SCHMIDL, S.

Soviet Aeroflot Airlines. p. 10.

(SKRZYDLATA POLSKA. Vol. 13, No. 27, July 1957. Warszawa, Poland)

SO: Monthly List of East European Accessions (EEAL) LC. Vol. 6, No. 10, October 1957. Uncl.

SOLNICKI, Henryk, Inz.

Influence of applying divided brushes upon the degree of sparking in the LKa-450 type motor. Przegl elektrotechn 38 no.7:312 Jl '62.

1. Instytut Elektrotechniki, Warszawa.

SOLNICKOVA, Z.

SOLNICKOVA, Z. New forms of planning, supply, and consumption as a means of improving consumers' goods supply of the population. p. 482

Vol. 7, no. 11, 1956
PRUMYSL POTRAVIN
TECHNOLOGY
Praha, Czechoslovakia

SOLNIK, J.

3184. EVALUATION OF QUALITY OF LUBRICATING OILS IN USE. Solnik, J. (Nafta (Petroleum, Kraków), 1955, vol. 11, 203, 224). It has been the general practice to determine the age and suitability of oils by their saponification and acid values, the limits being set at various figures in different countries. There are, however, other considerations, in particular, formation of gum and asphaltenes due to polymerization. F = (saponification and acid value) - (gum content)² - (content of hard asphaltenes)². F values 0-35 indicate good oils, 36-55 oils which are satisfactory, 56-70 oils to be used in emergency only, and above 70 useless as lubricant and injurious to the engine. Estimation of F is made according to modified Suld-Pölls method, which is described.

I.P.

SOLNIMSKY, G.L., professor; BERESTNEV, V.A.

Regarding the concepts of the strength of polymer materials. Khim.
nauka i prom. 4 no.4:543-544 '59.   (MIRA 13:8)
            (Polymers)   (Strength of materials)

L 29613-66   EEC(k)-2/EWT(d)/FSS-2   BC
ACC NR: AP6010779   SOURCE CODE: UR/0146/66/009/001/0119/0124

                                                                                    S

AUTHOR: Vorob'yev, V. G.; Sol'nitsev, R. I.   B

ORG: Leningrad Electrotechnical Institute im. V. I. Ul'yanov (Leningradskiy elektrotekhnicheskiy institut)

TITLE: Simulation of nonlinear gyroscopic systems

SOURCE: IVUZ. Priborostroyeniye, v. 9, no. 1, 1966, 119-124

TOPIC TAGS: gyro, gyroscope system, gyroscope motion equation

ABSTRACT: A simulation method combined with a method of harmonic linearization is suggested for investigating nonlinear gyro systems. Some motion parameters obtained on a simulator are substituted into the implicit equations that connect motion parameters and instrument parameters. Other motion parameters determined analytically are used as checks for the simulation results. Thus, the formulas resulting from the harmonic linearization serve to determine the direction of further simulator studies intended to find optimal instrument parameters. The above approach requires evaluation of the simulation error, particularly in the problem of the stability range in the controllable-parameter space and in the problem of gyro drift due to small disturbances. The above method is illustrated by numerical example of a two-gyro single-axis gyrostabiliser mounted on a fixed base. Orig. art. has: 3 figures and 16 formulas.

Card 1/1   SUB CODE: 17 / SUBM DATE: 24Jul64 / ORIG REF: 002   UDC: 531.383

TSOY, S.V.; IVANOV, P.P.; SOLNITSYN, B.P.; SEMENOV, V.I.

Automatic circuit breaker. Trudy Inst.gor.dela AN Kazakh.SSR
8:184-186 '61.
                                              (MIRA 15:4)
(Dust collectors)   (Automatic control)

RUMANIA/Morphology of Man and Animals -   S-5
            (Normal and Pathologic), Pathologic Anatomy.

Abs Jour   : Ref Zhur - Biol., No 3, 1958, 12485

Author   : Serbanescu, C., Draghici, D., Solnitzky, A.
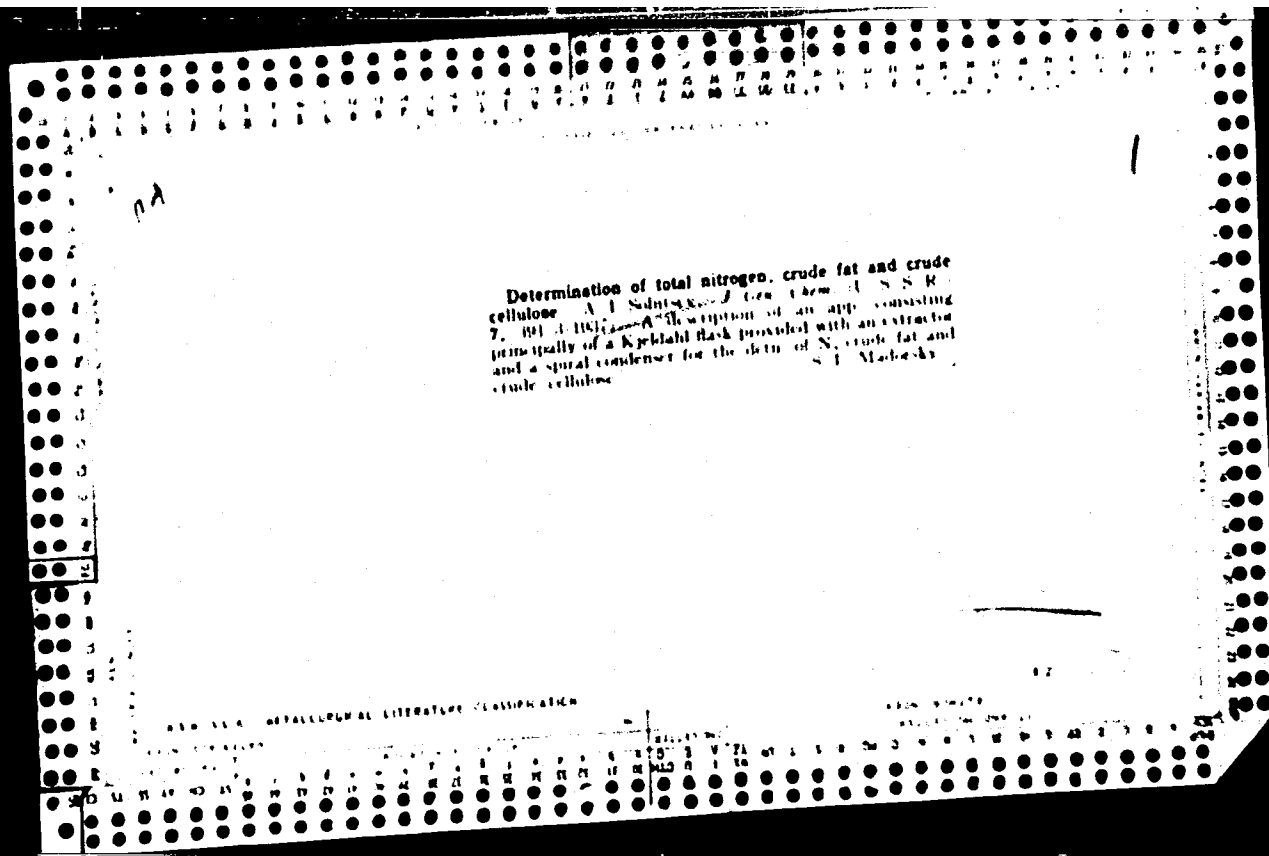Inst   : -
Title   : The Effect of Intravenous Aluminum Hydroxide on Experimen-
               tal Animals.

Orig Pub   : Bibliot. stiint Ints. Patol. si igiena anim. Ministerul
               agric. si silvicult., 1955, No 5, 25-33

Abstract   : Various laboratory animals (mouse, rat, guinea pig, rabbit,
               dog) sacrificed 3 hours after an intravenous injection of
               0.1 ml of a 10% suspension of aluminum hydroxide displayed
               reactive changes in the lungs, the liver, the spleen and
               the kidney. There was a dilitation of the capillary bed
               and a perivascular infiltration by histiocytic and, to a
               lesser extent, lymphoid elements. The intensity of the re-
               actions differed in various organs (maximal in the lungs,
                                     minimal in the kidney).

