

SCHWARZ, Stefan; KLIMEK, Rudolf; MADEJ, Jan; MATUSZEWSKI, Henryk;  
OSUCHOWSKI, Jerzy; SOLARZ, Edward

Oxytocin analogues in obstetrics and gynecology. Ginek. pol.  
34 no.4:487-490 '63.

1. Z I Kliniki Położnictwa i Chorob Kobięcych AM w Krakowie  
Kierownik Kliniki: prof. dr med. S. Schwarz.

KLIMEK, Rudolf; KORDEUSZ, Zygmunt

Cyclopeptide hormones and contraction of the uterine vessels.  
Ginek, pol. 34 no, 4: 491-495 '63,

1, 2 I Kliniki Położnictwa i Chorob Kobięcych AM w Krakowie  
Kierownik: prof. dr med. S. Schwarz.  
(ABORTIONS, LEGAL) (OXITOCICS)  
(UTERUS) (VASOMOTOR SYSTEM)

BALASH, A. [Balasz, A. ]; KLIMEK, R.

Oxytocin dynamic test for the determination of the time of delivery. Akush. i gin. 39 no.3:99-101 My-Je'63 (MIRA 17:2)

1. Iz 1-y kliniki akusherstva i ginekologii ( zav. - prof. dr. S. Shvarts) Meditsinskoy akademii, Krakov.

OSZACKI, Jan; GROCHOWSKI, Jan; KLIMEK, Rudolf

Oxytocin in mechanical jaundice. Pol. przegl. chir. 35  
no.7/8:742-743 '69,

1. Z II Kliniki Chirurgicznej AM w Krakowie Kierownik: prof.  
dr J. Oszacki i z I Kliniki Położnictwa i Chorob Kobietych  
Kierownik: prof. dr S. Schwarz.  
(JAUNDICE, OBSTRUCTIVE) (OXYTOCIN)  
(BILE)

SCHWARZ, Stefan; ZAMELLO, Jerzy; KLIMEK, Rudolf; MARCZYNSKI, Kazimierz;  
MATECKI, Tadeusz; MILEWICZ, Stanislaw; SOLARZ, Edward

Statistical analysis of the surgical material of the 1st Obstetrical and Gynecological Clinic of the Academy of Medicine in Krakow during the period 1950-1961. Ginek. pol. 35 no. 1:57-63 Ja-P'66.

1. Z I Kliniki Poloznictwa i Chorob Kobiet AM w Krakowie;  
kierownik: prof.dr.med. S.Schwarz.

\*

KLISSEK, Rudolf; MATUSZEWSKI, Henryk; ZIEBSKI, Zdzislaw

Remote puerperal endocrinological disorders. Ginek. vol. 35 no.2:  
251-256 Hr-Ap '64.

1. Z I Kliniki Położnictwa i Chorob Kobiecych Akademii Medycznej  
w Krakowie (Kierownik: prof. dr. med. S. Schwarz).

KLIMEK, Rudolf; PARADYSZ, Aleksandra

Water test in the diagnosis of endocrine diseases. Pol. Wzr.  
lek. 20 no.9:259-262 22 Feb.

1. Z I Kliniki Poloznienia i Chorob Kobietych Akademii Medycznej  
w Krakowie (kierownik Kliniki prof. dr. med. Stefan Szwarz).

KLIMEK, Rudolf

Pregnancy and labor in the light of studies on the oxytocin-oxytocinase system. Folia med. Cracov. 6 no.4:471-489 '64.



KLINEK, S.

Kozarski, L. Comparing the stratigraphic geography of Debniak with the Devonian of neighboring regions. P. 389.  
PRZEGLAD GEOLOGICZNY, Warszawa, No. 8, Aug. 1955.

SC: Monthly list of East European Accessions, (EAML), 15, Vol. 4, no. 10, Oct. 1955,  
Uncl.

Klimek, S.

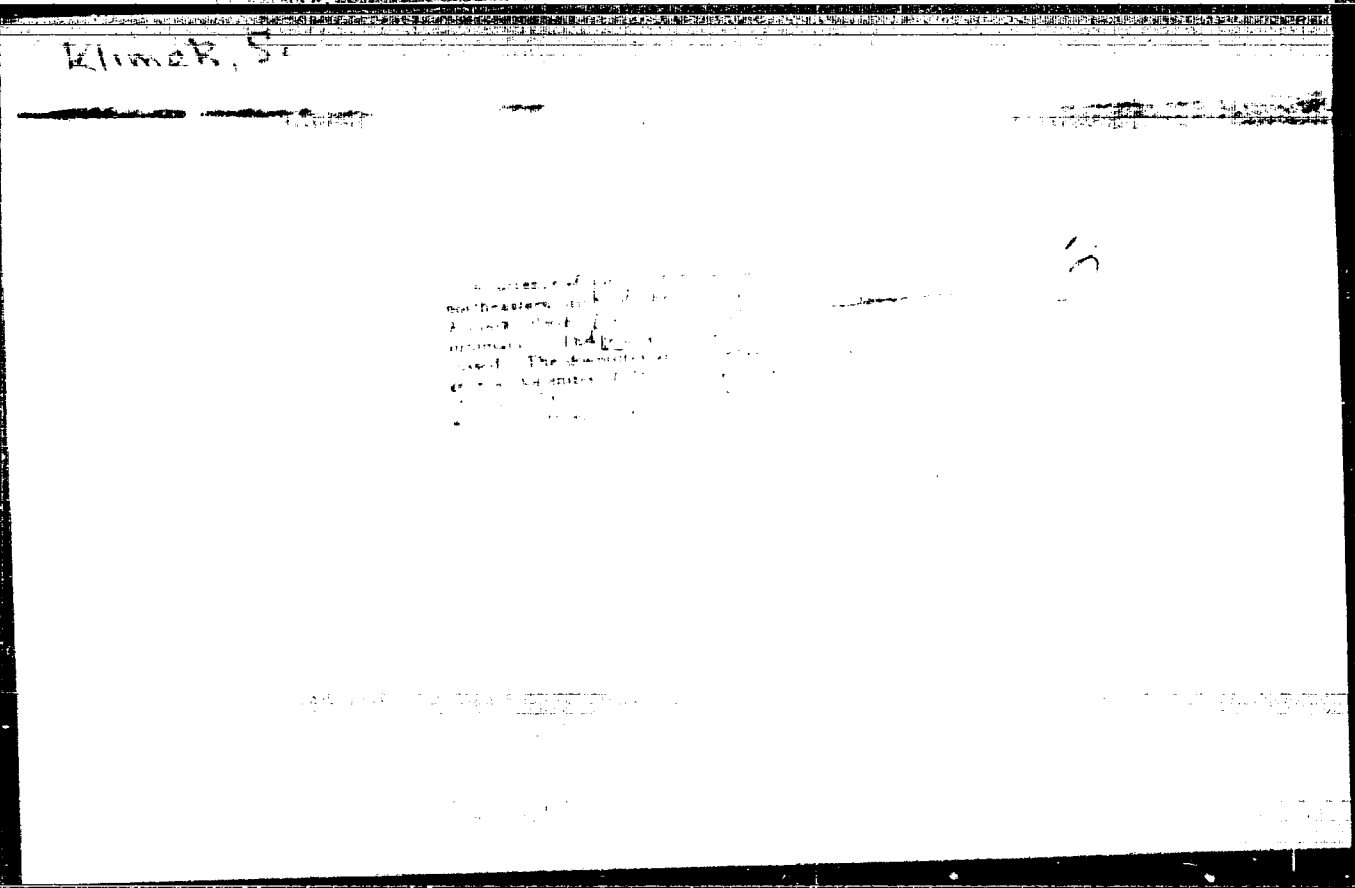
034.023.4 : 034.073.7 : 031.03 : 031.228.2

Klimek S., Mous W., Holzman W. Vaults of 8 cm Thick Precast Corrugated Reinforced Concrete Slabs.

