TROSHCHENKO, V.T.; BUGAY, V.I.

Durability of steels as dependent on the plastic per cycle
deformation under conditions of uniform and nonuniform stressed
states. Zav. lab. 31 no. 12:1501-1503 '65   (MIRA 19:1)

1. Institut problem materialovedeniya AN UkrSSR.

L 21818-66   EWT(d)/EWT(m)/EWP(w)/EWA(d)/EWP(v)/T/EWP(t)/EWP   IJP(c)

ACC NR: AT6008660   (N)   SOURCE CODE: UR/0000/65/000/000/0160/0169
EM/JD/HW/GS

AUTHORS: Bugay, V. I. (Kiev); Pisarenko, G. S. (Academician AN UkrSSR) (Kiev);
Troshchenko, V. T. (Kiev)

ORG: none

TITLE: A study of inelastic deformations in metals under cyclic deformation

SOURCE: Vsesoyuznoye soveshchaniye po voprosam staticheskoy i dinamicheskoy
prochnosti materialov i konstruktsionnykh elementov pri vysokikh i nizkikh
temperaturakh, 3d. Termoprochnost' materialov i konstruktsionnykh elementov (Thermal
strength of materials and construction elements); materialy soveshchaniya. Kiev,
Naukova dumka, 1965, 160-169
              circuit design
TOPIC TAGS: /fatigue strength, metal stress, strain, plastic deformation, hysteresis
loop, copper, steel / 45 steel, 25 steel, 20Kh steel, EI726 steel, 1Kh18N10T steel,
TsDM PU-10 testing machine

ABSTRACT: The course of plastic deformations in metals and alloys as a function of
the stresses and number of loading cycles is studied. The work was done to obtain
criteria for the fatigue strength of materials. A system developed earlier by V.
T. Troshchenko (Novyye mashiny i probory dlya ispytaniya metallov, M., Metallurgizdat,
1963) underlies the method. The 10-ton East German TsDM PU-10 machine was used for
mechanical loading of up to $P_a = \pm 49$ kN. The frequency can be varied smoothly from

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L 21818-66

ACC NR: AT6008660

500 to 2000 cycles per minute. A dynamic hysteresis loop in coordinates proportional to σ and ε is obtained on the screen of an oscillograph during testing (see Fig. 1).

Fig. 1. Circuit for recording dynamic hysteresis
loops with cyclic variable loading:
1 - oscillograph; 2, 10 - filters;
3 - amplifier; 4 - tensostation;
6 - PMT switch; 5, 7, 8, 9 - re-
sistance pickups.
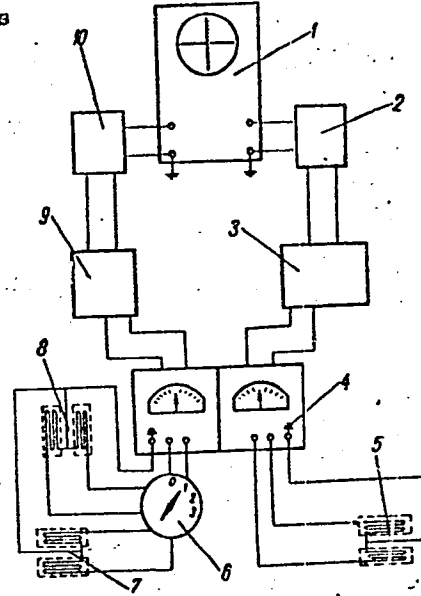
Card 2/3

L 21818-66

ACC NR: AT6008660

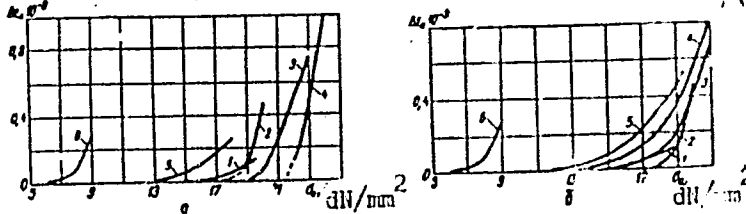Copper and 45, 25, 20Kh, EI726, and 1Kh18N10T steels were tested (see Fig. 2).

Fig. 2.   Change in width of hysteresis loop versus stress: a – first
          loading; b – second loading; 1 – EI726; 2 – 25 steel; 3 – 20Kh
          steel; 4 – 45 steel; 5 – 1Kh18N10T steel; 6 – copper.

With cyclic stress and strain, opening of the hysteresis loop for the steels tested
is observed with much smaller stresses than with static loading. For the steels,
with stresses exceeding the fatigue limit, the width of the hysteresis loop in-
creases regularly with the number of loading cycles until destruction of the spec-
imen. Orig. art. has: 2 diagrams, 3 graphs, 2 photographs, 2 tables, and 4 formu-
las.

SUB CODE: 20, 11/SUBM DATE: 19Aug65/ ORIG REF: 002

Card 3/3

L 16830-63   EP(c)/BDS   AFFTC/APGC/ASD   Pr-4   BM/MN
ACCESSION NR: AP3003265   S/0286/63/000/003/0036/0036

AUTHOR: Bugay, Ye. A.; Varfolomeyev, D. F.; Zagryatskaya, L. M.; Prokof'yeva, Ye. M.

TITLE: Method of increasing stability of gasoline." Class C 10g; 23b, 1 sub 04. No. 152924

SOURCE: Byul. izobreteniy i tovarnykh znakov, no. 3, 1963, 36

TOPIC TAGS: gasoline, inhibitor, phenolic oil, oxidation, oxidation inhibitor

ABSTRACT: Method of increasing the stability of gasolines by adding oxidation inhibitors; its distinguishing feature is that the oxidation inhibitor used is acid phenolic oil. /Abstracter's note: complete translation./ Orig. art. has no figures, tables, or formulas.
ASSOCIATION: none

SUBMITTED: 09Apr62   DATE ACQ: 23Jul63   ENCL: 00

SUB CODE: FL   NO REF SOV: 000   OTHER: 000

Card 1/1

BUGAY, Ye.A.

Device for measuring the inner diameter of furnace tubes.
Neftianik 6 no.2:23-24 F '61.   (MIRA 14:10)

1. Nachal'nik tsekha Ufimskogo neftepererabatyvayushchego
zavoda.
            (Petroleum refineries—Equipment and supplies)

VARFOLOMEYEV, D.F.; BUGAY, Ye.A.; DUDIN, V.N.; ZAGRYATSKAYA, L.M.; ANTIPIN,
M.K.; MARKINA, A.I.; POLINSKAYA, M.R.;

Recovering spent caustic using flue gases. Trudy Bash NIINP no.5:
319-322 '62.   (MIRA 17:10)

1. Ordena Lenina Ufimskiy neftepererabatyvayushchiy zavod.

ACCESSION NR: AP4036978

S/0065/64/000/005/0017/0022

AUTHOR: Masagutov, R. M.; Berg, G. A.; Varfolomeyev, D. F.; Selivanov
T. I.; Bugay, Ye. A.; Mukhametov, M. N.; Kulinich, G. M.; Sokolova,
V. I.

TITLE: Development of a process for high-purity cyclohexane

SOURCE: Khimiya i tekhnologiya topliv i masel, no. 5, 1964, 17-22

TOPIC TAGS: cyclohexane, benzene, benzene hydrogenation, catalyst,
nickel on kieselguhr, benzene purification, thiophene, sulfur com-
pound, cyclohexane production

ABSTRACT: An industrial process for cyclohexane has been developed
on the basis of preliminary pilot tests.   Cyclohexane of adequate
purity was produced by the one-step hydrogenation of benzene (cyclo-
hexane content, < 0.4%; thiophene content, < 0.00001%) on technical-
grade nickel on kieselguhr catalyst under the following conditions:
pressure 10 kg/cm^2 gage; space velocity of benzene feed, 0.5—0.6 hr^{-1};
maximum reactor temperature, 120—150C; hydrogen/benzene ratio, 3000

Card   1/3

ACCESSION NR: AP4036978

m^3/m^3. Catalyst activity did not drop after 15 days of continuous service. However, the degree of conversion of benzene containing 0.08% thiophene and 0.010% carbon disulfide dropped rapidly from 100 to 60%. Thus, a study was made of the possibilities for the preliminary purification of benzene to remove sulfur compounds. The study took into account data from the literature which indicate that thiophene in contact with the catalyst surface simultaneously blocks five active nickel atoms. In hydrogen the adsorbed thiophene molecule can decompose with the formation of a hydrocarbon molecule and of an S atom. The S atom combines with a nickel atom, but the hydrocarbon molecule desorbs from the catalyst surface, liberates four previously bound Ni atoms, and increases the S adsorption capacity of the catalyst. The results of the study and laboratory experiments have made it possible to develop a large-scale unit for the production of cyclohexane from benzene (containing 0.1—0.8% cyclohexene, up to 0.03% hexane, 0.02% other hydrocarbons, and 0.01—0.04% total sulfur) under the following [approximative] conditions: pressure, normal; temperature, 110 to 150C; space velocity of benzene feed, 0.2—0.85hr^{-1}; hydrogen/benzene molar ratio, 9.5—20. The process is conducted in

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ACCESSION NR: AP4036978

two steps: purification of benzene from S compounds and hydrogenation on two reactors connected in series. The unit has been in operation for two years. The cyclohexane is being used for making polyethylene. Orig. art. has: 3 figures and 2 tables.

