MAYEVSKIY, S.M.; SKRIPNIK, Yu.A.

Measuring phase shift between two distorted voltages. Izv. vys.
ucheb. zav.; prib. 7 no.4:22-27 '64   (MIRA 18:1)

1. Kiyevskiy ordena Lenina politekhnicheskiy institut. Rekomen-
dovana kafedroy izmeritel'nykh ustroystv.

SKRIPNIK, Yu.A.; NIZHENSKII, A.I.

Selecting the power-supply frequency for an automatic quasi-balanced bridge with a differential indicator. Izv.vys.ucheb.zav.;prib. 7 no.5:14-21 '64.   (MIRA 17.12)

1. Kiyevskiy politekhnicheskiy institut. Rekomendovano kafedroy izmeritel'nykh ustroystv.

L 40852-66   EWT(1)/E.C(k)-2

ACC NR: AP6010024   SOURCE CODE: UR/0119/66/000/003/0014/0015

AUTHOR: Skripnik, Yu. A. (Candidate of technical sciences); Yaremchuk, N. A. (Engineer)

ORG: none

TITLE: An automatic single-channel electronic logometer

SOURCE: Priborostroyeniye, no. 3, 1965, 14-15

TOPIC TAGS: electronic device, logometer, circuit design

ABSTRACT: Recording circuits operating with electric parametric sensors (capacitative, inductive sensors) must be designed so as to exclude the influence of the power source on the results of measurements. This problem can be easily solved by utilizing logometers as indicating and registering devices. However, existing electromechanical, rectifier, and converter logometers require a considerable amount of power. Consequently, the authors designed and successfully tested an automatic electronic logometer shown in Fig. 1.

Card 1/2   UDC: 621.317.61:621.376.2

CPD   SUBM DATE:

KADUK, B.G.; SKRIPNIK, Yu.A.

Measurement of small coefficients of nonlinear distortions in a wide range of frequencies. Izv.vys.uchob.zav.; radiotekh. 8 no.4:486-489 Jl-Ag '65.   (MIRA 18:11)

1. Submitted January 13, 1965.

L 02428-67   EWT(d)   GD   SOURCE CODE: UR/0000/66/000/000/0047/0052
ACC NR: AT6031907

AUTHOR: Skripnik, Yu. A. (Candidate of technical sciences; Docent);   39
Skripnik, V. I. (Aspirant)   B+1

ORG: [Skripnik, Yu. A.] Institute of Electrodynamics, AN UkrSSR (Insti-
tut elektrodinamiki AN UkrSSR); [Skripnik, V. I.] Kiev Polytechnic
Institute (Kiyevskiy politekhnicheskiy institut)

TITLE: A single-channel quadrature phase meter with phase switching

SOURCE: Lvov. Politekhnicheskiy institut. Kontrol'no-izmeritel'naya
tekhnika (Control and measurement techniques) no. 2. Lvov, Izd-vo
L'vov. univ., 1966, 47-52

TOPIC TAGS: phase shift, phase recording, phase meter

ABSTRACT: A portable quadrature phase meter with phase switching is
described. The input voltages V_1 and V_2 are applied to blocks 1 and 2
(see Fig. 1) which provide a high-impedance and low-capacitance input
to the meter. One of the voltages (V_2) goes through a 180° phase
switcher whose switching frequency is controlled by a square wave
generator (10). The two voltages are then added in transformer Tp.
The resultant output is an amplitude-modulated signal with the index
of modulation proportional to the duration from quadrature, i.e., the
phase difference of the two applied voltages. The resultant signal is
amplified, applied to a square-law detector (5), amplified by a low-
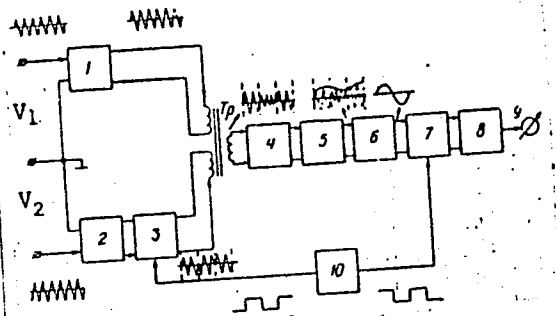
Card 1/2

L 02428-67

ACC NR: AT6031907

Fig. 1. Block diagram of quadrature phase meter.

frequency amplifier (6), applied to a detector (7), synchronized to the switching frequency, and fed through an integrator (8) to a highly sensitive indicator (9). The characteristics of the meter are: input frequency range, 1 to 1.5 Mc; input voltage, 3—30 v; fine and coarse scales of ± 30' and 5°; quadrature indication error (with maximum nonlinear distortion of 2%), 6', 30' and 90' for frequencies of 1—200 kc, 200—500 kc, and 500 kc to 1.5 Mc, respectively; minimum input impedance, 0.5 Mohm; threshold sensitivity, not less than 1°. The weight of the meter does not exceed 6 kg. Orig. art. has: 3 figures and 1 table.   [IV]

SUB CODE:/4,09/ SUBM DATE: 25May66/ ORIG REF: 009/ OTH REF: 002

Card 2/2

ACC NR: AT6034601

(1)

$$A(U_\omega) = \int_0^t U(t)\, U_r(t)\, dt,$$

where U(t) is the signal analyzed, $U_g = U_o e^{j\omega_o t}$ is the signal of a tunable generator whose frequency determines the analysis frequency, and $A(U_\omega)$ is the signal at orthogonal converter output. Specific cases are discussed. Orig. art. has: 22 formulas and 5 figures.

SUB CODE: 09, 14/ SUBM DATE: none/ ORIG REF: 006

Card 2/2

ACC NR: AT6034602   (A)   SOURCE CODE: UR/3232/66/000/003/0022/0027

AUTHOR: Skripnik, V. I.; Skripnik, Yu. A.

ORG: none

TITLE: The effect of amplitude inequality on the accuracy of antiphase zero indicators

SOURCE: L'vov. Politekhnicheskiy institut. Kontrol'no-izmeritel'naya tekhnika, no. 3, 1966, 22-27

TOPIC TAGS: phase measurement, phase shift, phase meter, *pulse amplitude*

ABSTRACT: The method of comparing amplitude unstable voltages does not provide the necessary high measurement accuracy of the 180° phase shift. The article discusses the principal of operation and describes an accurate antiphase measuring device in which the precision measurements of the 180° phase shift in the relatively broad frequency range is reached using the phase sensitive circuit with periodic commutations of compared voltages. The equipment has the following parameters: 1) the frequency range is from 1kc to 1 mc. 2) The effective values of input voltages range from 1 to 20 v; 3) the maximum reading error when the coefficient of nonlinear distortion is not higher than 2% is 0.1° for frequencies of 1—100 kc, 0.2° for frequencies of 100—300 kc and 0.3° for frequencies of 300 kc—1 mc. Orig. art. has: 2 figures and 13 formulas.
SUB CODE: 09/ SUBM DATE: none/ ORIG REF: 007

Card 1/1

SKRIPNIK, Vyacheslav Vasil'yevich [Skrypnyk, V.], kand.sel'skokhoz.nauk; PANCHENKO, V., red.; LUCHKIV, M., tekhred.

[Planting of vineyards] Posadka vynohradnyka. Uzhhorod, Zakarpats'ke obl.vyd-vo, 1958. 24 p.   (MIRA 13:3)
            (Viticulture)

SKRIPNIK, Vyacheslav Vasil'yevich [Skrypnyk, V.], kand.sel'skokhoz.neuk;
GRIMUT, V. [Hrymut, V.], spetsred.; PANCHENKO, V., red.; LUCHKIV,
M., tekhred.

[Cultivation practices for good yields] Agrotekhnika vysokykh
urozhaiv. Uzhhorod, Zakarpats'ke obl.vyd-vo, 1958. 33 p.
(MIRA 13:3)

(Viticulture)

SOV-21-58-8-13/27

AUTHORS: Skripnik, Z.D., Chervyatsova, L.L., and Yankovskaya, G.F.

TITLE: Hydrolysis of Acetic Ethyl Ester in the Presence of Oxidized
Carbon (Gidroliz uksusnoetilovogo efira v prisutstvii okis-
lennogo uglya)

PERIODICAL: Dopovidi Akademii nauk Ukrains'koi RSR, 1958, Nr 8,
pp 853-856 (USSR)

ABSTRACT: The authors show that oxidized carbon, in comparison with
the considerably more bulky carboxylic cation-exchange resin
of the KB-4 type, is a good catalyst for the hydrolysis re-
action of acetic ethyl ester. On the basis of the results
of their investigation and previous studies conducted by
I.A. Tarkovskaya (Ref. 16), D.N. Strazhesko (Ref. 1), con-
clusion was drawn that the catalytic activity of oxidized
carbon, as well as its capacity for cation exchange in an acid
medium, is due to hydrogen ions. Their connection with the
adsorbent surface, according to the concepts of Verwey and
de Boer (Ref. 17), and A. Frumkin (Ref. 18), is of electro-
chemical nature. The authors express an assumption that
oxidized carbon can apparently serve as a sufficiently
Card 1/2   effective catalyst for other reactions of the acid type,

Hydrolysis of Acetic Ethyl Ester in the Presence of Oxidized Carbon

usually accelerated by dissolved strong acids or cationites of the sulfoacid type. This investigation was carried out under the guidance of Professor D.N. Strazhesko. There is 1 graph and 19 references, 7 of which are Soviet, 4 German, 2 English, 3 American, 1 Australian, and 2 Dutch.