"Sklepienia z prefabrykowanych żelbetowych płyt falistych grubości 8 cm.". Inżynieria i Budownictwo. No. 8, 1953, pp. 189-197, 20 figs, 1 tab.

The paper describes an investigation carried out during 1953-54 on roof coverings of folded and corrugated slabs and also the first vault constructed from these precast corrugated reinforced concrete slabs. Tables are included listing the sizes and weights of the slabs, and the amounts of material used per 1 m<sup>2</sup> of horizontal projection for various column arrangements. In the authors' opinion, among the advantages of the vaults here described are 1) low expenditure of the more important building materials, and 2) great simplicity of the design of the corrugated slabs and vaults. At the same time, the precast units are easy to produce and easy to mount, and the vaults so constructed are elegant in appearance both from within and without.

mitte 3



KLIMEK, Slavomir (Warsaw)

Evaluation of completed multistory industrial buildings constructed with post-tensioned prestressed concrete. Przegł budowl i bud mieszk 34 no.2:81-86 P '62.

MARKOWA, Janina; MAREK, Alfred; SKROCHOWSKA, Maria; KLIMEK, Stanislaw

Studies on the presence of the Western equine encephalitis virus  
in the blood in experimental viral diseases of the bone. Chir.  
narsad. ruchu ortop. Pol. 29 no.2:265-268 '64.

1. Z II Kliniki Chirurgicznej Akademii Medycznej w Krakowie  
(Kierownik: prof. dr. J. Oszaeki), z III Kliniki Chirurgicznej  
Akademii Medycznej w Krakowie (Kierownik: prof. dr. J. Jasienski)  
i z Wytworni Surowic i Szcziponek w Krakowie (Dyrektor: dr. Z.  
Mosszczanski).

KLIMEK, Teresa, ins.

A review of the hydrological and meteorological phenomena in August 1961. Gosp wodna 21 no.11: 499 N '61.

1. Zaklad Prognoz Hydrologicznych, Panstwowy Instytut Hydrologiczno-Meteorologiczny, Warszawa.

KLIMEK, Teresa, ins.

A review of the hydrological and meteorological phenomena in September 1961. Gosp wodna 21 no.12:536 D '61.

1. Zaklad Prognoz Hydrologicznych, Panstwowy Instytut Hydrologiczno-Meteorologiczny, Warszawa.

KLIMEK, Teresa, ins.

Review of hydrometeorological phenomena in October 1961, Gosp vodna  
22 no.1:34 '62.

1. Zaklad Prognoz Hydrologicznych Panstwowego Instytutu Hydrologiczno-  
Meteorologicznego.



**KLIMEK, V.**

**Fundamental theoretical formulas for operating steam engines. p. 1481. Vol. 9, No. 9, 1954. TEHNIKA. Beograd, Yugoslavia.**

**SOURCE: East European Accessions List, (KEAL) Library of Congress, Vol. 5, No. 8, August, 1956.**

KLIMEK, V.

Principles for calculating and determining coal consumption by  
steam locomotives. p. 6

ZELEZNICE. (Zelesnicki institut GDJZ) Beograd.

Vol. 12, no. 7, July 1956

SOURCE: East European List (ERAL) Library of  
Congress, Vol. 6, No.1, January 1957

KLIEMEK, Walter; LEMBRYCH, Stanislaw

Early changes in the urinary system after Wertheim's operation.  
Gin. polska 32 no.3:329-335 '61.

1. Z Wojewodzkiego Szpitala Specjalistycznego Ginekologiczno-  
Polskiego w Opolu Dyrektor: dr med. S. Messer  
(HYSTERECTOMY compl)  
(UROLOGY)

KLIMENCHENKO, D.V. (Khmel'nitskaya obl. USSR)

Making up problems in the club. Mat.v shkole no.3:58-59 My-Je '56.  
(MIRA 9:8)

(Mathematics--Problems, exercises, etc.)

**KLIM ENCHENKO, D.V.**

**KLIMENCHENKO, D.V. (Osipenko)**

Checking and grading the knowledge of students. Mat.v shkole  
no.6:55-56 H-D '57. (MIRA 10:11)  
(Mathematics--Study and teaching)

BEKAROVICH, A.N. (Gomel'); BERESLAVSKIY, M.D. (Ushgorod); CHOMOV, A.P. (Melekhov);  
DUBINCHUK, Ye.S.; TESLENKO, I.F. (Kiyev); ZOLOTOVITSKIY, Ye.N. (Leutovo);  
KAZHDAN, B.I. (Leningrad); KLIMENCHENKO, D.V. (Berdyanak); MEL'NIKOV,  
K.S. (Sterlitamak); MIKHAYLOV, K.F. (Magnitogorsk); NASTROV, A.Z. (Sterl-  
itamak); NEFKDOV, D.I. (Moskva); NOVOSELOV, S.I. (Moskva); PRAVILOV, B.R.  
(s. Kanino Ryazanskoy obl.); PRINTSEV, N.A. (Kursk); SEMENOVICH, A.F.  
(Sverdlovsk)

Discussion of the plans for the programs. Mat. v shkole no.6:5-28  
M.I.D '59. (MIRA 13:3)

(Mathematics--Study and teaching)

KLIMENCHENKO, D.V. (Berdyanek)

Rational procedure for solving problems in mathematic lessons.  
Mat.v shkole n.1:63-64 Ja-F '60. (MIRA 13:5)  
(Mathematics—Study and teaching)

KLIMENCHENKO, D.V. (Berdiansk)

Interconnection between the courses of arithmetics and algebra.  
Mat.v shkole no.4:47-49 J1-Ag '62. (MIRA 15:11)  
(Mathematics--Study and teaching)



BUGOV, A.U., inzh.; KLIMENCHENKO, T.V., inzh.; DMITRIYEV, L.A., inzh.

Expedient design of annular connecting flanges for hydraulic  
turbine rotors and standardization of their calculation.  
Energomashinostroenie 9 no.5:6-10 My '63. (MIRA 16:7)

(Hydraulic turbines) (Flanges)

KLIMENCHUK, A.N.

Belt-drum machine for grinding curvilinear surfaces of bars with  
shaped cross section. Bus. 1 der. prom. no. 3140-41 J1-S 165.  
(MIRA 18:9)

KUNIN, Z.A.; KLIMENCHUK, A.V.

Attachment to rotary veneer cutters for butting out veneer.  
Bum. 1 der. prom. no. 2:30-31 Apr 1965. (MIRA 18:6)

KLIMENCHUK, A.V.