ASSOCIATION: BashNIINP; OLUNPZ

SUBMITTED: 00

SUB CODE: GC

DATE ACQ: 05Jun64

NO REF SOV: 014

ENCL: 00

OTHER: 006

Card 3/3

S/2744/64/000/007/0121/0127

ACCESSION NR: AT4043277

AUTHOR: Masagutov, R. M., Berg, G. A., Varfolomeyev, D. F., Selivanov, T. I., Bugay, Ye. A., Kulinich, O. M., Sokolova, V. I., Mukhametov, M. N.

TITLE: Purification of benzene by chemisorption

SOURCE: Ufa. Bashkirskiy nauchno-issledovatel'skiy institut po pererabotke nefti. Trudy*, no. 7, 1964. Sernisty*ye nefti i produkty* ikh pererabotki (Sour crude oil and products of refining), 121-127

TOPIC TAGS: benzene, desulfurization, chemisorption, nickel kieselguhr catalyst, thiophene, carbon disulfide, cyclohexane, purification

ABSTRACT: Since neither sulfuric acid treatment nor hydrofining guarantee complete removal of sulfur from benzene, the authors investigated the chemical desulfurization of a benzene sample containing 0.08% (by weight) thiophene, 0.0102% carbon disulfide and 0.3% cyclohexane, using a commercial nickel catalyst on kieselguhr (0.93 g/cc bulk density) with 60% nickel. Desulfurization was more effective at higher temperatures than at room temperature. The high degree of purification obtained at 170-180C may be due both to a better contact between the benzene and the catalyst and a higher diffusion rate. When benzene samples were purified at 170-180C with the addition of hydrogen, the adsorptivity of the catalyst was increased 4.4 times as compared to the usual adsorption conditions. This

L 22570-65   ЭPF(c)/ЭЖT(m)/T   Pr-4   WE
ACCESSION NR: AP5001627   S/0318/64/000/012/0003/0006

AUTHOR: Masagutov, R. M., Berg, G. A., Varfolomeyev, D. F., Selivanov, T. I., $\mathcal{B}$
Kulinich, G. M., Mironov, A. A., Pau, G. M., Bugay, Ye. A.

TITLE: Results of the operation of a hydrofining unit for diesel fuel

SOURCE: Neftepererabotka i neftekhimiya, no. 12, 1964, 3-6

TOPIC TAGS: petroleum refining, hydrofining, diesel fuel, catalytic cracking, sulfur content

ABSTRACT: The report describes the basic design and the results of 7 months oper-
ation of a hydrofiner at the Ufa refinery. Straight-run diesel fuel and thermal
and catalytic cracking fractions with 1-2.1 wt.% sulfur content and iodine number
of 5-20 were blended, heated in exchangers and in a tubular furnace to 380-420C,
and refined over an alumina-cobalt-molybdenum catalyst. Hydrogen-containing gases
were separated, scrubbed in a monoethanolamine unit, and recirculated. After re-
moval of the gaseous fractions, the product was passed through a stabilizer to re-
cover 95.5 wt.% diesel fuel and 1.5 wt.% gasoline per feed. The sulfur concentra-
tion in the feed varied from 1.04 to 1.4 wt.%; it was reduced initially to 0.02 wt.
% and after 7 months operation to 0.15 wt.% in the diesel fuel, and the catalyst

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L 22570-65
ACCESSION NR: AP5001627

was regenerated when the product sulfur content reached 0.25% after 240 days.
Since hydrogen deliveries from catalytic reforming and the steam-iron reaction
were inadequate, only one of two available refiners was operated. The design
pressure of the refiner was reduced from 50 to 34-36 to decrease the hydrogen con-
sumption. The design temperature was not changed, and the product quality was not
affected. Various improvements made on unsatisfactorily performing units are des-
cribed. Orig. art. has: 2 tables and 1 figure.

ASSOCIATION: Ufimskiy ordena Lenina neftepererabatyvayushchiy zavod (Ufa petrol-
eum refinery); BashKIINP

SUBMITTED: 00   ENCL: 00   SUB CODE: FP

NO REF SOV: 002   OTHER: 000

Card 2/2

ACC NR: AP6023621   SOURCE CODE: UR/0318/66/000/004/0003/0006

AUTHOR: Bugay, Ye. A.; Prokopyuk, S. G.

ORG: Ufa Petroleum Refinery of the Order of Lenin (Ufimskiy ordena Lenina nefte-pererabatyvayushchiy zavod)

TITLE: Operation of catalytic cracking unit under conditions of destructive sulfur removal from the diesel fuel fraction

SOURCE: Neftepererabotka i neftokhimiya, no. 4, 1966, 3-6

TOPIC TAGS: catalytic cracking, desulfurization, diesel fuel

ABSTRACT: After a half year's operation of the catalytic cracking unit under sulfur removal conditions at the Ufa petroleum refinery, some of the stages of the unit were partly modified in order to improve the technical and economic indicators and raise its output. The process of sulfur removal occurs at a lower temperature and a higher volume velocity than the process of catalytic cracking. In the sulfur removal process use is made of diesel distillates containing a considerable amount of heavy gas oil fractions boiling above 350°. By making the fractional composition of the distillate heavier, one increases the efficiency of the process, since the light cracking of tail fractions occurring simultaneously with the sulfur removal is associated with the for-mation of an additional quantity of target products which offset the losses of the diesel fraction taking place during the destructive sulfur removal from the main por-

Card 1/2   UDC: 665.644.2.05:665.658.26

L 45677-66

ACC NR: AP6023621

tion of the stock. Distillates of secondary origin (in addition to the straight-run diesel fractions) are also used as stock in the sulfur removal process. The distribution of sulfur among the fractions of the stock and purified distillate obtained from the catalytic cracking unit is given. The wet gas and gasoline obtained during the purification process are equivalent in quality to the same products of catalytic cracking. It is concluded that practically all the indicators of the process were improved by the modifications introduced. Orig. art. has: 2 figures and 5 tables.

SUB CODE: 11/ SUBM DATE: none

Card 2/2 ry

L 41717 41   EWT(m)/T   WE

ACC NR: AP6018619   (A)   SOURCE CODE: UR/0065/66/000/006/0007/0010   *50*

38

AUTHOR: Bugay, Ye. A.; Selivanov, T. I.; Akhmetshin, M. I.; D'yachenko, A. Ye.;   *B*
Mironov, A. A.; Nikulik, V. I.

ORG: Novo-Ufimsk Petroleum Refinery (Novo-Ufimskiy neftepererabatyvayushchiy zavod)

TITLE: Experiences in the production of gasoline and diesel fuel from highly sour
crudes

SOURCE: Khimiya i tekhnologiya topliv i masel, no. 6, 1966, 7-10

TOPIC TAGS: gasoline, diesel fuel, petroleum refining, petroleum refinery equipment

ABSTRACT: A destructive-adsorptive desulfurization process for sour feedstocks was
developed in laboratory and full-scale runs at the Ufa Order of Lenin Petroleum Re-
finery (Ufimskiy neftepererabatyvayushchiy zavod) to reduce production costs and
particularly the consumption of hydrogen, the insufficient supply of which is limiting
the output of hydrodesulfurized fuels. An aluminum silicate catalyst and the catalytic
cracker type 43—102 were used at 390—420C and 1.2—1.8hr^{-1} space velocity to produce
75.7—82.2% and 7.9—11.1% yields of diesel fuel and naphtha, respectively, decreasing
the sulfur content to approximately 50% of the input value and to not more than 1%
after blending with light straight-run fractions. The cost of diesel fuel was ap-
proximately 20% lower as compared with hydrorefined fuels. Use of the cracking unit
for the process is recommended when heavy feedstocks for catalytic cracking are in
short supply. The unit was also employed for desulfurization of thermal cracking

Card 1/2   UDC: 665.52

L 41070-66

ACC NR: AP6018619   /2/

naphtha at 410—420C and $0.75hr^{-1}$ space velocity, thus reducing 8-fold the amount of required blending stocks for production of type A-66 gasolines. The following were among those who participated in laboratory and industrial experiments: G. I. Chmutov, S. G. Prokopyuk, R. M. Karponosova, M. N. Mukhametov, Ye. M. Varfolomeyeva, B. N. Rays, K. F. Pryakhina, M. R. Polinskaya, A. V. Tenikova, L. F. Yevstifeyev, and A. S. Kononov. Orig. art. has: 1 figure and 4 tables.

SUB CODE: 11, 21/ SUBM DATE: none/ ORIG REF: 022

Card 2/2

MASAGUTOV, R.M.; DANILOVA, R.A.; ZAITOVA, A.Ya.; GILYAZEV, N.G.;
ZAGRYATSKAYA, L.M.; BUGAY, Ye.O.; PRYAKHINA, K.F.

High-temperature catalytic cracking of heavy fractions of
straight-run gasoline. Trudy BashNII NP no.6:14-18 '63.
(MIRA 17:5)

BUGAY, Yu. P.