ASSOCIATION: Institut fizicheskoy khimii AN UkrSSR im. L.V. Pisarzhevskogo (Institute of Physical Chemistry of the AS UkrSSR imeni L.V. Pisarzhevskiy); Kiyevskiy meditsinskiy institut im. O.O. Bogomol'tsa (Kiyev Medical Institute imeni O.O. Bogomolets)

PRESENTED: By Member of the AS UkrSSR, A.I. Brodskiy

SUBMITTED: March 6, 1958

NOTE: Russian title and Russian names of individuals and institutions appearing in this article have been used in the transliteration.

1. Acetic ethyl ester--Hydrolysis   2. Carbon--Applications

Card 2/2

SKRIPNIK, Z.D. [Skrypnyk, A.D.]

Catalytic oxidation of ascorbic acid in the presence of aftive
carbon. Dop. AN URSR no.5:609-613 '64.   (MIRA 17:6)

1. Institut fizicheskoy khimii AN UkrSSR. Predstavelno akademikom
AN UkrSSR A.I.Brodskim [Brods'kyi, O.I.].

STRAZHESKO, D.N.; SKRIPNIK, Z.D.; CHERVYATSOVA, L.L.; YANKOVSKAYA, G.F.

Acid catalysis in solutions in the presence of oxidized carbon.
Dokl. AN SSSR 155 no.1:168-170 Mr '64.   (MIRA 17:4)

1. Institut fizicheskoy khimii im. L.V.Pisarzhevskogo AN UkrSSR i
Kiyevskiy meditsinskiy institut im. A.A.Bogomol'tsa. Predstavleno
akademikom A.N.Frumkinym.

GOL'DSHTEYN, D.L.; RYSAKOV, M.V.; SKRIPNIK, Z.M.; ROGOV, S.P.

Production of transformer and turbine oils by hydrogenation of
sulfur-bearing petroleum products. Trudy VNII NP no.7:245-253
'58.   (MIRA 12:10)
        (Petroleum products) (Hydrogenation)

SKRIPNIKOV, G. K.

"Organizational and Technical Aid to
Stakhanoviy Brigades by Comrades
Batalov and Mitrakov During Forced Draft
Sinking of Horizontal Cross-Cut Tunnels." (BK)
by G. K. Skripnikov. Reviewed by A. Banketov.
Tsvet. Met., 14, No. 4-5, 1939.

Report U-1506, 4 Oct. 1951.

ACC NR: AP6035204 *(A)*   SOURCE CODE: UR/0066/66/000/009/0030/0032

AUTHOR: Ivanov, S. K.; Skripnikov, V. B.

ORG: Dongiprouglemash

TITLE: KPSh40P movable mine air conditioner with pneumatic drive

SOURCE: Kholodil'naya tekhnika, no. 9, 1966, 30-32

TOPIC TAGS: air conditioning equipment/KPSh40P air conditioner

ABSTRACT: Dongiprouglemash has designed a KPSh40P movable air conditioning unit with a pneumatic drive to be used in mines. The Odessa Refrigeration Equipment Plant has produced the experimental model. The unit (Fig. 1) is mounted on a special lorry on 600- to 900-mm wide gage rails. In the summer of 1965, the air conditioner was successfully tested at the "Kochegarka" mine of the Gorlovskugol' Trust of Artemugol' Complex. Serial production of the new air conditioner is planned for 1967 at the Odessa Refrigeration Equipment Plant. Orig. art. has: 4 figures.   [GC]

Card 1/2   UDC: 628.83

SHIPOV? M. M. F.

Forests and Forestry - Voronezh Province

Valuable stand of trees of the Leninsk forest station. Les. khoz. 5 no. 2, 1952

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

USSR/Cultivated Plants - Potatoes, Vegetables, Melons.   1-5

Abs Jour   : Ref Zhur - Biol., No 9, 1958, 39347

Author   : Skripnikov, Yu.G.

Inst   : Fruit-Vegetable Institute imeni I.V. Michurin.

Title   : The Fleshiness of Gourds and Melons.

Orig Pub   : Tr. Plodoovoshchn. In-ta im. I.V. Michurina, 1956, 9,
               303-306.

Abstract   : A formula for computing the fleshiness of gourds and
               melons was proposed: $M = 1 - \left[(\frac{d}{D})^2 \frac{h}{H}\right]$, where D -
               is the diameter of the fruit, d - diameter of the fruit's
               - inner cell equal to D - 2a (a - is the average thick-
               ness of the pulp), H - is the height of the fruit and h -
               the height of the inner cell. The comparison of data on
               fleshiness computed according to the formula and by the
               method of water displacement showed close results. --
                                                          V.S. Simal'ts

Card 1/1

AUTHOR: Skripnikov, Yu.G.   26-58-5-40/57

TITLE: An Interesting Case of Prolific Fruiting of a Pumpkin
               (Interesny sluchay mnogoplodiya tikvy)

PERIODICAL: Priroda, 1958, Nr 5, p 113 (USSR)

ABSTRACT: An instance is given, where a pumpkin plant produced 13
               pumpkins as compared with the usual 1-3 pumpkins per plant.
               There is one photo.

ASSOCIATION: Plodoovoshchnoy institut imeni I.V. Michurina, Michurinsk
               (Fruit and Vegetable Institute imeni I.V. Michurin, Michurinsk)
AVAILABLE: Library of Congress
Card 1/1
               1. Pumpkins - USSR

SKRIPNIKOV, Yu.G.

A new pumpkin hybrid. Agrobiologiia no.6:137-138 N-D '58.
(MIRA 12:1)

1.Plodovo-ovoshchnoy institut imeni I.V. Michurina, g. Michurinsk.
(Pumpkin--Varieties)

RUBTSOV, M.I., dots.; YERMILOVA, A.A., dots.; CHEREPOVA, O.M., kand.
sel'khoz.nauk; SKRIPNIKOV, Yu.G., dots.; DOROKHOV, A.A., kand.
sel'khoz.nauk; LITVINOVA, M.K., assistent; MUSTAFIN, A.M., pre-
podavatel'; PESHKOV, V.P., red.; POPOV, V.N., tekhn. red.

[Growing vegetables in the Central Chernozem Region of the
U.S.S.R.]Vyrashchivanie ovoshchei v TSentral'noi chernozemnoi
zone SSSR. Tambov, Tambovskoe knizhnoe izd-vo, 1962. 110 p.
                                              (MIRA 16:2)
1. Sotrudniki kafedry ovoshchevodstva Michurinskogo plodoovoshch-
nogo instituta im.I.V.Michurina (for all except Peshkov, Popov).
    (Central Chernozem Region--Vegetable gardening)

SKRIPNIKOV, Yu.G.

Squash breeding and seed production. Nacuh. dokl. vys. shkoly;
biol. nauki no.4:170-173 '63   (MIRA 16:11)

1. Rekomendovana kafedroy ovoshchevodstva Michurinskogo plodo-
ovoshchnogo instituta.

L 7794-66   EWT(m)/EWP(t)/EWP(b)   IJP(c)   JD

ACC NR: AP5027631   SOURCE CODE: UR/0109/65/010/011/2074/2077

AUTHOR: Avak'yants, G. M.; Alimova, L. I.; Murygin, V. I.;
Skripnikov, Yu. S.; Tserfas, R. A.

ORG: none

TITLE: Selective properties of silicon diodes with gold-doped base

SOURCE: Radiotekhnika i elektronika, v. 10, no. 11, 1965, 2074-2077

TOPIC TAGS: silicon diode, semiconductor diode

ABSTRACT: Results are reported of an experimental investigation of an Au-
doped-base silicon diode used as a parallel oscillatory circuit thanks to the
falling-off branch of its I-V characteristic (N. Holonyak, Proc. IRE, 1962, 50,
12, 2421). Biased to the negative-resistance region, the diode behaved like a
high-Q oscillatory circuit; biased to the edge of the positive-resistance region, it

Card 1/2   UDC: 621.382.2 : 546.28 : 621.391.8

L 7794-66
ACC NR: AP5027631

exhibited the characteristics of a low-Q oscillatory circuit. In addition to the
fundamental resonance curve, a number of resonance peaks at various multiple
frequencies were observed; higher applied voltages resulted in distorted
(asymmetrical) resonance curves. A compound peaked high-Q resonance curve
was exhibited by some specimens. As a rule, the resonance frequency increased
with the bias current. As a parametric amplifier the silicon diode developed a
voltage gain of 15—25. A transistor circuit, in which the resonant silicon diode
was connected in lieu of the collector load, could be operated as an amplifier from
a 9—12-v supply-voltage source. Orig. art. has: 7 figures.

SUB CODE: 09 / SUBM DATE: 05Jun64 / ORIG REF: 004 / OTH REF: 001

nw

Card 2/2

L 7793-66   EWT(m)/EWP(t)/EWP(b)   IJP(c)   JD
ACC NR: AP5027632   SOURCE CODE: UR/0109/65/010/011/2077/2081

AUTHOR: Avak'yants, G. M.; Zuyev, A. V.; Murygin, V. I.;
Skripnikov, Yu. S.; Surov, V. P.; Tserfas, R. A.

ORG: none

TITLE: Amplifying and oscillating properties of silicon diodes with gold-doped
base

TOPIC TAGS: silicon diode, semiconductor diode

ABSTRACT: The results of an experimental investigation of the operation of a
silicon diode as a voltage amplifier and as an oscillator are reported. A simple
amplifier circuit consisting of a capacitor in series with the diode developed a
voltage gain of 18—20 and a power gain of 200—300; its resonance frequency and

Card 1/2   UDC: 621.382.2:546.28:621.375+621.373

L 7793-66
ACC NR: AP5027632

passband depended on the bias current; its maximum sensitivity was 5—10 mv,
and in some specimens, 200—300 mv. The noise in such a circuit was
incoherent, sinusoidal, and had a maximum coinciding with the resonant
frequency. As an oscillator, the silicone diode developed a practically sinusoidal
waveshape; both its frequency and amplitude depended largely on the bias current
and external capacitance. Orig. art. has: 7 figures.