Belt-drum machine for grinding curvilinear surfaces. Der.  
prom. 14 no.10:24-25 0 '65. (MIRA 18:12)

YEREMENKO, G.K.; VAL'TER, A.A.; KLIMCHUK, Y.I.

Distribution of gallium in alkali rocks as revealed by the study  
in the region of the Sea of Azov. Geokhimiia no.2:132-136 P '63.  
(MIRA 16:9)

1. Institute of Mineral Resources, Academy of Sciences, Ukrainian  
S.S.R., Simferopol.

VASILEVSKAYA, A.Ye.; SHCHERBAKOV, V.P.; KLIMENCHUK, V.P.

Determination of mercury in coals by dithizone. Zav.lab.  
28 no.4:415 '62. (MIRA 15:5)

1. Institut mineral'nykh resursov AN USSR.  
(Mercury--Analysis) (Dithizone)  
(Coal--Analysis)

KLIMNIK, G. S.

②

3

14988\* (Influence of Molecule Interaction on Light Diffusion Properties of Rubber Solutions.) Vlieniye molekularnykh vzaimodeystviy na svetorasseliyeniye reestvov kauchuka. V. K. Osh and G. S. Klimnik. Kolloidnyi Zhurnal, v. 16, no. 3, May-June 1954, p. 191-196.  
Method for determining specific cohesion energy. Tables, diagram, graphs. 7 ref.

my

**KLIMENKO, A.**

Amateur nature of work in the trade-union club. Sov.profsojuz  
4 no.11:62-66 N '56. (MIRA 10:1)

1. Predsedatel' pravleniya kluba Dneprodzershinskogo tsementnogo  
savoda.  
(Dneprodzershinsk--Community centers)



KLIMENKO, A.

To what does this lead. Avt. transp. 36 no.9:47 8 '58.

(MIRA 11:10)

(Drinking and traffic accidents)

KLIMENKO, A.; PRIGOZHIN, N.

Continuous industrial crews and business accounting in coal mines.  
Sots. trud no.4:113-117 Ap '57. (MIRA 10:6)

1. Upravlyayushchiy trestom "Kospushugol'" (for Klimenko). 2. Nachal'nik shakhty no.39/40 (for Prigoshin).  
(Coal mines and mining)

KLIMENKO, A., polkovnik; SHUBIN, A., podpolkovnik

How we organized and conducted refresher training courses. Tyl 1  
snab.Sov.Voor.811 21 no.3:13-18 Mr '61. (MIRA 14:6)  
(Military education)

KLIMENKO, A.

Cultivation of rice in the U.S.A. Zemledelie 27  
no.3:91-94 Mr '65. (MIRA 19:1)

**KLIMENKO, A.A. (st. Bataysk)**

Operating technical inspection points according to Comrade  
Shcheblikin's method. Zhel.dor.transp. 37 no.12:79 D '55.  
(MLRA 9:5)

1. Nachal'nik vagonnogo uchastka.  
(Railroads--Repair shops)

KLIMENKO, A.A.

USSR/Human and Animal Physiology - (Normal and Pathological). T  
 Blood. General Problems.

Abs Jour : Ref Zhur Biol., No 4, 1959, 17259

Author : Sergel', O.S., Klimenko, A.A.

Inst : -

Title : Luminiscent Method of Investigation of Blood and Bone Marrow in Radiation Sickness.

Orig Pub : Vestn. rentgenol. i radiol., 1957, <sup>32</sup>No 5, 76-81

Abstract : The method is based on the ability of the nuclei of blood cells which contain DNA and have been treated with acridine orange to glow under normal conditions with a green light, and on the ability of protoplasm which contain RNA to glow with a pale green or orange glow. Erythrocytes (E) are not luminiscent; therefore the background of the specimen is dark. After a single general irradiation of 25 rabbits with a dose of 800 or 1200 r and of 8 dogs with 500 r, after 30-60 min was observed a single

Card 1/3 *Radiological Dept, State Sci Res Inst. Rentgenology and Radiology.*

"APPROVED FOR RELEASE: 09/18/2001 and Pathological) T  
 USSR/Human and Animal Physiology - (Normal and Pathological) CIA-RDP86-00513R000723110016-0  
 Blood. General Problems.

Abs Jour : Ref Zhur Biol., No 4, 1959, 17259

bright green or bright red foci of necrosis in the bone marrow (BM). Simultaneously, cells in the form of diffuse luminous orange or red balls appeared with a disrupted nuclear chemism, which assumed red luminiscence. In the blood, in the course of 1-3 days after irradiation, green luminiscence of plasma and brick-red luminiscence of E, and an increase of the % of red blood cells were discovered. At the peak of radiation sickness, in the specimens of BM and blood the plasma was luminiscent with a cloudy-green color, E-bright brick red. In the plasma, green cell fragments were swimming. With the beginning of regeneration the amount of red cells, i.e., those containing RNA in the nucleus again increased. In patients in the clinic, after 30 minutes - 1 hour after the first dose of irradiation, with a normal initial blood picture, a great amount of leucocytes with bright orange or red

Card 2/3

KLIMENKO, A. A.

Prognostic significance of the blood picture in malignant tumors during the process of radiation therapy. Med. rad. no. 4:43-47 '62. (MIRA 15:6)

1. Iz radiologicheskogo otdela (zav. - prof. A. V. Koslova) Gosudarstvennogo nauchno-issledovatel'skogo rentgeno-radiologicheskogo instituta Ministerstva zdavookhraneniya RSFSR.

(BLOOD—EXAMINATION) (CANCER) (RADIOTHERAPY)

MERKOVA, M.A.; OMEI'YANENKO, L.M.; KLIMENKO, A.A.

Possibilities of gamma-therapy of pituitary tumors. Med. rad. 8  
no.5:17-20 My '63. (MIRA 17:5)

1. Iz kafedry klinicheskoy radiologii (zav. - prof. A.V. Kozlova)  
" ntral'nogo instituta usovershenstvovaniya vrachey i radiologicheskogo  
otdela (rukovoditel' - prof. A.V. Kozlova) Nauchno-issledovatel'skogo  
rentgeno-radiologicheskogo instituta.



KLIMENKO, A.A.

Leucopenia in radiotherapy. Med. rad. 8 no.6:3-7 Jy '63.  
(MIRA 17:4)

1. Iz radiologicheskogo otdela (zav. - prof. A.V. Kozlova)  
Nauchno-issledovatel'skogo run geno-radiologicheskogo instituta  
Ministerstva zdravookhraneniya RSFSR.

SENOSL', O.S. (Moskva); KLIMENKO, A.A. (Moskva); POLITOVA, Ye.M. (Moskva)

Elements of atypical tissue in marrow punctate of patients with  
some malignant diseases. Trudy TSentr. much.-issl. inet. rentg.  
i rad. ll no.1:53-59 '64. (MIRA 12:11)

LONCIN, M.L.; KLIMENKO, A.B.; YERMOLENKO, I.N.

Electrochromatographic separation of amino acids using ion exchange  
analytic paper made of oxidized cellulose. Vestsi AN BSSR. Ser. fiz.-  
tekh. nav. no.2:136-137 '64. (MIRA 18:1)

KLIGENKO, A.G.