9.3150, 24.2120

77839
SOV/57-30-3-5/19

AUTHORS: Sinel'nikov, K. D., Tolok, V. T., Nazarov, N. I., Lukayev, I. I., Bondarev, V. A., Bugay, Yu. P.

TITLE: Investigations of Ion Cyclotron Resonance in a Dense Plasma

PERIODICAL: Zhurnal tekhnicheskoy fiziki, 1960, Vol 30, Nr 3, pp 283-286 (USSR)

ABSTRACT: The heating up of plasma under ion cyclotron resonance, where the ions acquire directly the energy of the electric field, is a process which one could hope to utilize for attaining high ionic temperatures. Theory developed by Stix (see ref) indicated that at plasma densities of 10^{14} cm^{-3} and more, one could generate and thermalize so-called ion cyclotron waves. The authors, therefore, investigated the ion cyclotron resonance in hydrogen plasmas of density 10^{12}-10^{14} cm^{-3} under impulse conditions, using a device described on Fig. 1.

Card 1/ 11

ASSOCIATION: Physico-Technical Institute AS UkrSSR, Khar'kov
(Fiziko-tekhnicheskiy institut AN USSR, Khar'kov)

SUBMITTED: October 22, 1959

Card 11/11

SINEL'NIKOV, K.D.; TOLOK, V.T.; NAZAROV, N.I.; BAKAYEV, I.I.; BONDAREV,
V.A.; BUGAY, Yu.P.

Investigation of ionic cyclotron resonance in a dense plasma.
Zhur.tekh.fiz. 30 no.3:282-288 Mr '60.   (MIRA 14:8)

1. Fiziko-tekhnicheskiy institut AN USSR, Khar'kov.
        (Plasma (Ionidzed gases))   (Cyclotron resonance)

S/781/62/000/000/001/036

AUTHOR: Sinel'nikov, K. D., Tolok, V. T., Nazarov, N. I., Bukayev, I. I., Bondarev, V. A., Bugay, Yu. P., Loginov, A. S., Kononenko, V. I.

TITLE: Investigation of ion cyclotron resonance in a dense plasma

TEXT: Ion cyclotron resonance heating of plasma, whereby field energy is transferred to the ions directly, is a promising method of rapidly attaining high ion temperatures. The article describes investigations of ion cyclotron resonance in a plasma produced by direct discharge in a glass tube 60 cm long and 6 cm in diameter. The discharge was produced by a rectangular voltage pulse of duration up to 800 microseconds and current up to 500 amp. The discharge tube was placed in a magnetic field produced by a solenoid fed from a capacitor bank with maximum stored energy 40,000 J, charged to 5 kV. The time required for the

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Investigation of ion cyclotron resonance in . . .   S/781/62/000/000/001/036

magnetic field to reach maximum was 4.7×10^{-3} sec.

The experiments have shown that there exist optimum values of hydrogen pressure and discharge current for the absorption of high frequency power by the plasma. The half-width of the resonant curves increases monotonically with increasing gas pressure, indicating that the accelerating ion interacts strongly with the neutral atoms. An increase in the discharge current and consequently in the ion density in the discharge also shifts the resonant peak toward magnetic field values below the resonant field. Density measurements in the hydrogen plasma have shown that at 300 amp a plasma of $6 \times 10^{13} cm^{-3}$ density has a lifetime of 150 microseconds after the termination of the discharge. It is also noted that the resonant peak becomes asymmetrical with increasing plasma density, this being possibly due to the diversion of part of the high frequency power to the generation of ion cyclotron waves. It is also likely that at densities above optimal the screening of the plasma against the high frequency field comes into play.

There are eight figures and five references. The English language references are: K. S. W. Champion, Proc. Phys. Soc. 70, 446, B, 212 (1957), and translated articles by T. N. Stix and R. W. Palladino.

Card 2/2

RASTREPIN, A.B.; ZOLOTOTRUBOV, I.M.; BUGAY, Yu.P.

Mass-spectrometric study of the energy distribution of ions in a plasma. Izv. AN SSSR. Ser. fiz. 27 no.8:1113-1117 Ag '63.
(MIRA 16:10)

1. Fiziko-tekhnicheskiy institut AN UkrSSR.

L 10928-67   EWT(1)   SCTB   DD/GD

ACC NR: AT6022295·   SOURCE CODE: UR/0000/66/000/000/0080/0084

AUTHOR: Chervov, V. G.; Bugay, Yu. P.

ORG: none

TITLE: Some aspects of functional simulation of nerve elements and systems

SOURCE: Vsesoyuznaya nauchnaya sessiya, posvyashchennaya Dnyu radio. 22d, 1966.
Sektsiya bioniki. Doklady. Moscow, 1966, 80-84

TOPIC TAGS: bionics, model, nervous system, physiologic parameter

ABSTRACT: The large amount of factual material accumulated in neurophysiology should
be used more widely for the design of appropriate models of nerve elements and
systems. The great complexity and dynamic characteristics of the parameters of nerve
tissues can be broadly reproduced on models with readily available means if the model-
ing process is based on the internal processes of the nervous cell taking into account
its dynamic properties and the universality of its characteristics. The study of the
characteristics of the nervous tissue during transitions between functional states
permits the incorporation of the totality of the known physiological properties of
nerve elements into a system and to supplement the physiological simulation premises
by new facts, not previously used for simulation.

SUB CODE: 06/ SUBM DATE: 08Apr66/ ORIG REF: 004

Card 1/1

43762

S/081/62/000/023/085/120
B144/B186

AUTHOR: Bugaychuk, A. M.

TITLE: Commercial isooctylene as a raw material for the production
of alkyl phenol

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 23, 1962, 595-596,
abstract 23M216 (Novosti neft. i gaz. tekhn. Neftepererabot-
ka i neftekhimiya, no. 5, 1962, 19 - 20)

TEXT: In the production of the additive Tsiatim-339 (solution of the barium
salt of alkyl phenol sulfide in mineral oil) which is used for motor oils;
phenol is alkylated by polymer-gasoline in the presence of benzene sulfonic
acid as catalyst. The non-reacted polymer-gasoline and the low-molecular
alkyl phenols are distilled with water vapor in vacuo from the reaction
mixture (the distillate is recycled for the alkylation of the phenol).
The residue, alkyl phenol with a flash point of $\geqslant 115^\circ$C, is treated, after
washing with water and drying, with S_2Cl_2 and then with $Ba(OH)_2$. The
results are given which were obtained in industrial experiments on the use

Card 1/2

Commercial isooctylene ...

S/081/62/000/023/085/120
B144/B186

of commercial isooctylene (I) (b. p. 77 - 205°C, molecular weight 116-125) instead of polymer-gasoline for the alkylation of phenol. For the alkylation of phenol with I, the following optimum conditions were found: temperature 65 - 78°C, molecular phenol:I:benzene sulfonic acid ratio 1:2.5: 0.1, time 8 hrs, after addition of the entire I the temperature of the mixture in the reactor was increased to 110°C and the mixture was cir-culated through a tubular cooler into the reactor for 4 hrs; properties of the alkyl phenol obtained (after distillation of the tops, washing and dry-ing): d 38 0.92, flash point 115°C, viscosity 5.4 cst/100°C, molecular weight 4 209; from (in kg) 1300 phenol, 3200 I, 1200 alkylation tops, and 180 benzene sulfonic acid were obtained 4200 alkyl phenol and 1200 top distillate. Industrial batches of the qualitative additive Tsiatim-339 prpepared on the basis of alkyl phenol obtained by using I have only a vis-cosity of ∿13.5 cst/100°C, which is thus lower than that of the commercial product (≥15 cst/100°C). [Abstracter's note: Complete translation.]

Card 2/2

S/081/63/000/004/027/051
B149/B186

AUTHOR: Bugaychuk, A. M.

TITLE: Factors affecting the synthesis of alkyl phenols

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 4, 1963, 453 - 454, abstract 4N39 (Novosti neft. i gaz. tekhn. Neftepererabotka i neftekhimiya", no. 6, 1962, 13 - 15)

TEXT: A series of experiments was carried out under industrial conditions at 60 - 100° in order to determine the optimum temperature for catalytic alkylation of phenol (I) by an extended fraction of technical polymer-distillate (II), which is a product of catalytic polymerization of the amylene-butylene fraction of the cracking and reforming gases, and contains $C_5 - C_{11}$ olefins. The catalyst was benzene sulfonic acid (III) containing 90 - 94% monosulfonic acid. Two sorts of II were used in the investigation - one with an iodine number of 136 and 73% evaporation up to 127°, and the second with an iodine number of 127 and 12% evaporation up to 127° - with a molecular ratio of I:II:III = 1:2.5:0.1 and a feed rate for II of 1100 kg/hr. It was found that on raising the temperature of the process the total yield of alkyl phenols increased the more markedly, the higher the

Card 1/2

Factors affecting the synthesis of...   S/081/63/000/004/027/051
B149/B186

concentration of low-boiling olefins in II. The maximum yield of alkyl
phenol occurs at 90 - 95°. Further increase of temperature causes enhanced
polymerization of crude olefins and intense evaporation of the olefins with
low molecular weight, with a drop in the yield of alkyl phenol. At 80-85°,
the olefins with low molecular weight do not react completely with I, but
are for the most part lost during the alkylation itself and, to some extent,
during the washing with water and drying of the alkyl phenol obtained. To
reduce the evaporation of the olefins with low molecular weight which are in
the vapor phase at 90-95°, it has been suggested that II be introduced into
the reaction mixture through a layer of a molten mixture of I and III. The
alkyl phenol obtained at 90-95° has lower viscosity and specific gravity
than that obtained at 60-65° because of the presence of alkyl phenols with
shorter alkyl chains. However, the ЦИАТИМ-339 (TsIATIM-339) additive
prepared on the basis of this alkyl phenol is not inferior in its qualita-
tive indices to that obtained from the more viscous one, and is superior
to it in terms of ash content, despite the lower viscosity. Comparative
characteristics of the additives are supplied. [Abstracter's note: Com-
plete translation.]