SUB CODE: 09 / SUBM DATE: 05Jun64 / ORIG REF: 004 / OTH REF: 001

nw
Card 2/2

5.3832

S/190/62/004/008/002/016
B117/B144

AUTHORS: Matsoyan, S. G., Pogosyan, G. M., Skripnikova, R. K.

TITLE: Study of cyclic polymerization and copolymerization. IX. Cyclic polymerization of 4-substituted hepta-1,6-dienes in the presence of radical initiators

PERIODICAL: Vysokomolekulyarnyye soyedineniya, v. 4, no. 8, 1962, 1142 - 1144

TEXT: The authors studied the cyclic polymerization of diallyl malonic and diallyl acetoacetic esters, diallyl acetic acid, and α,α-diallyl acetone heated in the presence of benzoyl peroxide and azoisobutyric dinitrile. With benzoyl peroxide, the polymer yields were higher than with azoisobutyric dinitrile. An increase in polymerization temperature above 80°C (diallyl malonic ester up to 160°C) reduced the yields. Polymers of diallyl malonic and diallyl acetic esters, and diallyl acetic acid, are fusible white powders easily soluble in acetic acid, benzene, carbon tetrachloride, and hot alcohol, having a molecular weight of 12000 - 15000 (determined ebullioscopically). Poly-α,α-diallyl acetone is

Card 1/2

Study of cyclic polymerization...   S/190/62/004/008/002/010
                                                     B117/B144

a glasslike mass soluble in organic solvents. It was shown that in the
course of radical polymerization two vinyl groups of the initial monomers
react without cross-linking. Cyclic polymers containing cyclohexane rings
in the principal chain, are formed. Finally it was observed that de-
carboxylation takes place when polydiallyl acetic acid is heated to 300°C,
with formation of polyhexahydrobenzyl, a polymer soluble in benzene.
There is 1 table.

ASSOCIATION: Institut organicheskoy khimii AN ArmSSR (Institute of
             Organic Chemistry AS ArSSR)

SUBMITTED: April 24, 1961

Card 2/2

S/171/62/015/006/005/006
E071/E492

AUTHORS: Matsoyan, S.G., Pogosyan, G.M., Skripnikova, R.K., Nikogosyan, L.L.

TITLE: Investigations in the field of cyclic polymerisation and copolymerisation. Communication 19. A study of radical polymerisation of certain substituted heptadienes-1,6

PERIODICAL: Akademiya nauk Armyanskoy SSR. Izvestiya, Khimicheskiye nauki, v.15, no.6, 1962, 541-551

TEXT: The work is a continuation of previous investigations on the ability of some substituted heptadienes-1,6 to cyclic polymerisation and properties of the polymers formed. A number of heptadienes-1,6 were synthesized namely: diallylacetic acid, ethyl and phenyl esters, amide, dimethylamide and phenylamide of diallylacetic acid, diallylcarbinol, acetate and benzoate of diallylcarbinol, 4-chloroheptadiene-1,6, 2,6-dichloro-4-acetyl-4-carbethoxyheptadiene-1,6 and their ability to cyclic polymerisation was investigated. It was shown that on polymerisation of the above monomers in the presence of radical
Card 1/2

S/190/63/005/002/004/024
B101/B102

AUTHORS: Matsoyan, S. G., Pogosyan, G. M., Skripnikova, R. K.,
                  Mushegyan, A. V.

TITLE: Studies in cyclic polymerization and copolymerization.
                  XI. Polymerization of substituted hepta-1,6-dienes in
                  the presence of radical initiators

PERIODICAL: Vysokomolekulyarnyye soyedineniya, v. 5, no. 2, 1963,
                  183-187

TEXT: Studies were made of 4,4-diacetyl-hepta-1,6-diene (I), 4-cyano-4-
carbethoxy-hepta-1,6-diene (II), 4-cyano-4-carboxy-hepta-1,6-diene (III),
4-cyano-hepta-1,6-diene (IV), 2,6-dichloro-4,4-dicarbethoxy-hepta-1,6-
diene (V), and 2,6-dichloro-4-carboxy-hepta-1,6-diene (VI) as to their
suitability for cyclic polymerization in the presence of 2 mole% benzoyl
peroxide or azoisobutyric dinitrile. When using benzoyl peroxide, the
yields (%) and m.p. (°C) of the polymers were: I, 22.7, 65-67; II, 34,
76-84; III, 40.0, 270-300; IV, 9.4, 65-67; V, 79.6, thick mass; VI, 47.3,
crosslinking at 280°C. With azoisobutyric dinitrile, the yields were
Card 1/2

Studies in cyclic polymerization ...   S/190/63/005/002/004/024
                                              B101/B102

lower. The molecular weight was 7000 to 20,000, the intrinsic viscosity
0.05-0.15. All polymers were soluble in organic solvents, except that of
V. Introduction of electron-acceptor groups into the hepta-1,6-diene in
2, 4, or 6 position makes thus the radical polymerization of hepta-1,6-
diene possible, which was not achieved without substitution according to
C. S. Marvel, J. K. Stille (J. Amer. Chem. Soc., 80, 1740, 1958). The IR
spectra of the polymers revealed the almost complete absence of double
bonds and showed the bands characteristic of substituted cyclohexane rings.
Cyclization between C_2 and C_7 and linear cyclic polymerization are assumed.
In the 2,6-dichloro derivatives, HCl is split-off. When HCl was completely
separated from the polymer of VI by aqueous alkali solution, a dark brown
polymer formed, m.p. 202-205°C. The IR spectrum showed that cyclohexa-1,4-
diene links formed in this reaction. There are 2 figures and 1 table.

ASSOCIATION: Institut organicheskoy khimii AN ArmSSR (Institute of
                  Organic Chemistry AS ArSSR)

SUBMITTED: July 25, 1961

Card 2/2

SKRIPNIKOVA, Ye.

There can not be two opinions. NTO 3 no.8:33-34 Ag '61.
(MIRA 14:9)

1. Uchenyy sekretar' soveta Nauchno-tekhnicheskogo obshchestva
Krasnodarskogo maslozhirovogo kombinata.
(Krasnodar--Oils and fats, Edible)

SKRIPNIKOVA, Ye.

We should work together and not replace each other. NTO 5 no.5:
52 My '63.   (MIRA 16:7)

1. Uchenyy sekretar' soveta nauchno-tekhnicheskogo obshchestva
Krasnodarskogo zhirovogo kombinata.
                  (Technological innovations)

SKRIPNIKOVA, Ye.P.

Materials on the biology of fruit mites of the Alma-Ata orchard
region. Trudy Resp.sta.zashch.rast.2:164-173 '55.   (MIRA 10:1)
    (Alma-Ata Province--Red spider) (Fruit--Diseases and pests)

KHRULEV, V.M.; GUBENKO, A.B., doktor tekhn. nauk, retsenzent;
        FREYDIN, A.S., kand. tekhn. nauk, retsenzent; SKRIPOV,
        B.S., kand. tekhn.nauk, retsenzent; SIVOCHKIN, F.P.,
        dots., retsenzent; ZAYCHIKOVA, E.A., red.; KASIMOV, D.Ya.,
        tekhn. red.

        [Improving the durability of glued wooden structures and
        building elements] Povyshenie dolgovechnosti kleenykh de-
        reviannykh konstruktsii i stroitel'nykh detalei. Moskva,
        Gosstroiizdat, 1963. 113 p.   (MIRA 16:8)
                                (Plywood)

SKRIPOV, F.I.   DECEASED   1962/5
                                 1961

                                 SEE ILC

PHYSICS

SKRIFOV, Fedor Ivanovich; OSTROUMOV, G.A., prof., red.; RACKIN,
Sh.Sh., st. nauchn. sotr., red.; SHUTILOV, V.A., dots.,
red.; BORODIN, I.M., red.

[A course of lectures on microwave spectroscopy] Kurs
lektsii po radiospektroskopii. Leningrad, Izd-vo Leningr.
univ., 1964. 211 p.   (MIRA 18:2)

ALEKSANDROV, N.M.; SKRIPOV, F.I.[deceased]

Studies of the structure of crystals by the method of nuclear
magnetic resonance. Analele mat 16 no.4:107-154 O-D '62.

1. SKRIPOV, I. V.

2. USSR (600)

4. Siberia - Turnips

7. Turnips in the steppe zone of Siberia, Korm. baza, 3, No. 12, 1952.

9. Monthly List of Russian Accessions, Library of Congress, February 1953. Unclassified.

SKRIPOV, M.I.

Brazing with heat-resistant brazes. V. A. Gorokhov and M. I. Skripov. Vestnik Mashinostroeniya 35, No. 7, 47-51 (1955).—Two brazes used were Cu-base alloys m. 1040-1100° and 960-1000°; the third had a Ni base and m.p. of 1200-1225°. Their compn. was not given. The flux employed consisted of 80% H_3BO_4, 14% borax, 5.5% CaF_2, and 0.5% Al-Cu-Mg alloy. Specimens of Ya1T steel and of Kh-N78T alloy were lap brazed with an oxyacetylene torch, those of steel being heated at 600° for 4-200 hrs. and those of the alloy at 700° for 2-14 hrs. Results of metallographic study, of intercryst. corrosion detn., creep strength measurement, and of fatigue strength detn. are given. J. D. Gat

①

SKRIPOV, N. I.