Card 1/1

Determination of total nitrogen, crude fat and crude
cellulose   A I Subnt J t t krm   U S S R
7. 101 4 101   A   "description of an app   consisting
principally of a Kjeldahl flask provided with an extractor
and a spiral condenser for the detn of N, crude fat and
crude cellulose

METALLURGICAL LITERATURE CLASSIFICATION

PROCESSES AND PROPERTIES INDEX

Albumins of the seeds of Dactylis glomerata. I. N. Yaichnikov and A. I. Sukiasov. *J. Applied Chem.* (U.S.S.R.) 11, 998-7(in French)(1938).—The seeds contained moisture 0.44, ash 8.2%, fat 6.79, cellulose 17.4%, total N 2.4%, albumin N 2.36, and protein 14.75%. Of the protein 6.78% was sol. in H₂O; 12.26% in 10% NaCl soln.; 61.42% in 0.25% NaOH soln.; and 19.54% was insol. in the above solvents. Prolamin extd. from the seeds with 70% alc. soln. and pptd. with 1% NaCl soln. in the amt. of 25.02% (of the total protein), contained 16.27% of N.   A. A. Podgorny

A S M - S L A   METALLURGICAL LITERATURE CLASSIFICATION

ZBARSKIY, B.I., prof.; ZBARSKIY, I.B.; SOLNTSEV, A.I.; STEPANENKO, B.N.,
    red.; DEMKINA, A., tekhn. red.

[Laboratory manual of biological chemistry] Praktikum po biolo-
    gicheskoi khimii. Moskva, Medgiz, 1949. 223 p. (MIRA 15:4)
        (BIOCHEMISTRY—LABORATORY MANUALS)

SOLNTSEV

ZBARSKIY, Boris Il'ich; ZBARSKIY, Il'ya Borisovich; SOLNTSEY, Aleksandr
Ivanovich; STEPANENKO, B.N., redaktor; SENCHILO, K.K., tekhni-
cheskiy redaktor.

[Laboratory manual of biochemistry] Praktikum po biologicheskoi
khimii. 2-e izd-., ispr. i dop. Moskva, Gos. izd-vo med. lit-ry,
1954. 347 p. [Microfilm]   (MLRA 7:11)
        (Biochemistry--Laboratory manuals)

SOLNTSEV, A. I.

The incorporation of phosphorus 32 from an inorganic source into milk casein. A. I. Solntsev and G. V. Filatov. *Invest. Timiryazev. Sel'skokhoz. Akad.* 1936, No. 1, 227-8.— P[32] in the form of Na_2HPO_4, 10 ml. soln. of 4.5 mc., was injected intramuscularly into a goat. Measurements made on the radioactivity of the milk, manure, and casein manufd. from the milk show that after 2 hrs. the activity in the milk was high, and attained a max. after 8 hrs. The manure also showed activity soon after injection. I. S. Ioffe

SOLNTSEV, A.I., kandidat biologicheskikh nauk.

Role of vitamins A, D, B_1, B_2, and B_{12} in stockbreeding. Izv.
TSKhA no.2:187-192 '56.
(MLRA 9:12)

(Vitamins)
(Stock and stockbreeding)

SOLNTSEV, A.I.,kandidat biologicheskikh nauk.

Pyrophosphatase activity in the blood of cattle. Izv.TSKhA no.3:236
'56.

(MLRA 10:3)

(Blood--Analysis and chemistry) (Pyrophosphatases)

"Concerning Calcium Metabolism in Ruminants in an Investiga-
tion Using Calcium^{45}," by A. I. Solntsev and G. V. Filatov,
Zhivotnovodstvo (Animal Husbandry), No 12, 1956, pp 53-55
(from Referativnyy Zhurnal -- Khimiya, Biologicheskaya
Khimiya, No 8, 25 Apr 57, Abstract No 0061, by A.
Verloochenko, p 83)

"Three-ml solutions of $Ca^{45}Cl_2$ containing 500 mg Ca were adminis-
tered intramuscularly into goats. Two hours after this injection, the
amount of Ca^{45} excreted per ml milk equalled 6.4 thousand impulses per
minute; seven hours after the injection, the activity per one ml milk
was 45 thousand impulses per minute; and 24 hours after the injection,
it amounted to 60.1 thousand impulses per minute per ml milk.

"Subsequently, calcium radioactivity in the milk commenced to de-
crease gradually, and in two months it equalled 0.6 thousand impulses
per minute per ml milk. During this same period, twice as much Ca^{45}
was excreted with the milk as with the feces." (U)

ZHEREBTSOV, P.I., doktor biologiches..., ...or; SOLNTSEV, A.I.,
kandidat biologicheskikh n... ... GEORGIYEVSKIY, V.I.,
kandidat biologicheskikh ..., assistent.

Effect of nicotinic acid on metabolism in animals.   Izv.TSKhA
no.1:140-144   '57.   (MIRA 10:7)
              (Metabolism)   (Nicotinic acid)

USSR/General Biology - Physical Chemical Biolog'.   B

Abs Jour   : Ref Zhur Biol., No 6, 1959, 23484

Author   : Solntsev, A.I.

Inst   : Agricultural Academy imeni K.A. Timiryazeva

Title   : On the Chemical Nature of Enzymes.

Orig Pub   : Dokl. Mosk. s.-kh. akad. im. K.A. Timiryazeva, 1957,
               vyp. 30, ch. 2, 46-52

Abstract   : Review of old and new literature on the protein nature
               of enzymes. The role of coenzymes (cocarboxylase and
               codehydrases I and II and coenzyme A) and cytochromic sys-
               tem in tissue respiration is pointed out. The participa-
               tion of some vitamins and metals - Fe, Cu and Zn - in the
               structure of enzymes is noted. -- V.A. Dorfman

Card 1/1

SOLNTSEV, A.I., dots.,kand.biol.nauk

Chemical nature of ferments [with summary in English). Izv. TSKhA
no.5:217-222 '58.   (MIRA 11:11)
                    (Fermentation)

ZHEREBTSOV, P.I., prof., doktor biol. nauk; SOLNTSEV, A.I., dots., kand. biol.
        nauk.

    Role of ascorbic acid in the metabolism of anima organism [with
    summary in English]. Izv. TSKhA no.6:177-182 '58.   (MIRA 12:1)
            (Ascorbic acid--Physiological effect)
            (Metabolism)

SAKIN, I.L.; RESHINA, I.I.; SOLNTSEV, A.I.

Double monochromators. Opt.-mekh.prom. 25 no.4:2-8 Ap '58.
(MIRA 11:10)

(Monochromators)

ZHEREBTSOV, P.I., doktor biologicheskikh nauk, prof.; SOLNTSEV, A.I.,
     kand.biologicheskikb nauk, dotsent

     Role of riboflavin in the metabolism of animals. Izv. TSKhA no.2:
     213-216 '60.   (MIRA 14:4)
                (Riboflavin)   (Metabolism)

SOLNTSEV, A.I., kand.bilogicheskikh nauk, dotsent; MUKHINA, N.A.

Present-day views on the biochemistry of milk carbohydrates. Izv,
TSKhA no.6:198-203 '60.   (MIRA 13:12)
        (MILK--COMPOSITION)   (CARBOHYDRATES)

ZHEREBTSOV, P.I., prof., doktor biolog.nauk; SOLNTSEV, A.I., dotsent, kand.biolog.
nauk.

Fermentative activity of an isolated section of rumen. Izv. TSkHA
no.1:92-96 '61.   (MIRA 14:3)
                        (Rumen)

ZBARSKIY, Boris Il'ich, prof.[deceased]; ZBARSKIY, Il'ya Borisovich;
    SOLNTSEV, Aleksandr Ivanovich; DEBOV, S.S., red.; BUL'DYAYE,
.N.A., tekhn. red.