Foreign body in the sphenoid sinus. Vest. oto-rin. 16 no.6:71-72  
N-D '54. (MLRA 8:1)

1. Iz ushnogo otdeleniya (sav.-dotsent V.S.Lande) Yaroslavskoy  
oblastnoy klinicheskoy bol'nitsy,  
(PARANASAL SINUSES, foreign bodies  
metal splinter, surg. removal)  
(FOREIGN BODIES  
nasal sinus, metal splinter, surg. removal)

KLIMENKO, A.G.

USSR/Pharmacology, Toxicology. Analeptics

U-3

Abs Jour : Ref Zhur - Biol., No 4, 1958, No 17559

Author : Strakhova M.P., Klimenko A.G.  
Inst : The Tomsk Medical Institute  
Title : The Influence of Bromo-Caffeine Therapy in Rheumatism on  
the Condition of the Fundamental Nervous Processes.

Orig Pub : 5-1 Pavlovsk. sb. Tomskii med. in-t. Tomsk. Un-t, 1956, 203-206

Abstract : Observations were carried out on young rheumatic patients with clearly defined inflammatory changes of the joints. The investigation of the patients was by the plethysmographic method in a specially equipped room with the use of a variety of stimulants (cold, heat, light). Bromine was administered intravenously as a 10% solution in 10 ml doses, caffeine in 0.5 g doses 3 times daily for 10 days. In some patients of medium weight the fundamental nerve processes in the brain cortex became normal within 6-8 days. In more severe cases of acute rheumatic polyarthrititis bromo-caffeine therapy did not lead to the reestablishment of the disturbed cortical processes; in these forms of rheumatism the bromo-caffeine therapy has to be carried out in combination with salicylates.

Card : 1/1

KLIMENKO, A.G.

Cand Med Sci - (diss) "Change in the upper nervous activity in patients with rheumatism when treated with cortisone and ACTH." Tomsk, 1961. 11 pp; (Novosibirsk State Med Inst); 250 copies; price not given; (KL. 10-61 sup, 224)

**KLIMENKO, A.G.**

Four-probe microhead for measuring the specific resistance  
of single-crystal films. Prib. i tekhn. eksp. 8 no.5:222-223  
S-0 '63. (MIRA 16:12)

1. Khar'kovskiy gosudarstvennyy universitet.

KLIMENKO, A.I.

Some data on the histone - DNA ratio in the nuclei of  
liver cells of young and aged rats. Biokhimiia 29  
no.5:820-823 J1-Ag '64. (MIRA 18:11)

1. Kafedra fiziologii cheloveka i zhivotnykh biologicheskogo  
fakul'teta Gosudarstvennogo universiteta imeni Gor'kogo,  
Khar'kov.

Engr., AmurStal' Factory, -c1948-.

"Prevention of the formation of hollows on the surfaces of steel plates," Stal', No. 9, 1948



KLIMENKO, A. K.: <sup>Card</sup> ~~Master~~ Tech Sci (diss) -- "Investigation of the process of removing the connecting-rod bushings of tractor engines with a regulated roller remover". Moscow, 1958. 22 pp (Joint Scientific Council, All-Union Sci Res Inst of Mechanization of Agric VIM and All-Union Sci Res Inst of the Electrification of Agric VIIESKh), 150 copies (KL, No 3, 1959, 150)

KLIMENKO, A.K., insh.

Finishing bronze bearings by rolling. Mekh. i elek. sots. sel'khoz.  
15 no.1:25-28 '58. (MIRA 11:3)

1. Gosudarstvennyy soyuznyy nauchno-issledovatel'skiy tekhnologicheskiy institut remonta i ekspluatatsii traktorov i sel'skokhozyaystvennykh mashin.  
(Rolling (Metalwork)) (Bearings (Machinery))

VASILISKOY, P.A., inzhener; GOTLIV, Ya.L., inzhener; ZAYMIN, Ye.Ye., inzhener;  
SMOLIN, N.I., inzhener; KLIMENKO, A.K., inzhener.

Study of water accumulated under snow and calculation of maximum accumulations in planning hydroelectric power stations. Gidr.stroi.25 no.3: 37-39 Ap '56. (MIRA 9:9)  
(Hydroelectric power stations) (Hydrology)

L 36359-66 EWT(1)

ACC NR: AP6005295

SOURCE CODE: UR/0413/66/000/001/0035/0036

INVENTOR: Klimenko, A. K.

50  
B

ORG: none

TITLE: D-c amplifier<sup>45</sup> for a servo drive. Class 21, No. 177462

SOURCE: Izobreteniya, promyshlennyye obratzty, tovarnyye znaki, no. 1, 1966, 35-36

TOPIC TAGS: generator, current amplifier, signal frequency, servo drive, AFC, *electronic feedback*

ABSTRACT: An Author Certificate has been issued describing a d-c amplifier for a servo drive operating on the principle of automatic phase frequency control. It is set into operation by two generators controlled by the frequency of signals received from an amplified signal and a feedback signal from the output of the phase discriminator, for which the potential trigger is used. To increase circuit stability and saturate the amplifier curve beyond the linear operating sector, a correcting circuit consisting of an electric valve for the memory stage and of the inhibit stage, is included between the output

Card 1/2

UDC: 621.375.5

L 36359-66

ACC NR: AP6005295

of each generator and the input of the discriminator.

[NT]

SUB CODE: 09/ SUBM DATE: 01Jun64

*rw*  
Card 2/2

RAVITSKAYA, T.M.; KAZARNOVSKIY, D.S.; Prinimali uchast'nye: KLIMENKO, A.N.;  
FADEYEVA, A.M.

Mechanism of the formation of defects of contact origin  
in rail heads. Sbor. trud. UNIDM no.11:324-333 '65.  
(MIRA 18:11)

SHILINA, Z.A.; STANKEVICH, R.S.; KLIMENKO, A.P.

Photoelectric apparatus for measuring the number of capron mono-  
filaments. Khim.volok. no.6:48-49 '61. (MIRA 14:12)

1. Institut avtomatiki Gosplana USSR.  
(Nylon)

KLIMENKO, Aleksandr Petrovich; PETRUSHENKO, Aleksandr Antonovich; VASENTOV,  
Iuriy Andreyevich; VYSOTSKIY, Grigoriy Ivanovich; CHEGLILOV, A.G.,  
otv.red.; REMENNIK, T.K., red.izd-va; RAKHLINA, N.P., tekhn.red.

[Thermodynamic properties of light hydrocarbons of the paraffin  
series] Termodinamicheskie svoistva legkikh uglevodorodov parafinovogo  
riada. Kyiv, Izd-vo Akad.nauk Ukrainskoi SSR, 1960. 95 p. (Akademia  
nauk URSR, Kiev. Instytut vykorystannia gazu. Trudy, no.8).  
(MIRA 14:12)

(Hydrocarbons--Analysis)



L 8817-65 EWT(m)/EWP(q)/EWP(b) SSD/ASD(a)-5/AFWL/RAEM(c)/ESD(c)/ESD(gg)/  
ESD(t)/RAEM(t) JD/JG

S/0185/64/009/007/0733/0743 6

ACCESSION NRI AP4043094

AUTHOR: Kly\*menko, A. P. (Klimenko, A. P.); Tkhory\*ak, Yu. O. (Tkhorik, Yu. A.)

