

HOSCHL, P.; KONAK, C.

Growing of CdTe single crystals by static sublimation on a cool wall under the pressure of one of the components.  
Chekhosl fiz zhurnal 13 no.11:850-856 '63.

1. Katedra fyziky pevných látek, Matematicko-fyzikální fakulta Karlovy univerzity, Praha.

ACCESSION NR: AP4041980

Z/0055/64/014/007/0559/0560

AUTHOR: Konak, C.; Prosser, V.

TITLE: Temperature dependence of absorption edge of CdSe single crystals

SOURCE: Chekhoslovatskiy fizicheskiy zhurnal, v. 14, no. 7, 1964,  
559-560

TOPIC TAGS: temperature dependence, absorption edge, cadmium selenide, single crystal, absorption coefficient, photoconductivity maximum

ABSTRACT: The results of measuring the temperature dependence of the absorption coefficient of CdSe in a wavelength range of 0.6 to 1 micron and a temperature range of 125 to 459K, are given. Thin plane-parallel plates 10 to 20 microns thick grown from the vapor phase by Frerich's method were measured; a Zeiss mirror monochromator and an M12Q photomultiplier tube were used in the measurements. The temperature dependence of the absorption coefficient for  $K = 10^3 \text{ cm}^{-1}$  is shown graphically. This dependence was linear for the energy

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ACCESSION NR: AP4041980

corresponding to an absorption  $K = 1.3 \times 10^3 \text{ cm}^{-1}$  in the range from 125 to 400K. Values of the temperature dependence of the absorption edge are compared with the temperature dependence of the photoconductivity maximum in a table. Orig. art. has: 1 figure and 1 table.

ASSOCIATION: Mathematics-Physics Department, Charles University,  
Prague

SUBMITTED: 13Jan64

SUB CODE: 851

NO REF SOV: 002

ENCL: 00

OTHER: 004

Card 2/2

REF ID: A61029524

101-70130

Yamada, H.; Konak, O.

Equilibrium of sodium telluride with binary vapors. I. The vapor pressure of binary components and the equilibrium growth of crystal growth

SOURCE: *Physica status solidi*, v. 9, no. 1, 1966, 167-180

The vapor pressure of binary components and the equilibrium growth of crystal growth

The dependence of the solubility of binary components on the vapor pressure of binary

components and the equilibrium growth of crystal growth of binary components  $P'A$  is investigated. For this purpose extensions are made to the theory of the kinetics of ele-

mental crystallization including the mechanism of diffusion-controlled growth. The relationship

is derived. A method for growing large single crystals by casting a mix-

ture of binary components at low vapor pressure of

is described and justified. The results are compared with those obtained by the supersaturation method of the equilibrium growth of crystal growth

and the generalization of the Thompson-Gibbs relation. Equilibrium growth of

ST 49-0095-24

studies has made it possible to determine the structure of lead telluride  
in "The authors wish to express their thanks to Prof. J. W. Klier for  
useful suggestions and critical comments. The authors are also grateful to A. Libicky,  
M. and M. Penkova for assistance in the experimental part." Orig. art.  
7 equations, 8 figures, and 3 tables

Department of Solid State Physics, Charles University and Physics,  
Prague

170005

ENCL: 10

CLASS: 10, EC

REF ID: A62

OTHER: 41

KONAK, Z.

"The Plan Has Been Exceeded By 77,000 Tons of Coal", P. 6, (TECHNICKE NOVINY, Vol. 1, No. 17/18, Dec. 1953, Praha, Czechoslovakia)

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 3, No. 12, Dec. 1954, Uncl.

KONAK, Z.

KONAK, Z. 3rd Congress of the Association of the Workers in Metallurgic Industry and Ore Mines. p. 59.

Vol. 7, no. 2, Feb. 1957  
HUTNIK  
TECHNOLOGY  
Czechoslovakia

So: East European Accession, Vol. 6, No. 5, May 1957

L. KONAKCHIEV

"Creative collaboration between science and practice. p. 16. (KOOPERATIVNO  
ZEMEDELIE, Vol. 7, no. 6, Oct. 1952, Sofiya, Bulgaria.)

SO: Monthly List of East European Accessions, Vol. 2, No. 7, July 1953, Uncl.

