VLADIMIRSKIY, T.A., doktor tekhn.nauk; SHVYLPOV, A.K., inch.; SELIVANOV,
K.V., inzh.; MEL'NIKOV, O.Ye., tekhnik

Using gas welding under pressure for rolling stock repairs. Zhel.
dor.transp. 42 no.6:58-62 Je '60.   (MIRA 13:7)
(Gas welding and cutting)
(Railroads--Maintenance and repair)

VLADIMIRSKIY, T.A'., doktor tekhn.nauk; SELIVANOV, K.V., inzh.;
    MEL'NIKOV, O.Ye., tekhnik; KOLESNIKOV, L.A., tekhnik

    Gas-pressure welding of railroad train parts with acetylene
    substitute gases. Svar. proizv. no.12:28-31 D '61.
                                        (MIRA 14:12)
    1. Vsesoyuznyy nauchno-issledovatel'skiy institut zheleznodorzhnogo
    transporta Ministerstva putey soobshcheniya.
                    (Gas welding and cutting--Equipment and supplies)
                    (Locomotives--Maintenance and repair)

SELIVANOV, L.

Watch schedule and number of crew members on ships of the
dredger fleet. Mor.flot 22 no.12:22 D '62.   (MIRA 15:12)

1. Starshiy inzh. TSentral'nogo proyektno-konstruktorskogo byuro
No. 8.
                    (Merchant marine—Watch duty)

BELOUSOVA, I.M.; SELIVANOV, L.M.

Accounting for the change in the physical properties of components
in the calculation of a multicomponent mixture rectification.
Khim. prom. 40 no.10:782-784 O '64.   (MIRA 18:3)

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

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

SELIVANOV, L.M.(Moskva)

Equation for mathematical machine computation of the number of actual
plates in distillation columns. Izv. AN SSSR.Otd.tekh.nauk. Met. i
topl. no.5:227-232 S-O '62.   (MIRA 15:10)
                        (Distiliation apparatus)

KREYNINA, G.S.; SELIVANOV, L.N.; SHUMSKAYA, T.I.

Emission and conductance and a condenser-type cathode. Radiotekh.
i elektron. 5 no.8:1338-1341 Ag '60.   (MIRA 13:8)
                    (Cathodes)

SELIVANOV, L. S. and VINOGRADOV, A. P. and DANILOVA, V. V.

"Fluorine content in the Rivers of the Union (in connection with the occurence of mottled enamel disease)   Dokl. Ak. Nauk SSSR, 14, pp. 361-4, 1937.

The F content of various portions of ten large rivers in the Soviet Union does not exceed 0.2 p. p. m. A higher F content was found in waters located in the regions of the Khibiny apatite deposits.

Composition of the mud of Karabugaz gulf. L. S. Schvanov. (Compt. rend. acad. sci. U. R. S. S. 16, 155 R(?) (1937).) The thin mud suspended in the brine of the gulf showed $MgCO_3$ 51.12, $CaCO_3$ 18.68, $CaSO_4$ 7.52, Fe_2O_3 5.82, insol. 14.86(?). The reason for this large preponderance of Mg over Ca is not clear.   G. W. W.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION
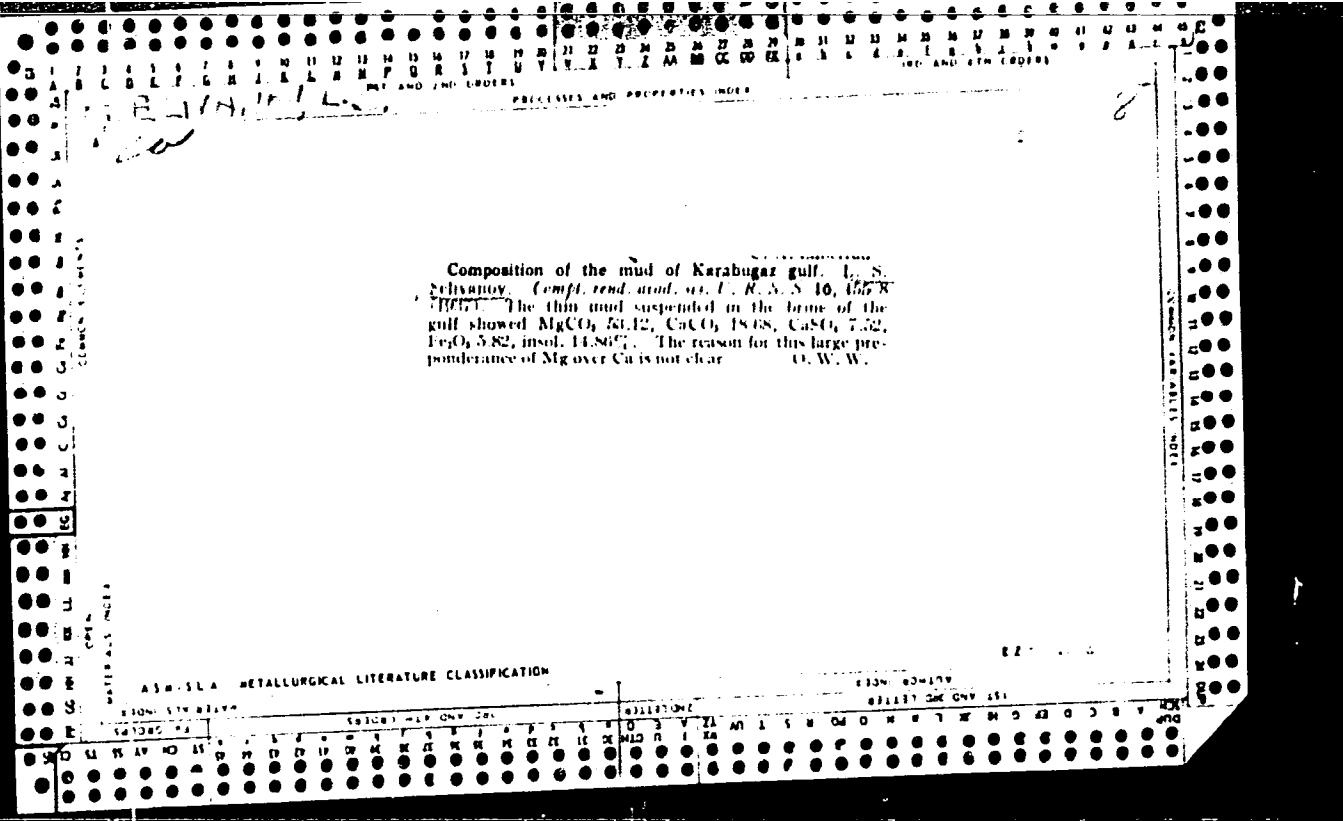
Seli·ranov, L. S.

Three meteoritic falls in the U.S.S.R. (A) L. S.
Seli·ranov. (B) D. P. Maliuga. (C) E. L. Krinov (Nature,
1938, 142, 623, 623, 624. (A) The stony meteorites of (A)
Kainsaz, (B) Kaptal-Aryk, and (C) Lavrentievka are described.
All three can be referred to the chondrites.
                                        L.S.T.

II D

CA

The geo- and biochemistry of scattered bromine. I. Bromine in plants and fresh water. L. S. Selivanov. *Trav. lab. biogéochim. acad. sci. U.R.S.S. 5*, 113 in French, 121 1939.— Twelve species of land plants from various regions of the U.S.S.R. contained 0.0001–0.0002% Br, and 11 species of fresh-water plants 0.0005–0.0483% Br. The amt. varies according to locality. Thus *Elodea canadensis* Rich. collected in 5 different localities (3 closely situated) contained 3.9 × 10⁻⁴ – 2.5 × 10⁻³% per dry wt. Water from 11 rivers contained 6.8 × 10⁻⁶ – 8.15 × 10⁻⁴% Br, while water from peat bogs, springs and wells contained 2.2 × 10⁻⁴ – 1.6 × 10⁻³%. The Cl/Br ratio in land plants is 400:1, in fresh-water plants 47.4:1 – 8010:1. In rivers the Cl/Br ratio is 314:1 (sea water, 7800:27 0.021), the Cl/Br ratio is 314:1 (sea water, 292:1). II. Bromine in soils, silts and peats. *Ibid.* 123 41 in French, 141 31.— For detn. of Br, 25-35 g. of the dry plant material was moistened with an alk. soln., ashed in an iron crucible and repeatedly extd. with hot water; the eluates were filtered, evapd., dried and calcined. The residue was dissolved in 10-15 cc. water, on cooling neutralized with concd. H₂SO₄, and the soln. placed in an oxidizing flask with 1 g. of K₂Cr₂O₇. By passing an air current through the soln. BrO₃ was freed and collected in a receptacle with 0.5% KI soln. and starch and titrated with 0.05–0.001 N hyposulfite soln. Av. error 7%. Min. amt. detectable 5%. For detn. of Br in fresh water it was alkalized and evapd. to 20–30 cc.; it was then worked up like the plant material. Soils, silts and peats were calcined with alkali at 480-520° and the residue was washed with hot water, from which SiO₂ was removed by partial neutralization with H₂SO₄. In 18 soil samples 0.8 × 10⁻⁴ – 2.52 × 10⁻⁴% Br was found. Nine samples of fresh-water silt contained 1.5 × 10⁻⁴ – 2.9 × 10⁻⁴% per dry wt. and 13 samples of peat contained 1.27 × 10⁻⁴ – 7.17 × 10⁻⁴% Br. The av. Cl content of fresh-water plants was 1.32% per dry wt. The relation of halides in air and pptn. water to that in soil and peat is: Air, $n \times 10^{-8}$%Cl and $n \times 10^{-9}$%Br undetd.; pptn. water, $n \times 10^{-4}$%Cl, $n \times 10^{-5}$%Br and $n \times 10^{-6}$%I; soils, $n \times 10^{-3}$%Cl, $n \times 10^{-4}$%Br and $n \times 10^{-5}$%I; plants, $n \times 10^{-1}$%Cl, $n \times 10^{-2}$%Br. III. Bromine in terrestrial plants. *Ibid.* 145 in French, 148 9.— Detns. of Br in soils and plants in the Northern Black Sea region and in Dagestan, Asia, show that the av. Br content of plants grown on rich soil in temperate zones is 10 times less than in those grown on poor soil in arid zones (1.65 × 10⁻² and 6 × 10⁻³%Br, resp. per dry wt.).

