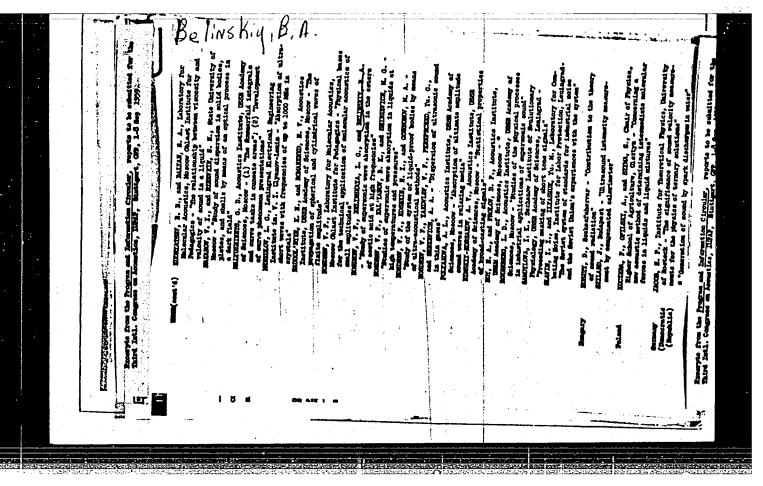SOV/58-59-5-11493

On the Theory of the Velocity Dispersion and Absorption Coefficient Dispersion of Ultrasonic Waves in Organic Acid Esters

observed in ethyl acetate in the 3 - 30 Mc frequency range and that the observed velocity and absorption coefficient dispersion of ultrasonic waves is determined by dispersion forces. The bibliography contains 6 titles.

B.B. Kudryavtsev

Card 2/2

Belinskiy, B.A.

BELINSKIY, B. A.: Master Phys-Math Sci (diss) -- "Investigation of the absorp -

tion of ultrasound in organic liquids by the impulse method at high frequencies".

Moscow, 1959. 17 pp (Moscow Oblast Pedagogical Inst im N. K. Krupskaya) (KL,

No 11, 1959, 114)

BELINSKIY, B.A.

PHASE I BOOK EXPLOITATION   SOV/5644

Vserossiyskaya konferentsiya professorov i prepodavateley pedagogicheskikh institutov

Primeneniye ul' traakustiki k issledovaniyu veshchestva. vyp. 10. (Utilization of Ultrasonics for the Investigation of Materials. no. 10) Moscow, Izd-vo MOPI, 1960. 321 p. 1000 copies printed.

Eds.: V. F. Nozdrev, Professor, and B. B. Kudryavtsev, Professor.

PURPOSE: This book is intended for physicists and engineers interested in ultrasonic engineering.

COVERAGE: The collection of articles reviews present-day research in the application of ultrasound in medicine, chemistry, physics, metallurgy, ceramics, petroleum and mining engineering, defectoscopy, and other fields. No personalities are mentioned. References accompany individual articles.

Card 1/10

26251
S/194/61/000/001/018/038
D216/D304

24.1600   1137, 2607

AUTHORS: Belinskaya, L.G. and Belinskiy, B.A.

TITLE: Energy losses in electrical and acoustical lines of
                pulse ultrasonic installations

PERIODICAL: Referativnyy zhurnal. Avtomatika i radioelektronika,
                no. 1, 1961, 14, abstract 1 E125 (V Sb. Primeneniye
                ul'traakust. k issled, veshchestva, no. 10, M.,
                1960, 255-263)

TEXT: The Laboratory of Molecular Acoustics of MOПИ (MOPI) is
investigating the absorption coefficient and the velocity of propa-
gation of ultrasonic waves in liquids in the frequency range from
a few to 200 Mc/s. A high-sensitivity receiver is being used, with
special matching to eliminate losses between the generator and the
receiver. The bloc-diagram of the receiver is given together with
the results of measurements and theoretical evaluation of losses
in acoustical and electrical lines. The results have confirmed the

Card 1/2

26251
S/194/61/000/001/018/038
D216/D304

Energy losses...

possibility of using the installation with liquids of the ethyl-
acetate type at values of the radiating quartz driving voltage of
the order of 10^{-4} v. The experimental data proves that the pertur-
bation theory can be applied for assessing the results of measure-
ments. 1 figure. 7 references.

Card 2/2

S/194/62/000/005/089/157
D222/D309

AUTHORS: Belinskiy, B.A., Vasil'yev, V.N., Karevskiy, V.A., and Savinikhina, A.V.

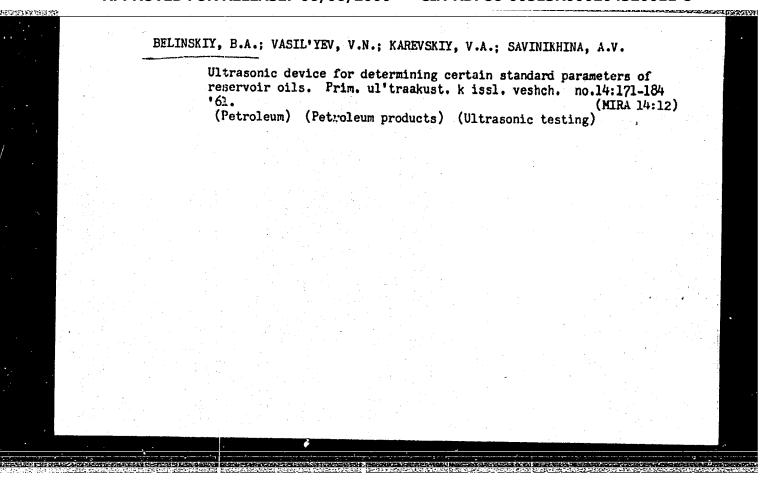TITLE: Ultrasound device for the measurement of some standard parameters of stratified liquids

PERIODICAL: Referativnyy zhurnal. Avtomatika i radioelektronika, no. 5, 1962, abstract 5-5-49 shch (V sb. Primeneniye ul'traakust. k issled. veshchestva, no. 14, M., 1961, 171 - 184)

TEXT: A small-sized ultrasound device is described, which is suitable for investigations related to the measurement of absorbtion and velocity of propagation of ultrasound oscillations under extremely varied physico-chemical conditions, in particular those relating to oil and oil products. The block diagram and the circuit diagram of the device are given. In order to determine the saturation pressure and crystallization temperature of paraffins it is sufficient to obtain data on the attenuation of ultrasound. The device has a thermostatically controlled vessel with two transducers, a pulse genera-

Card 1/2

BELINSKIY, B.A.; VASIL'YEV, V.N.; KAREVSKIY, V.A.; SAVINIKHINA, A.V.

Ultrasonic device for determining certain standard parameters of
reservoir oils. Prim. ul'traakust. k issl. veshch. no.14:171-184
'61.   (MIRA 14:12)
 (Petroleum) (Petroleum products) (Ultrasonic testing)

NOZDREV, V.F.; BELINSKIY, B.A.; KHABIBULLAYEV, P.K.

Ultrasonic wave absorption in a water - formic acid mixture.
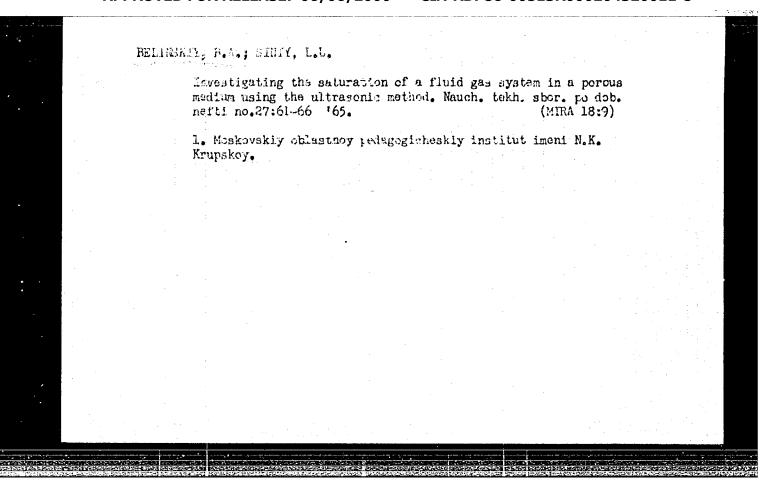Izv. AN Uz. SSR. Ser.fiz.-mat.nauk 7 no. 6:99-101 '63.
(MIRA 17:6)

1. Takhkentskiy gosudarstvennyy institut.

BELINSKIY, B.A.; NOZDREV, V.F.; KHABIDULLAYEV, P.K.

Absorption coefficient and the velocity of ultrasonic waves in mix-
tures water - formic acid. Akust. zhur. 9 no.4:482-484 '63.
(MIRA 17:3)

1. Moskovskiy oblastnoy pedagogicheskiy institut imeni Krupskoy.

KAREVSKIY, V.A.; VASIL'YEV, V.N.; BELINSKIY, B.A.; KOZOREV, V.P.

Small ultrasonic apparatus for the determination of the saturation
pressure and the crystallization temperature of paraffin. Nauch.-
tekh. sbor. po dob. nefti no.25:109-112 '64.

(MIRA 17:12)

1. Vsesoyuznyy neftegazovyy nauchno-issledovatel'skiy institut.

BELINSKIY, B.A.; SINIY, L.L.