[Laboratory work in biochemistry] Praktikum po biologicheskoi
khimii. 3. izd., ispr. i dop. Moskva, Medgiz, 1962. 279 p.
                                        (MIRA 15:7)

1. Kafedra biologicheskoy khimii Pervogo Moskovskogo meditsin-
skogo instituta (for Zbarskiy,B.I., Zbarskiy, I.B., Solntsev).
            (Biochemistry--Laboratory manuals)

ZHEREBTSOV, P.I., doktor biologicheskikh nauk, prof.;
    SOLNTSEV, A.I., kand.biologicheskikh nauk, dotsent

Studying lipolysis and the unsaturation degree of "crude"
fat in the rumen of calves. Izv. TSKHA no.2:214-217
'62.   (MIRA 15:9)
            (Lipolysis)   (Rumen)
                         (Calves)

SOLNTSEV, A.I,, kand.biologicheskikh nauk, dotsent; MUKHINA, N.A.;
        P'YESHCHAK, M.Yu., aspirant

Role of lactose in animal feeding. Izv. TSKHA no.3:228-232
'62.   (MIRA 15:9)
            (Feeding)   (Lactose)

ZHEREBTSOV, P.I., doktor biolog. nauk, prof.; SOLNTSEV, A.I., kand.
    biolog. nauk, dotsent

Vitamins in animal husbandry.   Izv. TSKHA no.1:79-90 '63.
                                              (MIRA 16:7)

        (Vitamins)   (Veterinary physiclogy)

SOLNTSEV, A.I., kand.biolog. nauk, dotsent; SUSOVA, N.I., assistent

Nitrogen metabolism in the rumen of ruminants. Izv. TSKHA no.3:
234-236 '63.   (MIRA 16:9)
         (Nitrogen metabolism) (Rumen)

ZHEREBTSOV, P.I., doktor biolog. nauk; SOLNTSEV, A.I., kand. biolog. nauk;
     MUKHINA, N.A., kand. biolog. nauk, dotsent

Carbohydrate metabolism in the rumen of ruminants. Izv. TSKHA
no.4:134-143 '63.   (MIRA 17:1)

ANNEL', A., prof. doktor biolog. nauk; ?????, ?..., dotsent, kand.
biolog. nauk

Lipid metabolism in the rumen of ruminants. Izv. TSKHA no.4:
??-??? '??.   (MIRA 1?:12)

1. Kafedra fiziologii i biokhimii sel'skokhozyaystvennykh zhivot-
nykh Moskovskoy ordena Lenina sel'skokhozyaystvennoy akademii imeni
K.A. Timiryazeva.

SHCHERBTSOV, ..., prof. doktor biol. nauk; SOLNTSEV, L.I., doten., kand.
biol. nauk; VRAKIN, V.F., starshiy nauchnyy sotrudnik, kand.
biol. nauk

Effect of nitrates on the organism of ruminants. Izv. TSKA
no.6:148-155 '64   (MIRA 18:1)

1. Kafedra fiziologii i biokhimii sel'skokhoz. zhivotnykh,
Moskovskoy ordena Lenina sel'skokhozyaystvennoy akademii imeni
K.A. Timiryazeva.

ZHEREBTSOV, P.I., prof. doktor biol. nauk; SOINTSEV, A.I.; dotsent,
        kand. biolog. nauk

    Ammonia metabolism in ruminants. Izv. TSKHA no. 1:145-149
    '65   (MIRA 19:1)

    1. Kafedra fiziologii i biokhimii sel'skokhozyaystvennykh
    zhivotnykh Moskovskoy sel'skokhozyaystvennoy ordena Lenina
    akademii imeni Timiryazeva.

SOLNTSEV, A.M.

728.   FERRO-CONCRETE SECTIONAL SLABS FOR SHAFT LINING.   Solntsev, A.M.
(Nov. 1955, 40-41).   The slabs described are made in
chamfered edges, 1000 mm high, 50 mm thick, and 200 mm
on the inside of the shaft and 204 cm wide on the
The slabs are erected by means of ordinary timber
anchored in the concrete lining of the shaft wall and
smooth facing.   At present the use of ferro-concrete slabs
is more expensive than that of timber lagging, but it is expected that
considerably reduced as soon as production methods have been
rationalised.   Considerable improvements in the speed and quality of shaft
have already been achieved.   (L).   N.C.B.

SOLNTSEV, A.M., inzh.

Rapid sinking of a vertical shaft at the Maganak Mine in the Kuznetsk Basin. Shakht.stroi. 6 no.4:22-25 Ap '62. (MIRA 15:4)
(Kuznetsk Basin--Shaft sinking)

LEONT'EV, . ., kand.tekhn.nauk; KOSAREV, N.F., inzh.; SOLNTSEV, A.A.;
? , V.I.

Rapid shaft sinking at the No.2 "Abashevskaia" coal mine. Shakht.
stroi. 9 no.8:21-24 Ag '65.   (MIRA 18:8)

1. Kemerovskiy gornyy institut (for Leont'yev). 2. Novokuznetskoye
shakhtostroyupravleniye (for Kosarev). 3. Nauchno-issledovatel'skiy
institut stroitel'stva ugol'nykh i gornorudnykh predpriyatiy,
Kemerovo (for Solntsev, Kalabin).

SOLNTSEV, A. M.

A. M. Solntsev, G. P. Mikhaylov, and Ye. I. Bobrov   "Use of Automatic Three-phase Arc Welding in Car Building," Avtogen. Delo, No. 6, 1949.

TROYANOVSKIY, Vasiliy Vasil'yevich; SOLNTSEV, A.M., inzhener, retsenzent;
    SIDOROV, N.V., inzhener, redaktor; POPOVA, S.M., tekhnicheskiy
    redaktor

[Electric clocks] Elektricheskie chasy. Izd. 3-e, perer. i dop.
Moskva, Gos. nauchno-tekhn. izd-vo mashinostroit. lit-ry, 1956.
226 p.   (MIRA 9:8)
        (Clocks, Electric)

SOLNTSEV, A.M.

Use of monolytic rubber half heels for men's fancy footwear.
Kozh.-obuv.prom. 4 no.12:29-30 D '62.   (MIRA 16:1)
(Shoe manufacture)

NEZLIN, M.V.; SOLNTSEV, A.M.

Acceleration of ions in plasma beams. Zhur. eksp. i teor. fiz.
45 no.4:840-849 O '63.   (MIRA 16:11)

L 12147-66   EWT(1)/ETC(F)/EPF(n)-2/EWG(m)   IJP(c)   AT

ACC NR: AP6000188   SOURCE CODE: UR/0056/65/049/005/1377/1388

AUTHOR: Nezlin, M. V.; Solntsev, A. M.

ORG: none

TITLE: On discrete states of a plasma beam and transitions between them

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 49, no. 5, 1965, 1377-1388

TOPIC TAGS: plasma beam interaction, plasma electron temperature, plasma oscillation, plasma velocity, plasma instability

ABSTRACT: This is a continuation of earlier work (ZhETF v. 48, 1237, 1965 and other papers) dealing with the unique instability exhibited under certain conditions by a cold plasma column when broached by a beam of accelerated primary electrons. Whereas the earlier studies were confined to limited ranges of the primary and secondary electron velocities, in the present article the authors studied experimentally the states of the beam for a great variety of primary/secondary density ratios. Another purpose of the investigation was to determine the frequency spectrum of the oscillations produced in the beam during all its states, and the dependence of this spectrum on the form of the beam-electron velocity distribution function. The experimental setup (Fig. 1) was such that the anode could be moved both longitudinally and transversely to determine the electron and ion distribution. The plasma source was described in the earlier paper. Two operating modes were employed, that of the direct arc and of the reflecting arc. The apparatus is described in detail. The magnetic field could

Card 1/2

L 12147-66

ACC NR: AP6000188

Fig. 1. Experimental setup. 1--
discharge cathode, 2--discharge
chamber, 3--insulator, 4--gas
inlet, 5--beam, 6--ring, 7--
vacuum chamber, 8--anode, 9--
virtual cathode, 10--electron-
beam trajectory at instant of
virtual cathode formation, 11--
region of positive potential,
12--accelerated ions.

be varied from 1000 to 5000 oe, and was 1400 oe in most experiments. The gas in most
experiments was argon. The tests showed that the transition from the macroscopically
stable state to the state with virtual cathode is effected in two steps, during which
appreciable changes take place in the plasma-particle energies, oscillation frequen-
cies, and the beam radial dimensions and potential. These instabilities remain of the
same character when the velocity distribution function of the fast electrons becomes
completely disordered. The results are compared with those by others and certain sim-
ilarities noted. Authors thank A. B. Mikhaylovskiy for stimulating discussions and W.
Piffl for taking part in some of the measurements. Orig. art. has: 9 figures and 3
formulas.

