURCE:  Tr. Vses. n.-i. i proyektno-konstrukt. in-ta metallurg. mashinostr.,
sb. 11, 1964, 99-156

TOPIC TAGS:  hydraulic press, press design, stressed beam wall, stressed state
calculation

TRANSLATION:  Composite structures consisting of a number of thick plates have
found wide use in powerful presses.  Cross bars and span beams in 30,000 and 75,000
metric ton presses consist of an assortment of short and tall plates classifiable
as beam walls with side ratios of 2:4.  The following conclusions were reached
from approximate calculations and an analysis of the stressed state of beam walls:
1) Methods applicable to the theory of elasticity should be used to calculate beam
walls stressed along a single edge or stressed by a concentrated force near the

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center cross section; 2) Beam walls with high ratios of length to height and
stressed along two opposite edges, except for the instance discussed in 1 above,
can be calculated approximately from expressions describing the resistance of the
material. Stress values obtained in the latter case will be exaggerated by 7%
for stretched fibers and understated by 40% for compressed fibers. Bibl. with
4 titles; 13 illustrations.

SUB CODE: AS, ME                          ENCL: 00

Card 2/2

VOROVICH, I.I., doktor fiz.-matem. nauk, prof.; LYUBIMOV, V.Ya.; SAFRONOV,
    Yu.V., kand. fiz.-matem. nauk, dotsent; SOFRONOV, Ye.I., kand.
    tekhn. nauk; USTINOV, Yu.A., kand. fiz.-matem. nauk

Reliability of fitting rim bands on gear-wheel centers. Vest.
mashinostr. 45 no.7:23-26 Jl '65.                    (MIRA 18:10)

POPKOV, Anatoliy Vasil'yevich; VERETE, A.G., inzh., retsenzent;
    RUKAVISHNIKOV, I.V., inzh., retsenzent; SOFRONOV, Ye.P.,
    nauchn. red.; VASIL'YEVA, N.N., red.; NIKITINA, R.D.,
    red.; ERASTOVA, N.V.; tekhn. red.

    [Fundamentals of hydrodynamics] Osnovy termodinamiki. Le-
    ningrad, "Sudostroenie," 1964.  181 p.    (MIRA 17:3)

SOFRONOV, Ye.T.

     Stability of the undisturbed motion of a system of three equations
in a certain critical case.  Vest. LGU. 18 no.19:77-84  '63.

                                    (MIRA 16:11)

L 54912-65   EWT(d)   Pg-4   IJP(c)

ACCESSION NR:   AR5015066

UR/0044/65/000/005/B047/B047
517.917

SOURCE:  Ref. zh. Matematika, Abs. 5B227

AUTHOR:  Sofronov, Ye. T.

TITLE:  Sufficient conditions for stability of the solution of a system of three equations

CITED SOURCE:  Dokl. 3-y Sibirsk. konferentsii po matem i mekhan., 1964. Tomsk, Tomskiy un-t, 1964, 155-156

TOPIC TAGS:  differential equation, stability

TRANSLATION:  The system

$$\frac{dx}{dt} = y - \varphi_1(x),$$

$$\frac{dy}{dt} = z - \varphi_2(x),$$

$$\frac{dz}{dt} = -\varphi_3(x) - \varphi_4(y) - \varphi_5(x, y) z,$$

is studied and sufficient conditions for stability in the large of the zero solution of the system given.

SUB CODE:  MA                           ENCL:  00

Card 1/1

L 29122-65    EWT(1)   IJP(c)

AUTHOR: Sofronov, Ye. T.

TITLE: Stability of unperturbed motion in a critical case

SOURCE: Leningrad. Universitet. Vestnik. Seriya matematiki, mekhaniki i astronomii, no. 1, 1965, 145-146

TOPIC TAGS: differential equation, stability

ABSTRACT: The author gives several theorems yielding sufficient conditions for stability of

$$\frac{dx}{dt} = y, \quad \frac{dy}{dt} = z + Y(x, y), \quad \frac{dz}{dt} = Z(x, y, z), \qquad (1)$$

where Y and Z satisfy certain given conditions, based on the stability of

$$\frac{dx}{dt} = y, \quad \frac{dy}{dt} = Y(x, y), \qquad (2)$$

He also gives theorems for instability of

$$\frac{dx}{dt} = y, \quad \frac{dy}{dt} = z, \quad \frac{dz}{dt} = Z(x, y, z). \qquad (3)$$

Orig. art. has: 5 formulas.

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