Investigating the saturation of a fluid gas system in a porous
medium using the ultrasonic method. Nauch. tekh. sbor. po dob.
nefti no.27:61-66 '65.   (MIRA 18:9)

1. Moskovskiy oblastnoy pedagogicheskiy institut imeni N.K.
Krupskoy.

L 7653-66   EWT(d)/EPA(s)-2/EWT(m)/EPF(n)-2/EWP(c)/EWP(v)/T/EWP(t)/EWP(k)/
             EWP(b)/EWP(l)/ETC(m)   JD/WW/JG

ACC NR: AP5025063   SOURCE CODE: UR/0286/65/000/016/0108/0108

AUTHORS: Belinskiy, B. A.; Siniy, L. L.

ORG: none

TITLE: Impulse ultrasonic apparatus for investigating porous media. Class 42,
No. 174016 [announced by Moscow Oblast Teachers Institute im. N. K. Krupskaya
(Moskovskiy pedagogicheskiy institut)]

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 16, 1965, 108

TOPIC TAGS: ultrasonic equipment, ultrasonics, ultrasonic wave propagation,
ultrasound absorption

ABSTRACT: This Author Certificate presents an impulse ultrasonic apparatus for
investigating porous media (see Fig. 1). The apparatus contains a generator of
electrical video-impulses, a receiver, recording equipment, and a measuring cham-
ber with the investigated medium with two piezoconverters and with ultrasound
retardation lines. To eliminate the influence of the tube wave on the measurement
readings and to facilitate measuring the amplitude-phase characteristics of the
investigated media, the ultrasound retardation lines are provided with sound

Card 1/2   UDC: 534-8.002.56

L 7653-66

ACC NR: AP5025063

Fig. 1.

absorbing cylinders, while the recording equipment is connected in parallel to the narrow-band output filter of the receiver. Orig. art. has: 1 figure.

SUB CODE: 20 / SUBM DATE: 12Oct64.

Card 2/2

SINIY, L.I.; BELINSKIY, B.A.; NOZDREV, V.F.

Methods for determining the phase composition of gas-liquid systems in a porous medium. Zav.lab. 31 no.4:467-468 '65.
(MIRA 18:12)

1. Moskovskiy oblastnoy pedagogicheskiy institut im. N.K. Krupskoy.

L 47330-66   EEC(k)-2/EWT(1)/EWT(m)/EWP(j)/T/EWP(k)   IJP(c)   RTW/RM/WG/

ACC NR: AR6025780   SOURCE CODE: UR/0058/66/000/004/E011/E011

AUTHOR: Belinskiy, B. A.; Khabibullayev, P. K.

TITLE: Determination of the effective relaxation time in binary mixtures

SOURCE: Ref. zh. Fizika, Abs. 4E79

REF. SOURCE: Tr. 1-y Mezhvuz. nauchn. konferentsii po primeneniyu molekul akust. i issled. veshchestva i v nar. kh-ve. Tashkent, 1964, 139-142

TOPIC TAGS: relaxation process, formic acid, binary mixture, collision

ABSTRACT: To determine the effective relaxation frequency of the investigated mixture of formic acid and ethyl formiate, the following empirical formula is proposed:

$$v_{eff} = [bv_{AA} + (1-b)v_{BB}] - b(1-b)[bv_{AA} + (1-b)v_{BB}],$$

where v_{AA} is the relaxation frequency of the component A, v_{BB} the relaxation frequency of component B, and b is the concentration. This expression was obtained under the assumption that the effective frequency of the relaxation of binary mixture is determined by collisions of type AA and BB, while collisions of the type AB and BA are ineffective in the relaxation process under consideration. The values of v_{eff} calculated by the proposed formula are in satisfactory agreement with the experimental data. A. Osir . /Translation of abstract/

Card 1/1   SUB CODE: 20

L 45804-66   EWT(1)/T/EWP(k)   JW

ACC NR: AR6023306

SOURCE CODE: UR/0058/66/000/003/H071/H072

AUTHOR: Normatov, A.; Nozdrev, V. F.; Belinskiy, B. A.

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B

TITLE: Investigation of the coefficient of absorption and propagation velocity of ultrasonic waves in the quaternary system acetic acid — ethyl acetate — ethyl alcohol — water

SOURCE: Ref zh. Fizika, Abs. 3Zh499

REF. SOURCE: Tr. 1-y Mezhvuz. nauchn. konferentsii po primeneniyu molekul. akust. k issled. veshchestva i v nar. kh-ve. Tashkent, 1964, 161-164

TOPIC TAGS: ultrasonic velocity, ultrasound absorption, aqueous solution, absorption coefficient, temperature dependence, acetic acid, frequency characteristic, relaxation process

ABSTRACT: An investigation was made of the coefficient of absorption and the velocity of ultrasound in a system consisting of acetic acid (79.2%), ethyl acetate (0.8%), ethyl alcohol (20%), and 1 — 80% water added. The component liquids were subjected to chemical purification. The accuracy of measurement of the absorption coefficient was from 5 to 2% at frequencies 5 — 85 Mcs, that of the velocity was 0.3%, and that

Card 1/2

Card 2/2

L 04092-67   EWP($)/EWT(1)/T

ACC NR: AR6023290   SOURCE CODE: UR/0058/66/000/003/H068/H068

AUTHOR: Belinskiy, B. A.

TITLE: Elements of ultrasonic spectroscopy

SOURCE: Ref zh. Fizika, Abs. 3Zh472

REF SOURCE: Tr. 1-y Mezhvuz. nauchn. konferentsii po primeneniyu molekul. akust. k
issled. veshchestva i v nar. kh-ve, Tashkent, 1964, 105-111

TOPIC TAGS: ultrasonic spectroscopy, vibration spectrum, acoustic resonance, excited
state, excitation spectrum, sound absorption

ABSTRACT: In the Debye-Born theory the equilibrium state of a solid body is char-
acterized by a set of acoustic oscillations with a definite spectrum (resonant-
frequency spectrum). There are grounds for assuming that the same concept can be ap-
plied to gases and liquids up to a certain degree. The nonequilibrium state caused
by the interaction of the "external" acoustic field is characterized not only by the
resonant-frequency spectrum, but also by the spectrum of the frequencies corresponding
to the probabilities of different transitions of the system to excited and unexcited
states. A way of establishing the connection between the coefficients of absorption
of the "external" sound on these spectra is then pointed out. In the author's opinion,
this can be done by sending into the medium a signal with a broad spectrum and investi-
gating the energy spectrum of the signal transmitted through the medium. L. Zarembo.
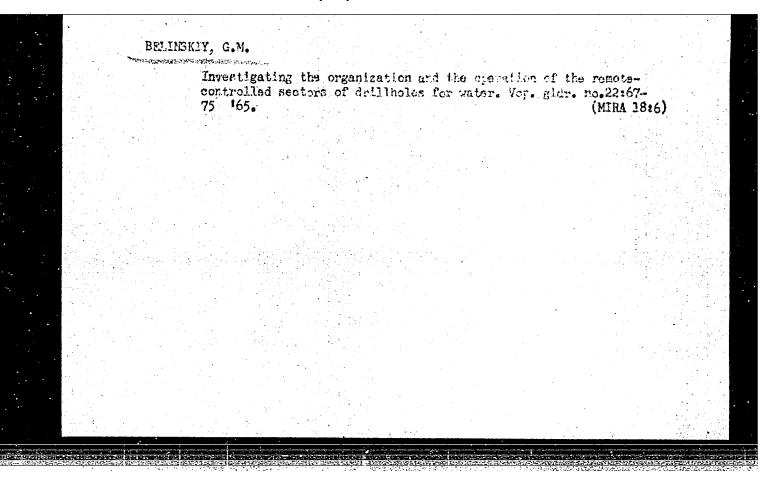[Translation of abstract]

SUB CODE: 20
           kh

Card 1/1

L 04085-67   EWT(1)/EWT(m)   GG/WW

ACC NR: AR6023299   SOURCE CODE: UR/0058/66/000/003/H070/H070

AUTHOR: Khodzhayev, S. A.; Belinskiy, B. A.

TITLE: Universal automatic apparatus for high-speed measurements of different parameters of liquids

SOURCE: Ref zh. Fizika, Abs. 3Zh486

REF SOURCE: Tr. 1-y Mezhvuz. nauchn. konferentsii po primeneniyu molekul. akust. k issled. veshchestva i v nar. kh-ve. Tashkent, 1964, 209-213

TOPIC TAGS: liquid property, ultrasonic equipment, ultrasonic velocity, ultrasound absorption, fluid viscosity measurement, dielectric constant, dielectric loss, automatic machine/ TS-24 thermostat

ABSTRACT: An automatic pulsed ultrasonic installation has been developed for the measurement of the absorption coefficient, ultrasound velocity, shear viscosity, dielectric constant, and tangent of the dielectric-loss angle. The hydraulic unit of the apparatus consists of an autoclave, a manometer, a press, and a device for pumping out the air and filling with the investigated liquid. The electronic unit serves to measure and automatically record these parameters. A diagram of the longitudinal cross section of the autoclave and a block diagram of the complete apparatus are presented. The quartz radiator is located outside the autoclave, and the ultrasonic oscillations are introduced into the autoclave through an acoustic delay line. The autoclave operates with the viscosimeter piston in a vertical position. As the piston

Card 1/2

L. 04085-67

ACC NR: AR6023299   0

is lowered, continuous measurements are made of its position and descent time, the
amplitude of the reflected ultrasonic pulse, and the time of its delay. The autoclave
is contained in a liquid thermostat, the thermal conditions of which are regulated by
an instrument of the TS-24 type. The velocity of ultrasound is determined by the
pulsed delay method in an acoustic chamber. Measurement of the capacitance of the
cylindrical capacitor placed in the autoclave is by a resonance method with zero-beat
indication. The installation permits automatic and continuous measurement and record-
ing of the parameters of the investigated liquid at pressures 0 - 500 atm and temper-
atures 10 - 200C. I. Nikolayeva. [Translation of abstract]

SUB CODE: 20

kh

Card 2/2

BELINSKIY, G., aspirant

Pay more attention to marine piping. Mor. flot 25 no.3:32 Mr '65.
(MIRA 18:4)

BELINSKIY, G., inzh.