SUB CODE: 20/   SUBM DATE: 08Apr65/   ORIG: REF: 009/   OTH REF: 003
Card 2/2

SOLNTSEV, A. M.

SOLNTSEV, A. M.: "Restorative operations in the jaw and face re-
    gion using cartilege from corpses". Kiev, 1955. Odessa State
    Medical Inst. (Dissertations for the Degree of Candidate of
    Medical Sciences)

SO: Knizhnaya letopis', No. 52, 24 December, 1955. Moscow.

SOLNTSEV, A.M.

Prefabricated reinforced concrete forms for the support of
vertical shafts. Ugol' 30 no.11:40-41 N '55.   (MLRA 9:2)

1.Trest Chelyabinskshakhtostroy.
(Shaft sinking) (Chelyabinsk Basin--Mine timbering)

SOLNTSEV, A.M.

Plastic surgery of the helix using a shaping membrane.
Stomatologiia 35 no.4:34-35 Jl-Ag '56   (MLRA 10:4)

1. Iz kafedry chelyustno-litsevoy khirurgii (zav.-prof. M.M
Velikanova) Kiyevskogo instituta usovershenstvovaniya vrachey (dir.-
zasluzhennvy deyatel' nauki prof. I.I. Kal'chenko) i 1-go
Respublikanskogo chelyustno-litsevogo gospitalya dlya invalidov
Otechestvennoy voyny (nachal'nik M.O. Brudnyy)
          (EAR--SURGERY)

SOLNTSKV, A.M.

Subcutaneous emphysema as a complication following tooth extraction. Stomatologiia 35 no.5:55-56 S-O '56   (MLRA 10:4)

1. Iz kafedry chleyustno-litsevoy khirurgii i stomatologii (zav.-prof. M.M. Velikanova) Kiyevskogo instituta usovershenstvovaniya vrachey (dir.-prof. I.I. Kal'chenko)
       (TEETH--EXTRACTION) (EMPHYSEMA)

SOLNTSEV, A.M., kand.med.nauk, YAMPOL'SKAYA, Z.K.

Surgery for lacrimal fistulas. Vrach.delo no.4:425-427 Ap'58
(MIRA 11:6)

1. Kafedra chelyustno-litsevoy khirurgii (zav. - prof. M.M. Velikanova) Kiyevskogo instituta usovershenstvo-vaniya vrachey.
(SALIVARY GLANDS--SURGERY)
(FISTULA)

SOLNTSEV, A.M., kand.med.nauk (Kiyev, ul. Lenina, d.50, kv. 8)

Homoplastic implantations of different kind of cartilage; experi-
mental investigation. Nov.khir.arkh. no.6:58-62 N-D '58.
(MIRA 12:3)

1. Kafedra patologicheskoy anatomii (zav. - zasl. deyatel' nauki
prof. M.K. Dal') Kiyevskogo instituta usovershenstvovaniya vrachey.
(CARTILAGE--TRANSPLANTATION)

SOLNTSEV, A.M., kand.med.nauk

Formation of the auricula on an acrylate framework. Vrach.delo
no.7:737-738 Jl'58   (MIRA 11:9)

1. Kafedra chelyustno-litsevoy khirurgii (zav. - prof. E.A. Aleksandrova)
Kiyevskogo instituta usovershenstvovaniya vrachey.
        (EAR--SURGERY)

SOLNTSEV, A.M.,kand.med.nauk

Possibility of using coatal cartilage from cadavers of children in
plastic operations on the face. Stomatologiia 37 no.2:66 Mr-Ap '58.

(MIRA 11:5)

1. Iz kafedry chelyustno-litsevoy khirurgii (zav.-prof. M.M.
Velikanova) Kiyevskogo instituta usovershenstvovaniya vrachey (dir.-
zasluzhennyy deyatel' nauki I.I. Kal'chenko).
        (FACE--SURGERY) (CARTILAGE--TRANSPLANTATION)

SOLNTSEV, A.M., kand.med.nauk; VOLYNETS, O.I.

Observation of marble disease (osteopetrosis) in the lower extremi-
ties. Vrach.delo   no.11:1199 N '59.   (MIRA 13:4)

1. Kafedra chelyustno-litsevoy khirurgii (zaveduyushchiy - prof.
B.A. Aleksandrova) Kiyevskogo instituta usovershenstvovaniya vrachey,
i gorodskaya klinicheskaya bol'nitsa.
    (EXTREMITIES, LOWER--DISEASES)   (BONES)

SOLNTSEV, A.M., dotsent

Odontogenic thrombosis of the cavernos sinus. Vrach.delo   no.2:
183-185 F '60.   (MIRA 13:6)

1. Kafedra chelyustno-litsevoy khirurgii i stomatologii (zav. -
prof. B.A. Aleksandrova) Kiyevskogo instituta usovershenstvo-
vaniya vrachey. (CAVERNOUS SINUS--DISEASES)

SOLNTSEV, A.M.; VAYSBLAT, I.N.

Medical procedure in the case of unintentional opening of the antrum.
Probl. stom. 5:260-267 '60.   (MIRA 15:2)

1. Kiyevskiy meditsinskiy institut usovershenstvovaniya vrachey.
(ANTHUM-SURGERY)

SOLNTSEV, A.M.

Reduction of the fracture pieces in old fractures of the maxilla.
Probl. stom. 5:303-307 '60.   (MIRA 15:2)

1. Kiyevskiy institut usovershenstvovaniya vrachey.
                    (JAWS--FRACTURE)

SOLNTSEV, A.M. (Kiyev)

Surgical treatment of odontogenic highmoritis. Probl.stom. 6:
223-230 '62.   (MIRA 16:3)
        (MAXILLARY SINUS—DISEASES) (TEETH—DISEASES)

SOLNTSEV, A.M., dotsent

Mandibular necrosis due to circulatory insufficiency. Vrach.
delo no.2:145-146 F '62.   (MIRA 15:3)

1. Kafedra chelyustno-litsevoy khirurgii i stomatologii (zav. -
prof. E.A. Aleksandrova) Kiyevskogo instituta usovershenstvovaniya
vrachey.   (BLOOD--CIRCULATION, DISORDERS OF)
                        (JAW--DISEASES)

SOLNTSEV, A.M., dotsent

Cheloid of the ear lobe. Zhur. ush., nos. i gorl.bol. 22 no.1:
85-86 Ja-F '62.   (MIRA 15:5)

1. Iz kafedry chelyustno-litsevoy khirurgii i stomatologii (zav. -
prof. E.A.Aleksandrov) Kiyevskogo instituta usovershenstvovaniya
vrachey.   (EAR--TUMORS)

SOLNTSEV, A.M., dotsent

Some characteristics of odontogenic highmoritis. Zhur.ush., nos.1
gorl.bol. 22 no.2:11-15 Mr-Ap '62.   (MIRA 15:11)

1. Iz kafedry chelyustno-litsevoy khirurgii (zav. - prof. E.A.
Aleksandrova) Kiyevskogo instituta usovershenstvovaniya vrachey.
          (MAXILLARY SINUS—DISEASES) (TEETH—DISEASES)

SOLNTSEV, A.M., inzh.