P. Lanies

ASM TLA   METALLURGICAL LITERATURE CLASSIFICATION

The composition of the Klyas'ma river slimes and slime water. L. S. Selivanov and E. P. Volovikovskaya. *Zapiski Bolshevskoi Biol. Stantsii* 1939, No. 11, 57-07; *Khim. Referat. Zhur.* 1940, No. 7, 19.—Twenty-nine specimens of slimes were investigated for their ash content and the content of residue insol. in 10% HCl. The content of ash varied from 71.1 to 90.2 (based on the dry substance) and that of the insol. residue from 63.9 to 98.0%. The content of the insol. residue paralleled that of ash. The content of organisms at the bottom varied between 0.33 and 16.7 g./sq. m. It was proportional neither to the content of ash nor to that of the insol. residue. Eight of these specimens were examd. in greater detail. The results of analyses for the HCl exts., for natural moisture and of the contents of C, N and H₂S are given. The amt. of slime sols. obtained by pressing out these slimes was 70-80% of the total content of water.

W. R. Heun
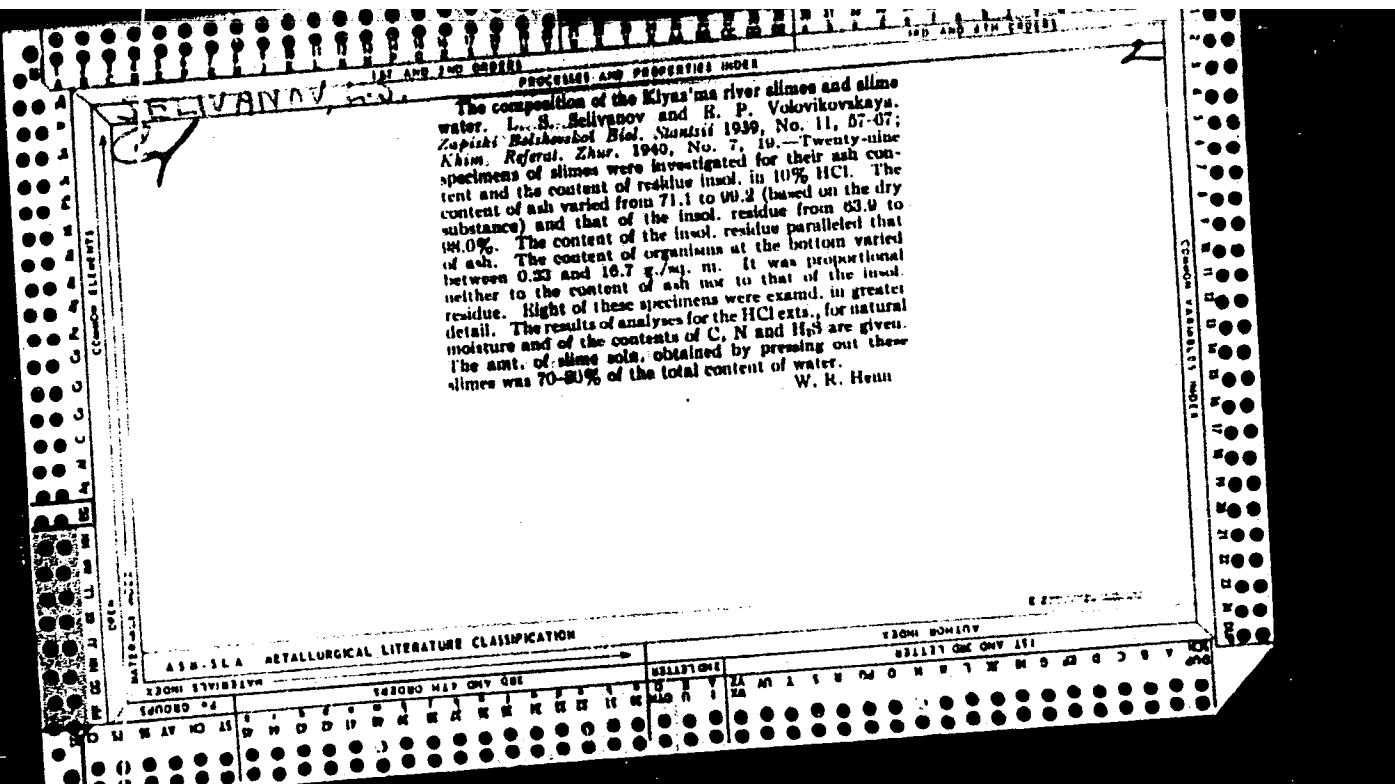
Chemical analysis of the meteorite Saratov. I. S. Selivanov. *Compt. rend. acad. sci. U. R. S. S. 26,* 389-92(1940)(in English).—A stony meteorite that fell on Sept. 6, 1918 in the former Saratov government, contained in the nonmagnetic fraction SiO_2 44.83, TiO_2 0.12, Al_2O_3 1.80, Cr_2O_3 0.71, FeO 14.46, CaO 2.33, MgO 27.43, MnO 0.39, Na_2O 0.56, K_2O 0.10, P_2O_5 0.74, Cl 0.011, Br 0.00047, FeS 6.53, hygroscopic moisture 0.04, and sulfide S 2.27%; in the magnetic fraction Fe 68.10, Ni 8.90, Co 0.41, SiO_2 3.15, CaO 1.00, MgO 4.17, MnO 0.07, P_2O_5 0.17, total S 1.02%, hygroscopic moisture 0.01%, residue insol. in hot aqua regia 12.76%. TiO_2 and Al_2O_3 traces. The insol. residue contained SiO_2 7.38, Al_2O_3 0.52, Cr_2O_3 0.30, CaO 0.72, MgO 2.11, MnO 0.04, FeO 1.48 and P_2O_5 0.01%. 9 references.   A. H. K.

Biogeochemical Lab, Dept. Chem. Sci., AS USSR

CK

Chlorine and bromine in massive crystalline rocks.
L. S. Selivanov. *Compt. rend. acad. sci. U. R. S. S.* 28,
500-13(1940)(in English); cf. *C. A.* 34, 4112⁴. The
values for the Cl and Br contents of 23 rocks, all located
in the U. S. S. R., are tabulated with the Cl/Br ratio,
which fluctuates between the extremes of 11,200 and 34,
averaging 243; it is noticeably lower for basic than for acid
rocks. The mean arithmetical Br content equals 1.62 ×
10⁻⁴%. 20 references.   A. H. Krappe

Committee on Meteoritics, Dept Phys - Math Sci, AS USSR

ASM SLA METALLURGICAL LITERATURE CLASSIFICATION

Geochemistry and biogeochemistry of the distribution of bromine in fresh waters, soils, and peats

Bromine   IV

Geochemistry and biogeochemistry of the distribution of bromine in fresh waters, soils, and peats. This research is concerned with the distribution and geochemistry of the halides, Cl, I, and Br, especially the latter, in regions where the waters contain large amounts of org. matter such as bogs and peat soils. In general, the presence of org. matter shows that Br and Cl contents of the lakes or rivers of continental waters. Higher Br contents were found in bodies of water containing higher amts. of org. matter. Bog lakes or river waters always had higher halide contents than the supernatant water, in the case of Cl, 1.8 times; Br, 2.5 times; and I, 1.7 times as much halide. Evidence is presented to show that atm. water cannot be the source of the Br in bogs, but rather the Br is brought in by the accumulation of the halide in the leaves of trees during a forest succession. Analyses of halides are presented for bogs, lakes, rivers, deciduous, and coniferous trees and various org. soils in various parts of the U.S.S.R.   S. Gottlieb

SELIVANOV, L S   FA 3T37

USSR/Geochemistry   Aug 1946
    Biochemistry
    Bromine

"The Geochemistry and Biochemistry of Bromine
 Diffusion," L S Selivanov, 68 pp

"Trudy Biogeokhimicheskoy Lab" No 8

Methods of determining small quantities of chlorine,
bromine, and iodine; bromine and other halides in
the atmosphere and in atmospheric precipitations;
bromine in fresh and salt waters; bromine in waters
and turfs of swamp areas; bromine in earth and fresh-
water plants; bromine in the sea. Numerous tables and
a bibliography.
                                              3T37

SELIVANOV,L.S.(Moscow)

Origin of chlorine and bromine in the ocean's salt.   Biul.Vulk.sta.
no.11:26-34 '47.   (MIRA 8:11)
            (Salinity) (Chlorine) (Bromine)

SELIVANOV, L. V.

"An Investigation of the Simplest Schemes of Drifting Sea Currents at
Shorelines." Cand Phys-Math Sci, Marine Hydrophysics Inst, Acad Sci USSR,
27 Dec 54 (VM, 15 Dec 54)

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

S/194/61/000/012/046/097
D256/D303

AUTHORS: Lazebnikov, M. G., Ferronskiy, V. I. and Selivanov,
               L. V.