Mass-produced ships need repair brigades. Mor. flot 25 no.7:30-31
Jl '65.   (MIRA 18:7)

BELINSKIY, G.M.

Investigating the organization and the operation of the remote-controlled sectors of drillholes for water. Vop. gidr. no.22:67-75 '65. (MIRA 18:6)

PELINSKIY, I.

A matter of great importance. Sov.profsoiuzy 16 no.17:20-21
S '60.   (MIRA 13:8)
                    (Telegraph)

BELINSKIY, I.

The 1960 standard of labor productivity is surpassed. Sov.
profsoiuzy 7 no.8:17-19 Ap '59.   (MIRA 12:7)
     (Textile workers) (Labor productivity)

BELINSKIY, I. (Poselok Oktyabr'skiy, Moskovskoy obl.

Accodding to one's own wish... Sov. profsoiuzy 18 no.18:25-26
S '62.   (MIRA 15:9)

1. Spetsial'nyy korrespondent zhurnala "Sovetskiye profsoyuz".
        (Oktybriskiy (Moscow Province)--Textile industry)

BELINSKIY, I. (Khar'kov)

The trade-union group corner. Sov. profsoiusy 18 no.24:21-22
D '62.   (MIRA 16:1)

1. Spetsial'nyy korrespondent zhurnala "Sovetskiye profsoyusy"

(Wall newspapers)

LUZIN, Yu., inzh.; BELINSKIY, I., inzh.

Reinforced concrete crane girders with 12 spans under cranes
with a 50-75 t. lifting capacity. Prom. stroi. i inzh. soor 5
no.5:35-40 S-O '63.   (MIRA 16:12)

GLUSHCHENKO, P.M., inzh.; KRYAKOVTSEV, G.F., master-vzryvnik (g. Kadiyevka,
     Donbass); BELINSKIY, I.; RUDENKO, I., rayonnyy gornotekhnicheskiy
     inspektor; OL'KHOVSKIY, A.

     Readers' letters. Bezop truda v prom. 7 no.4:37 Ap '63.
                                             (MIRA 16:4)

     1. Biyskiy kotel'nyy zavod (for Glushchenko). 2. Glavnyy inzh.
     shakhty im. Lutugina (for Belinskiy). 3. Obshchestvennyy
     inspektor okhrany truda, shakhta 18 bis, tresta Yemanzhelimugol'
     (for Ol'khovskiy).
                         (Industrial safety)

LIBERMAN, A.D., kand.tekhn.nauk; BELINSKIY, I.A., inzh.

Insulated wall slabs with a length of 12 m. Prom.stroi. 40
no.8:50-53   '62.   (MIRA 15:11)
                    (Concrete walls)

LIBERMAN, Al'fred Davidovich; KORSHUNOV, Dmitriy Andreyevich;
  RUBACH, Ol'ga Mikhaylovna; BELINSKIY, Igor' Alekseyevich;
  KIYANICHENKO, N.S., red.; [illegible], red.

[Large reinforced concrete structures in industrial
construction] Krupnorazmernye zhelezobetonnye konstruktsii
v promyshlennom stroitel'stve; iz opyta stroitel'stva me-
khanosborochnogo korpusa zavoda stankov-avtomatov im.
Gor'kogo v Kieve. Kiev, Gos.izd-vo lit-ry po stroit. i
arkhit. USSR, 1963. 49 p.   (MIRA 16:9)
      (Precast concrete construction)

BELINSKIY, I.A., inzh.

Permissible sags in reinforced concrete roof trusses in buildings with overhead conveying systems. Prom. stroi. 42 no.9:24-26 S '64.
(MIRA 17:10)

BELINSKIY, I.A., inzh.

Calculating reinforced concrete trusses taking into account the rigidity of units during the prolonged action of a load. Stroi. konstr. no.2:122-127 '65.   (MIRA 18:12)

1. Nauchno-issledovatel'skiy institut stroitel'nykh konstruktsiy Gosstroya SSSR, Kiyev.

BELINSKIY, I.A., inzh.

Deformations of reinforced concrete truss girders caused
by concrete shrinkage. Stroi.konstr. no.1:134-140 '65.
(MIRA 19:1)

1. Nauchno-issledovatel'skiy institut stroitel'nykh
konstruktsiy Gosstroya SSSR, Kiyev.

BELINSKIY, I.L., gornyy inzhener.

Relation between drift timbering costs and their cross-sections.
Ugol' 31 no.10:20-21 O '56.   (MLRA 9:11)

1. Shakhta imeni Intugina.
   (Mine timbering--Costs)

Belinskiy I. Ye

BARSHTEYN, I.K., kand.tekhn.nauk; BELINSKIY, I.Ye., inzh.

Operational characteristics of the 1050/400 mill ventilator
designed by the Central Scientific Research Institut for
Boilers and turbines. Energomashinostroenie 3 no.12:16-21
D '57.
(MIRA 11:1)

(Drying apparatus)

DELINSKIY, I.Ye.

AUTHOR: Barshteyn, I.K., Candidate of Technical Sciences, and 310
             Belinskiy, I.E., Engineer.

TITLE: Experience of burning high moisture content brown coals in
             a boiler installation equipped with pulverising fans. (Opyt
             szhiganiya vysokovlazhnykh ugley v kotel'noy ustanovke
             oborudovannoy melyushchimi ventilyatorami.)

PERIODICAL: "Energomashinostroenie", (Power Machinery Construction),
             1957, No. 5, pp. 10 - 14, (U.S.S.R.)

ABSTRACT: This article describes the results of tests on a boiler
             equipped with a pulverised fuel preparation system including
             pulverising fans developed by the Central Boiler and Turbine
             Institute. The equipment is in the KRES Power Station (Kiev
             Regional Power Station?). Boiler No. 4 of the KRES station
             manufactured by the "Rota" Company was reconstructed and has
             a designed steam output of 40 tons per hour with a drum
             pressure of 31 atm and a super-heated steam temperature of
             400 °C. The heating surface of the boiler is 462 m^2, of the
             super-heater 182 m^2, of the water economiser 492 m^2 and of the
             air heater 2 240 m^2. Other furnace data are also given. The
             pulverised fuel preparation system consists of three indepen-
             dent dust systems with pulverising fans. Coal from a bunker
             is delivered to drying shafts by drum-scraper feeders. In the
             drying shafts the fuel receives preliminary drying by gases
             drawn from the furnace because of suction set up by the
             pulverising fans, From the drying shafts the gas-fuel flow

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Experience of burning high moisture content brown coals in
a boiler installation equipped with pulverising fans. (Cont.)

passes through the pulverising fans in which the fuel is
pulverised and is intensively dried. It then passes to the
burners. The pulverising fans have a rotor of 1 050 mm diameter
with a blade width of 400 mm and height of 200 mm. The fan is
driven at 1 460 r.p.m. by a 115 kW motor.
    The main fuel of the power station is Aleksandriysk brown
coal produced by opencast working. The coal contains a high
proportion of fines and a comparatively small quantity of
large pieces and is low mechanical strength. The ash content
varies from 22 - 38%, the moisture content from 50 - 56% and
the calorific value is 1 500 - 2 000 kcal/kg. The ash is of
high temperature characteristic.
    Operational observations and tests made during initial
setting-up reveal the following special features of operation:
Ukrainian brown coals cause difficulties in the fuel supply
lines only under winter conditions. When the frost is hard,
the coal freezes in the stacks and the upper layer of fuel has
to be broken up by hand. There being no crushers the large
lumps of frozen fuel are troublesome and delivery of coal to
the pulverising fans is uneven. The magnetic metal separator
did not operate well so that damage was caused to the pulver-
ising fans. As the blades of the pulverising fans did not
last long, and the rotors frequently became unbalanced, the
Central Boiler and Turbine Institute has recently re-designed

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Experience of burning high moisture content brown coals in a boiler installation equipped with pulverising fans. (Cont.)

required to move it. Although the scraper-drum feeder generally operated satisfactorily the absence of preliminary crushing of the coal greatly interfered with its normal operation. When pulverising fans are used the need for crushing should be carefully considered. The gas dampers on the front wall of the furnace did not work well. The short distance between the gas intake apertures (from the furnace to the drying shaft) and the burners, which was about 2.5 m causes the temperature of the tapped-off gases to vary widely depending on the operating conditions of the boiler. A graph is given showing that this temperature can range from about 800 to 1 100 $^{\circ}$C. Therefore, the gas intakes should be located in the upper part of the furnace at a sufficient height above the burners. The horizontal gas pipes from the front of the furnace to the drying shafts are constantly clogged with ash and slag and require frequent cleaning. Appropriate arrangements should be made to prevent this.