Card 2/2

BUGAYCHUK, A.M.

Mastering and improving techniques used in the production of
formaldehyde condensation additives. Nefteper. i neftekhim.
no.1:9-14 '63.   (MIRA 16:10)

1. Permskiy opytno-promyshlennyy neftemaslozavod.

BUGAYCHUK, A.M.

Efficient method for the neutralization of alkyl phenols by barium-Hydrooxide. Nefteper. i neftekhim. no.7:21-25 '63
(MIRA 17:7)

1. Permskiy oputno-promyshlennyy neftemaslozavod.

BUGAYCHUK, A.M.

Use of TV- and OTV-600 centrifuges for the filtration of TsIATIM-339 additives. Nefteper. i neftekhim. no.10:35-40 '63.(MIRA 17:2)

1. Permskiy neftemaslozavod.

L 52626-65   EWT(m)/EPF(c)/T   Pr-4   DJ/JXT(CZ)

ACCESSION NR: AP5009995   UR/0318/65/000/003/0014/0017

AUTHOR: Bugaychuk, A. M.

TITLE: Technological factors affecting the efficiency of centrifugation and the quality of VNIINP-370 additive

SOURCE: Neftepererabotka i neftekhimiya, no. 3, 1965, 14-17

TOPIC TAGS: additive, centrifugation, catalyst, alkylation/ TV 600 centrifuge, OTV 600 centrifuge, SGO 150 N supercentrifuge, VNIINP 370 additive

ABSTRACT: VNIINP-370 is one of the most efficient additives for diesel oil. However, the standard TV-600 and OTV-600 centrifuges do not permit adequate purification of the additive. The SGO-150 N supercentrifuge increases the purification by a factor of 15000, but the capacity of this device is too small (up to 150 kg liquid phase) to permit high productivity. The author suggests that it is possible to prevent introduction of many mechanical impurities which later prove difficult to remove. The principal sources of these impurities are: quinoid products from phenol oxidation, plastic products of olefin polymerization, salts of low-molecular alkylphenols and alkylphenolsulfo acids, and low CaO content. All these factors reduce the stability of the additive as well as increase the content of mechanical.

Card 1/2

L 52626-65

ACCESSION NR: AP5009995

impurities. The oxidation of phenols may be eliminated by lowering the amount of heating. Alkylation of the phenol may reduce the content of free phenol to 0.5%, and the use of more concentrated sulfuric acid as a catalyst will tend to prevent olefin polymerization. The olefins and phenols of the raw material may be more efficiently used if an intermediate stage of producing calcium salts is introduced before distillation. To increase CaO in the additive it was found suitable to use a saturated aqueous solution of $Ca(OH)_2$. Several samples of the additive were produced with different degrees of preliminary prevention of mechanical impurities and with different periods of centrifugation with both standard centrifuge and supercentrifuge. The products were then examined for stability, viscosity, ash content, and calcium content. These data are tabulated. The samples with greatest preventive treatment (least mechanical impurities at start of centrifugation) gave best physical properties, even with shorter periods of centrifugation. Orig. art. has: 1 table and 1 formula.

ASSOCIATION: Permskiy opytno-promyshlennyy neftemaslozavod (Perm Experimental-Industrial Petroleum-Oil Plant)

SUBMITTED: 00   ENCL: 00   SUB CODE: OC, FP

NO REF SOV: 003   OTHER: 000

Card 2/2

Flow diagram for milling in a closed cycle, Tsement, no.5:13-15 S-0 '64.
(Cai 17:12)

1. Gosudarstvennyy vsesoyuznyy nauchno-issledovatel'skiy institut tsementnoy promyshlennosti i Pushchinoveniy tsementno-shifernyy kombinat.

L 05895-67   EWT(m)

ACC NR: AR6031251 (A) SOURCE COED: UR/0081/66/000/011/M026/ M026

AUTHOR: Kravchenko, I. V.; Vlasova, M. T.; Yudovich, B. E.; Krykhtin, G. S.; Kirillov, Yu. D.; Turkot, I. M.; Shorokh, L. N.; Bugaychuk, A. V.

TITLE; The production of a quick-hardening cement at a Zdolbunov Cement-Slate Plant

SOURCE: Ref. zh. Khimiya, Part II, Abs. 11M192

REF SOURCE: Nauchn. soobshch. Gos. Vses. n.-i. in-t tsementn. prom-sti, no. 20(51), 1965, 36-41

TOPIC TAGS: cement, quick hardening cement/Zdolbunovskiy Cement Slate Plant

ABSTRACT: A technology was developed for manufacturing very quick-hardening cement with a hardening strength of 300 kg/cm^2 after one day, 450 kg/cm^2 after three days, and 700 kg/cm^2 after 28 days. At the Zdolbunov Cement-Slate Plant the base mixture is made from hard chalk, clay, and loams, containing a considerable quantity of large-crystal quartz; calcining was conducted in rotating furnaces, 118 and 170 m long. The physicochemical properties of the base components were studied, and the effect of the following factors on the cement strength was analyzed:

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L05895-67
L 05895-67

ACC NR: AR6031251

the type of fuel, the method of grinding the clinker, and the reactivity of the components. The reactivity of the base mixtures was found to be low, since 30-- 45% SiO_2 was present in the form of quartz particles larger than 15 μ. The cross-sectional view of the manufactured slurry showed large quartz crystals, $\leqslant 250 \mu$. The best results with respect to cement strength and furnace productivity were obtained with clinkers containing 55—63% C_3S and 7—8% C_3A when n = 2.3—28, and p = 1.2—1.4. The required cement strength was obtained when the specific 3500--4000 cm^2/g, while the specific surface should be 5000 cm^2/g when calcining the clinker in a solid fuel. Mills, operating in open or closed cycles can be used; the temperature of the clinker being fed into the mill should not exceed 70—80° in the first case and 100° in the second case, and 100° at the outlet from the mill. [Translation of abstract]

SUB CODE: 07/

kh

Card 2/2

BUGAYCHUK, I.S.; SERGIYENKO, V.V.

Replacing cross switches with a crane. Put' i put.khoz. 4
no. 5:5-6 My '60.   (MIRA 13:11)

1. Starshiy dorozhnyy master, stantsiya Kazatin, Yugo-
Zapadnoy dorogi (for Bugaychuk). 2. Nachal'nik distantsii puti,
stantsiya Kazatin, Yugo-Zapadnoy dorogi (for Sergiyenko).
                (Railroads--Switches)

BUGAYCHUK, I.S.

Using a ballaster for lifting switches. Put' i put.khoz. 5 no.4:21
Ap '61.   (MIRA 14:7)

1. Starshiy dorozhnyy master st. Kazatin, Yugo-Zapadnoy dorogi.
                    (Railroads--Equipment and supplies)

OLEYNIK, A.P., dorozhnyy master (Stantsiya Kolkhoznyy, Yuzhnoy dorogi);
BUGAYCHUK, I.S., starshiy dorozhnyy master (Stantsiya Kazatin,
Yugo-Zapadnoy dorogi); LIPMAN, L.P., inzh. (g. Kazan');
ALEKSEYEV, Ie.V., mostovoy master (Stantsiya Belev, Moskovskoy
dorogi)

Letters to the editor. Put' put.khoz. 5 no.9:47 S '61.

(MIRA 14:10)

(Railroads)

BEZRUKOV, A. M.; PRIBUD'KO, N. S.; BUGAYCHUK, I. S.

Laying switches on blocks of reihforced concrete. Put' i put.
khoz. 7 no.3:3-6 '63.   (MIRA 16:4)

1. Nachal'nik Kazatinskoy distantsii puti Yugo-Zapadnoy dorogi
(for Bezrukov). 2. Zamestitel' nachal'nika Kazatinskoy distantsii
puti Yugo-Zapadnoy dorogi (for Pribud'ko). 3. Nachal'nik mekhani-
zirovannogo uchastka Kazatinskoy distantsii puti Yugo-Zapadnoy
dorogi (for Bugaychuk).

(Railroads—Switches)

MAKHORIN, K.Ye.; BUGAYENKO, B.P.

Selecting furnaces and fuels for the magnetization roasting of
Krivoy Rog quartzites. Metallurg 5 no.10:3-7 O '60.
(MIRA 13:9)

1. Institut ispol'zovaniya gaza AN USSR.
    (Krivoy Rog--Quartzite)
    (Ore dressing)

BUGAYCHENKO, M.V., inzhener-mekhanik.