TITLE: Measuring soil density by means of gamma-rays

PERIODICAL: Referativnyy zhurnal, Avtomatika i radioelektronika,
               no. 12, 1961, 28, abstract 12V238 (Avtomob. dorogi,
               1961, no. 3, 24-25)

TEXT: A field soil gamma-densitometer is described for rapid mea-
surements of soil density. The system of the instrument is based
upon passing the gamma-rays through a layer of soil placed between
the source and the detector, the recorded intensity being depen-
tent upon the soil density. The described instrument comprises an
integrator with a 100 μA microammeter measuring the grid current
of a triode tube, whose anode potential depends upon charging a
capacitor by current from a gamma-ray counter-tube. It is possible
with the described instrument to determine the soil density at
depths down to 25 cm without destroying its structure. The accuracy

Card 1/2

Measuring soil density ...

S/194/61/000/012/046/097
D256/D303

of the instrument is approximately $\pm$ 0.03 g/cm^3. Two different constructions of the instrument are described: Fork-and feeler rod-shaped. The basic electronic diagrams and the systems of construction for both types of instruments are given. There are 3 figures. /Abstractor's note: Complete translation. /

Card 2/2

SELIVANOV, L.V.

Determining the magnitude of the error of discharge measurements
in rivers by the "area velocity" method. Meteor. i gidrol.
no.2:49-50 F '62.   (MIRA 15:2)
                    (Hydrology)

SELIVANOV, L.V.

> State of the problem of evaluating the accuracy of water-discharge
> measurement in open channels and streams. Izm.tekh. no.5:58-59
> My '63.
> (MIRA 16:10)

ACC NR: AP7004581   SOURCE CODE: UR/0362/66/002/005/0545/0547

AUTHOR: Solivanov, L. Y.
ORG: Hydrological Project im. S. Ya. Zhuk (Gidroproyekt)
TITLE: Determination of the coefficients of friction and energy dissipation of wave motion of a liquid using data from shipboard measurements of wind waves in the ocean
SOURCE: AN SSSR. Izvestiya. Fizika atmosfery i okeana, v. 2, no. 5, 1966, 545-547
TOPIC TAGS: friction coefficient, wind velocity, atmospheric density

ABSTRACT:
      One of the two main equations of the wave field is the energy equation, which can be written in the form

$$\frac{d}{dt}E = Mq - E\mu,\qquad(1)$$

where E is the energy of wave motion of a column of liquid with a unit cross section; M_q is the energy per unit surface of the sea, imparted to the waves from the wind per unit time; $E\mu$ is the dissipation energy per unit surface of the sea per unit time; t is time. The effect of normal and tangential wind stresses is represented by the formula

$$M_g = \frac{4}{\pi^2}\, k_2 \rho' \delta^2 (V - o)^2 o,\qquad(2)$$

Card 1/2

ACC NR: AP7004581

where k2 is the dimensionless friction coefficient; ρ' is air density; V is wind velocity; c is wave speed; δ is wave steepness. E μ can be represented in the form

$$E_\mu = \eta^3 \, b \rho \delta^4 c^3 , \tag{3}$$

where b is the dimensionless numerical coefficient of energy dissipation. In this paper it is shown that wave measurements with a GM-16 wavegraph on the 12th and 14th voyages of the "Mikhail Lomonosov" in the Trade Winds zone of the Atlantic (with a large fetch of waves and a constancy of wind direction) made it possible to determine the values of the coefficients of friction and dissipation of wave motion, which must be obtained experimentally.

Orig. art. has: 5 formulas and 1 table. /JPRS: 38937/

SUB CODE: 04 / SUBM DATE: 30Sep65 / ORIG REF: 003

Card 2/2

...t of shallow waters on the speed of the ship and her draft.
... 24 no.12:20-32 D '64.   (MIRA 18:8)

1. Kafedra gidrografii Leningradskogo vysshego inzhenernogo
...kogo uchilishcha imeni admirala Makarova.

VIL'NER, B., kandidat geograficheskikh nauk; SELIVANOV, M., inzhener-
gidrograf.

Gyrocompass in the Arctic. Mor.flot 17 no.6:24 Je '57. (MIRA 10:7)

1. Glavnoye upravleniye severnogo morskogo puti.
(Arctic regions--Gyrocompass)

SELIVANOV, M.

Depth measurement by sounding apparatuses. Mor.flot 21 no.5:14-16
My '61.
(MIRA 14:5)

1. Nachal'nik gruppy Gidrograficheskogo predpriyatiya Glavsevmorputi.
(Deep-sea sounding)

SELIVANOV, M.

More on the sagging of ships. Mor. flot 22 no.11:16-17
N '62.
(MIRA 15:12)

1. Nachal'nik gruppy gidrograficheskogo predpriyatiya
Glavnogo upravleniya Severnogo morskogo puti Ministerstva
morskogo flota.
(Displacement (Ships))

SELIVANOV, M.

Theodolite for position finding during navigation in ice. Mor.
flot 23 no.4:19-21 Ap '63.   (MIRA 16:5)

1. Nachal'nik gruppy gidrograficheskogo predpriyatiya Glavnogo
Upravleniya Severnogo morskogo puti.
            (Navigation) (Sea ice) (Theodolites)

MENKOVSKIY, M.A.; PETROV, N.A.; FLODIN, A.A.; SELIVANOV, M.P., redektor;
    ROMANOVA, L.A., redaktor; KOROVENKOVA, Z.A., tekhnicheskiy redaktor.

[Introduction to the chemical analysis of coal (qualitative and
quantitative analysis] Vvedenie v khimicheskiy analiz uglei; ka-
chestvennyi i kolichestvennyi analiz. Moskva, Ugletekhizdat, 1954.
238 p. [Microfilm]   (MIRA 8:5)
        (Coal—Analysis)

SELIVANOV, M.P.

[Safety in chemical laboratory work] Bezopasnost' rabot v
khimicheskikh laboratoriiakh. Moskva, Medgiz, 1954.
319 p.   (MIRA 8:2)
        (Chemicals industry--Safety measures)

MENKOVSKIY, Mikhail Abramovich; FLODIN, Aleksey Alekseyevich; SELIVANOV,
     M.P., otv.red.; KARPOVICH, V.L., otv.red.; GARBER, T.N., red.
     izd-va; IL'INSKAYA, G.I., tekhn.red.

     [Analytical chemistry and technical analysis of coals] Anali-
     ticheskaia khimiia i tekhnicheskii analiz uglei. Moskva, Ugle-
     tekhizdat, 1959. 335 p.   (MIRA 12:11)
          (Chemistry, Analytical)   (Coal--Analysis)

NADEINSKIY, Boris Pavlovich; SELIVANOV, M.P., red.; LIPKINA, T.G.,
        red.izd-va; GRIGORCHUK, L.A., tekhn.red.

    [Theoretical principles and calculations of analytical
    chemistry] Teoreticheskie obosnovaniia i raschety v anali-
    ticheskoi khimii. Izd.3., perer. Moskva, Gos.izd-vo
    "Vysshaia shkola," 1959. 443 p.   (MIRA 13:7)
                (Chemistry, Analytical)

VAYGACHEV, A.Z.; SELIVANOV, M.N.

In the tracks of previous expeditions; from the history of the
exploration of Franz Josef Land. Probl.Arkt.i Antarkt. no.7:61-63
'61.   (MIRA 14:10)

(Franz Josef Land--Exploring expeditions)

ACC NR: AP6033520   SOURCE CODE: UR/0413/66/000/018/0159/0159

INVENTOR: Selivanov, M. P.; Turbin, B. G.; Levin, L. P.; Semenov, Yu. M.; Ugryumov, M. S.; Shvedunenko, L. A.; Sosul'nikov, G. B.

ORG: none

TITLE: Electromechanic signal converter. Class 62, No. 186296

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 18, 1966, 159

TOPIC TAGS: electromechanic converter, electromechanic signal converter, electromagnetic device, servomechanism, electrohydraulic servomechanism, electropneumatic servomechanism

ABSTRACT: The proposed electromechanical signal converter is intended primarily for electrical hydraulic and pneumatic servomechanisms. It contains a housing, a permanent-magnet electromagnetic device, pole pieces with adjustment screws, a coil and a portable system unit which includes an elastic element, an armature terminal, an operating slide element, and a magnetically permeable bushing. To improve operational reliability, ensure the possibility of operating in

Card 1/2   UDC: 629.19 629.135/138 629.132

ACC NR: AP6033520

corrosive liquids, and improve the dynamic properties of the converter, the
operating slide element is hermetically separated from the electromagnetic device
and by an air gap from the magnetically permeable bushing. The slide element
and the armature are a single unit, and the sealing element also serves as the
elastic element of the portable system. The adjusting screws are fixed to the poles
of the permanent magnet so as to make it possible to use the converter for servo-
mechanising with various output characteristics and in order to ensure the smooth
tuning of converter characteristics [Translation]

SUB CODE: 09/SUBM DATE: 22Jul64/

Card 2/2

SELIVANOV, M.V.