Balancing tests were carried out when burning normal Aleksandriysk coal and also coal of lower quality with increased ash content and reduced calorific value. During the tests the fuel properties varied within the limits of: water- 48.9 - 56.7%; ash 13.0 - 18%; calorific value 1 390 - 1 829 kcal/kg. The quantity of hot air passed to the drying shafts was 20 - 25% of the total air consumption of

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Experience of burning high moisture content brown coals in
a boiler installation equipped with pulverising fans. (Cont.)

the furnace. The tests confirmed the possibility of ensuring
reliable and economic combustion of the coal. With the high
ash coal the burner flame commenced rather a long way from
the embrasure but combustion remained steady. A graph is
given of the thermal losses and efficiency of the boiler as
a function of the steam load and it is shown that the
efficiency is practically independent of the load. There were
large leakages of air into the furnaces, mainly through the
fuel feeders because of leaks in the gas ducts from the
furnace to the drying shafts near the slag funnels and at
places where the screen tubes pass through the lining. With
a steam load of 40 t/h the temperature of the outgoing gases
is only 185 $^{\circ}$C. However, because of the high moisture content
of the fuel the heat loss with the outgoing gases was consider-
able and ranged from 12 - 16%. When burning normal fuel there
was no loss of heat because of chemically incomplete combustion
but with the low quality coal this loss was from 0.4 - 1.4%
even with considerable excess air. A graph is plotted of the
electric power consumption related to a ton of steam against
boiler output and with an output of 40 t/h it is 8.6 kWh/ton.
It is concluded that in addition to giving reliable combustion
of Aleksandriysk coal the installation equipped with

Experience of burning high moisture content brown coals in
a boiler installation equipped with pulverising fans. (Cont.)

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the fan construction. The milling parts have been considerably
strengthened and made of wear-resistant materials, and
protective linings on the milling blades can be replaced
without withdrawing the rotor. Operating experience and tests
on the boiler under different conditions show that stable
combustion of Aleksandriysk brown coal with a moisture content
of up to 33% is achieved even in winter conditions and with-
out a crusher. Combustion was stable even at loads of
40 - 50% with only one pulverising fan in operation. During
operation it was never necessary to light the fuel oil
burners and there were no enforced stoppages because of fuel
supply or combustion difficulties. Very little slag was
formed in the furnace. Experiments which were carried out
confirmed the advisability of supplying hot air to the drying
shafts with a somewhat increased oxygen content compared with
the furnace gases. It was also found that losses due to
incomplete combustion are very dependent on the excess air
factor; the results are plotted on a graph.
    In new designs account should be taken of the following
defects that appeared in various parts of the equipment:
If the bunkers are filled to more than a third of their capa-
city the coal is not delivered continuously. The coal shutter
of the damper type is inconvenient because great force is

Experience of burning high moisture content brown coals[310] in
a boiler installation equipped with pulverising fans. (Cont.)

pulverising fans is of comparatively high economy. At rated
load, the efficiency of the boiler is 97%. The gross effici-
ency of the boiler set when burning coal of normal quality at
the rated load on the boiler is 82.5% and the nett efficiency
with two milling systems working is 77%. The positive results
of burning high moisture content brown coal in a furnace
equipped with pulverising fans makes it possible to recommend
wide application of these installations on small and medium
sized boilers. The limiting value of the relative moisture
content of coal that can be burnt reliably and with efficient
economy in these installations is up to 36%. Work on the
improvement of pulverising fans should be continued.

7 figures, no literature references.

BELINSKIY, L.

Innovations in Chistiakovo mines. Mast.ugl.5 no.11:3-6 N '56.
(MIRA 10:1)

1. Glavnyy inzhner tresta Chistyakovantratsit.
(Donets Basin--Coal mines and mining)

BELINSKIY, L.I.; DEMINA, N.V.; ROMANOVA, L.S.

Automatic air conditioning unit for laboratories. Tekst. prom.
18 no.9:49-51 S '58.   (MIRA 11:10)
        (Testing laboratories--Air conditioning)

AUTHORS: Belinskiy, L. I., Al'ter-Pesotskiy,   S/183/60/000/01/024/031
             F. L.   B004/B014

TITLE: The Inertia of Indicators of the System of Temperature Regulation
             Which Are Protected by Chemically Resistant Coatings 16

PERIODICAL: Khimicheskiye volokna, 1960, Nr 1, pp 63-64 (USSR)

TEXT: ETM-Kh resistance thermometers are protected from corrosion by coatings.
The authors studied the effect of such coatings on the delay of temperature
indication. They studied coatings made of bakelite lacquer (0.03 cm), poly-
ethylene (0.03 cm), lead (0.25 cm), ebonite (0.3 cm), and viniplast (0.4 cm).
The delay constant was measured by taking the thermometers out of a medium of
20° and dipping them into media of 60° and 100°, and by determining the time
passed until the temperature was exactly indicated. The temperature of the
resistance thermometer was recorded by an electronic measuring bridge of the
type EMD-237. A table gives the thermal conductivity of the protective coatings,
and figures 1 and 2 illustrate experimental results. It is noted that coatings
made of bakelite, polyethylene, or lead do not produce an additional delay of
temperature indication, whereas the inertia of the indicator is increased by
ebonite and viniplast, due to the larger thickness of such coatings. There are
2 figures, 1 table, and 3 references, 2 of which are Soviet.

Card 1/2

The Inertia of Indicators of the System of
Temperature Regulation Which Are Protected by
Chemically Resistant Coatings

S/183/60/000/01/024/031
B004/B014

ASSOCIATION: VNIIV (Vsesoyuznyy nauchno-issledovatel'skiy institut
              iskusstvennogo volokna - All-Union Scientific Research Institute
              for Synthetic Fibers)

Card 2/2

S/119/60/000/010/009/014/X
B012/B063

AUTHORS: Belinskiy, L. I., Engineer, Pikorskiy, A. I., Engineer

TITLE: A Semiconductor Electrothermometer

PERIODICAL: Priborostroyeniye, 1960, No. 10, pp. 22 - 23

TEXT: The measuring bridge circuit of an electrothermometer with a constant feeding source, shown in Fig. 1, was tested at the laboratoriya avtomatiki i KIP Nauchno-issledovatel'skogo instituta iskusstvennogo volokna (Laboratory of Automation and Control and Measuring Instruments of the Scientific Research Institute for Synthetic Fibers). A microammeter is used for indication. Fig. 2 shows the electrothermometer, and its technical data are given. This quick-acting instrument was developed on the basis of the MT-54 (MT-54) microthermistor designed by Karmanov, and is intended for measuring temperatures between $0°$ and $100°C$. The small dimensions of the transmitter permit temperature measurement even at difficultly accessible points. This semiconductor electrothermometer has an error in measurement of $\pm 0.5°C$ between $0°$ and $50°C$. There are 2 figures.

Card 1/1

BELINKIĬ, L. M. and I. F. SOLDATOV.

Dvigateli tiazhelogo topliva i aviatsii; pod red. A. I. Tolstova. Moskva, Oborongiz, 1944. 55 p. illus.

(Heavy-oil engines and aircraft motors.)

DLC: TE702.23B46

SO: Manufacturing and Mechanical Engineering in the Soviet Union, Library of Congress, 1953

BELINSKIY, L.M.

3857.   QUICK EXCHANGE OF GUIDE RODS IN VERTICAL SHAFT. Shakin,E. M.
and Belinskii, L. M. (Ugol) (Coal), Nov. 1950, 32-33). This paper
describes how the careful organization of work enabled four guide rods
(604 m. total length) to be changed in 32 hours (although 48 hours were
available), when the operation would normally have taken 100-150 hours.
                                                                    M. C. B.
(L)

BELINSKIY, L. M.

USSR/ Mining

Card 1/1

Authors   : Belinskiy, L. M., Mining Engineer

Title   : Basic difficulties in constructing a special frontal unit

Periodical   : Mekh. Trud. Rab., 2, 31 - 32, March 1954

Abstract   : Author describes the four basic difficulties involved in the construc-
                  tion of a special frontal unit for coal mining. Giving the Chistyako-
                  vantratsit mine as an example he points out that the exploitation of
                  such a machine requires more workers and time consuming labor and the
                  gain in the extraction of coal is insignificant.

Institution   : .....

Submitted   : .....

BELINSKIY, M.A., brigadir puti (stantsiya Tayncha Kazakhskoy dorogi); YUDIN,
V.D., dorozhnyy master (stantsiya Kantemirovka Yugo-Vostochnoy dorogi);
KHIDIROV, A., brigadir puti (stantsiya Krasnovodsk, Ashkhabadskoy
dorogi)

How to plan maintenance operations. Put' i put.khoz. no.1:20
Ja '59.   (MIRA 12:2)
            (Railroads--Maintenance and repair)

BELINSKIY, M.L.

NEKRASOVSKIY, Ya.E., professor; LOKSHIN, B.S., dotsent; BELINSKIY, M.L.,
aspirant; SHITKO, A.A.

Protective bore bit for the boring of raising shafts in steeply
pitching coal seams where coal and gas outbursts are likely to
occur. Izv. DGI no.24:50-64 '55.   (MLRA 10:2)

(Boring machinery) (Coal mines and mining--Safety measures)

BELINSKIY, M.L., gorn.inzh.