J-128/0-65 EWT(1)/EWG(k)/EWT(m)/EPA(sp)-2/EPT(c)/EPF(n)-2/EPR/EPA(w)-2/  
EG(l)/T/EEC(b)-2/EPA(cc)-2/EWP(b)/EWA(m)-2 Po-4/Pz-5/Pac-10/PI-4/PE-4/  
PL-4/Pg-4 TUP(1) 5D/AT  
ACCESSION NR: - AP4044515

5/17/1986 10:00 AM 1986 0509/0309

ABSTRACT: Proceeding from works of various authors, the author,  
in his researches, has developed a method of synthesis of polyimides,  
which are based on the reaction of diamine with diacid chloride or  
anhydride. The method makes it possible to extend the  
range of polyimides by varying the structure of the diamine  
and the monomer of the acid chloride or anhydride.

was found to have a value approximately between 1 and 4. 4) The

Card 2 / 3

The choice of conductive filaments in plasma is at present limited by the availability of materials which are sufficiently strong to withstand the mechanical stresses of handling and which have a low electrical resistance. The filamentary conductors used in some early experiments were made of copper wire, and the results obtained are given in tables.

APPROVED FOR RELEASE: 06/13/2000      CIA-RDP86-00513R000824130001-2"

*KONAKHEVICH, A.V.*

KONAKHEVICH, A.V.; LATSIK, G.Ye.

Some negative aspects of the Poliakov street spigots. Vrach.delo  
supplement '57:107-108 (MIRA 11:3)

1. Rovenskaya oblastnaya sanitarno-epidemiologicheskaya stantsiya.  
(WATER--BACTERIOLOGY)

"APPROVED FOR RELEASE: 06/13/2000

CIA-RDP86-00513R000824130001-2

GOLUBEV, V.S. (Moskva); KASABOV, G.A. (Moskva); KONAKH, V.F. (Moskva)

Study of a stationary argon - cesium plasma of nonequilibrium conductivity. Teplofiz. vys. temp. 2 no.4:493-509 Jl-Ag '64.  
(MIRA 17:9)

APPROVED FOR RELEASE: 06/13/2000

CIA-RDP86-00513R000824130001-2"

KONAKHOVICH, YU. YA.

PA 152T92

USSR/Physics - Magnetism  
Instrument

Jul/Aug 49

"Measuring the Strength of a Magnetic Field  
by the Induction Method," Yu. Ya. Konakhovich,  
G. D. Latyshev, V. V. Tsimbalin, Leningrad  
Physicotech Inst, Acad. Sci USSR, 10 pp

"Iz Ak Nauk SSSR, Ser Fiz" Vol XIII, No 4

Describes apparatus for measuring the strength H of a magnetic field, which is distinguished from ordinary instruments by its high accuracy and by the possibility of continuous operation and convenience. Discusses block-diagram representing the apparatus, generator I giving field strength of stable frequency, generator II having direct current with a synchronous "motorchik" potentiometer having constant current and galvanometer, and results of experiments with the line of internal-conversion electrons from the K-shell (240 kev) of RaC. Conclusion: Accuracy of the method is limited by the stability of frequency of the quartz oscillator, equal to  $10^{-5}$ . Relative error for 500-oersted field is  $4 \cdot 10^{-5}$  and decreases with increase in field H, since absolute error is 0.02 oersted. Method is free of necessity of introducing tangential corrections on rectilinear scale, and on nonlinear galvanometer.  
Submitted 15 Jul 49.

152T92

05433  
SOV/120-59-3-4/46

AUTHORS: Konakhovich, Yu. Ya., and Panasyuk, I. S.

TITLE: A Flat Crystal Neutron Spectrometer (Neytronnyy Spektrometr s ploskim kristallom)

PERIODICAL: Pribory i tekhnika eksperimenta, 1959, Nr 3,  
pp 26-31 (USSR)

ABSTRACT: A photograph of the spectrometer is shown in Fig 1 and a sectional drawing in Fig 2. The spectrometer is set up in the path of the vertical neutron beam of a uranium-graphite reactor. The primary collimator is in the form of a steel tube 2.8 m long. A second collimator filled with a mixture of boron carbide and paraffin is set up at a distance of 1.6 m above the first collimator. The minimum divergence of the diffracted neutron beam is 4'. A table with a demountable crystal holder is placed above the second collimator and is followed by an end-window proportional counter of monochromatic neutrons. When diffracted neutrons with energy close to the Maxwell distribution maximum were detected, the number of counts per minute obtained with this counter was  $6.5 \times 10^3$  which corresponds to  $1.6 \times 10^5$  neutrons per