TITLE: Investigation of recombination in nickel atoms in p-germanium at high injection levels 17

SOURCE: Ukrayins'ky\* fizy\*chny\* zhurnal, v. 9, no. 7, 1964, 733-743

TOPIC TAGS: injection level, current carrier recombination, current carrier lifetime, diode saturation current, germanium, nickel, nickel impurity concentration, semiconductor, semiconductor device, semiconductor diode

ABSTRACT: The dependence of the lifetime  $\tau$  of current carriers in p-Ge diodes doped with Ni on the injection level and the temperature has been investigated. It was found that in diodes the dependence of  $\tau$  on temperature is weaker than in massive specimens because of the influence of a surface recombination whose efficiency increases with

Card 1/2

L 8827-65

ACCESSION NR: AP4043094

cooling. The theoretical and observed dependence of  $\tau$  on the injection level agree qualitatively. The pulse method for measuring  $\tau$  has been theoretically analyzed. The calculations show that the pulse method provides accurate values for  $\tau_0$  and  $\tau_{\infty}$  at vanishing small and superhigh injection levels. To reduce the errors in the region of medium injection levels, the parameter has to be increased for the measuring circuit  $I_2/I_1$ , where  $I_1$  is the amplitude of the forward current, and  $I_2$  is the amplitude of the reverse current after switching off the diode. As an example, a calculation was made of the dependence of the injection level on the current density at the p-n junction in p-Ge with a concentration of  $3 \times 10^{15} \text{ cm}^{-3}$  of Ni at 296K, 235K, and 185K. Orig. art. has: 6 figures and 44 formulas.

ASSOCIATION: Institut poluprovodnikov AN URSR, Kiev, (Institute of Semiconductors, AN URSR)

SUBMITTED: 05Aug63

ATD PRESS: 3106

ENCL: 00

SUB CODE: EC

NO REF SOV: 016

OTHER: 010

Card 2/2

KLIMENKO, A.P. [Klymenko, A.P.]; TKHORIK, Yu.A. [Tkhoryk, IU.O.]

Effect of the duration of the pulse front on direct transients  
in semiconductor diodes. Ukr. fiz. zhur. 9 no.11:1271-1273 N '64  
(MIRA 18:1)

1. Institut poluprovodnikov AN UkrSSR, Kiyev.

KLIMENKO, A.P. [Klymenko, A.P.]; TKHORIK, Yu.A. [Tkhoryk, IU.O.]

Use of the simultaneous diffusion of two admixtures in manufacturing quick-response diodes. Ukr. fiz. zhur. 10 no.2:238-239 F '65. (MIRA 18:4)

1. Institut poluprovodnikov AN UkrSSR, Kiyev.

KLIPENKO, A. P.

"Thermodynamic Analysis and Experimental Investigation of an Expander Machine in the Treating and Refining of Natural Gas." Cand Tech Sci, All-Union Petroleum Gas Sci Res Ins, Min Petroleum Industry, Moscow, 1955. (KL, No 17, Apr 55)

SO: Sum. No. 704, 2 Nov 55 - Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (16).

GALENKO, N.P.; KLIMENKO, A.P.

Selecting and studying bentonites for methane storage by the  
sorption method. Bent. gliny Ukr. no.1:74-85 '55.  
(MIRA 12:12)

1. Institut ispol'sovaniya gasa AN USSR.  
(Bentonite) (Methane--Storage)

SOV/124-58-11-12759

Translation from: Referativnyy zhurnal, Mekhanika, 1958, Nr 11, p 118 (USSR)

**AUTHOR:** Klimenko, A. P.

**TITLE:** The General Thermodynamic Analysis of the Cycle of a Compressed-gas Driven Engine (Obshchiy termodinamicheskiy analiz raboty detandera)

**PERIODICAL:** Tr. In-t ispol'zovaniya gaza v kommun. kh-ve i prom-sti AN UkrSSR, 1956, book 4, pp 6-9

**ABSTRACT:** The operating cycle of a compressed-gas driven engine is evaluated in terms of its cooling coefficient, which comprises the relative quantity of cold received therein and its potential. Using the thermodynamic relationships the author examines the influence of the parameters of the gas in the cycle on the adiabatic cooling coefficient  $\phi$  of a compressed-gas driven engine operating on an ideal gas. An analysis of the equation for  $\phi$  shows that  $\phi$  increases with increasing expansion. Precooling augments  $\phi$ .

V. A. Bashkin

Card 1/1

KLIMENKO, A.P.

Problems on the theory of the piston expander. Trudy Inst. isp. gaza  
AN URSS no.4:10-28 '56. (MIRA 10:12)  
(Refrigeration and refrigerating machinery)



KLIMENKO, A.P.  
KLIMENKO, A.P.

Analytical investigation of the operating cycle of an actual  
expander. Trudy Inst. isp. gaza AN URSS no. 4:29-58 '56. (MIRA 10:12)  
(Refrigeration and refrigerating machinery)  
(Thermodynamics)

KLIMENKO, A.P.

Gas-burning and automatic devices in absorption, gas refrigerators. Trudy Inst.izp.gaza AN USSR no.6:91-95 '58.

(MIRA 12:8)

(Gas appliances)

(Refrigerators)

~~KLIMENKO, A. P.~~  
*KLIMENKO, A. P.*

"One Flow Cascade Cycle (in Schemes of Natural Gas Liquefaction and Gas Separation)."

Report submitted for the 10th Intl. Refrigeration Congress, Copenhagen,  
19 August - 2 September 1959.

KLIMENKO, A.P.

[Illegible text columns 1-3]  
 [Illegible text column 4]

5 2 3 3 3

[Illegible text column 1]  
 [Illegible text column 2]

11(2)

PHASE I BOOK EXPLOITATION

80V/3293

Klimenko, Aleksandr Petrovich

Zhidkiye uglevodorodnyye gazy; khraneniye, transport, regasifikatsiya i ispol'zovaniye zhidkikh gazov (Liquid Hydrocarbon Gases: Storage, Transportation, Regasification and Utilization of Liquid Gases) Moscow, Gostoptekhnizdat, 1959. 294 p. 3,200 copies printed.

Exec. Ed.: M. P. Martynova; Tech. Ed.: A. S. Polosina.

**PURPOSE:** This manual is intended for engineers and technicians concerned with the storage, transportation, utilization, and regasification of liquefied cracking gases, and also for technical personnel engaged in designing, assembling and controlling equipment used in these operations.

**COVERAGE:** The manual reviews problems connected with the storage, transportation, regasification and utilization of liquefied cracking gases. Composition of natural and cracking gases serving as crude stock for liquid-gas production is analyzed. Properties of various liquid gases are reviewed and methods of extracting ethane and ethylene from natural and cracking gases are described and flow sheets of units used for the processes are presented. Storage and

Card 3/5

## Liquid Hydrocarbon Gases (Cont.)

80V/3291

transportation of LP gas is outlined, and various types of storage tanks, tank cars, and tank trucks with their safety equipment and controlling instruments are described and illustrated. Methods of erecting storage tanks and of filling them and various other gas containers are discussed and liquid-gas filling stations and their equipment are described. Principles of regasification of liquefied gases are reviewed and units used in the process described. Utilization of liquid gas for industrial, agricultural and other purposes is discussed. The manual contains numerous designs of the equipment reviewed, graphs, computations, tables and flow sheets. No personalities are mentioned. There are no references.