20783. Shchelkunov, V. V., Krivonogov, N. I. i Skripov, N. I. O tipe ekipazha loko-
motiva dlya dekovil'nykh Dorog. Sbornik nauch. -issled. Rabot (Arkhang. lesotekhn.
in-T im Kuybysheva), Xll, 1949, s. 5-31. --Bibliogr. 8 nazv.

SO: LETOPIS ZHURNAL STATEY - Vol. 28, Moskva, 1949.

SKRIPOV, N. I.

20958 Shchelkunov, V. V. i Skripov, N. I. O soprotivlenii dvizheniyu podvizhnogo
sostava uzkokoleynykh zheleznykh dorg. Sbornik nauch.-issled. rabot (Arkh-Ang.
lesotekhn. in-t im. Kuybysheva), XII, 1949, s. 33-51--Bibliogr: 6 nazv.

SO: LETOPIS ZHURNAL STATEY - Vol. 28, Moskva, 1949

SKRIPOV, Nikolay Ivanovich; STRASHINSKIY, B.A., red.; KALININA, L.M.,
        red.izd-va; KARLOVA, G.L., tekhn. red.

[Precast reinforced concrete pavement on logging roads]Sbornoe
zhelezobetonnoe pokrytie na lesovoznykh dorogakh. Moskva, Gos-
lesbumizdat, 1962. 132 p.   (MIRA 16:2)
        (Pavements, Concrete) (Forest roads)

SHCHELKUNOV, Valentin Vasil'yevich; SKRIPOV, Nikolay Ivanovich;
      SMIRNOV, A.I., red.

      [Effectiveness of the use of various types of logging roads]
      Effektivnost' primeneniia razlichnykh tipov lesovoznykh do-
      rog. Moskva, Goslesbumizdat, 1963. 110 p.   (MIRA 17:4)

185T1A

SEMENCHENKO, V. K.

USSR/Chemistry - Phase Conversions   Mar 51

"Phase Conversions of the Second Order and Crit-
ical Phenomena: III. Heat Capacity of Liquid
Binary Systems in the Critical Region of Layer-
Formation," V. K. Semenchenko, V. P. Skripov,
Inst Phys, Moscow State U Imeni M. V. Lomonosov

"Zhur Fiz Khim" Vol XXV, No 3, pp 362-368

Using specially designed calorimeter, measured
heat capacity of binary mixts (triethylamine-
H_2O and nitrobenzene-hexane) in crit region of
layer-formation by method of cooling. Results

185T14

USSR/Chemistry - Phase Conversions   Mar 51
             (Contd)

compared with those by direct measurement. Heat
capacity in crit region, rising after $1-1.5°$ to
temp of layer-formation, passes through finite
max.   Secondary max appears in absense of crit
concn of mixt.

185T14

SHEVTSOV, V. A., SHIMICH, N. M.

Heat - Radiation and Absorption

Thermal capacity of binary liquid mixtures in the critical area of stratification. Dokl. AN SSSR 85 no. 5, 1952.

SKRIPOV, V. P.

Dissertation: "Heat Capacity of Liquid Binary Mixtures in the Critical Area of
Layer Formation." Cand Phys Math Sci, Moscow State U, Moscow, 1953.
                                                                    W-30928
SO: Referativnyy Zhurnal, No. 5, Dec 1953, Moscow, AN USSR (W-29955)

SKRIPOV, V. P.

USSR/ Chemistry - Physical chemistry

Card 1/1   Pub. 147 - 23/26

Authors   :   Semenchenoko, V. K. and Skripov, V. P.

Title   :   Phase conversions of second order and critical phenomena. Part 6.
                      Effect of small admixtures on the specific heat of the triethylamine-
                      water system in the critical separation zone.

Periodical   :   Zhur. fiz. khim. 29/1, 194-197, Jan 1955

Abstract   :   In order to determine the effect of admixtures on the specific heat
                      in the critical zone the authors investigated a triethylamine-water
                      mixture of critical concentration with admixtures of tetraethylammonium
                      iodide and isoamyl alcohol. The tetraethylammonium iodide acted as a
                      surface-active substance increasing the lower critical temperature
                      and reducing the specific heat maximum. The isoamyl alcohol acted
                      as an inert substance thus reducing the critical temperature and the
                      specific heat maximum. The results obtained are briefly described.
                      Seven references: 6 USSR and 1 USA (1934-1955). Diagrams.

Institution :   The M. V. Lomonosov State University, Moscow

Submitted   :   June 24, 1954

The specific heats of solutions. V. P. Skripov (S. M. Kirov Ural. Polytech. Inst., Sverdlovsk). Zhur. Fiz. Khim. 29, 1634–9(1955).—A relation was found between the sp. heats and the concns. of solns. This relation becomes evident in the crit. layer-formation range, but is not limited to it, and is of a general character. The relation was studied for different types of solns. A qual. agreement was found with the observation on the Rayleigh light dispersion.
W. M. Sternberg

SKRIPOV, V.P.

Decrease of light intensity by carbon dioxide in the postcritical region. V. P. Skripov and G. P. Nikolaev (S. M. Kirov Ural Polytech. Inst., Sverdlovsk). Optika i Spektroskopya 1, 1020-1(1956).—The decrease in the intensity was detd. at temps. and pressures that exceed, but are very close to the crit. point. The isotherms of the change in I/I_{cr} (I_{cr} is the intensity at 31.6° and 61 kg./sq. cm.) with pressure showed that the higher the temp. the higher the pressure at which the min. appears in the curve.

J. Rovtar Leach

SKRIPOV, V.P.

Distribution function of a system containing a varying number of particles in a uniform external field. Zhur.fiz.khim. 31 no.1: 150-156 Ja '57.   (MLRA 10:5)

1.Ural'skiy politekhnicheskiy institut im. S.M. Kirova, Sverdlovsk.
            (Thermodynamics) (Statistical mechanics)

AUTHOR: Skripov, V. P.   76-32-3-35/43

TITLE: The Establishment of Equilibrium Near the Critical Point
               and the Part Played by Gravitation (Ustanovleniye ravnovesiya
               vblizi kriticheskoy tochki i rol'gravitatsii.)

PERIODICAL: Zhurnal Fizicheskoy Khimii, 1958, Vol. 32, Nr 3,
               pp. 712-716 (USSR)

ABSTRACT: The present paper deals with the evaluation of the peculiarities,
               which were observed in establishing the equilibrium in the system
               liquid - gas. Galitzin (reference 1) had already observed that
               the density redistribution, after the vanishing of the maniscus,
               according to the height of the tube takes a long time. Other
               investigations of the vertical distribution of the density of
               substance were also performed. The examinations performed near
               the critical point must take into account a number of specific
               factors such as e.g. the change of the gravitation potential
               according to the height of the tube. Near the critical point
               equilibrium sets in very slowly. Investigations of the effects
               of gravitation near the critical point were performed by

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76-32-3-35/43

The Establishment of Equilibrium Near the Critical Point and the Part Played by Gravitation

A. G. Stoletov (reference 6); other researchers gave wrong representations which are, however, in agreement with the theory according to Mayer (reference 7). An especially convincing experiment was performed by Veynberger and Schneider (reference 5)with xenon. Baehr (reference 8) carried out investigations of the effect of gravitation. The observations made in liquids near the critical point are brought into connection with a change of structure, a fluctuation of density and a transition into a highly disperse form. This was already explained by Smoluchowski (reference 10) and recently by V. K. Semenchenko (reference 11), whereas the opinion of D. L. Timrot (reference 12) that the molecules possess a different isotopic composition is unfounded. Considerations (with mathematical derivations) of a substance in a vertical tube are performed, where it is assumed that no convective transfer takes place. In the interpretations it is mentioned among others that a zone of

Card 2/3

24(8)

AUTHOR: Skripov, V. P.

SOV/56-35-5-41/56

TITLE: The Mixing Heat of Light and Heavy Water (Teplota smesheniya legkoy i tyazheloy vody)

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1958, Vol 35, Nr 5, pp 1294-1295 (USSR)

ABSTRACT: At the first glance it seems that the joulean effect produced by mixing H_2O and D_2O must be very small, because a mixture of molecules with various isotopes may be considered to be an ideal solution. However, also chemical interaction between the molecules of initial substances must be taken into account: $H_2O + D_2O \rightleftharpoons 2HDO$. For the constant of the equilibrium of this reaction in the liquid phase usually (Ref 1) the value $K = 3.26$ is assumed. Accordingly, 0.95 mole HDO are formed by mixing 1 mole H_2O and 1 mole D_2O. If the mixing heat q of the light and heavy water and the equilibrium constant of the reaction $H_2O + D_2O \rightleftharpoons 2 HDO$ are known, it is possible immediately to determine the heat of formation q' of HDO at the interaction of H_2O and D_2O in the condensed phase, and herefrom some conclusions can then be drawn as to the diversity

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of zero energies of the water molecules with different hydro-
gen isotopes. The mixing heats of H_2O and D_2O (99.7%) were
determined by means of a hermetically closed tipping-calori-
meter. During mixing (up to a molecular concentration
$n \sim 0.5$ of deuterium) the system was observed to cool down
(by ~ 0.3°C). In the course of the experiment also the speci-
fic heat of the system was determined. By means of these ex-
periments, the value $q = 7.92 \pm 0.25$ cal/mole was obtained for
$n = 0.50$ after taking all possible errors into account. By
putting the equilibrium constant of the reaction $H_2O + D_2O \rightleftharpoons 2HDO$
in the liquid phase equal to 3.26, the value $q' = 16.7 \pm 0.5$
cal/mole is obtained for the heat of formation of 1 mole HDO
(without taking the influence exercised by the heavy oxygen
isotope O^{18} into account). For the gaseous phase
$q' = 34$ cal/mole is obtained. The reduction of the heat of
formation of HDO in the condensed phase as against the gaseous
phase may be due to the considerable molecular interaction
in the solution and to the corresponding variation of zero
energies. The author thanks V. M. Kostin for his assistance
in carrying out the experiments. There are 3 Soviet references.