4

Utilization of alloy steel plate scrap in electric (smelt-ing) furnaces. S. G. Voinov and M. V. Selivanov. *Stal* 6, 365-8(1946); cf. C.A. 41, 1070h.—Cr-Ni-Mo steel was

produced in an elec. furnace from charges contg. 70% of alloy steel plate scrap.   M. Hoseh

Evaluation B-61757

A S M - S L A   METALLURGICAL LITERATURE CLASSIFICATION
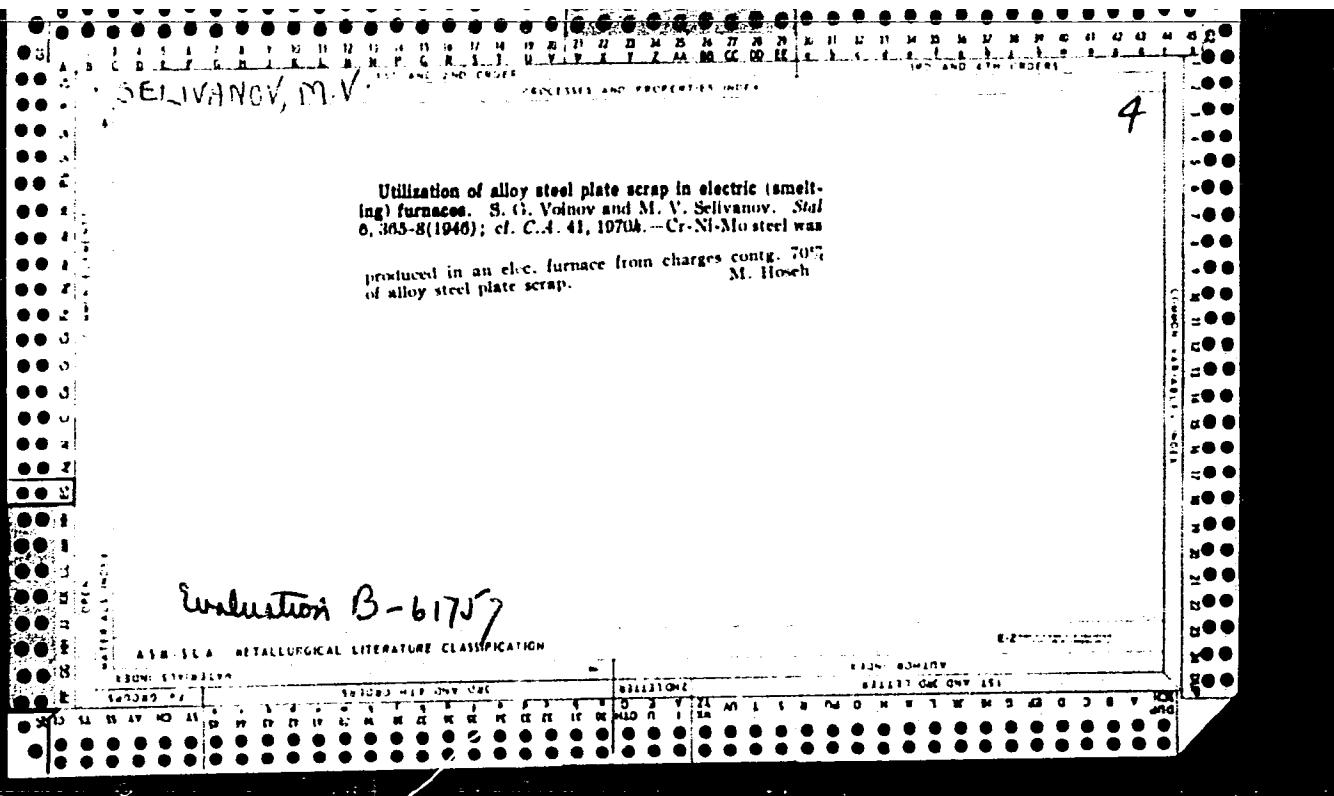
SELIVANOV, N.

Cheese Factories

Mechanization of labor-consuming work in cheese cellars.   Mol. prom.
13, No. 8, 1952.

1. SELIVANOV, N.

2. USSR (600)

4. Dairying - Apparatus and Supplies

7. Covered steam pasteurizers without agitators. Moloch.prom., 14 no. 2., 1953.

9. Monthly List of Russian Accessions, Library of Congress, _____April_____ 1953, Uncl.

SELIVANOV, N.; NOVOSELOV, N.

Why collective farms of Kalinin Provicne do not fulfill
their construction plan. Sel'.stroi. 9 no.1:3-5 Ja-F '54.
                                              (MIRA 13:2)
        (Kalinin Province—Farm buildings)

SELIVANOV, N.

SELIVANOV, N.

Provide all new settlers with dwellings. Sel'.stroi. 11 no.3:10-12
Mr '57.   (MLRA 10:5)

1.Starshiy inzhener Glavkolkozstroya Ministerstva gorodskogo
i sel'skogo stroitel'stva RSFSR.
                    (Housing, Rural)

SELIVANOV, N., skul'ptor

Techniques of sculpture.   IUn.tekh. 6 no.4:70-74 Ap '62.
(MIRA 15:6)

(Sculpture—Technique)

SELIVANOV, N.A.

Sélivanoff, N. A. Note sur les fonctions dérivées. Bull. [Izvestiya] Math. Mech. Inst. Univ. Tomsk 3, 125–127 (1946). (Russian and French)

The product of two derivatives does not have to be a derivative. However, the author shows that the product of a bounded derivative and a continuous function is a derivative. From this he deduces that the product of a derivative and a function having a bounded derivative is the derivative of a function. *František Wolf* (Berkeley, Calif.).

Source: Mathematical Reviews,   Vol 8   No. 8 .

SEI. IVANOV, N.A., veterinarnyy vrach.

Clinical and pathoanatomical data in hexachloran poisoning of horses. Veterinariia 30 no.2:47-48 F '53.   (MLRA 6:2)

1. Vel'skiy tsentral'nyy zoovetuchastok.

SELIVANOV, N.A.; EYSMAN, A.A.

In the service of criminal investigation.   Priroda   50   no.6:69-73
Je '61.   (MIRA 14:5)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut kriminalistiki,
Moskva.
                              (Criminal investigation)

SELIVANOV, N. I.

Applying printed drawings to polyethylene film. M. V. Gubachev, A. L. Eidlin, and N. I. Selivanov. U.S.S.R. 105,487, May 25, 1957. The drawings are applied with the aid of solns. contg. pigments and polyisobutylene or perchlorovinyl in a solvent acting on the surface of the film. To increase the durability of the drawing 2-20% polyisobutylene is added to the compn. used for making the polyethylene film.   M. Hoseh

SELIVANOV, N. I.

CA

Regeneration of carbon disulfide in the viscose industry.
N. I. Selivanov. *Tekh. Byull. GIIV* 1940, No. 1, 3-10;
Khim. Referat. Zhur. 1940, No. 8, 122. - In the production
of viscose approx. 28-32% of CS₂ (on the wt. of α-cellulose)
is used for the sulfidization of alkali cellulose. Most of the
CS₂ (up to 60%) is liberated during the spinning process
and during the treatment of the fabric. CS₂ remaining
in the fiber after spinning can be regenerated by treating
the fiber with water at 70-80° and subsequent condensa-
tion of CS₂. An app. for the continuous regeneration of
CS₂ is described. Regeneration of CS₂ improves consider-
ably the working conditions and returns into the produc-
tion process up to 30% of CS₂.　　　W. R. Henn.

CA SELIVANOV, N I

The sticking together of the individual fibers of rayon staple. A. I. Meos and N. I. Selivanov. *Tekstil. Prom.* 8, No. 3, 16-18(1948); *Chem. Zentr.* (Russian Zone Ed.) 1040, I, 1185-6.—The sticking together of the individual fibers in the manuf. of viscose staple is attributed to incompletely regenerated xanthate. Better washing of the individual fibers in the pptn. bath is attained with horizontal instead of the usual vertical spinning. No sticking together of the individual fibers was observed with horizontal spinning; the tensile strength of the fibers was increased from 1.68 to 1.96 g. per denier and the elongation reduced from 35.5 to 27.9%. Good circulation of the pptn. bath to reduce the variation in acidity is also important. M. G. M.

SURKOV, Viktor Danilovich, prof.; LIPATOV, Nikolay Nikitovich,
     dots.; BARANOVSKIY, Nikolay Vasil'yevich, kand. tekhn.
     nauk; Prinimal uchastiye SELIVANOV, N.I., dots., kand.
     tekhn. nauk; IVANOVA, N.M., red.; SOKOLOVA, I.A., tekhn.
     red.

     [Technological equipment of dairy enterprises]Tekhnologiche-
     skoe oborudovanie predpriiatii molochnoi promyshlennosti.
     Moskva, Pishchepromizdat, 1962. 576 p.   (MIRA 15:8)
            (Dairying--Equipment and supplies)

TELYATIV, D. D.

ALEKSANDROV, D. D. -- "Influence of Certain Factors in Individual Annealing Steel on the Structure of Ingot Weldments C.P. Temp." Dis 25 Mar 58, Polytech Inst of Labor Red Banner Inst of Wells named K. V. Stalin (Dissertation for the Degree of Candidate in Technical Sciences)

SO: VECHERNAYA MOSKVA, January-December 1958

VORONOV, F.D., prof.; SELIVANOV, N.M., kand.tekhn.nauk; RABINOVICH, Ye.I.,
    kand.tekhn.nauk; UZIYENKO, A.M., inzh.; TKACHENKO, I.A., inzh.;
    KUSTOBAYEV, G.G., inzh.; IVANOVA, N.G., inzh.; RYABCHIKOV, F.D., inzh.;
    GRUZNOV, A.K., inzh.

Developing a technology for the casting and quality investigation
of 21-ton rimmed steel ingots. Stal' 22 no.8:709-713 Ag '62.
                                        (MIRA 15:7)
                (Steel ingots)

VORONOV, F.D., prof.; MOROZOV, A.N., prof., doktor tekhn.nauk;
SELIVANOV, N.M., kand.tekhn.nauk; SMIRNOV, Yu.D., kand.tekhn.nauk;
RABINOVICH, Ye.I., kand.tekhn.nauk; CHERNOV, G.I., inzh.;
TKACHENKO, I.A., inzh.; BIKTAGIROV, K.K., inzh.; FILIPPOV, V.M.,
inzh.; KUSTOBAYEV, G.G., inzh.

Making St. 3ps capped steel in Magnitogorsk Metallurgical
Combine open-hearth furnaces. Stal' 22 no.8:716-718 Ag '62.
(MIRA 15:7)
1. Magnitogorskiy metallurgicheskiy kombinat i Chelyabinskiy
nauchno-issledovatel'skiy institut metallurgii.
(Magnitogorsk—Open-hearth process)

SELIVANOV, N.M.; TKACHENKO, I.A.; MAKARYCHEV, A.R.