Sudden rock caving during the sinking of a mine shaft. Bezop.truda v prom. 7 no.1:9-11 Ja '63. (MIRA 16:2)
        (Shaft sinking)   (Mine accidents)

SOLNTSEV, A.M., inzh.; USENKO, A.S., inzh.

Rapid vertical shaft sinking in the Kuznetsk Basin. Shakht.stroi.
7 no.5:17-19 My '63.   (MIRA 17:4)

1. KuzNIIshakhtostroy (for Solntsev). 2. Stroitel'noye
shakhtoprokhodcheskoye upravleniye No.1 tresta Prokop'yevskshakhtostroy
(for Usenko).

SOLNTSEV, A.N., inzh.

Shaft sinking with the use of advance boreholes. Shakht. stroi. 8
no.8:23-25 Ag '64.   (MIRA 17:9)

1. Nauchno-issledovatel'skiy institut stroitel'stva ugol'nykh i
gornorudnykh predpriyatiy.

KOLTSEV, Aleksey Mikhaylovich; SEMENCHENKO, G.I.(Semenchenko, H.I.),
red.

[Use of preserved cartilage in plastic facial surgery] Za-
stosuvannia konservovanoho khriashcha pry plastychnykh ope-
ratsiiakh na oblychchi. Kyiv, Zdorov'ia, 1964. 131 p.
                                        (MIRA 18:2)

KOLESOV, A.M., dotsent (Kiyev)

Conductor anesthesia in surgery on the maxilla in young children.
Probl. chel.-lits. khir. no.1:26-29 '65.

Pathological anatomy of osteomyelitis of the maxilla in newborn
infants and young children. Ibid.:157-168

(MIRA 18:10)

L 2341-66   EWT(1)/ETC/EPF(n)-2/EPA(w)-2/EWG(m)   IJP(c) AT
ACCESSION NR: AT5022111   UR/3136/65/000/855/0001/0015

AUTHORS: Nezlin, M. V.; Solntsev, A. M.

TITLE: On the discrete states of a plasma beam and transitions between them

SOURCE: Moscow. Institut atomnoy energii. /Doklady/, IAE-855, 1965. O diskretnykh sostoyaniyakh plazmennogo puchka i perekhodakh mezhdu nimi, 1-15

TOPIC TAGS: plasma magnetic field interaction, plasma beam instability, plasma concentration, plasma instability, plasma research

ABSTRACT: The present investigation is an extension of the work on plasma beam instability by the senior author (ZhETF, 46, 36, 1964). The behavior of a plasma beam permeated by a flux of primary electrons at conditions $\alpha \simeq \alpha_\kappa$ was investigated. Here $\alpha = \dfrac{n_2}{n_1}$ and $\alpha_\kappa = \dfrac{4 v_1}{v_2}$ where n_1, v_1, n_2, v_2 are the density and velocity of primary and secondary electrons respectively. The effect of the primary electron velocity distribution on the plasma stability was also investigated. The experimental methods used were described previously (see above reference). The experimental results for the radial ion current density and the volt-ampere characteristics of plasma beams at different conditions are shown
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L 2341-66
ACCESSION NR: AT5022111   6

graphically (see Fig. 1 on the Enclosure). It is concluded that the plasma is
characterized by three different states: State I - $Q > Q_2$, II - $Q_1 > Q > Q_2$, III -
$Q < Q_1$ where Q is the amount of argon used in the plasma source. It was found that
changing the primary electron velocity distribution even to the point when the
latter become completely random had no effect on the stability of the plasma beam.
The authors thank A. B. Mikhaylovskiy for stimulating discussions. Orig. art. has:
5 graphs and 2 equations.   44, 55

ASSOCIATION: Institut atomnoy energii im. I. V. Kurchatova (Institute for Atomic
Energy)

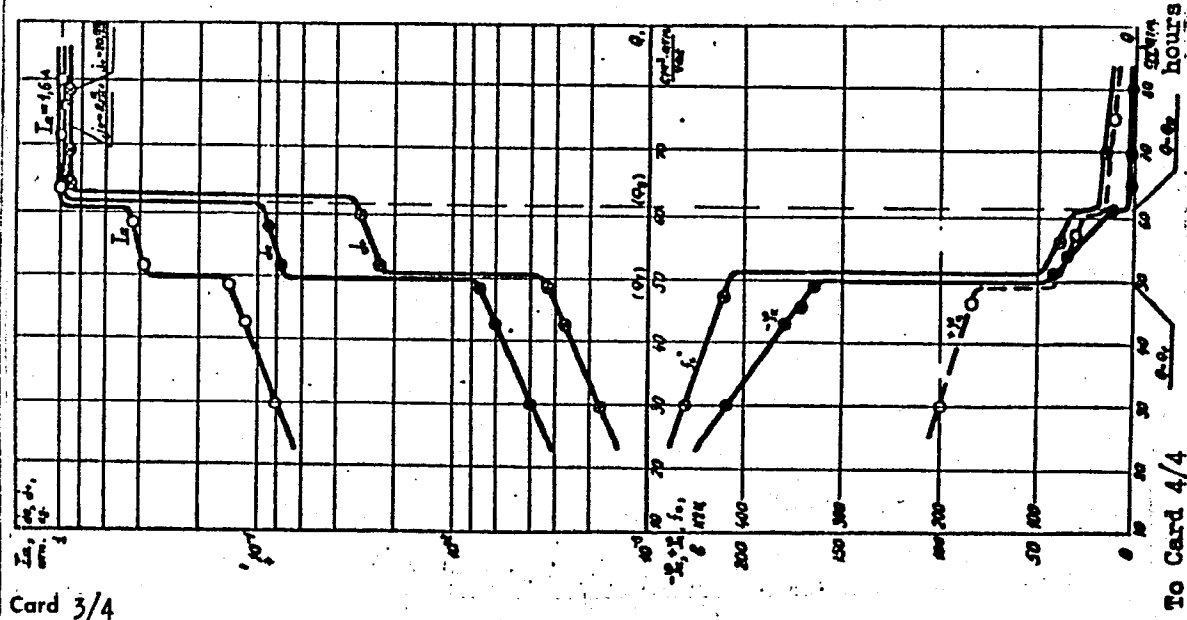SUBMITTED: 00   /   ENCL: 02   SUB CODE: NP

NO REF SOV: 009   OTHER: 001

Card 2/4

L 2341-66
ACCESSION NR: AT5022111   ENCLOSURE: 01

Card 3/4

L 2341-66
ACCESSION NR: AT5022111   ENCLOSURE: 02

From Card 3/4

Dependence of total anode electron current Ie, electron density Je, ion density J+, the floating potential of the ring electrode ϕ_k, the beam potential in the median plane of the installation ϕ, and fo the first harmonic in the linear vibrational spectral region, on the amount of argon used in the plasma source (Q). Vp discharge potential = 200 v, discharge current Ip = Ia, H the magnetic field strength = 1400 oerst. P = (0.5 - 1) x 10^-5 mm Hg, L length of beam 150 cm

Card 4/4

ACC NR: AT6001615   SOURCE CODE: UR/3136/65/000/932/0001/0029

AUTHOR: Nezlin, M. V.; Sapozhnikov, G. I.; Solntsev, A. M.