## TABLE OF CONTENTS:

Introduction	3
Ch. I. Physical and Thermodynamic Properties of LP Gases	6
Properties of individual hydrocarbons (components of liquid gas)	6
Properties of gas mixtures	20
Testing LP gases	27
Ch. II. Production of LP Gas	30
Crude stock	30
Card <del>7</del> 5	

KLIMENKO, A.P.; VASNETSOV, Yu.A.

Enrichment of generator gas by a propane-butane mixture. Gas.prom.  
5 no.9:18-20 8 '60. (MIRA 13:9)  
(Gas as fuel) (Propane) (Butane)

KLIMENKO, A. P., KANEVETS, G. E., GAYDUK, B. V., and  
CHERNOBYL', E. I.

"More Accurate Design of Heat Exchangers."

Report submitted for the Conference on Heat and Mass Transfer,  
Minsk, BSSR, June 1961.



KLIMENKO A. P.

~~KLIMENKO, A. P.~~, KANEVETS, G. E., GAYDUK, D. V. and CHERNOBYL'SKAYA E. I.

"Calculation Method of the Optimum Heat Exchangers by  
Electron Computers."

Report submitted for the Conference on Heat and Mass Transfer,  
Minsk, BSSR, June 1961.

KLIMENKO, Aleksandr Petrovich; BYSTROVA, T.A., red.; LUK'YANOV, P.I., red.; YEFREMOVA, T.D., ved. red.; BASHMAKOV, G.M., tekhn. red.

[Production of ethylene from petroleum and gases] Poluchenie etilena iz nefi i gasa. Moskva, Gostoptekhsdat, 1962. 234 p.  
(MIRA 15:7)

(Ethylene) (Petroleum--Refining)

KLIMENKO, Aleksandr Petrovich; RABINOVICH, Ye.Z., vedushchiy red.;  
VORONOVA, V.V., tekhn.red.

[Liquefied hydrocarbon gases; storage, transportation,  
regasification, and utilization] Szhizheniye uglevodородnye  
gazy; khraneniye, transport, regasifikatsiia i ispol'zovaniye.  
Ind.2., perer. i dop. Moskva, Gosoptekhnizat, 1962, 419 p.  
(MIRA 15:5)

(Liquefied petroleum gas)

**PHASE I BOOK EXPLOITATION**

**SOV/6089**

**Klímenko, Aleksandr Petrovich**

**Polucheniye etilena iz nefti i gaza (Extraction of Ethylene From Petroleum and Gas). Moscow, Gostoptekhizdat, 1962. 234 p. 4250 copies printed.**

**Eds. : T. A. Bystrova and P. I. Luk'yanov; Chief Ed. : T. D. Yefremova;  
Tech. Ed. : G. M. Bashmakov.**

**PURPOSE:** This book is intended for technical personnel in the petroleum, gas, and chemical industries engaged in the production and use of ethylene and in planning and setting up of plants. It can also be used by students specializing in heavy organic synthesis.

**COVERAGE:** The book deals with ethylene production from petroleum and gas, giving detailed information on the sources and properties of the raw material. The industrial processes and the equipment used in ethylene production by pyrolysis, catalytic hydrogenation of acetylene, and dehydration of ethyl

Card 1/3

## Extraction of Ethylene (Cont.)

SOV/6089

alcohol, as well as extraction of ethylene from coke-oven and refinery gas, are described. Separation of ethylene from the gaseous mixtures and its purification are discussed in detail. Included are data on the chemical processing of ethylene by polymerization, oxidation, chlorination, hydrochlorination, oxo process, hydration, telomerization, and alkylation. The use of ethylene in the manufacture of plastics and synthetic materials is noted. No personalities are mentioned. There are 122 references: 67 English, 48 Soviet, 5 German, and 2 French.

## TABLE OF CONTENTS [Abridged]:

Ch. I. Introduction	3
Ch. II. Physical and Thermodynamic Properties of Ethylene and Its Mixtures	7
Ch. III. Production of Ethylene	17
Card 2/3	

APPROVED FOR RELEASE: 09/18/2001

CIA-RDP86-00513R000723110016-0

Extraction of Ethylene (Cont.)

SOV/6089

Ch. IV. Separation of Ethylene	90
References	233

AVAILABLE: Library of Congress

SUBJECT: Chemical Engineering  
Petroleum and Gas Industries

Card 3/3

BN/pw/os  
11/5/62

KLIMENKO, A.P.; MOGIL'NIY, V.I.

Adsorption drying of gas with heat exchange at low temperatures  
of contact. Trudy Inst. isp. gaza AN USSR 9:5-9 '61. (MIRA 15:9)  
(Adsorption)

KLIMENKO, A.P.

Compression-sorption cycle of mean temperature refrigeration.  
Trudy Inst. isp.gaza AN USSR 9:35-9 '61. (MIRA 15:9)  
(Refrigeration and refrigerating machinery)

KLIMENKO, A.P.; SEL'YANOVA, G.N.

Solubility of carbon dioxide in liquefied hydrocarbons. Trudy  
Inst. isp. gaza AN USSR 9:10-12 '61. (MIRA 15:9)  
(Liquefied gases) (Carbon dioxide)



KLIMENKO, A.P.

Liquefaction of methane, its transportation and storage.  
Trudy Inst.isp.gaza AN USSR 9:44-50 '61. (MIRA 15:9)  
(Methane--Storage) (Gases--Liquefaction)

KLIMENKO, A.P.

Experimental investigation of piston expander. Trudy Inst. isp. gaza  
AN USSR 9:56-74 '61. (MIRA 15:9)  
(Refrigeration and refrigerating machinery)

KLIMENKO, A.P.; VASKINOV, Yu.A.

Rectification of the propane-propylene fraction in a  
centrifugal rectifier with a spiral rotor. Trudy Inst.  
isp.gaza AN USSR 9:83-89 '61. (MIRA 15:9)  
(Petroleum--Refining)  
(Propane) (Propane)

KLIMENKO, A.P.; STEPANOV, A.V.; VEKSHTEYN, L.M.

Using the pressure drop of natural gas. Trudy Inst.isp.gaza  
AN USSR 9:97-102 '61. (MIRA 15:9)  
(Gas, Natural) (Steam turbines)

KLIMENKO, A.P.; KANEVETS, G.Ye.; GAYDUK, B.V.

Production of energy in the heat consumption of casing-head  
gasoline plants. Trudy Inst.isp.gaza AN USSR 9:103-108  
'61. (MIRA 15:9)  
(Gasoline) (Heat engineering)

KLIMENKO, A.P.; KANEVETS, G.Ye.; GAYDUK, B.V.; CHERNOBEL'SKAYA, E.I.