        Description of machinery for working fallow in the southern steppe.
Mekh. sil'. hosp. 8 no.9:28-29 S '57.   (MLRA 10:9)
            (Ukraine--Agricultural machinery)

BUGAYCHENKO, N.V. [Buhaichenko, N.V.], inzh.-mekhanik

What we expect from Lyubertsy machinery builders. Mekh.sil'.
hosp. 11 no.2:26 F '60.   (MIRA 13:6)
        (Lyubertsy--Agricultural machinery industry)

BUGAYENKO, G. A.

Bugaenko, G. A. On the theory of hydrodynamical grids with thin wings of arbitrary shape. Akad. Nauk SSSR. Prikl. Mat. Meh. 12, 453–462 (1948). (Russian)

The author considers an incompressible potential two-dimensional flow past a straight cascade of infinitely thin slightly curved profiles. He assumes that the chords of the profiles are either situated along the axis of the cascade or else are perpendicular to the axis. The flow is represented as being due to a doublet at infinity and to vortices distributed along the chords of the profiles. For the density of the vortex-distribution the author derives a singular linear integral equation (i.e., an integral equation with Cauchy principal values). Using complex variable methods this equation can be solved in closed form. The resulting formulas for the pressure distribution contain as a limiting case Munk's formulas. The method is then extended to profiles of small but not vanishing thickness. In that case the flow is considered as being produced by a doublet at infinity and by vortices, sources, and sinks distributed along the chords.   L. Bers (Syracuse, N. Y.).

Source: Mathematical Reviews,   Vol 10   No. 2

BOGAYENKO, G. A.

BUGAENKO, G.A.

K voprosu o struinom obtekanii beskonechnoi reshetki gazom v priblizhennoi postanovke S.A. Chaplygina. (Prikladnaia matematika i mekhanika, 1949, v. 13, no.4, p.449-456, diagrs.)

Title tr.: Problem of gas flow over an infinite cascade using Chaplygin's approximation.

QA801.P7 1949

SO: Aeronautical Sciences and Aviation in the Soviet Union, Library of Congress, 1955

BUGAENKO, G. A.

On the problem of gas flow over an infinite cascade using Chaplygin's approximation.
Washington, 1951. 14 p., diagrs. (U. S. NACA TM no. 1298)

Trans. of K voprosu o struinom obtekanii beskonechnoi reshetki gazom v
priblizhennoi postanovke S. A. Chaplygina.

TL507.U57 no1 1298

SO: Aeronautical Sciences and Aviation in the Soviet Union, Library of
Congress, 1955

BUGAYENKO, G. A.

"Swing of a Pendulum," Fiz. v Shkole, No.5, 1952

BUGAYENKO, G.A.

3724. Bugaenko, G. A., *Free thermal convection in vertical cylinders of arbitrary cross sections* (In Russian), *Prikl. Mat. Mekh.* 17, 4, 490-500, July-Aug. 1953.

General analytical solution of free thermal convection equations is derived to determine velocity and temperature distributions inside vertical cylinders for laminar fluid-flow case. Author starts with Navier-Stokes, continuity, and Fourier equations and uses methods similar to Pohlhausen's for vertical plates to reduce the problem to that of solution of Laplace equation for temperature and Poisson equation for velocity distribution; he concludes that temperature distribution resembles that of stationary medium because of orthogonality of velocity to temperature gradient. Above differential equations are integrated and boundary conditions discussed for two specific cases. Thus distributions are obtained for cross sections of rectangular cylinder and of circular cylinder bounded by a solid.   H. Hurwicz, USA.

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BUGAYENKO, G. A.
USSR/Physics - Convection

FD-656

Card 1/1   : Pub. 85 - 11/20

Author   : Bugayenko, G. A. (Molotov)

Title   : Free convection in an inclined cylinder

Periodical   : Prikl. mat. i mekh., 18, 212-214, Mar/Apr 1954

Abstract   : Treats the gravitational-thermal convection in cylinder which is
                   inclined to the vertical, and studies the stationary current whose
                   lines of flow are parallel to the axis. Two references, including
                   G. A. Ostroumov, Svobodnaya konvektsiya v usloviyakh vnutrenney
                   zadachi [Free convection under conditions of the internal problem],
                   Chapter 7, GITTL, 1952.

Institution   : --

Submitted   : January 18, 1954

SOV/124-57-9-10245

Translation from: Referativnyy zhurnal, Mekhanika, 1957, Nr 9, p 50 (USSR)

AUTHOR: Bugayenko, G. A.

TITLE: Flow About a Plane Hydrodynamic Cascade According to the Principles
            of the Vanishing-viscosity Theory (Obtekaniye ploskoy gidrodinami-
            cheskoy reshetki po skheme teorii ischezayushchey vyazkosti)

PERIODICAL: Uch. zap. Molotovsk. un-ta, 1955, Vol 9, Nr 4, pp 25-28

ABSTRACT: The well-known solution to the problem of the incompressible fluid
            flow about an isolated fluid foil according to the principles of the
            vanishing-viscosity theory [Kochin N. Ye., Kibel' I. A., Roze N. V.,
            Teoreticheskaya gidrodinamika (Theoretical Hydrodynamics). Part II.
            Gostekhteoretizdat, 1948] is expanded to include an infinite cascade
            of straight fluid foils placed in a straight line perpendicular to the direct-
            ion of the impinging flow. It is presumed that beyond each profile of
            the cascade there is an infinite vortex region separated from the basic
            non-vortex flow by two semi-straightline segments originating at the
            edges of the fluid foil and extending parallel to the impinging flow. The
            liquid slips along the face of the fluid-foil facing the stream and adheres
Card 1/3   to its far side. The study of the flow velocity field is reduced to the

SOV/124-57-9-10245
Flow About a Plane Hydrodynamic Cascade According to the Principles (cont.)

determination of an analytic function $w_1(z)$ in the z plane of the flow which is regular in the region of flow and is characterized by the property that on the segmental boundaries along the imaginary axis simulating the cascade $\arg dw_1/dz$ assumes a prescribed value and that for $Re_z \to +\infty$ the derivative dw_1/dz tends to approach a prescribed limit. This is equivalent to finding the function $\omega = i \cdot \log_e dw/dz$ which is regular in the region of the flow that has a prescribed $Re\,\omega$ value on the segmental boundaries and that tends to approach a prescribed limit at $Re_z \to +\infty$. The solution of this problem is obtained by conformally reflecting each periodic band of the region of flow that contains a single profile of the cascade on the portion of the Riemann ζ surface external to the unit circumference so that each profile is transformed into a unit circumference and the infinite space forward of the cascade into a point ζ_∞ external to this circumference. After the transfer to the ζ plane the ω function (which is regular for $|\xi| > 1$ but not for $|\xi| < 1$ as pointed out on page 26 of the paper reviewed is given by the Schwarz formula, wherein the arbitrary constant is determined from the conditions at point ζ_∞. The knowledge of the dw_1/dz derivative in the region of the flow permits one to find the velocity field, pressure distribution along a profile of the cascade, and the drag acting on a unit length of each foil

Card 2/3
$$X = \rho U^2 \frac{(2m-1)km - (1+m^2)\ell}{(1-m)^2}$$

SOV/124-57-9-10245

Flow About a Plane Hydrodynamic Cascade According to the Principles (cont.)

where ρ_1 is the mass density of the fluid, U is the velocity of the impinging flow, ℓ is one-half of the profile chord length, k is the cascade pitch, and $m = \tan(\pi \ell /2k)$ for $0 < m < \ell$. Under extreme conditions, when $k \to \infty$ and ℓ is constant, the expression takes the well-known form of the formula for the drag of a single foil perpendicular to the impinging flow.

G. Ye. Bobrov

Card 3/3

16.4500 24.4300 25005

S/044/61/000/003/006/014
C111/C333

AUTHOR: Bugayenko, G. O.

TITLE: Application of the integral of Cauchy type for the
            solution of the problem of the flow around a thin profile

PERIODICAL: Referativnyy zhurnal, Matematika, no. 3, 1961, 31, ab-
            stract 3B130 (Nauk. zap. Cherkas'k. derzh. ped. in-t,
            1957, 2, 39-43)

TEXT: The author uses the method proposed by him (Bugayenko, G.O.,
Prikl. matem. i mekhan., 1948, No. 4) for solving the problem of the
circulation around a thin profile, the axis of which is an arc of
the circle C ($|\zeta| = 1$, $|arg \zeta| \leq \alpha$). The integral equation for γ, q--
intensities of the vortices and sources distributed on the axis, is
written in the form

$$ Re \; \frac{i}{2\pi} \frac{dt}{ds} \int \frac{\gamma(\zeta) + iq(\zeta)}{\zeta - t} \frac{d\zeta}{\zeta} = u_0 \frac{dy}{ds} - v_0 \frac{dx}{ds} - v_0 \frac{dx}{ds} , \qquad (3) $$

where u_0, v_0 are projections of the velocity of the undisturbed flow.
With the aid of the formulas of Sakhotskiy-Plemeli there are
Card 1/3

25005

Application of the integral of . . .

obtained the representations:

$$
\gamma(e^{i\tau}) = \frac{1}{2\pi} \sqrt{\frac{\sin\frac{\alpha-\tau}{2}}{\sin\frac{\alpha+\tau}{2}}} \int_{-\alpha}^{\alpha} \left(\operatorname{tg}\frac{\alpha}{2} + \operatorname{ctg}\frac{\theta-\tau}{2} \right) \times \sqrt{\frac{\sin\frac{\alpha+\theta}{2}}{\sin\frac{\alpha-\theta}{2}}} f(\theta)\, d\theta
$$

and the circulation

$$
\Gamma = \frac{1}{\cos\alpha} \int_{-\alpha}^{\alpha} \sqrt{\frac{\sin\frac{\alpha+\theta}{2}}{\sin\frac{\alpha-\theta}{2}}} \; f(\theta)\, d\theta
$$

where $f(\theta) = u_0(y_1' + y_2') - v_0(x_1' + x_2')$ (the indices 1,2 denote the

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Application of the integral of . . .   S/044/61/000/003/006/014
                                    C111/C333

values for the lower and upper part of the boundary of the profile).