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05433  
SOV/120-59-3-4/46**A Flat Crystal Neutron Spectrometer**

minute through an area of 12<sup>2</sup>. The resolving power of the instrument was measured using a cadmium diaphragm placed in front of the counter window. Three types of crystals were used. Calcite  $\text{CaCO}_3(100)$ ,  $d = 3.029 \times 10^{-8}$  cm; lithium fluoride  $\text{LiF}(100)$ ,  $d = 2.005 \times 10^{-8}$  cm; and quartz  $\text{SiO}_2(1340)$ ,  $d = 1.177 \times 10^{-8}$  cm. The dimensions of plates were 210 x 40 x (2 - 4) mm. Each crystal consisted of two or three monocrystalline plates. The plates were polished to coincide to within 30". First order reflection neutrons may be detected with calcite between 0.003 and 6 ev, and with lithium fluoride and quartz between 30 and 60 ev. The neutron detector was an end window proportional counter 68 cm long filled with boron trifluoride (natural isotope mixture) at a pressure of 575 mm Hg. Another counter which was used also employed boron trifluoride containing 84% of  $\text{B}^{10}$  at a pressure of 500 mm Hg. The counter was set up so that the diffracted neutron beam travelled parallel to the counter wire. The resolving power of the counting apparatus was  $(2.5 \pm 0.4) \times 10^{-7}$  sec. The counter

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21.1000,24.6800

77214  
SOV/89-8-1-8/29

AUTHORS: Konakhovich, Yu. Ya., Pevzner, M. I.

TITLE: Monochromatic Neutron Fission Cross Section of Th<sup>229</sup> in the Energy Interval 0.02-0.8 ev. Letter to the Editor

PERIODICAL: Atomnaya energiya, 1960, Vol 8, Nr 1, pp 47-48 (USSR)

ABSTRACT: Reliable conclusions cannot be drawn about the  $1/\sqrt{E}$  variation of the fission cross section in the thermal region and on the resonance in the energy interval between 0.2 and 0.3 ev, unless one increases the number of investigated fissionable nuclei. The authors chose the  $\alpha$  active ( $T_{1/2} = 7,300$  years) nucleus of Th<sup>229</sup>, proposed by Selinov as the most convenient. Neutrons from the horizontal beam of the IRT reactor were selected by means of a neutron crystal spectrometer, and sent through a ionization fission chamber, containing the material under investigation, into a "fine" proportional BF<sub>3</sub> counter. The cross section

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Monochromatic Neutron Fission Cross  
Section of Th<sup>229</sup> in the Energy Interval  
0.02-0.8 ev. Letter to the Editor

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is then given by:

$$\sigma_f \propto \text{const} \frac{1}{\sqrt{E}} \left( \frac{N_{Th}}{N_B} \right)$$

where  $N_{Th}$  and  $N_B$  are the respective counting rates of the chamber and the monochromatic neutron counter after making background corrections. The authors used  $6 \cdot 10^{-5}$  g of Th<sup>229</sup>, chemically extracted from U<sup>233</sup> pure to a few hundredths of 1% of uranium. Quantity of Th<sup>229</sup> was determined by counting  $\alpha$  particles. The chamber contained argon with 8% CO<sub>2</sub> at 500 mm Hg pressure. To get a 10% statistical accuracy, each point in the figure needed 50-100 hr of counting. The curve was normalized to the value of  $\delta_f = (45 \pm 11)$  barn. This normalization could serve only for orientation purposes,

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Monochromatic Neutron Fission Cross  
Section of Th<sup>229</sup> in the Energy Interval  
0.02-0.8 ev. Letter to the Editor

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since apparently it refers to the reactor neutron spectrum, and the Th<sup>229</sup> cross section in the thermal region does not follow the  $1/\sqrt{E}$  law. The authors note that the 0.563 and 0.727 ev resonances contribute little to the resonance integral:

$$J_{Th} = \int_{0.4}^{\infty} \sigma_{f(E)} \frac{dE}{E}$$

Using the equation:

$$J_{Th} = \frac{\sigma_{Th\ th}}{2} \frac{R^B_{Cd} - 1}{R^{Th}_{Cd} - 1}$$

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Monochromatic Neutron Fission Cross  
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and the values for the cadmium ratio ( $R_{Cd}$ ) from the IRT reactor ( $R_{Cd}^{Th} = 2.34$ ,  $R_{Cd}^B = 15.2$ ), the resonance integral has the value of 240 barns. Measurements with the same setup were performed by V. F. Gerasimov in the 0.02-0.26 ev energy region, using a mechanical monochromator. I. V. Kurchatov showed continuous interest during the work, G. N. Yakovlev and S. V. Pirozhkov prepared the pure sample of thorium, and Chzhan Khuan-chao helped during measurements. There is 1 figure; and 8 references, 6 Soviet, 2 U.S. The U.S. references are: Neutron Cross Section, Second ed., BNL-325 (1958); C. Porter, R. Thomas, Phys. Rev., 104, 483 (1956).