Research at the Magnitogorsk Metallurgical Combine. Stal' 22
no.8:718-719 Ag '62.   (MIRA 15:7)
                (Magnitogorsk--Steel ingots)

KOLOV, M.I., inzh.; YERSHOVA, L.P., inzh.; SELIVANOV, N.M., kand.tekhn.nauk

Effect of grain size on the magnetic properties of cold-rolled
electrical steel. Stal' 22 no.8:744-747 Ag '62. (MIRA 15:7)

1. Magnitogorskiy metallurgicheskiy kombinat.
                    (Sheet steel—Magnetic properties)

L 40798-65   EWT(m)/EWP(w)/EPF(c)/EWA(d)/EPR/T/EWP(t)/EWP(k)/EWP(z)/EWP(b)/
EWA(c)   Pf-4/Pr-4/Ps-4   IJP(c)   MJW/JD/HW/JG
ACCESSION NR: AP4048658   S/0133/64/000/011/1030/1033

AUTHOR: Rabinovich, Ye. L. (Candidate of technical sciences); Selivanov, N. M.
(Candidate of technical sciences); Biktagirov, K. K. (Engineer)

TITLE: Effect of the rare earth elements on the properties of low-carbon killed
steel

SOURCE: Stal', no. 11, 1964, 1030-1033

TOPIC TAGS: low carbon steel, rare earth element additive, mischmetal addition,
grain refinement, desulfurization, impact strength, tensile property/ St 3sp steel

ABSTRACT: The effects of adding mischmetal to basic open hearth steel were
examined in this study using 2 kg/T mischmetal in the ingot mold or ladle of type
St. 3sp steel. The sulfur concentration was reduced 2-5 times from the original
0.03-0.026%. The amount of nonmetallic inclusions was reduced; the remaining
inclusions were more uniformly distributed in the ingot. The natural grain was
refined in comparison to that of steel not treated with the mischmetal; the temper-
ature at which the grain started to become coarser was raised. The rare earth
elements bound nitrogen into stable nitrides. The plastic and ductile properties

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L 40798-65

ACCESSION NR: AP4048658

2

of sheet from the treated steel improved. The degree of anisotropy of the tensile temperature and at low temperatures increased and the sensitivity to mechanical aging was reduced. "Engr. L. G. Ganeyeva took part in the tests." Orig. art. has: 6 figures.

ASSOCIATION: None

SUBMITTED: 00

ENCL: 00

SUB CODE: MM

NR REF SOV: 002

OTHER: 000

Card 2/2

VORONOV, F.D., prof.; FILATOV, A.D., inzh.; DEYNEKO, D.I., inzh.; BIGEYEV, A.M., kand. tekhn. nauk; TKACHENKO, I.A., inzh.; SELIVANOV, N.M., kand. tekhn. nauk; ARYCHENKOV, V.P., inzh.

Use of boil intensifiers in the rapid pouring of rimmed steel. (MIRA 18:11)
Stal' 25 no.4:317-319 Ap '65.

1. Magnitogorskiy metallurgicheskiy kombinat i Magnitogorskiy gornometallurgicheskiy institut.

S/153/62/005/006/001/015
E071/E392

AUTHORS: Selivanova, N.M., Sazykina, T.A. and Zubova, G.A.

TITLE: Physicochemical properties of selenates.
              XVL. Investigation of the behavior of cesium
              selenate on heating

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Khimiya i
              khimicheskaya tekhnologiya, v. 5, no. 6, 1962,
              859 - 863

TEXT: Since there are no literature data on the behavior
of cesium selenate on heating, investigations were carried out on
this subject by differential thermal analysis, determination of
changes in weight and composition as well as X-ray photography
of Cs_2SeO_4 at various temperatures. Cesium selenate used in the
tests was obtained by oxidizing cesium selenite with 30% H_2O_2.
The selenite was prepared by neutralization of cesium carbonate
with selenious acid. It was found that cesium selenate decomposed
slightly when heated from 200 to 600 °C, forming cesium selenite.
Further heating up to 1 000 °C did not produce any changes in
composition and structure. There was a reversible endothermic

Card 1/2

Physicochemical properties ....

S/153/62/005/006/001/015
E071/E392

effect on the heating curve at 608 °C which could be explained
as being due to the polymorphic transformation of the rhombic
cesium selenate crystals into hexagonal. The second endothermic
effect on the curve at 985 °C corresponded to melting without
decomposition.   Cesium selenate was noticeably evaporating at
900 °C and over, without changing its composition.
There are 1 figure and 3 tables.

ASSOCIATION: Kafedra obshchey i neorganicheskoy khimii,
                 Moskovskiy khimiko-tekhnologicheskiy institut
                 im. D.I. Mendeleyeva (Department of General
                 and Inorganic Chemistry, Moscow Institute of
                 Chemical Technology im. D.I. Mendeleyev)

SUBMITTED: September 22, 1961

Card 2/2

SELIVANOVA, N.M.; SAMPLAVSKAYA, K.K.; MAYYER, A.I.

Physicochemical properties of selenates; the heat of formation
of copper selenates. Trudy MKHTI no.38:30-36 '62.
(MIRA 16:7)

(Copper selenates)   (Heat of formation)

SELIVANOVA, N.M.; SAMPLAVSKAYA, K.K.; STREL'TSOV, I.S.; MAZEPOVA, V.I.

Thermal decomposition of aluminum selenate. Zhur. neorg. khim.
8 no.7:1645-1653 Jl '63.   (MIRA 16:7)

(Selenates)   (Aluminum compounds)
(Thermal analysis)

SELIVANOVA, N.M.

Approximate calculation of the heats of formation of selenates.
Zhur.neorg.khim. 8 no.9:2024-2028 S '63. (MIRA 16:10)

L 45135-66   EWT(m)/EWP(w)/T/EWP(t)/ETT   IJP(c)   JD

ACC NR: AP6019765   (A)   SOURCE CODE: UR/0370/66/000/003/0003/0016

AUTHOR: Kravchenko, V. F.; Isakov, I. V.; Khlebnikov, A. Ye.; Dashevskiy, Yu. A.;
Lebedev, Ya. I.; Selivanov, N. M. (Moscow)

ORG: none

TITLE: Improving the quality of open hearth steel by treating it with rare earth
metal alloys

SOURCE: AN SSSR. Izvestiya. Metally, no. 3, 1966, 3-16

TOPIC TAGS: rare earth metal, metallurgic process, metal physics, metal property,
steel property, mechanical property, steel/40Kh2NMA steel

ABSTRACT: There is very little published information concerning the effect of rare
earth metals (REM) on the properties of steel, and on the optimum conditions for the
use of such metals. This paper investigates the effects of REM on specific properties
of steel, notes procedures for alloying steel, and indicates optimum REM content to
achieve desired combinations of mechanical properties. Chemical thermodynamic data
and composition of REM alloys are presented in order to provide a better understanding
of the principles involved in alloying steel with REM. Experimental melts were pro-
duced in a 150 ton induction furnace as well as in 25 and 200 ton basic open hearth
furnaces. Mishmetal, a rare earth alloy containing 56.1% Ce and 41.3% La (other REM,
iron, and impurities totaled 2.6%), was used as the deoxidizing agent. Studies were
made of both cast and wrought metal states and tables of mechanical properties are in-
                                              UDC: 669.141.243.4

Card 1/2

L 45435-66

ACC NR: AP6019765

cluded. The impact strength of steel 40Kh2NMa, melted in a 25 ton furnace and top-poured at 1580°C, is given. Results of the experiments showed that in all cases the addition of REM increased steel ductility. This increase was greatest when the mish-metal was able to reduce sulfur content in the solidified ingot. Desulfurization was best accomplished when it was initiated in the ladle prior to pouring into the mold. Optimum conditions were concluded to be ladle deoxidation and desulfurization by add-ing 0.15-0.20% mishmetal (calculated) to the molten steel (1560-1580°C) immediately after tapping from the furnace. The mishmetal reaction begins and most of the sulfur is removed by the time the steel is poured and solidified. The procedure lowers the sulfur content 25 to 30%. The mishmetal significantly reduces nonmetallic inclusion content, as well as changing the shape, composition, and distribution of that content. Finally, the REM alloy increases impact strength of the rolled steel 27 to 47% (transverse test samples) and of cast steel by 47 to 65%, with a simultaneous increase in ductility. Orig. art. has: 12 tables and 6 figures.

SUB CODE: 11/   SUBM DATE: 25 May 64 / ORIG REF: 026 / OTH REF: 001

Card 2/2

SELIVANOV, N.P.

26,2340
Translation from: Referativnyy zhurnal, Fizika, 1960, No. 6, p. 29, # 13140

AUTHORS: Sipal'nikov, I.P., Zeydlits, P.M., Grishayev, I.A., Akhiyezer, A.I., Faynberg, Ya.B., Selivanov, N.P., Khizn.