Card 2/3

Ural Polytech Inst.

SKRIPOV, V.P.

Akademiya nauk SSSR. Otdeleniye khimicheskikh nauk

Termodinamika i stroyeniye rastvorov; trudy soveshchaniya... (Thermodynamics and Structure of Solutions; Transactions of the Conference Held January 27-30, 1958) Moscow, Izd-vo AN SSSR, 1959. 295 p. 3,000 copies printed.

Ed.: M. I. Shakhparonov, Doctor of Chemical Sciences; Ed. of Publishing House: N. G. Yegorov; Tech. Ed.: T. V. Polyakova.

PURPOSE: This book is intended for physicists, chemists, and chemical engineers.

COVERAGE: This collection of papers was originally presented at the Conference on Thermodynamics and Structure of Solutions sponsored by the Section of Chemical Sciences of the Academy of Sciences, USSR, and the Department of Chemistry of Moscow State University, and held in Moscow on January 27-30, 1958. Officers of the conference are listed in the Foreword. A list of other reports also read at the conference, but not included in this book, are given. Among the problems treated in this work are: electrolytic solutions, ultrasonic measurement, dielectric and thermodynamic properties of various mixtures, spectroscopic analysis, etc. References accompany individual articles.

SOV/156-59-2-6/48

21(1), 5(4)

AUTHORS: Kotel'nikov, V. V., Skripov, V. P.

TITLE: The Isotopic Effect in the Mutual Solubility of Water and Triethylamine (Izotopnyy effekt vo vzaimnoy rastvoritel'nosti vody i trietilamina)

PERIODICAL: Nauchnyye doklady vysshey shkoly. Khimiya i khimicheskaya tekhnologiya, 1959, Nr 2, pp 248-249 (USSR)

ABSTRACT: The solubility in the systems $(C_2H_5)_3N - D_2O$ and $(C_2H_5)_3N - H_2O$ is investigated. A diagram (Fig 1) shows the experimental results. The solubility is reduced in heavy water, the critical temperatures amount to 17.86° for H_2O and to 14.05° for D_2O; thus the difference is negative. For different deuterium content of the water the change of the critical temperature in the case of an equal concentration of weight of triethylamine is calculated in the following way: $t_x = t_{H_2O} - c_x(t_{H_2O} - t_{D_2O})$ (t_{H_2O}, t_{D_2O} denote the temperature limit values at 100% H_2O and D_2O, respectively). A table gives the values for c_x. They are in good agreement

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The Isotopic Effect in the   SOV/156-59-2-6/48
ethylamine   Mutual Solubility of Water and Tri-

with the measuring results. An isotopic exchange occurs in
solutions of triethylamine and heavy water. Under experimental
conditions (concentration of triethylamine 35% by weight)
1 - 1.5% of the deuterium atoms passed over into triethylamine.
There are 1 figure, 1 table, and 3 references, 1 of which
is Soviet.

PRESENTED BY: Kafedra teoreticheskoy khimii Ural'skogo politekhnicheskogo
instituta im. S. M. Kirova
(Chair of Theoretical Chemistry, Ural Polytechnic Institute
imeni S. M. Kirov)

SUBMITTED: September 22, 1958

Card 2/2

21(1), 5(4)   SOV/156-59-2-7/48
AUTHORS: Skripov, V. P.,   Rusinov, N. Ya.

TITLE: The Distribution of the Heavy Water Between the Liquid Phases
                in the StratifiedSolution Triethylamine - Light Water - Heavy
                Water (Raspredeleniye tyazheloy vody mezhdu zhidkimi fazami
                v rasslaivayushchemsya rastvore trietilamin - legkaya voda -
                tyazhelaya voda)

ABSTRACT: The distribution coefficient of heavy water between the upper
                and lower layer of an unmixed solution of triethylamine cool-
                ed below the critical temperature is given by a table and
                amounts to $\alpha = 1.01$. The pycnometric determination of the
                content of heavy water and the purification of water from
                triethylamine residuals by repeated unmixing at 72°, filtra-
                tion through active coal and distillation repeated by 5 times,
                as well as purity test of water by measuring the electric
                conductivity are described in detail. Similar investigations
                carried out in the USA are mentioned (Ref 4). The difference
                between the value found by the authors ($\alpha = 1.01$) and that
Card 1/2   found in the USA ($\alpha = 1.04$) is explained by the different

SOV/156-59-2-7/48

The Distribution of the Heavy Water Between the Liquid Phases in the Strati-
fied Solution Triethylamine - Light Water - Heavy Water

type of the experimental order. The result of the thermo-
dynamical analysis on the basis of the generalized Clapeyron-
Clausius equation amounts for α to 1.005. Taking into account
the further terms of the equation with the differential quo-
tient of the chemical potential of the components leads to
a higher α-value; it was, however, not possible as a result
of inadequate experimental data. There are 1 table and
4 references, 3 of which are Soviet.

PRESENTED BY: Kafedra teoreticheskoy fiziki Ural'skogo politekhnicheskogo
instituta im. S. M. Kirova
(Chair of Theoretical Physics, Ural Polytechnic Institute
imeni S. M. Kirov)

SUBMITTED: September 22, 1958

Card 2/2

29410 S/081/61/000/017/005/166
B102/B138

5.4130

AUTHOR: Skripov, V. P.

TITLE: Structural features of a substance near critical point, and
              transfer effects

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 17, 1961, 44, abstract
              17B307 (Sb. "Kritich. yavleniya i flyuktuatsii v rastvorakh,
              M. AN SSSR, 1960, 117 - 125)

TEXT: The structural peculiarities of matter near the critical points
(CP) are discussed on the basis of Semenchenko's presentations (Sb.
"Primeneniye ul'traakustiki k issledovaniyu veshchestva", M., Izd-vo MOPI,
1956). It is shown that in a closed domain, matter is near to indifferent
equilibrium as regards changes of extensive parameters (density,
concentration, entropy). The extraordinary slowness with which equilibrium
is established in a one-component system close to CP indicates the diffusion
nature of the process. It is noted that microheterogeneity is the main
structural feature of a substance near CP. Ideas concerning the colloidal
nature of liquid mixtures above the critical temperature (RZhKhim, 1958,
No. 14, 46167) are discussed. A quasicolloidal model suggested to explain
Card 1/3

Structural features of a substance...

Complete translation.]

29410
S/081/61/000/017/005/166
B102/B138

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S/081/61/000/024/010/086
B138/B102

AUTHORS: Skripov, V. P., Kolpakov, Yu. D.

TITLE: Scattering of light in carbonic acid along sub- and trans-
              critical isotherms

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 24, 1961, 73, abstract
              24B522 (Sb. "Kritich. yavleniya i flyuktuatsii v rastvorakh".
              M., AN SSSR, 1960, 126 - 136)

TEXT: The scattering of light on carbonic acid is studied for five sub-
$(19.98 - 30.67^{\circ}C)$ and five transcritical $(31.20 - 49.90^{\circ}C)$ isotherms.
Intensity of scattered I' and of transmitted light I are measured for three
lines of the mercury spectrum $(5461, 4350$ and $4060 \overset{\circ}{A})$. The measurements
were made with high pressures $(50 - 125$ at$)$ in the system. The extremum
values of I' increase on approaching critical temperature, and the
difference between I' for the liquid and the vapor becomes less. On the
transcritical isotherms I' peaks are observed, which also increase on
approaching critical point. With variable $p - t$, points for the I' peaks
of transcritical isotherms plot very well into a straight line, merging
Card 1/2

80284
S/170/60/003/04/05/027
B007/B102

5.4100

AUTHORS: Skripov, V.P., Kolpakov, Yu.D.