The lifting force is determined according to the formula of Zhukovskiy:
$P = \rho V \Gamma$.

[Abstracter's note: Complete translation.]

Card 3/3

BUGAYENKO, G.A. (Cherkassy)

Problem on the pendulum of Galilei. Fiz.v shkole 21 no.4:102-103
Jl-Ag '61.   (MIRA 14:10)
              (Pendulum)

L 23592-65   EWT(1)/EWP(m)/EPF(n)-2/EWA(d)   Pd-4/Pu-4   WW

ACCESSION NR: AP5002861   S/0207/64/000/005/0056/0058

AUTHOR: Bugayenko, G. A. (Cherkassy) B

TITLE: A case of free convection of a liquid contained by soluble and absorbent walls

SOURCE: Zhurnal prikladnoy mekhaniki i tekhnicheskoy fiziki, no. 5, 1964, 55-58

TOPIC TAGS: convection, diffusive motion, thermal diffusion

ABSTRACT: The exact solution is found for the problem of the convection of a liquid enclosed between two vertical coaxial cylinders heated to different temperatures. The outer cylinder (radius R_2, temperature T_1) is soluble so that at its surface the concentration C is that of the saturated solution C_*. The inner cylinder (radius R_1, temperature T_0) absorbs all the diffusing material on its surface so that $C(R_1) = 0$. The temperature and concentration between the cylinders is then given by

$$T = \frac{T_1 - T_*}{\ln(R_2/R_1)}\ln\frac{r}{R_1} + T_0, \qquad C = \frac{C_*}{\ln(R_2/R_1)}\ln\frac{r}{R_1}.$$

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L 23592-65
ACCESSION NR: AP5002864

0

The hydrodynamic velocity $v_z = v(r)$ (z is directed vertically upwards and $v_r = v_\phi = 0$,
is given by

$$v = \frac{1}{4}r^2 \left[a\left(1 - \ln\frac{r}{R_1}\right) - b\right] + k\ln\frac{r}{R_1} + k_1,$$

where $a = \left(\beta_1\frac{T_1 - T_0}{\ln(R_2/R_1)} + \beta_2\frac{C_0}{\ln(R_2/R_1)}\right)\frac{g}{\nu},$ $b = \beta_1 T_0 \frac{g}{\nu} - A,$

$$k_1 = \frac{R_1^2}{4\Delta}\left(P\ln\frac{R_2}{R_1} - MQ\right), \quad k = \frac{1}{\ln(R_2/R_1)}\left[M + k_1\left(\frac{R_1^2}{R_2^2}\right) - 1\right]$$

$$4\Delta = \frac{1}{4}(R_2^4 - R_1^4)\ln\frac{R_2}{R_1} + \frac{1}{2}(R_2^2 - R_1^2)R_1^2\ln\frac{R_2}{R_1} + Q(R_2^2 - R_1^2)$$

$$M = \frac{1}{4}a R_2^2 \ln\frac{R_2}{R_1}$$

$$P = a/16\left[R_2^4 \ln\frac{R_2}{R_1} - \frac{1}{4}(R_2^4 - R_1^4)\right]$$

$$Q = \frac{1}{4}\left[R_2^2 \ln\frac{R_2}{R_1} - \frac{1}{2}(R_2^2 - R_1^2)\right]$$

$$A = \frac{g\beta_1 T_0}{\nu} - a + \frac{1}{\Delta}\left\{P\ln\frac{R_2}{R_1} + MQ\right\}.$$

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L 23592-65
ACCESSION NR: AP5002864

0

The coefficients of expansion β_1 and β_2 and of the kinematic viscosity ν are taken at the mean values of T and C, and g is the gravitational potential. The diffusion flux of the dissolved material is given by

$$J_n = - \frac{P_0 D}{r \ln(R_2/R_1)}\left[(T_1 - T_0)\lambda + C_0\right],$$

where D and λ are the coefficients of diffusion and thermal diffusion respectively (also at the mean values of T and C). Orig. art. has: 47 equations.

ASSOCIATION: none

SUBMITTED: 29Jan64   ENCL: 00   SUB CODE: ME, TD

NO REF SOV: 003   OTHER: 000

Cor. 3/3

BUGAYENKO, G.I.; SENCHUK, V.Ye.

Cutting-tool holders for fine planing. Mashinostroitel'
no.12:19 D '61.   (MIRA 14:12)
              (Planing machines—Attachments)

BUGAYENKO, I. F.

Determining sugar traces in the feed water for boilers (from Listy cukrovarnicke," no.6, 1962). Sakh. prom. 36 no.10:76 0 '62.   (MIRA 15:10)
(Feed water--Testing)

BUGAYENKO, I.F.

Solubility of sucrose in water (from "Gazeta Cukrownicza,"
no.12, 1960). Sakh.prom. 35 no.6:71-73 Je '61.

(MIRA 14:6)

(Sucrose)

BUGAYENKO, I.F.

Carbonic acid (carbonate) method of the ion exchange purification of second carbonation juice (from "Zucker," no.5, 1960). Sakh. prom. 35 no.6:73-74 Je '61.   (MIRA 14:6)

(Sugar manufacture)

BUGAYENKO, I.F.

> Saturation coefficient of low-quality sugar solutions (from "Listy cukrovarnicke," No.4, 1961). Sakh. prom. 35 no.12:63 D '61.
>
> (Sugar manufacture)   (MIRA 15:1)

BUGAYENKO, I.F.

Putting the stone catcher into service after washing
the beets from "Listy cukrovarnicke," No.7, 1961). Sakh. prom.
35 no.12:64 D '61.
(Sugar machinery)

(MIRA 15:1)

BUGAYENKO, I.F.

Structure of the colloid coagulates of sugar beet juices (from Listy cukrovarnické," no.9, 10, 1961). Sakh.prom. 35[i.e. 36] no.2:67 F '62.
(MIRA 15:4)
(Poland—Sugar manufacture)

BUGAYENKO, I.P.

Addition of calcium acetate in the boiling of the last product of massecuite (from "Cukoripar," no.7, 1962). Sakh. prom, 37 no.4:66 Ap '63.   (MIRA 16:7)

(Hungary—Sugar manufacture)

BUGAYENKO, I.F.

Method for determining the degree of damage in sugar beets and
of the optimum conditions of beet cossettes scalding (from
"Listy cukrovarnicke," no.2, 1963). Sakh.prom. 37 no..6:74 Je
'63.   (MIRA 16:5)
           (Czechoslovakia--Sugar manufacture)

BUGAYENKO, I.F.

Effect of the softening of the second carbonation juice on the quality of molasses. Sakh. prom. 36 no.7:62-63 Jl '62.

Principles of the boiling of the final product of the massecuite. Ibid.:63   (MIRA 17:1)

BUGAYENKO, I.F.

Rate of crystallization of sucrose from impure solutions. Sakh.
prom. 36 no.9:66-67 S '62.   (MIRA 16:11)

BUGAYENKO, I.F.

Determining saccharose content in the presence of invert sugar by the method of direct polarization. Sakh. prom. 37 no.10:57 O '63.
(MIRA 16:12)

BUGAYENKO, I.F.

Review of V. Faber and J. Hartl's book "Refining of raw cane sugar." Sakh. prom. 37 no.10:74 O '63.   (MIRA 16:12)

BUGATENKO, I.F.

Effect of precarbonation on the adsorption of coloring substances. Sakh.prom. 38 no.1:68 Ja '64.

Laboratory tests of the method of simultaneous defecation and carbonation.   Ibid.:68-69   (MIRA 17:2)

BUGAYENKO, I.F.

Complexometric determining of calcium in the regeneration of bone black. Sakh.prom. 38 no.2:60 F '64.

Determining "harmful" sulfur in activated carbon. Ibid.:61 .

(MIRA 17:3)

BUGAYENKO, I.F.; MIKHATOVA, G.N.

[High-molecular flocculants in the sugar industry] Vysoko-
molekuliarnye flokulianty v sakharnoi promyshlennosti.
Moskva, TSentr. in-t nauchno-tekhn. informatsii pishchevoi
promyshl., 1964. 21 p.   (MIRA 17:12)

BUGAYENKO, I.F.