ORG: none

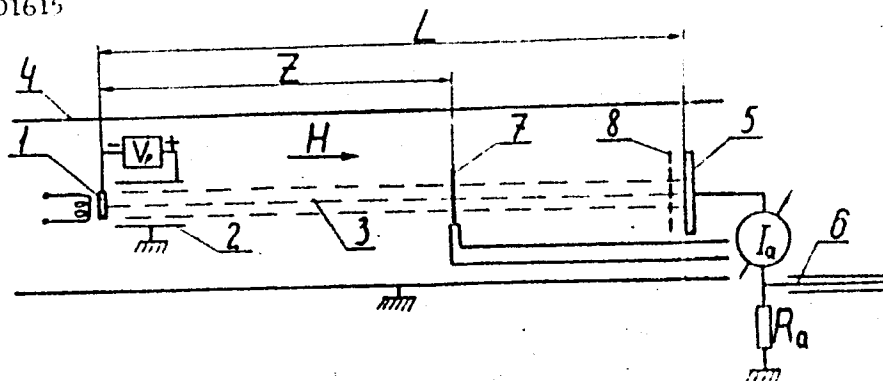TITLE: Long-wave electron oscillations in a beam-plasma system

SOURCE: Moscow. Institut atomnoy energii. Doklady, IAE-932, 1965.
Dlinnovolnovyye elektronnyye kolebaniya v sisteme puchok-plazma, 1-29

TOPIC TAGS: electron oscillation, plasma, electron beam

ABSTRACT: As previous experimental investigations (e.g., C. C. Cutler, Proc. IRE,
44, 61, 1956) of r-f oscillations in electron beams
propagating in vacuum were desultory, the present
experiments have been conducted to obtain a
systematic picture of the oscillations spectrum,
nature, and excitation mechanism. A beam of
electrons 3 emitted by W heater-type cathode 1
(see figure) was accelerated by electrode 2 to a
few hundred ev and traveled along a strong

Card 1/3

Experimental outfit

ACC NR: AT6001615

magnetic field, in an equipotential space, along the axis of metal-wall cylinder 4. A movable anode 5 permitted adjusting the beam length within $16-150$ cm; other components: 6 - measurement cable, 7 - needle probe, 8 - grid, R_q- measurement resistance; hydrogen pressure, $10^{-6}-10^{-4}$ torr; magnetic field, $1000-5000$ oe. Spectra of electron-current oscillations at the anode and at the probe were measured. A plasma was formed as a result of gas ionization by the beam, the plasma density being commensurate with that of the beam. The spectrum of these non-Langmuirian oscillations consists of a number of harmonics whose wavelengths obey the formula: $\lambda_n = 2 L/n$ (where n is the number of the harmonic and L is the beam length) and whose frequencies ω_n are determined by the beam-electron velocity V in this way: $\omega_n \approx K_n V$, where $K_n = 2\pi/\lambda_n$. The experiments corroborate the theory of longitudinal electron oscillations in a homogeneous beam-plasma system having limited longitudinal and transverse dimensions. Orig. art. has: 11 figures and 20 formulas.

SUB CODE: 20 / SUBM DATE: none / ORIG REF: 008 / OTH REF: 009

Card 3/3

L 58445-65   EWT(1)/EPF(n)-2/EWG(m)/EPA(w)-2   Pz-6/Po-4/Pab-10/Pi-4   IJP(c)
WW/AT
ACCESSION NR: AP5015881   UR/0056/65/048/005/1237/1247

AUTHOR: Nezlin, M. V.; Solntsev, A. M.

TITLE: Unstable plasma beam

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 48, no. 5, 1965,
1237-1247

TOPIC TAGS: plasma instability, plasma turbulence, plasma spectrum, plasma parti-
cle acceleration

ABSTRACT: This is a continuation of a systematic study of the properties of an un-
stable plasma beam, started by the authors earlier (ZhETF v. 45, 840, 1963 and else-
where). The purpose of the work was to determine the conditions under which the
plasma beam becomes unstable, as a function of such parameters as the energy of the
fast electrons and the mass of the ions, and to study the electric fields and the
character of motion of the charged particles in a plasma with fast ions, produced
by an unstable plasma beam in a trap with magnetic mirrors. All the experiments
were carried out with the apparatus described in the earlier paper, in magnetic
fields ranging from 1000 to 5000 Oe. The experiments were carried out in two dis-

Card 1/2

L 58445-65
ACCESSION NR: AP5013881

charge modes, continuous and pulsed. The results show that the plasma turbulent
state is characterized by: a) a broad electric-field oscillation spectrum, which
includes the ion Larmor frequency and which makes it possible to carry out multiple
(stochastic) acceleration of the ions to kilovolt energies, b) the formation of a
strongly eccentric plasma torch rotating on the "ion" side with a frequency of
several times 10 kcs, and c) acceleration of the ions not only in the transverse
but also in the longitudinal direction. The conditions for the transition of the
beam to a stable state in which particle acceleration does not occur are considered.
The results are compared with data by others. "The authors thank M. S. Ioffe and
Ya. B. Faynberg for useful discussions, and Ye. K. Yeroshchenkov for participating
in some of the experiments." Orig. art. has: 9 figures and 4 formulas.

ASSOCIATION: None

SUBMITTED: 18Dec64   ENCL: 00   SUB CODE: ME

NR REF SOV: 011   OTHER: 003

Card 2/2

NEZLIN, M.V.; SOLNTSEV, A.M.

Discrete states of a plasma beam and the transitions between
them. Zhur.eksp. i teor.fiz. 49 no.5:1377-1388 N '65.
(MIRA 19:1)

L 23573-DE

ACC NR: AP6005385 (A)   SOURCE CODE: UR/0413/66/000/001/0131/0131

INVENTOR: Piskorskiy, G. A.; Polishchuk, V. N.; Solntsev, A. M.

ORG: none

TITLE: Vibratory vacuum type conveyor for air-tight flat parts. Class 49, No. 177751

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 1, 1966, 131

TOPIC TAGS: conveyor, vacuum type conveyor, vibratory conveyor

ABSTRACT: An Author Certificate has been issued for a vibratory vacuum-type conveyor for airtight parts. To ensure piece-by-piece delivery of flat airtight parts, the middle part of the vibratory chute is made with holes, and under it there is a receptable connected with all the holes by hoses, a dust collector and a pulsatory vibrating contactor with a vacuum pump to provide the pulsatory action of the suckers (see Fig. 1). Orig. art. has: 1 figure.   [LD]

Card 1/2   UDC: 621.867-26

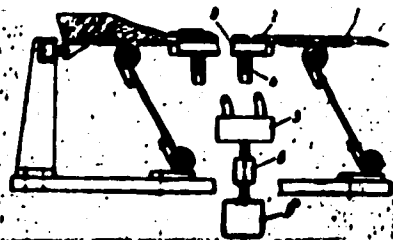L 29378-66

ACC NR: AP6005385

Fig. 1.   Vibratory vacuum conveyor for flat air-
tight parts

1 - vibratory chute; 2 - holes; 3 - receptacle;
4 - hoses; 5 - dust collector; 6 - pulsatory
vibratory contactor; 7 - vacuum pump.

SUB CODE: 13/ . SUBM DATE: 07May63

Card 2/2

L 16581-66 EWT(1)/ETC(f)/EPF(n)-2/EWG(m)   IJP(c)   AT

ACC NR: AP6007215   SOURCE CODE: UR/0056/66/050/002/0349/0363

AUTHOR: Nezlin, M. V.; Sapozhnikov, G. I.; Solntsev, A. M.