TITLE: An Investigation of the Interphase-region Transition in Carbonic
              Acid From Light Scattering

PERIODICAL: Inzhenerno-fizicheskiy zhurnal, 1960, Vol. 3, No. 4, pp. 30-36

TEXT: In this paper experiments are described in which scattered as well as
transmitted light was observed during isothermal change of the state of the
substance. The experiments were made with carbonic acid. A section through the
test chamber is shown in Fig. 1. The experimental arrangement consisted of this
chamber, of a system for refilling the device with carbonic acid, a thermal
pressure control and an optical system. The device is briefly described. Eight
isothermal curves (6 transcritical and 2 subcritical) of the intensity of
scattered and of transmitted light as depending on carbonic-acid pressure were
taken. The entire temperature range of the measurements was 8°C. The dependence
of height and position of the maxima of I' (intensity of scattered light) on
the magnitude of the difference ΔT between testing temperature and critical
temperature is very conspicuous in these curves (Fig. 2). The intensity rise of

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An Investigation of the Interphase-region Transition S/170/60/003/04/05/027
in Carbonic Acid From Light Scattering   B007/B102

scattered light becomes weaker with growing distance from T_c (critical temperature).
Vertical lines mark the points of condensation in the below-critical isothermal
lines. Fig. 3 shows the dependence of the I'-maxima on ΔT for three spectral
lines. The maximum of light scattering shifts towards higher pressure with
rising temperature (Fig. 2). The relation between temperature and pressure at
the I'-maxima is, near the critical point, a straight line with the inclina-
tion of dp/dT = 1.50 at/deg or, in reduced quantities, $d\pi/d\tau$ = 6.2. The latter
value is almost equal to that obtained by M.G. Kaganer (Ref. 6) for the critical
isochoric curve of various nonpolar gases ($d\pi/d\tau$ = 6.0). In the experiments
described also the intensity I of the transmitted light was measured. The minima $\vee$
of transmittent light were obtained in the range of the scattering maxima. The
results of earlier measurements made by one of the authors (V.P. Skripov) and
G.P. Nikolayev (Ref. 11) have already been given. The qualitative dependence
of light scatter on wavelength is shown in table 1 and Fig. 3. The light
scattering observed had the character of a Rayleigh scattering, i.e. $I' \sim 1/\lambda^4$.
The data of light scatter and formula (3) (Ref. 8) may be used for calculating

elasticity f = -(dp/dv)$_T$ or compressibility $\beta = \frac{1}{v}$ (dv/dp)$_T$ of the substance

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An Investigation of the Interphase-region Transition   S/170/60/003/04/05/027
in Carbonic Acid From Light Scattering   B007/B102

within a narrow range of density variation. In this case elasticity of carbonic
acid along the scattering maxima in the transcritical region was calculated.
The results are given in table 2. The problem of structure marks in interphase-
region transition of gas-like- into fluid-like phases of matter are discussed.
This discussion is made from V.K. Semenchenko's aspect (Ref. 7) who connected
the investigation of phase transitions with the thermodynamical criteria of
phase stability. In these transitions a continuous number of macroscopically
homogeneous isothermal states contains a region with maximum microscopic
inhomogeneity of fluctuating character. The existence of such regions is con-
nected with the decrease in thermodynamical stability of the original phase and
with the formation of "islands" of a more stable phase. All anomalies in the
transcritical region are assumed to be caused by the character of the interphase-
region transition. There are 3 figures, 2 tables, and 12 references, 8 of which
are Soviet.

ASSOCIATION: Ural'skiy politekhnicheskiy institut im. S.M. Kirova, g. Sverdlovsk
             (Ural Polytechnic Institute imeni S.M. Kirov, City of Sverdlovsk)

Card 3/3

S/076/60/034/007/019/042/XX
B004/B068

AUTHORS: Skripov, V. P. and Kostin, V. M.

TITLE: Specific Heat of Solutions of Triethyl Amine Forming
               Separate Layers in Light and Heavy Water

PERIODICAL: Zhurnal fizicheskoy khimii, 1960, Vol. 34, No. 7,
               pp. 1503-1507

TEXT: Starting from a theory developed by V. K. Semenchenko (Ref. 1) on
critical phenomena, the predictions of a specific-heat maximum in the
neighborhood of the critical concentration in separate-layer-forming
solutions made according to this theory were examined. For this purpose,
the specific heats of triethyl-amine (I) solutions in heavy water (II) and
in light water (III) were measured with an adiabatic rocking calorimeter
which contained a thermistor and was heated electrically. Five solutions
of I and II containing 19.3; 25.6; 30.5; 33.0; and 43.0 % by weight of I,
and four solutions of I and III containing 20.1; 25.6; 28.8; and 31.5 %
by weight of I were examined. Fig. 2 shows C_p, expressed in cal/mole·degree,
as a function of temperature (in $^\circ$C), and Fig. 4 shows C_p as a function of
Card 1/3

Specific Heat of Solutions of Triethyl Amine   S/076/60/034/007/019/042/XX
Forming Separate Layers in Light and Heavy Water B004/B068

the percent by weight of I. For 6.76 mole% of I, a shift of the critical
cal separation temperature equal to 3.8°C is observed if H_2O is used instead
of D_2O. The highest C_p values are near the critical temperature at which
separation of the solution into two layers occurs. This is explained by the
fluctuation which precedes the macroscopic layer separation and leads to
microscopic latent separation dependent on concentration and temperature.
A visual method developed by Alekseyev is mentioned but not described.
There are 4 figures and 8 references: 7 Soviet and 1 US.

ASSOCIATION: Ural'skiy politekhnicheskiy institut im. S. M. Kirova,
                Sverdlovsk (Ural Polytechnic Institute imeni S. M. Kirov,
                Sverdlovsk)

SUBMITTED: September 23, 1958

Text to Fig. 2: 1: Triethyl Amine and Heavy Water; 2: Triethyl Amine and
Light Water. Molar Concentration of Triethyl Amine in Both Experiments:
6.76%; a) cal/mole·degree.

Card 2/3

SKRIPOV, V. P.

"Thermodynamic Stability of a Liquid and Crisis of Boiling"

Report presented at the Conference on Heat and Mass Transfer.
Minsk, USSR, 5-10 June 61

A complete cessation of bubble boiling and the establishment of
a film regime are conditioned by a critical temperature near the
wall and the influence of wettability conditions on it are taken
into account.

SKRIPOV, V.P.

Relationship between the dynamic stability of droplets and
critical vapor supersaturation during condensation. Koll.
zhur. 23 no.1:106-111 Ja-F '61.   (MIRA 17:2)

1. Ural'skiy politekhnicheskiy institut imeni Kirova, Sverdlovsk.

SKRIPOV, V.P.; KUKUSHKIN, V.I. (Sverdlovsk)

Apparatus for observing the limit superheating of liquids.
Zhur.fiz.khim. 35 no.12:2811-2813 D '61. (MIRA 14:12)

1. Ural'skiy politekhnicheskiy institut imeni S.M. Kirova.
(Superheaters) (Liquids)

AUTHOR: Skripov, V.P.

TITLE: Critical boiling and the thermodynamic stability of a liquid

SOURCE: Teplo- i massoperenos. t. 2: Teplo- i massoperenos pri fazovykh i khimicheskikh prevrashcheniyakh. Ed. by A.V. Lykov and B.M. Smol'-skiy. Minsk, Izd-vo AN BSSR, 1962. 60 - 64

TEXT:.   The so-called first critical boiling corresponds to the onset of disturbances of nucleate boiling which is followed by a transition region with alternating nucleate and film boiling in space and time and, finally, the transition to film boiling is accomplished at the point of second critical boiling (Δt_{cr2}, q_{cr2}) where Δt is superheating and q the heat flow. Since it can be expected, on the basis of theoretical considerations, that the second critical temperature t_{cr2} will be close to the temperature t_s of maximum superheating of the liquid, this assumption was verified experimentally. For this purpose, t_s and t_{cr2} were independently determined for different substances and at different pressures. Maximum superheating was determined by the method of H. Wakeshima

Card 1/3

Critical boiling and the thermodynamic ....

and K. Takata (J. Phys. Soc. Japan, v. 13, 678, 1958) which is based on the fact
that small droplets of the investigated liquid flow into the vertical column of
another liquid with a considerably higher boiling point which forms a mutually
insoluble vapor. Along the height of the column, a temperature gradient is es-
tablished which secures the superheating of the overflowing droplets. When
these droplets reach some height, they are evaporated in an explosive way with a
characteristic crack. The apparatus used was further improved by the author and
V.I. Kukushkin which will be described in another communication. Experiments
were performed with n-hexane, n-heptane, ethyl ether, benzene and water. The
mean coefficient of heat exchange in the experiments with droplets was found to
be proportional to $1/\tau \Delta t$, where τ is the time of complete evaporation of the
droplets, and Δt the temperature gradient. From data obtained, it is evident
that the critical boiling temperature is, as a rule, lower than the maximum su-
perheating temperature of the liquid. Maximum superheating of the liquid at the
boundary of the solid is determined by the effective surface tension $\sigma_{eff} =$
$= \sigma \psi (\theta)$, where θ is the wetting angle and

$$\psi (\theta) = \left(\frac{1 + \cos \theta}{2} \right)^{2/3} (2 - \cos \theta). \tag{2}$$

Card 2/3

Critical boiling and the thermodynamic ....

The practically complete discontinuation of nucleate boiling is experimentally found to be due to the fact that the liquid along the hot wall reaches the temperature of maximum superheating, with the conditions of wetting being taken into account. Maximum superheating itself is determined irrespectively of the phenomena of heat transfer and, from its nature, it appears as the critical thermodynamic stability of the liquid phase at a given pressure. E.N. Gorbunova, M.P. Vukalovich, and I.I. Novikov are mentioned. There are 3 figures and 1 table.

ASSOCIATION: Ural'skiy politekhnicheskiy institut, g. Sverdlovsk (Ural Polytechnic Institute, City of Sverdlovsk)

Card 3/3

SKRIPOV, V.F.; POTASHEV, P.I.

Heat transfer to carbonic acid along supercirtical isotherms in the case of free convection. Inzh.-fiz. zhur. 5 no.2:30-34 F '62.
(MIRA 15:1)

1. Ural'skiy politekhnicheskiy institut imeni S.M.Kirova, Sverdlovsk.
(Heat--Transmission) (Heat--Convection) (Carbonic acid)

KOLPAKOV, Yu.D.; SKRIPOV, V.P.; GORBUNOVA, E.N.