TITLE: An Electron Accelerator with 3.5 Mev Output Energy

PERIODICAL: Tr. Sessii AN UkrSSR po aim. iapol'zobaniyu atomn. energii. Kiyev, AN UkrSSR, 1958, pp. 16-23

TEXT: The authors describe a linear electron accelerator with a travelling wave of 3.5 Mev energy. A waveguide loaded with disks is used as accelerating system. The necessary law of wave phase velocity variation is brought about by variation of the diameter of the apertures in the disks. The 280-cm long wave-guide is divided into three sections. In the first section, the phase velocity is varied from 0.5 to 0.97 c; in the second and third section it is equal to 0.99 and 0.99 c respectively. The electron equilibrium phase increases during the acceleration process; its initial value is equal to 45⁰ and is chosen according to the optimum capture condition. The computational value of the h.f. power at the

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accelerator input is 900 kw; the accelerator field intensity amounts hereat to 16.5 kv/cm. The accelerator output power (about 600 kw) is absorbed in a steel load with water cooling; approximately 300 kw are dissipated in the waveguide walls. An additional axisymmetrical magnetic field with an intensity up to 400 Oe is developed by solenoids for focusing the electrons along the waveguide axis. An electron gun with three electrodes serves as electron source; it operates pulsing synchronously with the magnetron generator and provides for a beam of 5.8 mm diameter at the accelerator input. The output parameters of the accelerator measured are; the current is about 20-30 ma in the pulse of 2μsec duration, the average current is about 20-30 μa; the beam diameter is 3-4 mm with the diver-gence angle of 7.10⁻⁴ - 3.10⁻³ radian; the energy beam half-width is about 8%.

ASSOCIATION: Fiz.-tekhn. In-t AN UkrSSR (Physico-Engineering Institute of the Ukrainian Academy of Sciences)

A.P. Fateyev

Translator's note: This is the full translation of the original Russian abstract.

Card 2/2

SHAPLITSKAYA, V.L.; SELIVANOV, N.P., MURASHOV, Yu.S.; VASILENKO, S.V.

Plastic foams for lightweight roofs of industrial buildings.
Stroi. mat. no.11:29-30 N '65.   (MIRA 18:12)

SINEL'NIKOV, K.D.; RUTKEVICH, B.N.; SAFRONOV, B.G. SELIVANOV,N.P.,
          otv.za vyp.
          [Nonadiabatic traps for charged particles] Neadiabati-
          cheskie lovushki zariazhennykh chastits. Khar'kov, Fiziko-
          tekhn. in-t AN USSR, 1960. 479-494 p.   (MIRA 17:2)

44881
S/861/62/000/000/012/022
B125/B102

AUTHORS: Selivanov, N. P., Faynberg, Ya. B.

TITLE: The possibility of using traveling-wave linear accelerators to accelerate heavy particles

SOURCE: Teoriya i raschet lineynykh uskoriteley; sbornik statey. Fiz.- tekhn. inst. AN USSR. Ed. by T. V. Kukoleva. Moscow, Gosatomizdat, 1962, 174 - 185

TEXT: The efficiencies of standing-wave and traveling-wave linear proton accelerators are estimated by comparing the specific losses in rf power. A comparatively long time $T_0 \sim 60 \mu$sec elapses before the stationary state has become established, and this prevents the use of magnetrons or klystrons for supplying traveling-wave accelerators. Break-down phenomena between the drive tubes precludes increasing the mean accelerating field or shortening the accelerator. Traveling-wave waveguides containing metal discs are cal- culated using the approximation method of V. V. Vladimirskiy ("Zh. tekhn. fiz.", 17, 1269 (1947)) and W. J. Hansen (Appl. Phys., 20, 280 (1949)). In Hansen's dispersion equation

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The possibility of using...

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$$\frac{1}{k_1 a}\frac{J_1(ka)}{J_0(ka)} = \frac{J_1(ka)\,N_0(kb) - N_1(ka)\,J_0(kb)}{ka\,[J_0(ka)\,N_0(kb) - N_0(kb)\,J_0(ka)]}.$$ (3),

J, I and N are Bessel and Neumann functions, and kb = $2\pi b/\lambda$ or ka = $2\pi a/\lambda$ are the relative radii of the waveguide or of the disc aperture. b and a are the corresponding absolute radii. The phase velocity of the wave increases continuously along the accelerator. Even when the most effective focusing methods available are used, the radius of the proton bunch remains smaller than a. For small phase velocities, the increase in efficiency due to the decrease in b is compensated by increased attenuation of the field in the accelerator. For optimum design of the accelerator, all its parameters have to be properly chosen to render the correspondence complete. When weak accelerating fields are used, the losses in the initial part of a traveling-wave linear proton accelerator are advantageously small. At final energies of 1000 Mev, however, they are about 1.5 times as large as those in standing-wave accelerators. New methods of focusing that are more effective will invert this ratio. Since stronger accelerating fields can be used, a smaller value can be chosen for the total length of a traveling wave proton

Card 2/3

The possibility of using...

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accelerator than for that of a standing wave accelerator. This advantage is
largely compensated by the absence of a sufficiently effective method for
decelerating the traveling wave. More effective focusing methods, employing
waveguides of 10 cm wavelength, will furnish proton bunches a few milli-
meters in radius; this will considerably increase the efficiency of the
traveling wave linear proton accelerator. This paper was written in 1949.
There are 6 figures.

Card 3/3

44882
S/861/62/000/000/013/022
B125/B102

AUTHORS: Selivanov, N. P., Faynberg, Ye. B., Stepanov, K. N.,
Khizhnyak, N. A.

TITLE: Choosing the best variant of a linear proton accelerator

SOURCE: Teoriya i raschet lineynykh uskoriteley, sbornik statey. Fiz.-
tekhn. inst. AN USSR. Ed. by. T. V. Kukoleva. Moscow,
Gosatomizdat, 1962, 186 - 202

TEXT: Two theories are studied: that of waveguides with dielectric discs
fitted inside, used to accelerate protons to high energies, and that of
radial focusing using alternate focusing and defocusing lenses. When the
dielectric constant $\varepsilon = \varepsilon(x,y,z)$ and the conductivity $\sigma = \sigma(x,y,z)$ are time-
independent, $\Delta \vec{A} + k^2 \vec{A} - \text{div}\vec{A} \cdot \text{grad}(\ln k^2) = -(4\pi/c)\vec{j}$ holds, where
$k^2 = i\omega(i\omega\varepsilon + 4\pi\sigma)/c^2$, ω denoting the frequency and $\vec{j}$ the current density.
In the case of an axisymmetric field and zero current the product $A(r,z)$
$= R(r)Z(z)$ is formulated so as to obtain the components of electric and
magnetic field strengths:

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Choosing the best variant of...

$$E_z = E_0 J_0(mr) e^{i(\omega t - k_3 z)};$$

$$E_r = \frac{iE_0 k_3}{\frac{a+b}{a\varepsilon+b} k_3^2 - \left(\frac{\omega}{c}\right)^2} \frac{m(a+b)}{(a+\varepsilon b)} J_1(mr) e^{i(\omega t - k_3 z)};$$

$$H_\varphi = \frac{iE \frac{\omega}{c} m}{\frac{a+b}{a\varepsilon+b} k_3^2 - \left(\frac{\omega}{c}\right)^2} J_1(mr) e^{i(\omega t - k_3 z)},$$

(12).

The boundary conditions

$$A|_{z=z_s-0} = A|_{z=z_s+0}; \quad \frac{1}{k^2} \frac{\partial A}{\partial z}\bigg|_{z=z_s-0} = \frac{1}{k^2} \frac{\partial A}{\partial z}\bigg|_{z=z_s+0}.$$

(2)

take account of the jump-like change in the properties of the medium at z = z_s. The formulas (12) agree with the known expressions for the compo-
nents of an electromagnetic field in a waveguide containing an anisotropic
dielectric, if the following condition is observed: The discs made of a
homogeneous isotropic dielectric, that are fitted inside the waveguide, must
be equivalent to an anisotropic dielectric having the effective ε components

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Choosing the best variant of...

$\varepsilon_r = (a+\varepsilon b)/(a+b)$, $\varepsilon_z = (a+b)\varepsilon/(a\varepsilon+b)$. The mean phase velocity in a waveguide containing discs is smaller than that in an empty waveguide; it is greater than that in one containing a dielectric. The attenuation of the fields due to the infinite conductivity is proportional to $e^{-\gamma z/2}$, where

$$\gamma = \frac{4\pi}{c^2}\,\omega\sigma\,\frac{b\sqrt{\varepsilon}}{\sqrt{(a\varepsilon + b)(a + b\varepsilon)}}\,\frac{1 - \frac{a}{a+b}\frac{m^2 c^2}{\omega^2}\frac{\varepsilon^2 - 1}{\varepsilon^4}}{\sqrt{\frac{(a+b)\varepsilon}{a\varepsilon+b}\frac{\omega^2}{c^2} - m^2}} \qquad (13)$$

and $m = 2.405/R$. The power losses per unit length from a waveguide containing dielectric discs amount to $D_1 = (1-e^{-\gamma})S \approx \gamma S$. When the structural period remains constant, the phase velocity of a wave in a waveguide fitted with dielectric discs is varied by changing the relative thickness $\eta = a/b$, of the discs. Linear accelerators with alternately arranged magnetic lenses possess regions of stable motion in the y and z directions corresponding to certain values of magnetic field gradient and lens length. The stability condition of the motion in such traveling-wave accelerators reads

$$H' = \frac{\pi E \cos \varphi_s}{\beta^2 \lambda}\frac{a_1 + a_2}{a_2 - a_1}, \quad l^2 = \frac{2\pi m \beta \lambda v_x^2}{eE \cos \varphi_s}(a_2 - a_1). \quad (25),$$

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Card

S/861/62/000/000/015/022
B125/B102

AUTHORS: Faynberg, Ya. B., Selivanov, N. P.

TITLE: Investigating the initial part of a linear electron accelerator

SOURCE: Teoriya i raschet lineynykh uskoriteley, sbornik statey. Fiz.-
             tekhn. inst. AN USSR. Ed. by T. V. Kukoleva. Moscow,
             Gosatomizdat, 1962, 211 - 230

TEXT: The accelerating system of this linear accelerator consists of a
waveguide fitted with metal discs. When the entrance field strengths are
not too high, e.g. $eE_o\lambda$ = 180 kev, and $\beta > 0.5$, the phase oscillations cal-
culated by the quasi-classical approximation method are correct. The phase
stability deteriorates in an attenuating field, and is improved by an in-
creasing field. The amplitudes and frequencies of the phase oscillations
derived by numerical integration of the equation of motion for the particle
agree tolerably well with those calculated in quasi-classical approximation.
The numerical results imply a constant waveguide radius in the initial part
of the accelerator. The effect of the space charge on the phase velocity
of the wave is small anyway if the currents are large; it becomes even

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Investigating the initial part...