Designing optimum heat exchange units with the aid of electronic  
calculating machines. Trudy Inst. isp. gaza AN USSR 9:111-118  
'61. (MIRA 15:9)

(Heat exchangers)

RUDNYI, N.M., kand.tekhn.nauk; BOGOMOLOV, G.Ya.; KOLOMIYETS, A.R.;  
KLIMENKO, A.P.; LIPOVETSKAYA, G.I.; RAZINKOV, A.I.

Acoustic pickup of the presence of a flow of fluid viscous  
and powdery materials. Avtom.i prib. no.3:55-58 JI-S '62.  
(MIRA 16:2)

1. Institut avtomatiki Gosplana UkrSSR.  
(Flowmeters)

8/066/63/000/001/002/002

**AUTHOR:** Aerov, M. E., Doctor of Technical Sciences, Bystrova, T. A., Candidate of Technical Sciences, and Zalantsova, N. I., Engineer; Klimenko, A. P., Candidate of Technical Sciences, Cheglikov, A. G., Candidate of Technical Sciences, and Kostyuk, V. I., Engineer

**TITLE:** An experimental study of contact heat exchange

**PERIODICAL:** Kholodil'naya tekhnika, no. 1, 1963, 37-40

**TEXT:** To study contact heat exchange, the authors investigated packed evaporators and condensers and developed apparatus which used these devices. The systems studied were: an aqueous solution of calcium chloride - boiling propane and an aqueous solution of calcium chloride-boiling butene. The basic part of the apparatus was a contact evaporator which was a scrubber filled with ceramic packing of 17 x 17 x 4 mm Raschig rings. The temperature difference in the apparatus was 1-3°. Values of the heat transfer coefficient, 3,000 to 10,000 kcal/m<sup>2</sup> per hour, obtained here in the upper zone of the evaporator were lower than those obtained in industrial foaming apparatus, due to lower steam velocities.

Contact heat exchange in condensers was also proposed to improve effectiveness of refrigeration equipment. This scheme permitted elimination of tube heat exchangers

Card 1 of 2



S/066/63/000/001/002/002

## An experimental study ...

and replacement of ammonia by propane at about 1/9 the cost. Compressed propane was delivered to the lower part of a contact condenser and forced upward against a flow of cooling water. The condensate and water passed into the lower part of the condenser where the phases were separated. The use of propane increased the cooling capacity. The equilibrium concentration of propane in water under ordinary working conditions (pressure of 11 to 12 atm, temperature of 30°) was  $0.5 \times 10^{-3}$  kg per kg of water. Losses of propane from water in the aqueous condensate were about  $5 \times 10^{-3}$  kg per kg of circulating propane. Equilibrium concentration of water in liquid propane was  $0.14 \times 10^{-3}$  kg/kg. Two figures and one table were given. English language references: L. Garwin and B. D. Smith, Chem. Engng Progress, 1953, no. 11; T. Woodward, Ibid., 1961, no. 1; G. Karnofsky, Ibid., 1961, no. 1; W. G. Knox, T. Hess, Ibid., 1961, no. 2; W. F. Hoot, Petrol. Refiner, vol. 30, no. 5, 1961, D. S. Davis, Chem. and Process Engng., 1960, vol. 41, no. 2.

ASSOCIATIONS: Nauchno-issledovatel'skiy institut sinteticheskikh spiritov i organicheskikh produktov (Scientific Research Institute for Synthetic Alcohols and Organic Products) (Aerov, M. E.; Bystrova, T. A.; Zelentsova, N. I.); Institut ispol'zovaniya gaza AN UkrSSR (Institute for the Utilization of Gas, AS, UkrSSR) (Cheglikov, A. G.; Klinenko, A. P.; Kostyuk, V. I.)

Card 2 of 2

SKLIAR, Vladimir Tikhonovich, kand. khim. nauk; LYBENEV, Yevgraf  
Venediktovich, kand. khim. nauk; ZAKUPRA, Vadim  
Aleksandrovich, kand. tekhn. nauk; KLIVENKO, A.P., kand.  
tekhn. nauk, retsenzent

[Higher monoolefins] Vysshie monoolefiny. Kyiv, Tekhnika,  
1964. 281 p. (MIRA 17:9)

KLIMENKO, Aleksandr Petrovich, kand. tekhn. nauk; ZAKUPRA, V.A.,  
kand. khim. nauk, rezensent

[Separation of natural hydrocarbon gases] Razdelenie pri-  
rodnikh uglevodorodnykh gasov. Kiev, Tekhnika, 1964. 379 p.  
(MIRA 17:11)

GUYRYA, V.S., glav. red.; KLIMENKO, A.P., zan. glav. red.; GALICH, P.N., red.; KAMAKIN, N.M., red.; MAN'KOVSKAYA, N.K., red.; MASUMYAN, V.Ya., red.; SERDYUK, O.P., red.

[Petroleum chemistry; paraffin petroleum hydrocarbons]  
Neftekhimiia; parafinovye uglevodorody nefti, ikh vydelenie i pererabotka. Kiev, Naukova dumka, 1964. 138 p.

(MIRA 17:10)

1. Akademiya nauk URSR, Kiev. Institut khimii vysokomolekulyarnykh soyedineniy.

KLIMENKO, A.P.; VYSOTSKIY, G.I.

Reserves for increasing the production of liquefied gases in  
petroleum refineries. Neft. i gas. prom. no.1:41-42 Ja-Mr '64.  
(MIRA 18:2)

L 36952-66 EWT(m) IJP(o) JAJ

ACC NR: AT6017661

(N)

SOURCE CODE: UR/9162/65/000/002/0180/0183

AUTHOR: Klimenko, A. P. (Engineer); Rudnyy, M. M. (Candidate of technical sciences)

13  
B+

ORG: none

TITLE: Photoelectric device with a modulated light source for measuring flow of vis-  
cous liquids

9M

SOURCE: Ukraine. Ministerstvo vysshego i srednego spetsial'nogo obrazovaniya. Khimi-  
cheskoye mashinostroyeniye, no. 2, 1965. Protsessy, mashiny, apparaty i avtomatizatsiya  
khimicheskikh proizvodstv (Processes, machines, apparatus and automation of chemical  
plants), 180-183

TOPIC TAGS: flow measurement, measuring device, flow meter, viscous flow

ABSTRACT: The device (based on a 5w TN-03 neon tube and an ac power source) was deve-  
loped in view of the fact that the sensing elements of contact-type devices either wear  
out or become fouled. The important feature of this neon lamp is that it is used as a  
light source modulation and also as a compensator of light source. By correctly select-  
ing a balance resistor, connected in series with this tube, the voltage across the lamp  
electrodes and the magnitude of the light source remain stable in the face of voltage  
source fluctuation over a broad range. A schematic diagram of the photoelectric de-  
vice is shown and the functions of each electronic component and the neon lamp is ex-

Card 1/2

Card 2/2 *AL*

L 36953-66 EWT(m)/T/EWP(j) IJP(o) RM

ACC NR: AT6017662

SOURCE CODE: UR/3162/65/000/002/0184/0189 //

AUTHOR: Rudnyy, M. N. (Candidate of technical sciences); Klinenko, A. P. (Engineer) //

ORG: none

TITLE: Photoelectric device for measuring thickness fluctuations in caprone fibers

SOURCE: Ukraine. Ministerstvo vysshogo i srednego spetsial'nogo obrazovaniya. Khimicheskoye mashinostroyeniye, no. 2, 1965. <sup>GM</sup>Protsessy, mashiny, apparaty i avtomatizatsiya khimicheskikh proizvodstv (Processes, machines, apparatus and automation of chemical plants), 184-189

TOPIC TAGS: photoelectric method, photoelectric cell, measuring apparatus

ABSTRACT: The device (model ATM-1)<sup>2</sup> is based on light reflected by the illuminated caprone fiber. The reflection is fed to the input of the photoelectric cell. Tests showed that the output current of the photoelectric device modulated by the reflecting light was directly proportional to the thickness of the fiber. A graph shows that the relationship between the photocurrent and the thread thickness is linear. A wiring diagram of the device is given. Light intensity and temperature of the measuring device are compensated by a differential detection method. The advantage of this method over existing methods is that it measures the diameter of the fiber instead of its mass. Orig. art. has: 5 figures.