Preliminary degasification of a seam being mined. Izv. DGI
31:241-244 '58.   (MIRA 11:7)
   (Mine gases)   (Coal mines and mining—Safety measures)

CA

14

The purification of waste waters of magnesia production. M. L. Belinskii. Vodosnabzhenie Sanit. Tekh. 1939, No. 4-5, 9.—Ibid. Khim. Referat. Zhur. 1939, No. 9, 79, 80).—The proposed purification of waste waters from MgO manuf. consists of mech. purification (with settlers for the removal of MgO) carried away by the water) and of chem. purification (treatment with lime to remove Mg and with NaOH to utilize the Mg in the ppt.). The consumption of CaO for each cu. m. of the waste liquid after settling was 21 kg. Approx. 70 kg. of dry residue was obtained which was a mech. mixt. of chalk, gypsum and MgO. The consumption of NaOH for each cu. m. of the waste liquid was 30 kg. Approx. 24 kg. of residue was obtained which consisted of Mg(OH), 95.75% and MgCO₃ 3.5%. This can be used as the initial product. Calcns. of the cost of the purification are given.   W. R. Holm

A58-3CA   METALLURGICAL LITERATURE CLASSIFICATION

Copper-containing wastes and the conditions for their introduction into water reservoirs. M. L. Belinskii, *Vodosnabzhenie Sanit. Tekh.* 14, No. 9, 56 (1939); *Chem. Zentr.* 1940, I, 1401.—Sewage from the manuf. of rayon by the Cu process can be biologically purified as such if it contains no Cu. Such wastes contg. Cu can be run into reservoirs where too high a Cu content (toxic Cu content) can be reduced by treatment with Fe, with C. contg. zeolite (Zeocarb) or with $Al_2(SO_4)_3$.   M. G. M

Sewage waters of a medicinal cotton factory. M. L. Belinskii.—*Vodosnabzhenie i Sanit. Tekh.* 15, No. 5, 48-53 (1940).—Problems involved in the disposal of the various acid, alk. and Cl wastes.   B. Gutoff

CA

Sewage waters of the linen combines M. I. Behm-
skii. *Industrialno Stal.* Febh 15, No.
tion." Purification of the sewage waters of linen
combine. *Ibid.* No. 10-11, tip. 23. The special problems
involved, detailed analyses of the different liquors and
methods of treatment are given.   R. Catroll

PROCESSES AND PROPERTIES INDEX

METALLURGICAL LITERATURE CLASSIFICATION

BELINSKIY, M.

4456. Iz opyta raboty shakht tresta ((chistya kovantratsii)). Stalino, obl. izd., 1954. 60 s. s chert; 4 L. chert. 20 SM. (Nito i dom inzhenerai tekhnika kombinata ((Stalinugol'))). 5.000 ekz. ir. 20k. - (55-562) P

622.333:685.5

SO: Knizhnaya Letopsis', Vol. 1, 1955

Belinskiy, M.L.

USSR /Chemical Technology. Chemical Products   H-5
        and Their Application
        Water treatment. Sewage water.

Abs Jour: Referat Zhur - Khimiya, No 1, 1958, 1792

Author : Karelin Ya. A., Belinskiy M.L.

Title   : Sewer Systems at Petroleum Production Bases

Orig Pub: Vodosnabzheniye i san. tekhnika, 1956, No 11,
          13-17

Abstract: At petroleum production bases 2 sewer systems
          are planned: an industrial and storm sewer sys-
          tem and a household system. In the industrial
          and storm sewer system are installed 2 sectional
          petroleum traps, from which the sewage water
          passes into ponds. If the sewage water contains
          tetraethyl lead the latter is extracted with the
          lightest aviation gasoline containing no ethyl

Card 1/2

USSR /Chemical Technology. Chemical Products   H-5
    and Their Application
    Water treatment. Sewage water.

Abs Jour: Referat Zhur - Khimiya, No 1, 1958, 1792

        lead. After extraction the sewage water is
        allowed to settle for 10-20 hours.

Card 2/2

BELINSKIY, M. L., Cand Tech Sci -- (diss) "Determination of
basic elements of the ~~working~~ of working strata with high gas
content under conditions of Chistyakovskiy and Shakhterskiy
Rayons of Donbass." Dnepropetrovsk, 1958. 20 pp (Min of
Higher Education Ukr SSR. Dnepropetrovsk Order of Labor Red
Banner Mining Inst im Artem. Chair of Working of Stratified
Deposits), 100 copies (KL, 35-58, 107)

-29-

TITKOV, V.I.; BELINSKIY, M.L.; BUNCHUK, V.A.; BUT, P.P.; VINOGRADOV, A.F.;
        KOFMAN, S.R.; KUKUSHKINA, R.N.; MATSKIN, L.A.; MOSKAL'KOV, I.I.;
        MISHIN, B.V.; NADEZHDIN, M.D.; OLENEV, N.M.; ROZEN, S.N.; NOVIKOVA,
        vedushchiy red.; TROFIMOV, A.V., tekhn.red.

        [Handbook on oil tank equipment] Spravochnik po oborudovaniiu
        neftebaz. Moskva, Gos.nauchno-tekhn.izd-vo neft. i gorno-toplivnoi
        lit-ry, 1959. 463 p.   (MIRA 12:12)
                        (Petroleum--Storage)

KARELIN, Ya.A.; BELINSKIY, M.L.

Sewerage schemes for sites of main line pumping stations. Vod.
i san.tekh.   no.3:15-18 Mr '59.   (MIRA 12:2)
          (Pumping stations)   (Sewerage)

PHASE I BOOK EXPLOITATION   SOV/5198
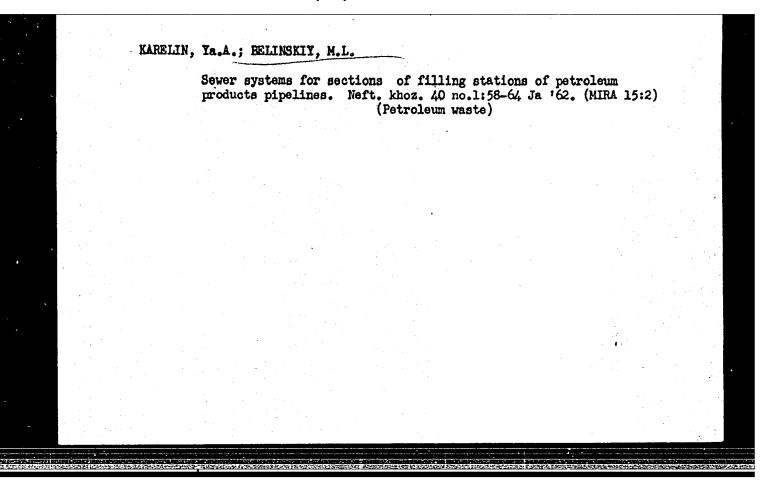
Titkov, V. I., ed.

Spravochnik po oborudovaniyu neftebaz (Manual on Petroleum Storage
    Depot Equipment) Moscow, Gostoptekhizdat, 1959. 463 p. 5,600
    copies printed.

Authors: M. L. Belinskiy, V. A. Bunchuk, P. P. But, A. F.
    Vinogradov, S. R. Kofman, R. N. Kukushkina, L. A. Matskin,
    I. I. Moskal'kov, B. V. Mishin, M. D. Nadezhdin, N. M. Olenev,
    S. N. Rozen, and V. I. Titkov; Scientific Ed.: M. P. Novikova;
    Tech. Ed.: A. V. Trofimov.

PURPOSE: This book is intended for engineers and technicians work-
    ing in the field of transportation and storage of petroleum and
    petroleum products.

COVERAGE: The manual includes data on equipment used in loading
    and unloading, storage, and transfer of petroleum and petroleum
    products on tank farms. The characteristics of tanks and

Card 1/5

KARELIN, Ya.A.; BELINSKIY, M.L.

Sewer systems for sections of filling stations of petroleum
products pipelines. Neft. khoz. 40 no.1:58-64 Ja '62. (MIRA 15:2)
(Petroleum waste)

ROMENSKIY, L.P., kand.tekhn.nauk; FES'KOV, M.I., gornyy inzh.; BELINSKIY, M.L., kand.tekhn.nauk

Planning and design of ventilation in the reorganization of Donets Basin mines. Ugol' Ukr. 6 no.9:19-21 S '62.   (MIRA 15:9)

1. Kommunarskiy gorno-metallurgicheskiy institut (for Romenskiy, Fes'kov). 2. Shakhta No.1 "Krasnaya Zvezda" Chistyakovskogo tresta predpriyatiy ugol'noy promyshlennosti Donbassa Ministerstva ugol'noy promyshlennosti SSSR (for Belinskiy).
                    (Donets Basin—Mine ventilation)

BELINSKIY, M.S.; AKINFIYEV, B.F., otv.red.; KOKOSOV, L.V., red.; KARABILOVA, S.F., tekhn.red.

[Using precast reinforced concrete access pits in connection with automatic telephone stations] Sbornye zhelezobetonnye kolodtsy na stroitel'stve ATS. Moskva, Gos. izd-vo lit-ry po voprosam sviazi i radio, 1958. 43 p.   (MIRA 12:1)
      (Precast concrete construction) (Telephone cables)

ALFIMOVA, Irina Alekseyevna; BLEKHER, Polina Moiseyevna; ZAYTSEVA,
     Antonina Ivanovna; BELINSKIY, M.Ya., redaktor; KUZ'MIN, D.G.,
     tekhnicheskiy redaktor

[Problems in turning] Zadachnik po tokarnomu delu. Moskva, Vses.
uchebno-pedagog. izd-vo Trudrezervizdat, 1956. 162 p.   (MIRA 9:9)
        (Turning)

BELINSKIY, M. YA.