Scattering of light in carbonic acid and its relation to the
equation of state. Ukr.fiz.zhur. 7 no.7:787-792 Jl '62.
(MIRA 12:15)

1. Ural'skiy politekhnicheskiy institut i Ural'skiy filial AN
SSSR, g. Sverdlovsk.
    (Light—Scattering) (Carbonic acid) (Equation of state)

33693
S/076/62/036/002/004/009
B119/B101

$\mathcal{S.}\ \mathcal{2430}$

AUTHORS: Skripov, V. P., and Povyshev, L. V. (Sverdlovsk)

TITLE: Excess enthalpy of solutions of light and heavy water

PERIODICAL: Zhurnal fizicheskoy khimii, v. 36, no. 2, 1962, 325 - 331

TEXT: The excess enthalpy, ΔH, of H_2O - D_2O solutions was determined at 25 and $45^{\circ}C$ as dependent on the deuterium concentration in the solution. Measurements were conducted in a tilting calorimeter with a Pt resistance thermometer (measuring device: ППТВ (PPTV) potentiometer). The endo-thermic effect observed when mixing H_2O with D_2O, is due to the reaction

$H_2O + D_2O = 2HDO$ (equilibrium constant of the reaction 3.80). The heat of formation, Δh, of one mole of HDO was measured to be 15.5 cal on the assumption that the solutions are ideal. Theoretical calculations with the aid of the standard enthalpies of HDO, H_2O, and D_2O, yielded

Δh = 28 cal/mole. For similar calculations it is therefore necessary that these standard values be determined with greatest accuracy. At $25^{\circ}C$

Card 1/2

Excess enthalpy of solutions...

33693
3/076/62/036/002/004/009
B119/B101

and an atomic fraction of the deuterium n_D = 0.50, ΔH is 7.65 ± 0.25 cal/mole, at $45°C$, ΔH is 7.55 cal/mole. For determining the heat of exchange and estimating the temperature dependence of the equilibrium constants, the calorimetric method may be applied for systems with fast isotopic exchange. A paper by A. I. Brodskiy (Khimiya izotopov (Chemistry of isotopes), Izd-vo AN SSSR, M., 1957) is mentioned. There are 3 figures, 2 tables, and 5 references: 3 Soviet and 2 non-Soviet.

ASSOCIATION: Ural'skiy politekhnicheskiy institut im. S. M. Kirova
               (Ural Polytechnic Institute imeni S. M. Kirov)

SUBMITTED: April 23, 1960

Card 2/2

L 18323-63   EPF(c)/EWT(m)/BDS   Pr-4   RM/WW
ACCESSION NR: AP3004992   S/0076/63/037/008/1925/1927

AUTHORS: Skripov, V. P.; Ermakov, G. V.

TITLE: Practicable superheating of liquids

SOURCE: Zhurnal fiz. khimii, v. 37, no. 8, 1963, 1925-1927

TOPIC TAGS: superheating, superheating of liquid

ABSTRACT: Results are reported on the determination of practicable
limits of superheating hydrocarbons at atmospheric and near criti-
cal pressures according to methods of H. Wakenshima and K. Takata
(J. Phys. Soc. Japan, 13, 1958, 678) and V. P. Skripov and V. I.
Kukushkin (Zh. fiz. khimii, 35, 1961, 2811). Experimental tempera-
ture limits agreed with values calculated from Doering-Volmer for-
mula. Near the critical conditions ($p = 0.7\,p_k$, $t_k = 196.6C$) how-
ever, data could not be obtained because the droplets lose their
explosive character. On $p - t$ coordinates, the line of superheat-
ing limits is almost straight for n-pentane. The values for n-
hexane and n-heptane are practically on the same line. Orig. art.

Card 1/2

L 18323-63
ACCESSION NR: AP3004992   /

has: 1 table.

ASSOCIATION: Ural'skiy politekhnicheskiy institut im. S. M. Kirova,
Sverdlovsk (Ural polytechnic institute)

SUBMITTED: 19Nov62   DATE ACQ: 06Sep63   ENCL: 00

SUB CODE: CH   NO REF SOV: 004   OTHER: 003

Card 2/2

NIKOLAYEV, G. P.; SKRIPOV, V. P.

"Investigation into the burn-out of carbon dioxide boiling with natural con-
vection at pressures close to critical."

report submitted for 2nd All-Union Conf on Heat & Mass Transfer, Minsk, 4-12
May 1964.

Ural' Polytechnic Inst.

SKRIPOV, V. P.; DUBROVINA, Ye. N.

"Convective heat transfer in carbon dioxide in the near critical region."

report submitted for 2nd All-Union Conf on Heat & Mass Transfer, Minsk, 4-12 May 1964.

Ural' Branch, Acad Sci USSR, Ural' Polytechnic Inst

PAVLOV, P.A.; SKRIPOV, V.P.

Boiling up of a liquid in pulse heating. Part 1: Methodology of
the experiment with thin wires. Teplofiz. vys. temp. 3 no.1:109-
114 Ja--F '65.   (MIRA 18:4)

1. Ural'skiy politekhnicheskiy institut imeni Kirova.

ACCESSION NR: AP4034605   S/0143/64/000/004/0066/0071

AUTHOR: Skripov, V. P. (Docent); Nikolayev, G. P. (Engineer)

TITLE: Heat exchange with boiling carbon dioxide at near-critical pressures

SOURCE: IVUZ. Energetika, no. 4, 1964, 66-71

TOPIC TAGS: carbon dioxide, carbon dioxide heat exchange, heat exchange, critical boiling, critical boiling pressure

ABSTRACT: An experimental investigation of the critical boiling of carbon dioxide at near-critical pressures of a liquid-vapor system under natural convection conditions is reported. The heat exchange was studied with a 3.9/3.0-mm brass tubing passing circulating water and cooled externally by boiling carbon dioxide. The tubing was mounted in a pressure chamber with thermocouples, viewing ports, etc. (drawing supplied). These pressures were maintained in the chamber: 65.9, 68.1, 69.9, 72.2, 73.7, 74.2, 75.0 kg/cm^2; the carbon dioxide critical pressure was 75.3 kg/cm^2. It was found that: (1) At near-critical pressures, the pattern of liquid boiling on the tubing surface undergoes a sharp

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ACCESSION NR: AP4034605

change; the wall-temperature vs. specific-thermal-flow curve retains its normal shape; it passes through its maximum and minimum, except for p = 75.0 kg/cm^2 where no crisis was observed; (2) For pressure ratios p/p_{crit} = 0.875 — 0.995, the variation of q_{max}, q_{min}, $t_{w max}$ and $t_{w min}$ was measured; the local wall temperature corresponding to the bubble-to-film-boiling transition was lower than t_{crit}; (3) The line of the max-heat-transfer factor turns into the supercritical max-heat-transfer line at the boiling point; at supercritical pressures, boiling is impossible; however, the max thermal expansion and max heat capacity conditions result in the highest heat-transfer factor. Orig. art. has: 4 figures and 1 formula.

ASSOCIATION: Ural'skiy politekhnicheskiy institut im. S. M. Kirov (Ural Polytechnic Institute)

SUBMITTED: 18Mar63   DATE ACQ: 15May64   ENCL: 00

SUB CODE: PR,GC   NO REF SOV: 004   OTHER: 000

Card 2/2

S/0120/64/000/003/019 /6195

ACCESSION NR: AP4041051

AUTHOR: Skripov, V. P.; Cherepanov, V. N.

TITLE: Instrument for determining the range of sensitivity of an overheated liquid to radiation

SOURCE: Pribory* i tekhnika eksperimenta, no. 3, 1964, 192-195

TOPIC TAGS: bubble chamber, bubble chamber radiation sensitivity

ABSTRACT: An instrument (see Enclosure 1) provides for floating up tiny droplets of the test liquid in another liquid. In small flask 12, a small amount of the test liquid is emulsified in sulfuric acid by means of a magnetic stirrer 1. Via capillary 2, droplets of 0.1--0.4-mm enter a glass tube 11 filled with sulfuric acid and float up. A copper shell 4 has heater 8 at the top which provides for a uniform temperature rise along the acid column. Glass jacket 6 stabilizes the heat loss conditions. Isotopes Co^{60}, Zn^{65}, Na^{22}, and the gamma-bremsstrahlung from a 6-Mev betatron were used as radiation sources. Without irradiation, all droplets burst within 2 mm (temperature interval $\pm 0.5C$). With irradiation, part droplets burst within 2 mm (temperature interval $\pm 0.5C$). With irradiation, part

Card 1/3

ACCESSION NR: AP4041051

of the droplets burst at a lower temperature. These substances were tested: n-pentane, n-heptane, perfluoroheptane, perfluoropropylpyridine. Sensitivity temperature limits for these substances are reported. "The authors wish to thank Ye. N. Sinitsy*n for his help in carrying out a few of the experiments. They are also grateful to N. B. Delone, V. K. Lyapidevskiy, and G. S. Voronov for discussing some points, and to S. V. Sokolov for lending the fluorinated liquids." Orig. art. has: 3 figures and 1 table.