ORG: none

TITLE: Long wave electron oscillations in a beam-plasma system

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 50, no. 2, 1966, 349-363

TOPIC TAGS: electron oscillation, electron beam, plasma beam, plasma beam interaction, longitudinal magnetic field, gas ionization, gas pressure, excitation spectrum

ABSTRACT: Long wave electron oscillations excited by an electron beam in a rarefied plasma in the presence of a strong longitudinal magnetic field are investigated experimentally. The plasma is produced as a result of ionization of the gas by the beam. The gas pressure $\sim 10^{-5}$ mm Hg and the plasma density is comparable with that of the beam. The oscillations observed are not Langmuir oscillations. Their spectrum consists of a number of harmonics, the wavelengths of which (λ_n) obey the relation $\lambda_n = 2L/\lambda_n$ (n is the harmonic number and L is

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L 16581-66
ACC NR: AP6007215   2

the beam length). The frequencies ω_n are defined by the velocity of the beam
electrons (ν) and the wavelength: $\omega_n \sim k_n \nu$ where $k_n = 2\pi/2_n$. It is shown that
the excitation conditions of the oscillations and their spectral characteristics
are in good agreement with the theory of longitudinal electron oscillations in
an homogeneous beam-plasma system with restricted longitudinal and transverse
demensions. The authors take the opportunity to express their appreciation to
Ya. B. Faynberg for his interest in this work and for his useful comments, and
A. Ye. Bazhanova for providing the roots of dispersion equations with the aid
of a computer. Orig. art. has: 11 figures and 6 formulas. [Based on author's
abstract]

SUB CODE: 20/   SUBM DATE: 27Aug65/ ORIG REF: 008/ OTH REF: 010/

Card 2/2

ACC NR: AP7004568   SOURCE CODE: UR/0056/65/049/005/1377/1388

AUTHOR: Nezlin, M. V.; Solntsev, A. M.
ORG: none
TITLE: Discrete states of a plasma beam and the transitions between them
SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 49, no. 5, 1965, 1377-1388
TOPIC TAGS: plasma beam, electron beam, fast electron

ABSTRACT: It was shown by the authors in earlier articles that a plasma beam consisting of a cold plasma column and a fast electron stream which permeates this column undergoes a transition from a macroscopically steady state to a virtual cathode state when there is a decrease in the ratio of the densities of these components. The purpose of the experiments described in the present article was to investigate the question of the state of the plasma beam in the region of intermediate values of α, as well as to investigate the frequency spectrum of the oscillations occurring in the beam in all its states and the question of the relationship between this spectrum and the form of the velocity distribution function of the beam electrons. Argon and hydrogen were used as the working gases in the experiments. An orificed electrode and three Langmuir probes were used to measure the frequency spectrum of the oscillations.

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ACC NR: AP7004568

The article shows that the transition occurs as the result of two
jumps between three discrete states, during which there is a sig-
nificant increase in the energies of the plasma particles and the
radial dimensions of the beam and its potential. The oscillation
spectrum is shown to consist of a line section and a continuous
section, with an increase in oscillation frequencies during the
transition jumps. It is found that there is no significant change
in the oscillation spectrum in any of the three discrete plasma
beam states, even if the fast electron velocity distribution func-
tion becomes disordered. This result is of interest in connection
with the question as to whether and to what extent the plasma beam
instability here under consideration is associated with the "ordin-
ary" beam instability which occurs in the presence of "order" in
electron motion in a velocity space. A definite answer to this
question requires an investigation of high-frequency electronic
("Langmuir") oscillations in all three plasma beam states, and
such an investigation is under way at the present time by the authors.
The authors express their appreciation to A. B. MIKHAYLOVSKIY for
"stimulating discussions" and to V. PIFFL for having taken part
in some of the measurements./ Orig. art. has: 9 figures and 3 formulas.
/JPRS: 34,657/

SUB CODE: 20 / SUBM DATE: 21Jul65 / ORIG REF: 009 / OTH REF: 003

Card 2/2

BURENKOVA, N.I., inzhener; SOLNTSEV, A.V., inzhener.

New dredging pump. Mekh.stroi. 14 no.3:38 Mr '57.

(MIRA 10:4)

(Dredging machinery)

SOLNTSEV, A. V., Cand Geol-Min Sci -- (diss) "Subterranean
waters of the eastern part of Akmolinskaya Oblast." Alma-Ata,
1958. 15 pp (Acad Sci Kazakh SSR, Inst of Geol Sci), 107 copies
(KL, 35-58, 106)

SOLNTSEV, A.V.

Ground water in the alluvial deposits of Akmolinsk District and
prospects for its utilization in water supply. Vest. AN Kazakh.
SSR 14 no.1:62-70 Ja '58.   (MIRA 11:2)
        (Akmolinsk District--Water, Underground)

SOLNTSEV, A.V.

Method of determining water inflows in mining. Trudy Alt.GMNII
AN Kazakh.SSR 12:152-156 '62.   (MIRA 15:8)
                              (Mine water)

SOLNTSEV, A.V.

Formation of the chemical composition of underground waters
in the TSelinograd region. Trudy Inst. geol. nauk AN Kazakh.
SSR no.14:194-202 '65.   (MIRA 19:1)

06540

SOV/142-2-2-16/25

9(2,3)
AUTHORS: Vorob'yev, A.A., Solntsev, B.A., and Titov, V.N.

TITLE: The Application of an Electrode Electric Field for
              Electron Acceleration in a Synchrotron

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Radiotekhnika,
              1959, Vol 2, Nr 2, pp 246-247 (USSR)

ABSTRACT: Coaxial cavity resonators found the most wide-spread
              application as electron accelerators in electron syn-
              chrotrons with annular electromagnets. They were
              first used by F.K. Goward and D.E. Barnes in 1946.
              Resonators of this type occupy a part of the pole gap
              of the electromagnet. Therefore, the outer conductor
              cannot have sufficiently large dimensions compared to
              the inner one. Further, bending of the resonator can-
              not be avoided. These conditions reduce the resonance
              to a considerable degree. The introduction of high-
              quality dielectrics into the resonator cavity /Ref 1,
              2, 3/ does not produce a considerable increase of the
              parallel resistance. In 1948, at the Tomskiy poli-
              tekhnicheskiy institut imeni S.M. Kirova (Tomsk Poly-

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06540

SOV/142-2-2-16/25

The Application of an Electrode Electric Field for Electron Ac-
celeration in a Synchrotron

technic Institute imeni S.M. Kirov) the suggestion was
made to use for electron acceleration the electric
field created in a gap between conductive coatings
inside the chamber, as shown by figure 1. With a
sufficient thickness of the conductive layer, the
configuration of the electric field will not be dif-
ferent from the shape of the field created in the ac-
celerating gap of a coaxial resonator. In 1955, a
20 mev synchrotron was built at the Tomsk Polytechnic
Institute with the application of the aforementioned
electrodes. For feeding high frequency power to the
accelerating gap two metal rings were used which were
placed on the accelerating chamber, as shown by fig-
ure 2. The capacitance component of the input impedan-
ce of the device was compensated by a parallel-connect-
ed inductance, as shown by the equivalent circuit in
figure 3. The aforementioned device occupies little
space in the pole gap of the accelerating electromag-
net and provides optimum operating conditions. The

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SOV/142-2-2-16/25

The Application of an Electrode Electric Field for Electron Ac-
celeration in a Synchrotron

parallel resistance of the accelerating gap may be
higher than with coaxial resonators. Frequency ad-
justments may be easily made. Special matching and
balancing systems for the coupling with the HF gener-
ator are not required. The manufacture of such an
accelerating device is considerably simpler than that
of other accelerators. Figure 4 shows a general view
of the accelerating device in the chamber. The elec-
tromagnet of the 15 mev betatron of the Tomsk Poly-
technic Institute provided the magnetic field. The
accelerating device was excited by a push-pull genera-
tor, composed of metal-ceramic tubes GI-12B, produc-
ing approximately 20 watts at a frequency of 350 mc.
With such a power, 150 volts were obtained at the
accelerating gap. The basic characteristics of the
synchrotron with this accelerating device were the
same as those obtained with a coaxial resonator. The
gamma radiation had an intensity of 2 roentgen at 1 m

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SOV/142-2-2-16/25

The Application of an Electrode Electric Field for Electron Ac-
celeration in a Synchrotron

      distance from the target. There are 2 diagrams, 1
      photograph, 1 circuit diagram and 3 references, 1 of
      which is Soviet and 2 English.
      This article was recommended by the
      Nauchno-issledovatel'skiy institut yadernykh issledo-
      vaniy, elektroniki i avtomatiki pri Tomskom politekh-
      nicheskom institute imeni S.M. Kirova (Scientific Re-
      search Institute for Nuclear Research, Electronics
      and Automation at the Tomsk Polytechnic Institute
      imeni S.M. Kirov).

SUBMITTED: July 11, 1958

Card 4/4

ACC NR: AP6013528

SOURCE CODE: UR/0120/66/000/002/0212/0214

AUTHOR: Butakov, L. D.; Solntsev, B. A.