VZOROV, Nikolay Mikhaylovich; RESPAL'KO, Aleksandr Grigor'yevich; BELINSKIY, M.Ya., redaktor; OSTRIKOV, N.S., tekhnicheskiy redaktor

[Collection of problems in engineering mechanics] Sbornik zadach po tekhnicheskoi mekhanike. Moskva, Vses.uchebno-pedagog. izd-vo Trudrezervizdat, 1957. 159 p.   (MIRA 10:10)
        (Mechanics, Applied--Problems, exercises, etc.)

N. A. BELINSKIY

"Approximate Method for Calculating a Resonator of Complex Form for a Given Wave length" from Annotations of Works Completed in 1955 at the State Union Sci. Res. Iust: Min. of Radio Engineering Ind.

So: B-5,080,964

BELINSKIY, Nikolay Alekseyevich   DECEASE   1964

Hydrometerorotogy   (1910-1964)

Obituary- Meteor i gidrol 3, p. 61 1964

BELINSKIY, N.A. [deceased]

Problems of marine forecasts and information. Trudy TSIP no.142:5-12
'65.
(MIRA 18:10)

L   4091C-66   EWT(1)   GW
ACC NR: AT6006566   (N)   SOURCE CODE: UR/2546/65/000/142/0005/0012

AUTHOR: Belinskiy, N. A. (Deceased)

ORG: none

TITLE: Maritime forecasting problems

SOURCE: Moscow. Tsentral'nyy institut prognozov. Trudy, no. 142, 1965. Morskiye prog-
nozy i raschety (Marine forecasts and calculations); materialy Vsesoyuznogo sovesh-
chaniya, noyabr' 1963 g., 5-12

TOPIC TAGS: weather forecasting, sea ice, ship navigation, ocean dynamics

ABSTRACT: The author defines the mission of the Hydrometeorological Service with re-
spect to Soviet oceangoing and coastal vessels and makes recommendations for improving
the work of the Service. The recommendations are prefaced by the remark that the
Soviet Union is seriously lagging behind the USA and the German Federal Republic in
charting optimal courses (both in terms of safety and economy) for merchant vessels.
The author recommends the creation of a navigational station network, the study of
coastal navigation, the study of the effect of meteorological conditions on ocean tur-
bulence, current levels, and ice and water temperature distribution. He further urges
improvements in buoy stations, the development of better methods for recording precipi-
tation and a better method for evaluating elements in the ocean heat-water balance.

Card 1/2

L. 40910-66

ACC NR: AT6006566

He notes the lack of systematic observation of ocean currents, temperature, and sali-
nity as a function of depth. Methods and instruments for measuring water turbulence,
and water and air temperatures are severely criticized.

SUB CODE: 04,13,15/   SUBM DATE: none

Card 2/2

ACC NR: AP6025658   SOURCE CODE: UR/0413/66/000/013/0110/0111

INVENTOR: Bleyvas, I. M.; Belinskiy, N. A.; Zelinskiy, E. M.; Dubrovina, S. A.;
Sergiyenko, V. I.

ORG: None

TITLE: A device for simultaneously solving equations of motion of charged particles
and electric field equations. Class 42, No. 183494

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 13, 1966,
110-111

TOPIC TAGS: motion equation, computer component, charged particle, electric field

ABSTRACT: This Author's Certificate introduces: 1. A device for simultaneously sol-
ving equations of motion of charged particles and electric field equations. The unit
contains an electrolytic bath with conductive elements, a probe head, a digital com-
puter which solves the motion equation of a charged particle and servosystems which
move the probe head with respect to two coordinates. Computational speed and ac-
curacy are increased by using a magnetic operational memory with one input connected
to the digital computer through a summation unit and a diode which is controlled by
pulses from the address formation unit. The second input of the magnetic operational
memory is connected to the output of the address formation unit, and the memory out-

Card   1/3

UDC: 681.142.001.572

ACC NR: AP6025658

puts are connected to the input of the summation unit and to the current leads for the conductive elements in the electrolytic bath. 2. A modification of this device in which the instantaneous address of the probe head is compared with that of a memory cell in the magnetic operational memory by making the address formation unit in the form of an electromechanical commutator consisting of two contact tracks located along the coordinate axes with insulatED sections, and movable contacts mechanically connected to the probe head. The windings of the address relays are connected between the corresponding commutator segments of the contact tracks. 3. A modification of this device in which currents are automatically fed to the conductive elements by using a step switch in the lead-in unit for synchronizing the operation of this unit with that of the address relays in the address formation unit.

Card   2/3

ACC NR: AP6025658

1—bath; 2—probe head; 3— computer; 4—servosystems; 5—memory; 6—summation unit; 7—diode; 8—address formation unit; 9—current lead-in unit; 10—electromechanical commutator tracks; 11—address relays; 12—step switch

SUB CODE: 09/ SUBM DATE: 06Apr63

Card   3/3

BELINSKIY, P. P.

USSR/Mathematics - Quasiconformal   1 Aug 53

"Behavior of Quasiconformal Representation at an Isolated Point," P. P. Belinskiy

DAN SSSR, Vol 91, No 4, pp 709-710

Presents a theorem which is an essential improvement over the Wittich-Teichmueller theorem (Math Z. 51:6, 278 (1949)) and which generalizes the results of B. V. Shabat (Matem Sbornik, 17(59):2, 193 (1946)) on the differentiability of a quasiconformal reflection to the case of the fulfilment of the Helder integral condition. Namely, proves the following theorem: If

272T63

$\iint [p(z)-] \cdot /z/^{-2} ds_z$ is finite over the interval $0 < /z/ \leqslant 1$, where ds_z is an element of area in the z-plane, then there exists a limit $w = w_0$ $(z \rightarrow 0)$ and the function $w = f(z)$ is monogenic at point z_0. Presented by Acad M. A. Lavrent'yev 23 May 53.

Belinskiĭ, P. P. On metric properties of a quasi-conformal mapping. Doklady Akad. Nauk SSSR (N.S.) 93, 589-590 (1953). (Russian).

The author gives two counter-examples (the second of which is invalid) to a theorem of A. Pfluger [C. R. Acad. Sci. Paris 226, 623-625 (1948); these Rev. 9, 421] which asserts that, under the one-to-one continuous extension to $|z| = 1$ of a quasi-conformal one-to-one mapping of $|z| < 1$ onto $|w| < 1$, a set on $|z| = 1$ of inner measure zero is transformed into a set on $|w| = 1$ with the same property. The first counter-example shows that the definition of quasi-conformality, which Pfluger uses, does not even permit an extension to $|z| = 1$ of the mapping function. The author states three additional conditions (e.g., uniformly bounded dilatation coefficient) under which such an extension is possible and for which the conclusion of Pfluger's theorem holds. The author points out an unjustified assumption in the first step of Pfluger's proof and asserts that, under any one of the three additional hypotheses, a step-by-step recapitulation of Pfluger's proof yields the desired result. This is unfortunate, because the author seems unaware of other errors in the proof (e.g., p. 625, line 5, where the assumption is used that the linear measure of an open set is equal to the measure of its closure).   *A. J. Lohwater.*
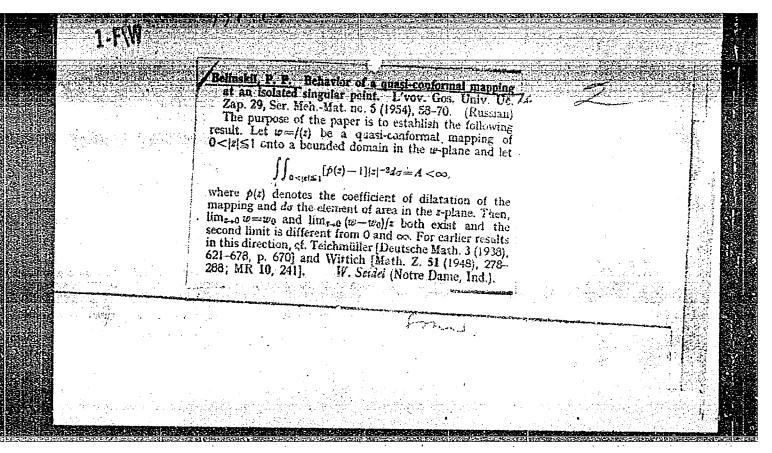
BELINSKIY, P. P.