ASSOCIATION: Ural'skiy politekhnicheskiy institut im. S. M. Kirova (Ural Polytechnic Institute)

SUBMITTED: 02Jul63   ENCL: 01
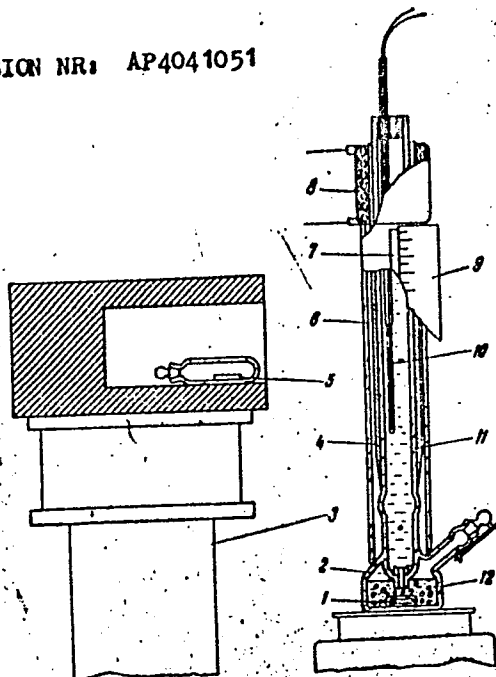
SUB CODE: NP   NO REF SOV: 002   OTHER: 002

Card 2/3

ACCESSION NR: AP4041051

ENCLOSURE: 01

Instrument for determining
temperature sensitivity of
liquids to radiation

Card 3/3

ACCESSION NR: AP4040376   S/0185/64/009/004/0393/0400

AUTHOR: Skripov, V. P.

TITLE: Overheated liquid near the boundary of its stability/Sixth Con-
ference on the Physics of Liquid State of Matter held in Kiev in 1963/
SOURCE: Ukrayins'ky*y fizy*chny*y zhurnal, v. 9, no. 4, 1964,
393-400

TOPIC TAGS: overheated liquid stability, metastable state, over-
saturated vapor, thermodynamic stability, Van der Waals equation,
Himpan equation

ABSTRACT: The attainable overheating of liquid under pure conditions
is associated with the kinetics of the process of forming nuclear
centers of the vapor phase. However, there is a thermodynamic bound-
ary of the stability of liquid (spinodal), defined by the equation
$(\partial p/\partial V)_T = 0$. A method is proposed for approximating this boundary
using the experimental data on the attainable overheating of liquids.
This is important for making the equations of state more precise so
that they can correctly describe the properties of the substance in
the region of metastable states. As an example, the Van der Waals

Card 1/2

ACCESSION NR: AP4040376

equation was used to obtain some information about the state. It was found that since the derivative $(dp/dT)_{sp}$ is positive, the possible changes of molecular volume of the liquid at the boundary of stability are within limits of $1/3V_k < V_{sp} < V_k$, where V_k is critical volume of substance and V_{sp} is the molecular volume of liquid on the spinodal. This range of volumes coincides with the evaluation of the region accepted in literature in which a liquid can exist, at least for simple substances. The volume of liquid on the spinodal first increases slightly with a rise in temperature, then increases faster and faster until the critical temperature is reached. For comparison the Himpan equation of state (an equation of the Van der Waals type with more precise coefficients) was calculated for n-pentane. Comparison of the results obtained from this calculation and the processed experimental data for the attainable overheating of n-pentane at different pressures showed that good agreement was obtained. Orig. art. has: 8 formulas and 5 figures.

ASSOCIATION: Ural'skiy politekhnicheskiy institut, Sverdlovsk (Ural Polytechnic Institute)
SUBMITTED: 00   DATE ACQ: 13May64   ENCL: 00
SUB CODE: GP   NO REF SOV: 004   OTHER: 002
Card 2/2

SKRIPOV, V.P.; YERMAKOV, G.V.

Pressure dependence of the ultimate superheating of liquids.
Zhur. fiz. khim. 38 no.2:396-404 F 64.   (MIRA 17:8)

1. Ural'skiy politekhnicheskiy institut imeni Kirova.

L 23042-65   EWT(m)   IJP(c)

ACCESSION NR: AP5002311

S/0053/64/084/004/0727/0729

AUTHOR: Skripov, V. P.; Sinitsyn, Ye. N.

TITLE: Experiments with superheated liquid

SOURCE: Uspekhi fizicheskikh nauk, v. 84, no. 4, 1964, 727-729

TOPIC TAGS: superheat, methane, pentane, nucleate boiling, bubble chamber

ABSTRACT: The author indicates that the question of degree of superheat attainable in a vapor is not discussed in textbooks, and the very possibility of a prolonged existence of highly superheated liquids is not well known, so that it would be useful to introduce appropriate laboratory experiments in the physics curriculum. Apparatus used to this end at the Physicotechnical Department of the Ural Polytechnic Institute, both for research and for student laboratory exercises, is described. The apparatus is shown in Fig. 1 of the enclosure. It is used to superheat a saturated hydrocarbon of the methane series in the form of small droplets imbedded in sulfuric acid. Droplets of diameter 0.1--0.5 mm are superheated and made to float upward in sulfuric acid. When a definite temperature is reached, the superheated droplets become unstable and evaporate ex-

Card 1/3

L 23042-65

ACCESSION NR: AP5002311

O

plosively, with the resultant characteristic noise clearly heard in the lecture room. By introducing a thermocouple at the position of the explosion it is possible to determine with sufficient accuracy the corresponding temperature of the medium and consequently the temperature of the droplets. More detailed information on the attainable superheating of the liquid can be obtained by bringing the droplets to rest at a given temperature. The procedure for this is also described. The apparatus can also be used to determine the lifetime of droplets under the action of gamma radiation in the sensitive zone of a superheated liquid. Experiments of this kind are similar to investigations of the density of tracks of ionizing particles in bubble chambers. The performance of such an experiment is described. Orig. art. has: 2 figures.

ASSOCIATION: None

SUBMITTED: 00   ENCL: 01   SUB CODE: GP'

NR REF SOV: 005   OTHER: 001
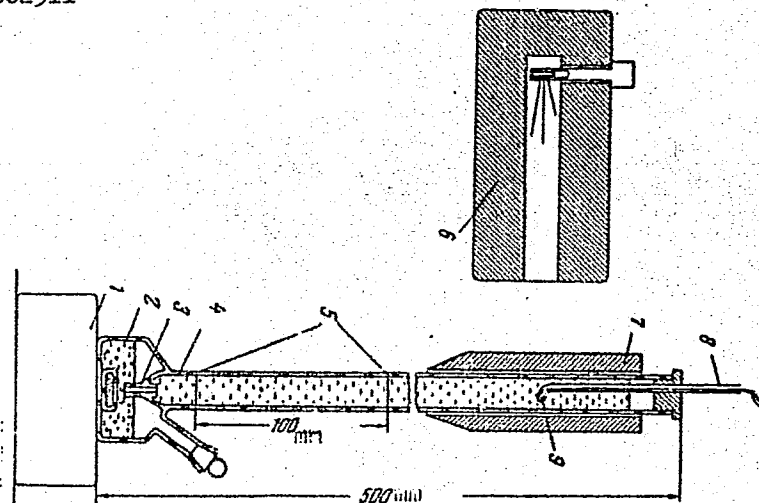
Card 2/3

L 23042-65
ACCESSION NR: AP5002311

Fig.1: Apparatus scheme for droplets life determination of superheated liquid.

Card 2/3

SKRIPOV, V.P.

A superheated liquid near the limit of its stability. Ukr.
fiz. zhur. 9 no.4:393-400 Ap '64.   (MIRA 17:8)

1. Ural'skiy politekhnicheskiy institut, Sverdlovsk.

SKRIPOV, V.P.; SINITSYN, Ye.N.

Experiments with superheated liquids. Usp. fiz. nauk 84 no.4:
727-728   D '64   (MIRA 18:1)

L 46164-65   EWT(1)/EPF(c)/EPF(n)-2/EWG(m)/EPR   Pr-4/Ps-4/Pu-4   WW

ABSTRACT: Convective heat exchange of carbon dioxide with an electrically heated
platinum wire was investigated in horizontal and vertical channels. The coeffi-
cient of heat exchange and the coefficient of convection were determined. The
criterial equation determining the currents of convection was verified. The con-
nection between the conditions that ensure the development of convection and char-
acter of heat exchange was checked for a wide range of states of the substance.
Particular attention was paid to states lying on both sides of the line of trans-
critical continuous transitions through the region of decreased thermodynamic
phase stability. The experimental set-up is shown in Fig. 1 of the Enclosure.
During the course of the experiments measurements were made of the temperature,

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L 46164-65

ACCESSION NR: AP5009555

pressure, heat flow and temperature difference, from which the heat exchange coefficient was determined. The pressure dependence of the heat exchange coefficient is shown in Fig. 2 of the Enclosure. A similar behavior was exhibited for both horizontal and vertical filaments, but the coefficient of heat exchange for the horizontal filament was systematically lower. Photographic and visual investigations of the convection of carbon dioxide near the critical point have shown considerable differences between vertical and horizontal filament positions. A maximum is also exhibited for the convection coefficient. The criterial relation $R \leq 1000$ (R is the Rayleigh number) could not be satisfied with carbon dioxide in the present installation, and helium had to be used to check on the validity of this rule. Orig. art. has: 2 formulas, 3 figures, and 3 tables.

ASSOCIATION: None

SUBMITTED: 10Aug64   ENCL: 02   SUB CODE: TD
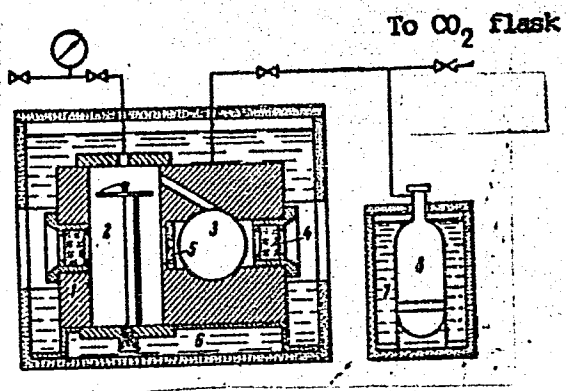
NR REF SOV: 007   OTHER: 003

Card 2/4

To CO_2 flask

Fig. 1. Experimental set-up

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