[Crystallization of the massecuite of the last product]
Kristallizatsiia utfelia poslednego produkta. Moskva,
TSentr. in-t nauchno-tekhn. informatsii pishchevoi pro-
myshl., 1964. 25 p.   (MIRA 18:5)

DUGAIENKO, I.I.

Spreading the knowledge of new agricultural technology. Mekh. i elek.sel'_
khoz. no.4:93-94 Ap '53.
(MLRA 6:5)

1. Khar'kovskiy zootekhnicheskiy institut. (Agricultural machinery)

GORB, T.V. [Horb, T.V.], doktor sel'skokhoz.nauk; TERESHCHENKO, F.K.,
    kand.biolog.nauk; BOGAYEVSKIY, O.T. [Bohaievs'kyi, O.T.], kand.
    veterin.nauk; POTYEMKIN, M.D.. [Pot'omkin, M.D.] akademik;
    KNIGA, M.I. [Knyha, M.I.]; POPOV, O.Ya., kand.sel'skokhoz.nauk;
    KHMELIK, G.G. [Hmelyk, H.H.], kand.sel'skokhoz.nauk; SHRAM, I.P.,
    kand.sel'skokhoz.nauk [deceased]; KOPIL, A.M., kand.sel'skokhoz.
    nauk; TSELYUTIN, V.K., kand.sel'skokhoz.nauk; BOZHKO, P.Yu., doktor
    sel'skokhoz.nauk; KROMIN, S.S., kand.sel'skokhoz.nauk; ZEMLYANSKIY,
    V.M. [Zemlians'kyi, V.M.], kand.sel'skokhoz.nauk; BORISENKO, A.M.
    [Borysenko, A.M.], kand.biolog.nauk; ZAKHARENKO, V.B., kand.biolog.
    nauk; SMIRNOV, I.V. [Smyrnov, I.V.], kand.biolog.nauk; KHRABUSTOVSKIY,
    I.F. [Khrabustovs'kyi, I.F.], kand.biolog.nauk; TORSTYANETSKAYA, M.N.,
    [Trostianets'ka, M.N.], assistent; ALESHKO, P.I., inzh.; VASIL'YEV,
    Vasyl'iev, O.F., kand.tekhn.nauk; BUGAYENKO, I.I. [Buhaienko, I.I.],
    starshiy prepodavatel'; TRAKHTOMIROVA, O.O., kand.ekonom.nauk;
    BUTKO, S.D., kand.ekonom.nauk; TELESHIK, K.G. [Teleshyk, K.H.],
    doktor ekonom.nauk; YAROSHENKO, V.D., kand.ekonom.nauk; LISIY, I.Y.
    [Lysyi, I.I.], red.; YEROSHENKO, T.G. [IEroshenko, T.H.], tekhn.red.

[Handbook for zootechnicians] Dovidnyk zootekhnika. 2., dopovnene
i pereroblene vyd. Kyiv, Derzh.vyd-vo sil's'kohospodars'koi lit-ry
URSR, 1960. 728 p.   (MIRA 15:2)

1. Vsesoyuznaya akademiya sel'skokhozyaystvennykh nauk imeni V.I.
Lenina (for Potemkin). 2. Chlen-korrespondent Vsesoyuznoy akademii
sel'skokhozyaystvennykh nauk imeni V.I.Lenina (for Kniga).
            (Stock and stock breeding)

L 25046-65   EWT(1)/EWG(v)/EWC(t)   Pe-5/Pae-2   GW/MLK

ACCESSION NR: AT4019984   S/0000/64/000/000/0054/0057

AUTHOR: Bugayenko, L.A. ; Bagayenko, O.I.; Koval', I.K.; Morozhenko, A.V.   29

TITLE: Brightness distribution in the marginal zone of Mars   B + 1

SOURCE: AN UkrSSR. Glavnaya astronomicheskaya observatoriya. Fizika Luny* i planet
(Physics of the moon and planets). Kiev, Naukova dumka, 1964, 54-57

TOPIC TAGS: light scattering, Mars opposition, brightness distribution, Martian atmos-
phere, light absorption, turbulent vibration, photoelectric observation

ABSTRACT: The purpose of this work was to determine the optical characteristics of the
Martian atmosphere by a study of brightness as a function of the angle of incident light. To
obtain this information, a study of the marginal zone is imperative, but photographic meth-
ods are found to be deficient for this purpose. The method used involved a photoelectric
sensor, coupled with a very small diaphragm opening subtending only 0".35. The device
was placed at the Cassegrain focus of a 70-cm reflecting telescope. Photomultipliers were
used, with filters covering a spectral range of 3550 – 9000 A. During the Mars opposition
of Feb. 4, 1963, the conditions were perfect and 40 to 50 diameter transits were made for
each light filter, with the zenith distance never exceeding 35°. The effective amplitude of

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turbulent image vibration was only 0".4. The authors found the true brightness distribution along the diameter of Mars, which requires correction for washout and image vibration, in the following way. An integral equation was set up by writing:

$$F(x) = \frac{1}{A} \int_{-v}^{+v} S(x - \zeta) \cdot f(\zeta) d\zeta \tag{1}$$

where F(x) and f(ζ) are, respectively, the observed and true brightness distribution along the diameter of Mars. The kernel, S(x - ζ), is the brightness distribution for a finite, "normally" vibrating point light source. This can be determined from the expression

$$S(x - \zeta) = A \cdot \int_{-v}^{+v} \sqrt{R_d - (/x - \zeta/ - y)^2} \cdot e^{-y^2/2 \varepsilon^2} \cdot dy \tag{2}$$

Here, A is the normalization constant, R_d is the diaphragm diameter and   is the amplitude of image vibration. The true brightness distribution was determined by first solving expression (2) for the kernel S, and then solving the integral equation (1) by an iterative

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method which converged rapidly. Results of brightness determination for λ = 4200 - 6000 A are given in a table. They point to the prevalence of scattering in the visible region. Results for λ = 3550 - 4200 A are discussed quantitatively without giving the details in table form. The conclusion is drawn that the Martian atmosphere has significant true absorption at around 3550 A. Orig. art. has: 2 tables and 6 formulas.

ASSOCIATION: None

SUBMITTED: 07May64   ENCL: 00   SUB CODE: AA

NO REF SOV: 002   OTHER: 000

Card   3/3

ACC NR: AT6033321   SOURCE CODE: UR/0000/66/000/000/0018/0030

AUTHOR: Bugayenko, L. A.--Bugayenko, O. I.; Koval', I. K.; Morozhenko, A. V.

ORG: none

TITLE: Electrophotometric sections of the Mars planet disk in the spectral range of the 355—600 mμ interval

SOURCE: AN UkrSSR. Fizika i planet (Physics of the Moon and the planets) Kiev, Naukova dumka, 1966, 18-30

TOPIC TAGS: Mars planet, star, Mars, brightness distribution

ABSTRACT: Electrophotometric sections of the images of Mars and of some stars situated at a small angular distance from the planet were obtained with a 70-cm reflector at the Main Astronomical Observatory of USSR in 1956. The information now being published represents the experimental part of an investigation aimed at correcting the brightness distribution curve along the disk of Mars by calculating the influence of factors in the earth atmosphere. The authors thank Z. Merkulova

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ACC NR:
AT6033321

and V. Pipko for their assistance in calculations. Orig. art. has: 5 figures and
3 formulas. [Based on authors' abstract]

SUB CODE: 03/SUBM DATE: 19Mar66/ORIG REF: 017/OTH REF: 003/

Card 2/2

BUGAYENKO, L.T.

Twentieth International Congress on Theoretical and Applied
Chemistry. Atom. energ. 19 no.6:550-553 D '65.

(MIRA 19:1)

21(8)   PHASE I BOOK EXPLOITATION   SOV/2326

Bugayenko, L. T., T.S. Nikitina, A. N. Pravednikov, and Yu M. Malinskiy

Khimicheskoye deystviye ioniziruyushchikh izlucheniy (Chemical Action of Ioniz-
    ing Radiation) Moscow, 1958. 84 p. (Series: Khimicheskaya promyshlennost')
    Errata slip inserted. 1,500 copies printed.

Sponsoring Agencies: USSR. Gosudarstvennyy nauchno-tekhnicheskiy komitet,
    and Akademiya nauk SSSR. Vsesoyuznyy institut nauchnoy i tekhnicheskoy
    informatsii.   No contributors mentioned.

PURPOSE: The book is intended for chemists and chemical engineers.

COVERAGE: The book discusses the effect of ionizing radiation on various
    chemical processes. The effect of radiation on inorganic and organic com-
    pounds, on polymerization in the liquid, gaseous and solid phases, and on
    the properties of polymers is adequately covered. No personalities are men-
    tioned. There are 495 references: 67 Soviet, 343 English, 16 German, 66
    French, and 3 Italian.

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Chemical Action of Ionizing (Cont.)   SOV/2326

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Chemical Action of Ionizing (Cont.)

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TM/fal
9-9-59

BUGAYENKO, L. T.