Mathematical Reviews
May 1954
Analysis

10-4-54   LL

(4)

Belinskiĭ, P. P. On distortion in quasi-conformal mappings. Doklady Akad. Nauk SSSR (N.S.) 91, 997–998 (1953). (Russian)

Using terminology of Lavrentiev [C. R. Acad. Sci. Paris 200, 1010–1012 (1935)], the author calls a quasi-conformal mapping q-quasi-conformal if the characteristic function $p(z)$ is bounded by a constant q. It is shown that if $w = f(z)$, $f(0) = 0$, is q-quasi-conformal and maps $|z| \leq 1$ onto $|w| \leq 1$, then (1) $|f(re^{i\theta})| \leq \rho(r, q)$, where $\rho = \rho(r, q)$ is uniquely defined by the relation $K'(\rho)/K(\rho) = q^{-1}K'(r)/K(r)$, $K(r)$ and $K'(r)$ denoting, respectively, elliptic integrals of the first kind with moduli $k = r$ and $k' = (1 - r^2)^{\frac{1}{2}}$. Furthermore, if an arc of $|z| = 1$ of length φ goes over into an arc of $|w| = 1$ of length $\bar{\varphi}$, then (2) $\bar{\varphi} \leq \psi(\varphi, q)$, where $\psi = \psi(\varphi, q)$ is determined uniquely from the equation

$$\frac{K'(\sin \frac{1}{4}\psi)}{K(\sin \frac{1}{4}\psi)} = \frac{1}{q} \frac{K'(\sin \frac{1}{4}\varphi)}{K(\sin \frac{1}{4}\varphi)}.$$

Conditions under which equality holds in (1) and (2) are discussed. [Reviewer's remark: these theorems are contained in more general results on distortion in pseudo-analytic mappings due to J. Hersch and A. Pfluger, ibid. 234, 43–45 (1952); these Rev. 13, 736.] *A. J. Lohwater.*
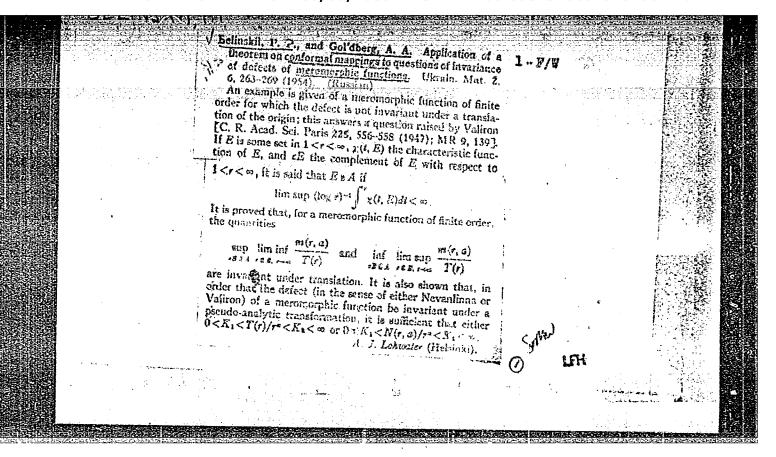
BELINSKIY, P. P.

"Quasiconformal Mappings." Cand Phys-Math Sci, L'vov U, L'vov, 1954. (RZhMat, Nov 54)

Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (11)
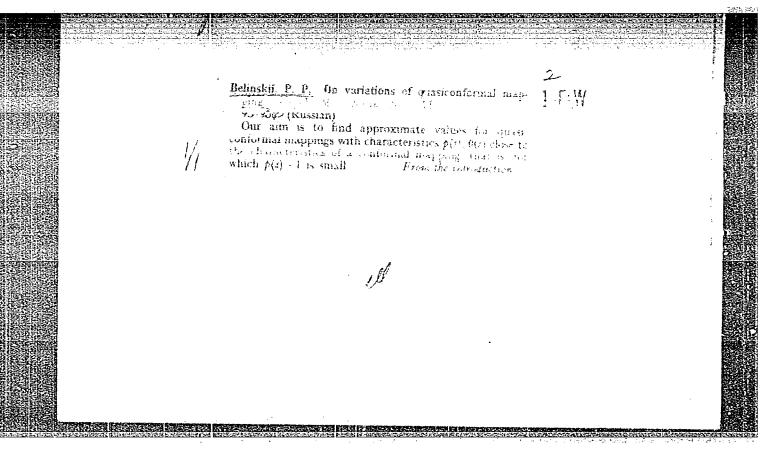
SO: Sum. No. 521, 2 Jun 55

Belinskii, P. P. Behavior of a quasi-conformal mapping at an isolated singular point. L'vov. Gos. Univ. Uč. Zap. 29, Ser. Meh.-Mat. no. 5 (1954), 58-70. (Russian)

The purpose of the paper is to establish the following result. Let $w = f(z)$ be a quasi-conformal mapping of $0 < |z| \leq 1$ onto a bounded domain in the w-plane and let

$$\iint_{0 < |z| \leq 1} [p(z) - 1]|z|^{-2} d\sigma = A < \infty,$$

where $p(z)$ denotes the coefficient of dilatation of the mapping and $d\sigma$ the element of area in the z-plane. Then, $\lim_{z \to 0} w = w_0$ and $\lim_{z \to 0} (w - w_0)/z$ both exist and the second limit is different from 0 and ∞. For earlier results in this direction, cf. Teichmüller [Deutsche Math. 3 (1938), 621-678, p. 670] and Wittich [Math. Z. 51 (1948), 278-288; MR 10, 241].   W. Seidel (Notre Dame, Ind.).

Belinskii, P. P., and Gol'dberg, A. A. Application of a theorem on conformal mappings to questions of invariance of defects of meromorphic functions. Ukrain. Mat. Ž. 6, 263–269 (1954). (Russian)

An example is given of a meromorphic function of finite order for which the defect is not invariant under a translation of the origin; this answers a question raised by Valiron [C. R. Acad. Sci. Paris 225, 556–558 (1947); MR 9, 139]. If E is some set in $1 < r < \infty$, $\chi(t, E)$ the characteristic function of E, and cE the complement of E with respect to $1 < r < \infty$, it is said that $E \in A$ if

$$\lim \sup (\log r)^{-1} \int^r \chi(t, E)dt < \infty.$$

It is proved that, for a meromorphic function of finite order, the quantities

$$\sup_{a \in A} \lim_{r \in E, r \to \infty} \inf \frac{m(r, a)}{T(r)} \quad \text{and} \quad \inf_{a \in A} \lim_{r \in E, r \to \infty} \sup \frac{m(r, a)}{T(r)}$$

are invariant under translation. It is also shown that, in order that the defect (in the sense of either Nevanlinna or Valiron) of a meromorphic function be invariant under a pseudo-analytic transformation, it is sufficient that either $0 < K_1 < T(r)/r^a < K_2 < \infty$ or $0 < K_1 < N(r, a)/r^a < K_2$.

O. J. Lehto (Helsinki).

USSR/Mathematics — Mappings

Card 1/1   Pub. 22 - 2/54

Authors   : Belinskiy, P. P., and Pesin, I. N.

Title   : On the closing of the class of continuously differentiable quasi-conformal mappings

Periodical   : Dok. AN SSSR 102/5, 865-866, June 11, 1955

Abstract   : A proof is presented, that the general Q-quasi-conformal mappings of the $W = f(Z)$ are nothing but the closing of a class of quasi-conformal mappings with continuous characteristics, or, otherwise, the closing of a class of continuously differentiable mappings. The given proof is based on the Banach theory which considers such mappings as absolutely continuous and, according to Lavrent'ev, have the characteristics $p(Z)$ and $\Theta(z)$ everywhere, which are measurable and $p(Z) \leq Q$. Six references: 2 Germ. and 4 USSR (1925-1955).

Institution : L'vov State University imeni Ivan Franko

Presented by : Academician M. A. Lavrent'ev, February 22, 1955

Belinskiy, P. P.

Call Nr: AF 1108825

Transactions of the Third All-union Mathematical Congress *(Cont.) Moscow
Jun-Jul '56, Trudy '56, V. 1, Sect. Rpts., Izdatel'stvo AN SSSR, Moscow, 1956, 237 pp.
Mention is made of Bernshteyn, S. N. and Kolmogorov, A. N.

Arin', E. I. (Riga).   On the Concept of Partial
Continuity of Function.   75

Balk, M. B. (Smolensk).   On an Analog of the Liouville
Theorem.   75-76

There is 1 USSR reference.

Batyrev, A. V. (Rostov-na-Donu).   On the Stability of a
Solution of Hilbert Boundary Problem.   76

Belinskiy, P. P. (L'vov).   On the Existence of a
Solution of Variational Quasi-conformal Mapping Problems   77

Bredikhina, Ye.A. (Kuybyshev).   On the Best Approximations
of Almost-periodical Functions.   77

There is 1 USSR reference.
Card 23/80
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Belinskii, P. P. On variations of quasiconformal map-
ping, ... (Russian)
Our aim is to find approximate values for quasi-
conformal mappings with characteristics $p(z)$, $\theta(z)$ close to
the characteristics of a conformal mapping, that is, for
which $p(z) - 1$ is small.   *From the introduction*

AUTHOR: Belinskiy, P.P.   SOV/20-121-1-3/..
TITLE: On the Surface Measure for a Quasiconformal Mapping (O mere
              ploshchadi pri kvazikonformnom otobrazhenii)
PERIODICAL: Doklady Akademii nauk SSSR, 1958, Vol 121, Nr 1, pp 16-17 (USSR)

ABSTRACT: Lavrent'yev and the author [Ref 2] showed that for a small
              $\varepsilon = 1 - \frac{1}{q}$ the q-quasiconformal mapping is little different from
              a conformal mapping. In the present paper the author gives an
              estimation of the type $|\Delta \sigma| \le \sqrt{\varepsilon} + O(\varepsilon)$ for the variation of
              the surface appearing here. At the same time the result of
              Pesin [Ref 3] is proved again (at a quasiconformal mapping a
              set of measure zero is mapped onto a set of measure zero).
              There are 3 Soviet references.

ASSOCIATION: Matematicheskiy institut Sibirskogo otdeleniya Akademii nauk SSSR
              (Mathematical Institute of the Siberian Section of the Academy
              of Sciences of the USSR)
PRESENTED: March 6, 1958, by M.A.Lavrent'yev, Academician
SUBMITTED: February 15, 1958

              1. Conformal mapping   2. Mathematics

Card 1/1

AUTHOR: Belinskiy, P.P.   SOV/20-121-2-1/53

TITLE: On the Solution of Extremum Problems of Quasiconformal Mappings
           With the Aid of the Method of Variation(O reshenii ekstremal'nykh
           zadach kvazikonformnykh otobrazheniy metodom variatsiy)

ABSTRACT: In the class of q-quasiconformal mappings $w = w(z)$ the author
           considers the maximum of the real function $F(z_1,\ldots,z_k;w_1,\ldots,w_k)$,
           $w_n = w(z_n) = u_n + iv_n$. With the aid of the methods of variation the
           question for the existence and uniqueness of the extremal function
           is solved finally. Estimations for $|w(z)-z|$ and similar ones are
           given.
           There are 4 references, 3 of which are Soviet, and 1 German.