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B125/B102

smaller when the relativistic correction is taken into account. The r-f energy absorbed in the accelerated bunch can be disregarded in accelerators of low amperage. For accelerators of large amperage, the energy conservation equation $(\partial W/\partial t) + D + D_1 = 0$ is used to determine the change in the accelerating field strength due to absorption of energy in the bunch, and hence the maximum duration of the accelerated particle pulse for which the condition for particle acceleration is fulfilled. W is the power supply of the accelerator, D the losses in the walls, and D_1 the power absorbed by the bunch. The flux of accelerated particles can be very large when the pulses are short. The longitudinal and transverse electric fields set up by ellipsoidal electron bunches of uniform density are considerably weaker than the accelerating r-f field. Nevertheless, the bunches can greatly affect some of the electrodynamical parameters of the system. This paper was written in 1952. There are 9 figures and 8 tables.

Card 2/2

AUTHORS: Selivanov, N. P., Faynberg, Ya. B., Gil'man, M. Z.

TITLE: Calculation of a linear electron accelerator for 4 Mev

SOURCE: Teoriya i raschet lineynykh uskoriteley, sbornik statey. Fiz.-
             tekhn. inst. AN USSR. Ed. by T. V. Kukoleva. Moscow,
             Gosatomizdat, 1962, 231 - 242

TEXT: A travelling $\pi/2$-wave linear accelerator segmented by annular metal
discs (as suggested by V. V. Vladimirskiy) is calculated with the
Walkinshow-Brillouin (J. Appl. Phys., 20, 634 (1949)) method which ensures
high accuracy in determining the phase velocity of the wave and the frequen-
cy of the system. The dispersion relation, actually a determinant with an
infinite number of rows and lines, need not have more than three rows in
order to give sufficiently accurate results. It is derived using the con-
tinuity of the tangential components of the electric and of the magnetic
fields and solved by graphical means. Leaving the ratio of thickness l
of the disks to wavelength λ unchanged, the solution also remains unchanged.
It can be used then to calculate the inner radii a of the annular disks for
any frequency ω. The spacing between the discs is then determined by suc-
Card 1/2

Calculation of a linear electron...   S/861/62/000/000/016/022
                                                   B125/B108

cessive approximation for a given h-f power flux S_o at the input of the
accelerator, taking the loss in power into account. The initial 0.7-Mev
section of a 4-Mev linear accelerator was calculated, constructed, and
tested at the Fiziko-tekhnicheskiy institut AN USSR (Physicotechnical
Institute AS UkrSSR). For λ = 10.6493 cm, the outer radius of the disks
(wave guide) b = 4.491, and l = 0.398 cm, the results were as follows:
The distances between the single discs had to increase from 13.62 mm to
23.94 mm between the first and the 44th disc and the inner diameters 2a in-
creased from 31.26 mm to 39.36 mm. Experimental and calculated data were
in good agreement, so the entire 4-Mev accelerator was completed after cal-
culations with the same method. Results were very good. The present work
was composed in 1953. There are 5 figures and 5 tables.

Card 2/2

44886

S/861/62/000/000/017/022
B125/B108

AUTHORS: Akhiyezer, A. I., Faynberg, Ya. B., Selivanov, N. P.,
              Stepanov, K. N., Pakhomov, V. I., Kovalev, O. V., Khizhnyak,
              N. A., Gorbatenko, M. F., Bar'yakhtan, V. G., Shanshanov, A. A.

TITLE: Linear electron accelerators for high energies

SOURCE: Teoriya i raschet lineynykh uskoriteley, sbornik statey. Fiz.-
              tekhn. inst. AN USSR. Ed. by T. V. Kukoleva. Moscow,
              Gosatomizdat, 1962, 243 - 309

TEXT: This paper, finished in 1955, is a voluminous report on the most
important results obtained at the Fiziko-tekhnicheskiy institut AN USSR
(Physicotechnical Institute AS UkrSSR) between 1948 and 1955 as to the
proper choice of an accelerating system and its optimum parameters, as well
as on the dynamics of the electrons inside the accelerator. One of the most
efficient systems is the $\pi/2$ traveling wave type accelerator segmented by
annular metal disks (designed by V. V. Vladimirskiy). The calculation of
such a waveguide with the Walkinshow-Brillouin method (J. Appl. Phys., 20,
634 (1949)) is demonstrated. The radial motion of the electrons in a Bev-
accelerator under the action of terrestrial magnetism and gravity should be
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Linear electron accelerator...

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B125/B108

compensated by the combined magnetic fields of rectilinear currents and a small number of electromagnets. In such a case, detectors are necessary indicating the displacement of the beam by the fields of the correcting magnets. Owing to the great length of linear accelerators, an additional radial focusing on the principal section is necessary. In the first section and in the injector this will be achieved by strong longitudinal magnetic fields. In the principal section radial focusing can be achieved by short magnetic lenses (diameter 50 cm) producing a longitudinal magnetic field of ∼1000 oe/cm, or by a system of four-pole lenses. Both systems can reduce the beam radius at the output of the accelerator to 0.5 cm. There are 1 figure and 18 tables.

Card 2/2

AUTHOR: Znamenskiy, N. N. and Salivanov, O. A. SOV/138 -58-4-11/13

TITLE: Preparation of Water - Oil Emulsions with the Aid of an Acoustic Hydrodynamic Vibrator, (Prigotovleniye vodno-maslyanykh emul'siy pri pomoshchi zvukovogo gidrodinami-cheskogo vibratora).

PERIODICAL: Kauchuk i Rezina, 1958, Nr.4. pp. 35. (USSR).

ABSTRACT: The physico-chemical laboratory of NIIR developed during 1957 a method for preparing water - oil emulsions based on using the emulsifying action of the vibrations of a sound band. The hydrodynamic vibrator used for creating the vibrations is of very simple construction. The vibrations are created in a metallic plate by an impact at the end plate by a jet of liquid which is under a pressure of several atmospheres (Fig.1). The emulsion is prepared in a plant, the setting-up of which is shown in Fig.2. 100 litre of emulsion (with a concentration of the dispersion phase equal to 60 - 65%) can be made during one hour. The efficiency of the plant can be increased considerably when preparing less concentrated emulsions. The frequency of the vibrations = 2 - 5 kilohertz. The pressure of the liquid, which is

Card 1/2   of the order of 5 - 10 atmospheres, is achieved by using

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Preparation of Water - Oil Emulsions with the Aid of an Acoustic
Hydrodynamic Vibrator.

a pinion pump ShDP-18. 100 kw of electric energy is
used for 1,000 litres of emulsion. This apparatus
was used in the institute for preparing aqueous emul-
sions of dibutylsebacate, dioctylsebacate, vaseline
oil and other plasticisers which are used in the rubber
industry.

ASSOCIATION: Research Institute for Rubber and Latex Goods.
(Nauchno-issledovatel'skiy institut rezinovykh i
lateksnykh izdeliy).

Card 2/2   1. Oil-water mixtures--Preparation   2. Plasticizers--
Production   3. Vibration mechanisms--Design   4. Sound--
Applications

SOV/138-58-9-11/11

AUTHORS: Znamenskiy, N. N. and Selivanov, O. A.

TITLE: Destruction of Natural Rubber in Solution by Ultrasonic Waves (Destruktsiya natural'nogo kauchuka v rastvore pod vozdeystviyem ul'trazvuka)

PERIODICAL: Kauchuk i Rezina, 1958, Nr 9, pp 37 - 38 (USSR)

ABSTRACT: Natural rubber in solution in benzol (0.63%) was subjected to ultrasonic vibration in the 22 - 1000 kilocycle range by a magneto-strictive generator. Destruction of the rubber was gauged by viscosity determination of the solution, using an Ostwald viscometer. Fig.1 shows the relationship between viscosity and duration of subjection to ultrasonic vibration for five different frequencies. With the exception of the curve for 1000 kilocycles, the curves fit formula (1). The material subjected to ultrasonic vibration tends to reach an equilibrium condition depending on the frequency. The final or equilibrium degree of destruction changes little in the 22 to 500 kilocycle range. At 750 kilocycles there is marked decrease in the speed and degree of destruction. At 1000 kilocycles the destruction is slight, viscosity changes show a linear

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Destruction of Natural Rubber in Solution by Ultrasonic Waves

relationship with duration of test. The curves show
that the process of destruction is almost entirely
completed within 30 minutes of subjection of the poly-
mer to ultrasonic vibration under the given conditions.
The relationship found between degree and speed of des-
truction to intensity of ultrasonic vibration, leads
to the conclusion that intensities of the order of 7 to
10 watts/cm^2 are sufficient to cause a reduction of
viscosity of the solution to 20% of its initial value,
and this evidences considerable changes in the polymer.
Fig.2 shows the relationship between viscosity (relative
to initial state) and intensity of vibration (watts/cm^2)
for a 30 minute test at 300 kilocycles. There are 2 Figures
and 1 Table, also 5 References: 3 Soviet and 2 English.

ASSOCIATION: Nauchno-issledovatel'skiy institut rezinovykh i latek-
snykh izdeliy (Scientific Research Institute for Rubber
and Latex Products)

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S/081/60/000/021/016/018
A005/A001

Translation from: Referativnyy zhurnal, Khimiya, 1960, No. 21, p. 505, # 86906

AUTHORS: Znamenskiy, N. N., Selivanov, Q. A.