Rate of reaction between chlorate and ferrous ions as a function of the acidity of the medium. Zhur. neorg. khim. 5 no.8:1894-1895 Ag '60.
(MIRA 13:9)

1. Moskovskiy gosudarstvennyy universitet im. M.V.Lomonosova, Khimicheskiy fakul'tet.
    (Chlorates)   (Iron)   (Chemical reaction, Rate of)

81571
S/076/60/034/06/14/040
B015/B061

$\mathcal{S}.4500(B)$

AUTHORS: Bugayenko, L. T., Kalyazin, Ye. P., Bakh, N. A. (Moscow)

TITLE: Radiochemistry of Oxychloride Compounds. I. The Action of X Rays on Aqueous Sodium Chlorite Solutions

PERIODICAL: Zhurnal fizicheskoy khimii, 1960, Vol. 34, No. 6, pp. 1243-1249

TEXT: The conversion of the ClO_2^- ion in neutral aqueous 0.001 M $NaClO_2$-solutions by the action of 65-kv X rays was examined. A roentgen tube of the type TPЦ-3A (TRTs-3A) was used as radiation source, and chlorite, chlorine dioxide, and hydrogen peroxide were determined with an CФ-4 (SF-4) spectrophotometer, whilst chloride, hypochlorite, and chlorate were determined with an ФЭК-1 (FEK-1) photoelectrocolorimeter. The tests were carried out on $NaClO_2$-solutions saturated with hydrogen, nitrogen, and oxygen. The conversion products obtained with a radiation dose of $5 \cdot 10^{18}$ ev/ml are tabulated. It was established that an oxidation

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BUGAYENKO, L. T., CAND CHEM SC.I, "RADIOCHEMICAL CHANGES OF THE COMPOUNDS OF CHLORINE IN AQUEOUS SOLUTIONS." MOSCOW, 1961. (ACAD SCI USSR. INST OF ELECTROCHEMISTRY). (KL-DV, 11-61, 210).

-34-

BUGAYENKO, L.T.

Radiolysis of aqueous solutions of perchloric acid. Part 2.
Vest.Mosk.un.Ser.2:khim. 16 no.3:21-26 My-Je '61.

1. Kafedra elektrokhimii Moskovskogo gosudarstvennogo   (MIRA 14:10)
universiteta.
                (Perchloric acid)
                (Radiation)

BUGAYENKO, L.T.

Using tubular cells for spectrophotometric analysis. Zav.lab.27 no.5:619-620 '61.   (MIRA 14:5)

1. Moskovskiy gosudarstvennyy universitet imeni M. V. Lomonosova.
(Spectrophotometry)

BUGAYENKO, Lenar Timofeyevich; KALYAZIN, Yevgeniy Petrovich;POLAK,
    L.S., doktor fiziko-matem. nauk, otv. red.; IOFFE, V.G.,
    red.izd-va; SUSHKOVA, L.A., tekhn. red.

[Radiation chemistry; chemical effect of nuclear radiation]
Khimiia radiatsionnaia; khimicheskoe deistvie iadernykh iz-
luçhenii. Moskva, Izd-vo Akad. nauk SSSR, 1962. 132 p.
                                              (MIRA 16:7)
                (Radiochemistry)

VOYEVODSKIY, V.V.; GLAZUNOVA, P.Ya.; SMIRNOVA, B.A.; KHAIT, Yu.L.;
TOPCHIYEV, A.V., akademik, otv. red.; POLAK, L.S., doktor
fiz.-matem. nauk, otv. red.; BUGAYENKO, L.T., red.;
ZENTSEL'SKAYA, Ch.A., tekhn. red.

[Radiolysis of hydrocarbons; some physicochemical problems]Radio-
liz uglevodorodov; nekotorye fiziko-khimicheskie problemy. Mo-
skva, Izd-vo Akad. nauk SSSR, 1962. 207 p. (MIRA 15:9)

1. Akademiya nauk SSSR. Institut neftekhimicheskogo sinteza.
(Hydrocarbons) (Radiochemistry)

43227
S/844/62/000/000/022/129
D244/D307

AUTHOR: Bugayenko, L. T.

TITLE: The mechanism of direct irradiation on perchloric acid

SOURCE: Trudy II Vsesoyuznogo soveshchaniya po radiatsionnoy khi-
          mii. Ed. by L. S. Polak. Moscow, Izd-vo AN SSSR, 1962,
          144-148

TEXT: The author continues the investigation of the mechanism of
the conversion of perchlorate ions by studying the effect of Fe^{++},
ethyl alcohol and acetone on the yields of the reduction products
of ClO_4^-. The yield of ClO_3^- depended on $[Fe^{++}]$, and showed that
$ClO_2 + OH \rightarrow ClO_3^- + H^+$ (Eq. 3) is the main reaction in the forma-
tion of ClO_3^- and not the reaction $(ClO_4^-)^* \rightarrow ClO_3^- + 1/2\ O_2$ (Eq.5),
since the yield of ClO_3^- resulting from the disintegration of the
excited ClO_4^- should not depend on the concentration of dissolved

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The mechanism of direct ....

salts. The ratio $\dfrac{G(ClO_3^-)}{G(Cl^-)}$, where G is the radiation yield (ions/100 ev), decreases rapidly with the increasing $[Fe^{++}]$. The formation of Fe^{3+} increased slowly with $[Fe^{2+}]$ on account of the increasing role played by the reaction $ClO_2 + Fe^{2+} \rightarrow ClO_2^- + Fe^{3+}$ (Eq. 6) and the corresponding decreasing part taken by reaction (5). The irradiation of ethyl alcohol and acetone solutions in 2.5 M $HClO_4$ gave a decreased yield of the reduced ClO_4^-, the yield decreasing with the increasing concentration of the organic compounds, The only reduction products formed in the presence of the organic compounds are chloride and chlorate ions. The decreasing yield is believed to be due to the reaction $ClO_4 + RH \rightarrow ClO_4^- + H^+ + R$ (Eq. 10).

c
a.   The ratio $\dfrac{G(ClO_3^-)}{G(Cl^-)}$ decreases with increasing concentration of the

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S/844/62/000/000/023/129
D244/D307

AUTHORS: Bugayenko, L. T. and Kovalev, G. M.

TITLE: Radiation-chemical conversions of the chlorite ion in aqueous solutions

SOURCE: Trudy II Vsesoyuznogo soveshchaniya po radiatsionnoy khimii. Ed. by L. S. Polak. Moscow, Izd-vo AN SSSR, 1962, 149-154

TEXT: The dependence was studied of the yields of ClO_2 and ClO^- resulting from the conversion of chlorite ions on the concentration of sodium chlorite in neutral solutions saturated with O_2, air and N_2. $NaClO_2$ was chosen as an example of an autoconjugated acceptor capable of reacting with both H and OH radicals. The experiments were conducted at 20°C, the radiation source being an x-ray tube operating at 70 kv. In most cases the dosage was 6 x 10^{15} ev/ml.sec. It was found that the formation of ClO_2 increased line-

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Radiation-chemical conversions ... S/844/62/000/000/023/129
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arly with the dosage u, to 1.5×10^{18} ev/ml in solutions containing a range of concentrations of $NaClO_2$ (0.0033 - 2.04 M), showing that both ClO_2 and ClO^- do not react with H and OH. The yield of ClO_2 at first increases slowly and linearly with the concentration of $NaClO_2$ (up to 0.03 M) and then increases rapidly. The increase is explained to be due to the reaction of ClO_2^- with excited water molecules, post-radiation reactions and the direct action of the radiation on ClO_2^-. There is no chain reaction, changes in the radiation dosage from 9×10^{14} to 6×10^{15} ev/ml.sec not causing changes in the yields of ClO_2. In the presence of O_2 (various concentrations) and $NaClO_2$ the initial portions of the curves for the formation of ClO_2 are all linear, the yields $G(ClO_2)$, ranging from 2.8 to 8.7 mole/100 ev. Also $G(ClO_2)$ did not depend on the dosage strength from 7.1×10^{13} to 6.4×10^{15}. The results show that the

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Radiation-chemical conversions ...   S/844/62/000/000/023/129
D244/D307

mechanism proposed by Bugayenko (ZhFKh, 34, 1243 (1960)) for the conversion of chlorite ion is essentially correct. There are 2 figures and 3 tables.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet in. M. V. Lomonosova, khimicheskiy fakul'tet (Moscow State University im. M. V. Lomonosov, Faculty of Chemistry)

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S/844/62/000/000/064/129
D204/D307

AUTHORS: Roder, M., Bakh, N. A. and Bugayenko, L. T.

TITLE: Radiation-chemical transformations of chromium compounds dissolved in acetone

SOURCE: Trudy II Vsesoyuznogo soveshchaniya po radiatsionnoy khimii. Ed. by L. S. Polak. Moscow, Izd-vo AN SSSR, 1962, 378-381

TEXT: The oxidation-reduction transformations of Cr^{III} and Cr^{VI} compounds were studied, in continuation of earlier work (this collection, p. 374) connected with such transformation of methylene blue and its leucobase, under the action of x rays (10^{16} ev/ml.sec) at $16°C$. The compounds were dissolved in the form of $CrCl_3 \cdot 6H_2O$ and CrO_3. After irradiation $Cr^{VI} \rightarrow Cr^{III}$, with reduction yields G_{red}, (eqts/100 ev) which increased with concentration of CrO_3, c, both in the presence of (1) N_2 and (2) O_2. G_{red} varied between (1) ~ 5 and

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