ASSOCIATION: Matematicheskiy institut Sibirskogo otdeleniya Akademii nauk SSSR
           (Mathematical Institute of the Siberian Section of the Academy of
           Sciences of the USSR)
PRESENTED: March 6, 1958, by M.A.Lavrent'yev, Academician
SUBMITTED: March 3, 1958

Card 1/1

BELINSKIY, P. P., Doc of Phys-Math Sci -- (diss) "General Characteristics

of the Quasiconforming Reflections," Novosibirsk, 1959, 10 pp

(Institute of Mathematics, Siberian Dept, Acad Sci USSR)   (KL, 4-60, 114)

16(1)

AUTHOR: Belinskiy, P.P.   SOV/20-128-4-2/65

TITLE: Normality of Families of Quasiconformal Mappings

PERIODICAL: Doklady Akademii nauk SSSR, 1959,Vol 128,Nr 4,pp 651-652 (USSR)

ABSTRACT: Theorem: Let $\mathfrak{M}$ be a system of functions $\{w=f(z)\}$ with the following properties: 1) the functions $f(z)$ are defined in domains and they imply homeomorphic mappings; 2) auxiliary transformations of the type $z'=az+b$ and $w'=aw+b$ do not disturb the membership to the system $\mathfrak{M}$; 3) every sequence of functions $w=f_n(z)$ of $\mathfrak{M}$ defined in the domains D_n with the kernel $D \neq 0$, can be transformed into a compact sequence with the aid of a normalization of the form $w'=a_n f_n(z)+b_n$. The compactness is understood in the sense of the uniform convergence (in D) after the mapping of the system.- Then the mappings defined by the functions of the system are quasiconformal with a deformation which is bounded by a number q. - There are 2 Soviet references.

ASSOCIATION:Matematicheskiy institut Sibirskogo otdeleniya Akademii nauk SSSR (Mathematical Institute of the Siberian Dept. of the AS USSR)

PRESENTED: June 3, 1959, by M.A.Lavtrent'yev, Academician

SUBMITTED: May 25, 1959

Card 1/1

BELINSKIY, P.P.

Solving the extremum problems of the theory of quasiconformal mappings by the variational method. Sib. mat. zhur. 1 no.3:303-330 S-O '60. (MIRA 14:2)
(Conformal mapping)

S/020/62/147/005/001/032
B172/B112

AUTHOR: Belinskiy, P. P.

TITLE: Continuity of spatially quasiconformal mappings and a
Liouville theorem

PERIODICAL: Akademiya nauk SSSR, Doklady, v. 147, no. 5, 1962, 1003-1004

TEXT: A mapping is called q-quasiconformal if it maps an infinitely small
sphere onto an ellipsoid for which the a/b ratio of the largest and the
smallest axis satisfies the inequality a/b = q. The normalization of the
mappings is determined by internal and boundary points guaranteeing the
uniqueness. The following theorem is formulated: a family

$$\left\{Y = f(x)\right\}, \quad X = (x_1, \ldots, x_n), \quad Y = (y_1, \ldots, y_n), \quad n > 2,$$

of q-quasiconformal normalized mappings of the n-dimensional unit sphere
has the following properties: (1) a constant q_0 exists that depends on the
normalization and the dimension n in such a way that the family is
uniformly bounded and continuous of the same degree for $q < q_0$;

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Continuity of spatially ....

(2) $\varrho(f(x),x) = \lambda(\mathcal{E})$, where $\mathcal{E} = q-1$; ϱ is the distance in the n-dimensional space and $\lambda(\mathcal{E})$ is a function depending on the normalization only and satisfying the relation $\lim_{\mathcal{E}\to 0} \lambda(\mathcal{E}) = 0.$, The basic idea of this proof is outlined. $q_o \equiv \infty$ is impossible, as shown by an example.

PRESENTED: June 22, 1962, by M. A. Lavrent'yev, Academician

SUBMITTED: March 17, 1962

Card 2/2

BELINSKIY, S. A. and POPOV, Ye. G.

Criticism and Bibliography, Manual 'Marine Hydrometeorological Information and Forecasts'," Meteorology and Hydrology, Issue No. 4, December 1950, Leningrad.

U-2020, 29 May 52

AUTHORS: Belinskiy, S.B., Chernyak, D.A., Labutin-Gorskiy,Yu.V., 68-58-5-14/25
Kaufman, A.A. and Torchitsa, A.B.

TITLE: Group Repairs of Coke Ovens (Gruppovoy remont kamer koksovykh pechey)

PERIODICAL: Koks i Khimiya, 1958, Nr 5, pp 49 - 52 (USSR).

ABSTRACT: A partial rebuilding of coke ovens in groups without interrupting the production of remaining ovens is described in some detail. There are 2 figures.

ASSOCIATION: Kaliningradskiy koksogazovyy zavod (Kaliningrad Coke and Gas Works), Teplotekhstantsiya and Koksokhimmontazh

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SOV/68-58-9-14/21

AUTHORS: Belinskiy, S.B., and Gubakhin, G.F.
Heating of Sheds Covering Batteries under Construction
with Coke Oven Gas (Obogrev teplyakov stroyashchikhsya
koksovykh batarey koksovym gazom)

PERIODICAL: Koks i Khimiya, 1958, Nr 9, pp 51-53 (USSR)

ABSTRACT: Steam is generally used for heating the above sheds.   On
the Kalinigrad Coking Works coke oven gas was successfully
used for this purpose which was 3-4 times cheaper than
heating with steam.   Gas stoves used and their distri-
bution in the shed, are shown diagrammatically.

There is 1 figure.

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AUTHORS: Belinskiy, S.B. and Prokopov, I.F.   SOV/68-59-1-15/26

TITLE: The Use of Spent Pyrites for Dry Cleaning of Gas from
             Hydrogen Sulphide (Primeneniye ogarka dlya sukhoy
             ochistki gaza ot serovodoroda)

ABSTRACT: The use of spent pyrites instead of bog ore for cleaning
             of coke-oven gas from hydrogen sulphide was investigated.
             In view of satisfactory results (see table) the method
             was adopted on the Kaliningrad Coking Works. The method
             of preparation of the absorption mixture is as follows:
             spent pyrites are mixed with sawdust in a proportion of
             1:3 by volume and an addition of 0.5% by weight of
             powdered hydrated lime is made. Then the mass is screened
             on mechanical screens which removes large pieces of spent
             pyrites and sawdust and mixes the components. Bulk
             density of the mass 0.5 - 0.6 t/m^3. When charging into
             boxes the mass is wetted with water to a moisture
             content of 30-45%. During operation, humidity is main-
             tained by the introduction of steam into the gas stream.
             Pressure drop of the freshly prepared purification mass
             amounts to 30-35 mm H_2O per box. Optimum absorption

Card1/2   temperature 26 - 30 $^{\circ}C$. During 10 months of operation

SOV/68-59-1-15/26

The Use of Spent Pyrites for Dry Cleaning of Gas from Hydrogen Sulphide

the mass absorbed sulphur in an amount of 61% of its own weight and continued to absorb hydrogen sulphite to 68-70% of its content of the gas. It is concluded that the use of spent pyrites is more economical than bog ore and is recommended even in cases when they must be imported from other regions. There are 2 figures and 1 table.

ASSOCIATIONS: Novo-Lipetskiy metallurgicheskiy zavod (Novo-Lipetskiy Metallurgical Works) and Kaliningradskiy koksogazovyy zavod (Kaliningrad Coking Works)

Card 2/2

BELINSKIY, S.F.; MARAMOKHIN, I.I.

Work of the Yaroslavl Starch and Molasses Combine during 1962.
Sakh.prom. 37 no.6:72-74 Je '63.   (MIRA 16:5)

1. Yaroslavskiy krakhmalo-patochnyy kombinat.
        (Yaroslavl—Starch) (Yaroslavl—Molasses)

L 40318-66   E.T(d)/E.T(m)/EWP(v)/T/EWP(t)/ETI/E.P(k)/EWP(h)/EWP(1)   JD/JM

ACC NR: AP6005335   SOURCE CODE: UR/0413/66/000/001/0072/0072

INVENTOR: Katler, S. M.; Alekseyev, Yu. Ye.; Belinskiy, S. M.;
Temkin, B. Ya.

ORG: none

TITLE: Device for activation and maintenance of an a-c welding
arc. Class 21, No. 177574 [announced by the All-Union Scientific
Research Institute for Electric Welding Equipment (Vsesoyuznyy
nauchno-issledovatel'skiy institut elektrosvarochnogo oborudo aniya)]

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 1,
1966, 72

TOPIC TAGS: arc activation, welding arc, arc maintenance, welding
arc equipment

ABSTRACT: An Author Certificate has been issued describing a device
for activating and maintaining an a-c arc generating one pulse per
cycle or half cycle of voltage from the welding-arc power source; it
also contains a storage battery, a commutator, a control block. In
order to phase the pulse against the shape of the voltage curve on the

UDC: 621.791.75—503.51

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