TITLE: The Application of Elastic Vibrations to Certain Processes in the
               Latex Technology

PERIODICAL: Tr. N.-i. in-ta resin. i lateksn. izdeliy, 1959, sb. 2, pp. 146-154

TEXT: The authors studied the preparation processes of emulsions of various
liquids and the washing off processes of rubber articles from latex by means of a
hydrodynamic vibrator. The vibrator with cantilever fixing of a plate ensures the
most stable operation conditions. The resonance was observed at 1.5 - 5 kc for
10 at liquid pressure. The distance between the nozzle and the plate varied hereat
from 10 to 3 mm. At the distance between the nozzle and the plate < 0.1 mm, plate
vibrations were observed at a frequency of < 1 kc. In the majority of the tests
conducted, water was the liquid driven through the vibrator. The adjustment of
the vibrator was performed by means of a sound pressure gage constructed by the
authors on the basis of the developments of the Akusticheskiy Institut AN SSSR
(Institute of Acoustics of the Academy of Sciences USSR) together with a frequency

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S/081/60/000/021/016/018
A005/A001

The Application of Elastic Vibrations to Certain Processes in the Latex Technology

meter ИЧ-6 (ICh-6), the device permits the measurement of the vibration frequency and the relative value of the sound pressure in the liquid. The 20%-emulsion of lubricating oil was obtained sufficiently stable after a few passages of the liquid through the vibrator. The addition of surface-active substances considerably increases the emulsion stability. Gloves produced from latex by way of ion precipitation were placed into a vessel with flowing water in which the vibrator operated. The washing off of the gloves was accelerated by about 5 times at frequencies of 5-8 kc. With decreasing frequency down to 1-2 kc the effect sharply decreased. The possibility is pointed out of the operation of an industrial unit for the preparation of 60%-emulsions with an output of 1-2 1/min.

I. Pil'menshteyn

Translator's note: This is the full translation of the original Russian abstract.

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L 42210-66   EWT(m)/EWP(j)/T/EWP(k)   IJP(c)   RM/DJ/GD

ACC NR: AT6013179   (A)   SOURCE CODE: UR/0000/61/000/000/0145/0165

AUTHORS: Znamenskiy, N. N.; Selivanov, O. A.; Fomina, L. S.; Chernaya, V. V.

ORG: none

TITLE: Some investigations of the application of ultrasound in industrial process-
ing of resin

SOURCE: Moscow. Oblastnoy pedagogicheskiy institut. Primeneniye ul'traakustiki k
issledovaniyu veshchestva, no. 14, 1961, 145-165

TOPIC TAGS: ultrasound, emulsion, chloroprene, natural rubber, polymer degradation,
elastic oscillation, ultrasonic wave propagation

ABSTRACT: Application of ultrasound in production control was investigated along
the following lines: propagation velocity of ultrasonic waves as a function of the
composition and method of processing resins; effect of ultrasound on natural rubber
in benzene, chloroprene in dichloroethane, and chloroprene latex; application of
ultrasound to intensify production of aqueous emulsions of plasticizers and to
finely disperse ingredients of latex mixtures. A definite relationship was found
between the propagation of elastic vibrations and the properties and compositions
of rubbers and resins. Natural rubber in benzene solution is degraded when treated
with ultrasound from 22 to 1000 kHz, the process depending upon the ultrasound inten-
sity, as shown in Fig. 1. Ultrasound also degrades α-chloroprene in dichloroprene,

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ACC NR: AT6013179   2

Fig. 1. Degree of polymer
        degradation as a
        function of the
        ultrasound inten-
        sity.

f = const = 300 kHz

τ = const = 30 min

$\mathcal{J}$, watt/cm^2
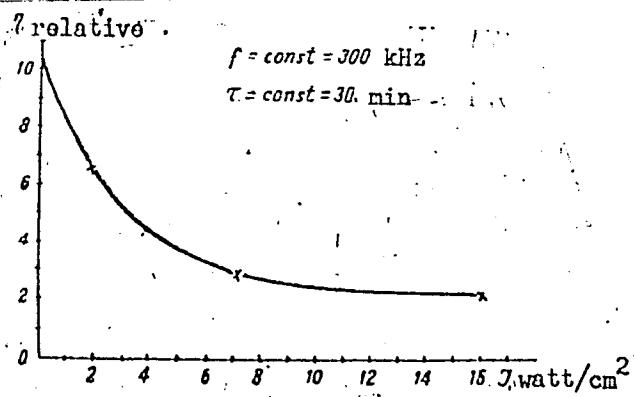
while the μ-polymer, which has a more stable three-dimensional structure, is dissolved to an insignificant extent in the solvent. A detailed description of the process for preparing finely dispersed zinc oxide and water-oil emulsions is given, and diagrams of the equipment are shown. Orig. art. has: 6 tables, 5 equations, and 18 figures.

SUB CODE: 11, 20/ SUBM DATE: 22Apr61

Card 2/2   af

BORISOV, I., kand. tekhn. nauk; SELIVANOV, P., kand. ekonom. nauk

Comparative effectiveness of lumber transportation by ship and
by rafts. Rech. transp. 24 no.11:6-8 '65.   (MIRA 19:1)

1. Gor'kovskiy institut inzhenerov vodnogo transporta (for Borisov).
2. TSentral'nyy nauchno-issledovatel'skiy institut lesosplava (for
Selivanov).

SELIVANOV, P.A.

New method of communication for main gas pipelines. Strei.pred.neft.prem.
1 no.1:11-13 Mr '56.   (MLRA 9:9)
(Has, Natural--Pipelines)(Telemetering)(Radio relay systems)

SELIVANOV, P.A., inzhener (Moskva)

Organization of communications on the Stavropol-Moscow gas pipeline.
Stroi.pred.neft.prom. 1 no.5:17-20 Jl '56.   (MLRA 9:9)
(Gas, Natural--Pipelines) (Radio relay systems)

SELIVANOV, P.A.

Some problems of economy for radio relay lines. Vest. sviazi
17 no.5:16-18 My '57.   (MLRA 10:5)

1. Glavnyy inzhener proyekta Gosudarstvennogo soyuznogo
proyektnogo instituta Ministerstva svyazi SSSR.
                (Radio relay systems)

SELIVANOV, P. A.

Molotovskaia GES i plotoperevozki na Kame. (The Molotov electric power station and raft traffic on the Kama river). (Rechnoi transport, 1947, no 5, p. 3-6; map, sketch).
DLC: TC601.R4

SO: Soviet Transportation and Communications, A Bibliography, Library of Congress, Reference Department, Washington, 1952, Unclassified.

SELIVANCV, F. A.

Lumber - Transportation

Transportation of timber along the Kama-Volga course. Les. prom. 12 no. 9, 1952.

9. Monthly List of Russian Accessions, Library of Congress, December 1952 1953, Uncl.

SELIVANOV, Petr Akimovich; SHCHERBINSKIY, Ya.N., red.; VALLAKH, T.G.,
        red.izd-va; BRATISHKO, L.V., tekhn.red.

    [Analysis of the economic operations of timber floating
    enterprises] Analiz khoziaistvennoi deiatel'nosti leso-
    splavnogo predpriiatiia. Moskva, Goslesbumizdat, 1959. 47 p.
                                (MIRA 12:6)
             (Lumber--Transportation)

SELIVANOV, P. A

> Urgent questions of labor organization and wages in timber work.
> Sots.trud 5 no.3:124-125 Mr '60.   (MIRA 13:6)
>
> 1. Vsesoyuznyy tsentral'nyy nauchno-issledovatel'skiy institut
> lesosplava, Leningrad.
>   (Lumbering--Transportation)

SELIVANOV, P.A., red.; PLESKO, Ye.P., red. izd-va; PARAKHINA, N.L.,
        tekhn. red.

    [Uniform working and evaluating norms in lumber floating]
    Edinye normy vyrabotki i rastsenki na lesosplave. Moskva,
    Goslesbumizdat, 1961. 135 p.   (MIRA 14:12)
                (Lumber—Transportation)

SELIVANOV, Petr Akimovich; NEFEDOV, S.I., red.; MIKHAYLOVA, L.G., red.
        izd-va; VDOVINA, V.M., tekhn.red.

    [Economic efficiency of the modern organization and technique
    of timber rafting] Ekonomicheskaia effektivnost' sovremennoi
    organizatsii i tekhniki lesosplava. Moskva, Goslesbumizdat, 1962.
    178 p.   (MIRA 16:6)
                    (Lumber—Transportation)

SELIVANOV, P. I.   IA 15120

USSR/Electricity   May 1 48
    Furnaces, Electric
    Controls, Electric

"Automatic Control of Electric Resistance Furnaces," V. V. Kudryavtsev, L. M. Ioffe,
L. P. Shvalev, F. I. Glushkov, P. I. Selivanov, E. S. Popov, Plant imeni Molotov,
Ministry of Armament, 1 p

"Prom Energet" No 5

Staff of above plant did not allow shortage of electric automatic controls to prevent
increased output. Designed and installed a thermacouple-potentiometer type system,
a circuit diagram of which is reproduced. Suggestion was awarded a fifth prize in
All-Union competition.

SELIVANOV, P.N., Inzh.

Formulas for the approximate calculation of the lengths and
azimuths of a long geodetic line. Izv. vys. ucheb. zav.; geod.
i aerof. no.2:51-55 '64.   (MIRA 17:9)

KULAKHMET'YEV, R.M., inzh.; BABINSKIY, A.Ya.; SELIVANOV, P.Ya.; ZAMAKHOVSKIY, L.I., kand.tekhn.nauk

Consultation. Tekst.prom. 21 no.2:86-89 Ja '61. (MIRA 14:3)

1. Gosudarstvennyy proyektnyy institut No. 1 (for Kulakhmet'yev).
   (Textile machinery)