ORG: Scientific Research Institute of Nuclear Physics, Electronics, and Automation, TPI, Tomsk (Nauchno-issledovatelskiy institut yadernoy fiziki, elektroniki i avtomatiki pri TPI)

TITLE: Pulse generator of 100-kw and 40 μsec

SOURCE: Pribory i tekhnika eksperimenta, no. 2, 1966, 212-214

TOPIC TAGS: pulse generator, thyratron, PULSE SHAPER

ABSTRACT: A diagram is given in the original article of a square pulse generator of 100 kw and 40 μsec. Pulses are shaped by the partial discharge of a capacitive accumulator through the thyratron. The front pulse and the clipped pulse are 0.3 and 3 μsec, respectively. The layout provides for increased efficiency of the thyratron quenching circuit. Orig. art. has: 4 figures. [NT]

SUB CODE: 14/ SUBM DATE: 07Apr65/ ORIG REF: 002/ OTH REF: 001/

Card 1/1 ULR   UDC: 621.317.765.4

ACC NR: AT7003996   SOURCE CODE: UR/0000/66/000/000/0098/0104

AUTHOR: Butakov, L. D.; Lashuk, N. A.; Solntsev, B. A.; Tolmachev, V. I.

ORG: Scientific Research Institute of Nuclear Physics, Electronics, and Automation, Tomsk Polytechnic Institute (Nauchno-issledovatel'skiy institut yadernoy fiziki, elektroniki i avtomatiki pri TPI)

TITLE: High-frequency system for operating an electron synchrotron as a proton-synchrotron

SOURCE: Mezhvuzovskaya konferentsiya po elektronnym uskoritelyam. 5th, Tomsk, 1964. Elektronnyye uskoriteli (Electron accelerators); trudy konferentsii. Moscow, Atomizdat, 1966, 98-104

TOPIC TAGS: synchrotron, proton, ~~synchrotron~~ electron

ABSTRACT: Wide passband and high voltages do not permit using conventional proton-synchrotron-tape aperiodic accelerating systems. Nor can drift tubes or accelerating transformers be used. Hence, two variants of a special accelerator are proposed: (1) Two closely coupled and shunted toroidal resonators (see Fig. 1) and (2) A system of ring electrodes (see Fig. 2). The entire frequency deviation is 9 Mc, and the frequency by the end of the cycle is 36 Mc. The hf channel is divided into two subchannels: a 1.2-Mc one covering most of the cycle and a wide-band one covering the initial part of the cycle. In the ring-electrode design, all long lines are supplied
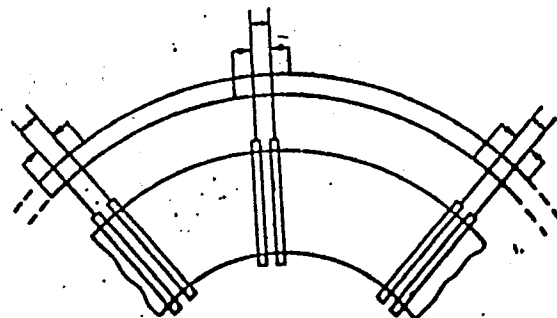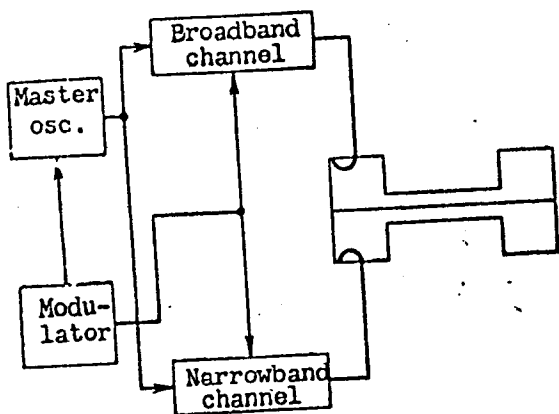
Card 1/2

ACC NR: AT7003996

Fig. 1. Two-coupled resonator hf system

Fig. 2. Ring-electrode hf system

by a common feeder system. Some details of the electronic equipment are given. Orig. art. has: 8 figures and 6 formulas.

SUB CODE: 09, 20 / SUBM DATE: 06Mar66

Card 2/2

ACC NR: AT7003997   SOURCE CODE: UR/0000/66/000/000/0105/0111

AUTHOR: Lashuk, N. A.; Solntsev, B. A.

ORG: none

TITLE: Transients in a pulsed hf system

SOURCE: Mezhvuzovskaya konferentsiya po elektronnym uskoritelyam. 5th,
Tomsk, 1964. Elektronnyye uskoriteli (Electron accelerators); trudy konferentsii.
Moscow, Atomizdat, 1966, 105-111

TOPIC TAGS: cyclic accelerator, transient phenomenon, high frequency, resonator

ABSTRACT: The transient time of an accelerating voltage largely depends on the
parameters of the accelerator resonator because the latter's Q-factor is
considerably higher than that of the oscillator circuits. Principal and equivalent
circuits of excitation of the resonator conventionally used in the vhf band are

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ACC NR: AT7003997

shown. Solution of a differential equation that describes the equivalent circuit
yields formulas for the output voltage t··· ·····t (settling) time. The transients in
amplifier stages can be reduced by pr·   ·· modulation in the output stage.
Also, a formula describing the phase variation of oscillations under transient
conditions is derived. The effect of other circuits on transients is allowed for by
introducing an exponential exciting emf. Under resonance conditions, only
amplitude transients occur in the oscillatory system; both frequency and phase of
forced oscillations are established instantaneously. Orig. art. has: 5 figures and
20 formulas.

SUB CODE: 09, 20 / SUBM DATE: 06Mar66

Card 2/2

ACC NR: AT7004003   SOURCE CODE: UR/0000/66/000/000/0249/0253

AUTHOR: Butakov, L. D.; Lashuk, N. A.; Solntsev, B. A.
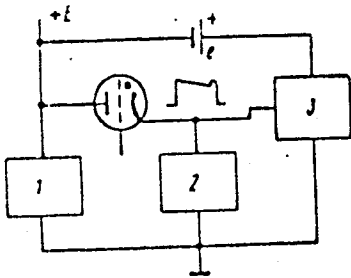
ORG: none

TITLE: Shaping the long steep-front pulses

SOURCE: Mezhvuzovskaya konferentsiya po elektronnym uskoritelyam. 5th, Tomsk,
1964. Elektronnyye uskoriteli (Electron accelerators); trudy konferentsii. Moscow,
Atomizdat, 1966, 249-253

TOPIC TAGS: pulse shaper, pulse shape, particle acceleration

ABSTRACT: A method is described of shaping high-power steep-front long pulses
intended for anode modulation of a hf oscillator (e.g., in a synchrotron accelerator).
Millisecond pulses are shaped by discharging a storage into a load via a hydrogen
thyratron (G. W. Wheeler, Rev. Sc. Instr., v. 32, no. 10, 1961). To ensure short
time and high efficiency, it is suggested that storage 1 (see figure) be discharged via
a thyratron directly into grounded load 2. In this case, the thyratron is to be
quenched by a pulse supplied by auxiliary oscillator 3. The expected pulse-rise time
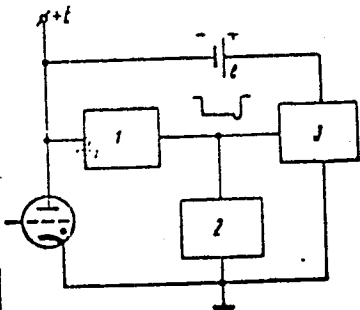
Card 1/2

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is 20—100 nsec; efficiency, near 100%. The quenching-pulse duration must be 50—500 µsec. Principal connection diagrams of such (100-kw) pulse shapers are supplied, as are four oscillograms of the pulses. Orig. art. has: 7 figures and 1 table.

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Card 2/2

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