SUB CODE: 09 11/ SUBM DATE: none

Card 1/1 //

L 04209-67 ENT(d) IJP(c)

ACC NR: AR6000712

SOURCE CODE: UR/0124/65/000/009/B087/B087

AUTHORS: Kanevets, G. Ye., Klimenko, A. P.

52  
B

TITLE: The interval-iteration method for the design of heat exchangers by electronic computers

SOURCE: Ref. zh. Mekhanika, Abs. 98589

REF SOURCE: Sb. Resp. nauchno-tekhn. konferentsiya po kompleksn. ispol's. topliv i topliva v prom-sti, B. m., Kiyevsk. un-t, 1964, 281-288

TOPIC TAGS: iteration, heat exchanger, computer application, computer calculation

ABSTRACT: In designing heat exchangers, the use of calculation methods with averaged thermodynamic properties of the coolant leads to large errors in determining the surface of the apparatus. Interval methods for determining the surface sharply reduce the error in the calculation. Because the tubular casing equipment of a combined flow is most commonly used in different engineering systems in which the flows of the materials undergo significant temperature changes, discussion of the paper on the interval-iteration method developed by the authors is presented. The method is investigated using, as an example, the design of a combined flow heat exchanger: one path between the tubes, the second path in the tubes. It is pointed out that the method permits the calculation of the heat transfer with any degree of

Card 1/2



L 04209-67

ACC NR: AR6000712

precision previously established and extends to equipment along the surfaces of which the physical properties of the coolant are changed according to any principle. Because of the time-consuming nature of the method, it can be effectively used only when conducting the calculations on electronic digital computers. The method can be used in design organizations with hand calculation of the most important and of mass produced heat exchangers. M. L. Z. [Translation of abstract]

SUB CODE: 13,09

Card 2/2 *da*

ACC NR: AT8036497

SOURCE CODE: UR/0000/66/000/000/0063/0064

AUTHOR: Benevolinskiy, V. N.; Drushinin, Yu. P.; Klimenko, A. S.; Malyutina, T. S.;  
Sychkov, I. A.

ORG: none

TITLE: The effect of gamma irradiation and irradiation with protons with energies of 600 to 127 Mev on the radiosensitivity of yeast cells [Paper presented at the

Conference on Problems of Space Medicine held in Moscow from 24 to 27 May 1966]

SOURCE: Konferentsiya po problemam kosmicheskoy meditsiny, 1966. Problemy kosmicheskoy meditsiny. (Problems of space medicine); materialy konferentsii, Moscow, 1966, 63-64

TOPIC TAGS: cosmic radiation biologic effect, proton radiation biologic effect, ionizing radiation biologic effect, relative biologic efficiency, life support system, space food, radiation induced mutation, yeast

ABSTRACT: Yeast cells are a convenient object for space research because, in addition to serving as a model system, they may someday be used as a heterotrophic link in a spaceflight life-support system. The vulnerability of the cell division process in yeast cells irradiated in the quiescent state was studied. A water suspension of yeast was irradiated with 660-, 510-, 240- and 127-Mev protons from an OIYAI synchrocyclotron, and their RBE was determined in comparison with Co<sup>60</sup> gamma rays (from an EGO-4 apparatus). Irradiation with 660-Mev protons was conducted through a polyethylene and lead filter. The activation method of dosimetry was used for 660-Mev protons, and the luminescent method for lower-energy pro-

Card 1/2

ACC NR. AT6036497

ions. Ionization chambers were used to monitor the flux. Experiments were conducted with diploid *Saccharomyces vini* yeast cells (Mcgr 130-13 strain) and haploid *Saccharomyces cerevisiae* yeast cells (strain 40-2587). Most of the studies were conducted with 660-Mev protons and the diploid strain. The following tests of yeast radiosensitivity were used: 1) inactivation of macrocolonies and of different types of microcolonies, 2) disruption of the cell division rate in the first five cycles after the beginning of irradiation, 3) dispersion of different types of microcolonies, 4) post-irradiation recovery, and 5) lysis of cells. Dose-damage relationships in a range from 1-120 rad were established for each index. Experimental results indicate that the effect of proton irradiation is essentially the same as gamma irradiation: thus the RBE for protons in these experiments was close to one. Evaluation of these data considering the different linear energy losses of the types of radiation used made possible a preliminary estimate of the radiosensitivity of quiescent yeast cells in spaceflight conditions. This is necessary as yeast may be used as a back-up system for spaceflight life support, if the system of continuous cultivation of heterotrophs stops working. [W.A. No. 22; ATD Report 66-116]

SUB CODE: 06 / SUBM DATE: 00May66

Card 2/2 egk

ACC NR: AP6034196

SOURCE CODE: UR/0369/66/002/005/0552/0555

AUTHOR: Fedorchenko, I. M.; Filatova, N. A.; Klimentko, A. V.; Afanas'yev, V. F.; Polushko, A. P.

ORG: Institute of the Science of Materials, AN UkrSSR, Kiev (Institut problem materialovedeniya AN UkrSSR)

TITLE: Antifriction properties of iron based powder metallurgy products in dry friction

SOURCE: Fiziko-khimicheskaya mekhanika materialov, v. 2, no. 5, 1966, 552-555

TOPIC TAGS: dry friction, antifriction material, powder metallurgy, ~~product~~, iron base alloy, iron powder, friction coefficient

ABSTRACT: A study has been made of the antifriction properties of iron based powder metallurgy products in dry friction. The antifriction materials were prepared from PZhM1 reduced iron powder with such additives as PM2 reduced copper powder zinc sulfide powder and/or KLS graphite powder (GOST's 5279-62, 4960-62, 3657-54, and 5279-61, respectively). The other member of the friction couple is a steel roller (steels 45 or 40X, or 1X18N9T nitrided steel). The experiments were conducted on the MI-1M friction machine at a constant speed of 0.9 m/sec. Addition of copper powder or zinc sulfide to the iron-graphite-base increased the load at the onset of seizure from 5 to 50-60 kg/cm<sup>2</sup>, stabilized the friction process, and lowered the friction coefficient by 500-600%. Study of the friction surface with a UV microscope showed that the increase of wear resistance and the lowering of the friction

Card 1/2