SUBMITTED: April 4, 1959

Card 5/5

2

S/070/63/008/001/005/024  
E132/E460

AUTHORS: Konakhovich, Yu.Ya., Saksonov, Yu.G.

TITLE: Neutron diffraction investigation of a manganese-zinc ferrite

PERIODICAL: Kristallografiya, v.8, no.1, 1963, 25-31

TEXT: The study had the aim of finding the positions of the ions and of explaining the magnetic structure in the ferrite of composition  $Zn_{0.288}Mn_{0.645}Fe_{2.067}O_4$ . Neutron diffraction was carried out at  $20^\circ C$  with and without a magnetic field of 5000 Oe and at  $260^\circ C$ . X-ray diffraction gave the unit cell dimensions as  $a = 8.4915 \pm 0.0005 \text{ \AA}$ . The neutron beam used was monochromatized by reflection from 111 of a Pb crystal to  $0.962 \text{ \AA}$ . The Curie point of the specimen was  $230^\circ C$ . It was shown that the parameter of the oxygen ions is  $u = 0.3881 \pm 0.0008$  and that the degree of inversion  $e = 0.89 \pm 0.05$ . The ferrite shows anti-parallel ordering of the magnetic moments of cations in the octahedral and in the tetrahedral interstices. The saturation magnetic moment per ion for the ions in the tetrahedral and octahedral positions is  $3.3 \pm 0.3$  Bohr magnetons and is  $3.3 \pm 0.9$  for a "molecule", which corresponds exactly with the value

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Neutron diffraction ...

S/070/63/008/001/005/024  
E132/E460

determined by magnetic measurements at room temperature.  
Comparison with the calculated values show that the tetrahedral  
and octahedral sub-lattices are saturated at room temperature to  
different degrees (94 and 68% respectively). There are 2 figures  
and 1 table.

ASSOCIATION: Institut atomnoy energii im. I.V.Kurchatova  
(Institute of Atomic Energy imeni I.V.Kurchatov)

SUBMITTED: June 26, 1962

Card 2/2

KONAKHOVICH, Yu.Ya.; SOPENKOV, V.A.

Use of gallium in determining the cross sections of coherent  
neutron scattering. Kristalografija 8 no.5:785-787 S-O '63.  
(MIRA 16:10)

1. Institut atomnoy energii im. I.V.Kurchatova.

KONAKHOVICH, Yu.Ya; SAKSONOV, Yu.G.

Neutron diffraction study of manganese-zinc ferrite. Kristalle-  
grafiia 8 no.18 25-31 Ja-F'63 (MIRA 1787)

1. Institut atomnoy energii imeni I.V. Kurchatova.

L 26670-66 EWT(m)/EPF(n)-2/EWA(d)/EWP(t)/EWA(h) IJP(c) JD  
ACC NR: AP6010404

SOURCE CODE: UR/0126/66/021/003/0384/0387

AUTHORS: Astrakhantsev, S. M.; Konnov, Yu. I.; Konakhovich, Yu. Ya.

ORG: none

TITLE: Neutron diffraction study of polycrystalline nichrome alloy

SOURCE: Fizika metallov i metallovedeniye, v. 21, no. 3, 1966, 384-387

TOPIC TAGS: nickel alloy, chromium alloy, nichrome alloy, neutron diffraction, tempering, electric resistance, polycrystal

ABSTRACT: A neutron diffraction study of annealed and cold worked polycrystalline nichrome alloy (containing 22 at. wt % Cr) was carried out. The electrical resistance of the specimens was also determined. A schematic of the neutron diffractometer is presented, and the experimental results are tabulated and are graphically summarized (see Fig. 1). The neutron diffraction pattern exhibited superstructural maxima corresponding to the formation of antiphase domains, the existence of which was first suggested by B. G. Livshits, G. A. Rymashevskiy, and N. P. Kosyрева (Izv. vuzov. Chernaya metallurgiya, 1961, No. 5). Tempering was found to lead to an ordering of the domains after the Ni<sub>2</sub>Cr type. The authors thank N. F. Pravdyuk for evaluation of the experimental results.

Card 1/3

UDC: 539.292:548.4

L 26670-66

ACC NR: AP6010404

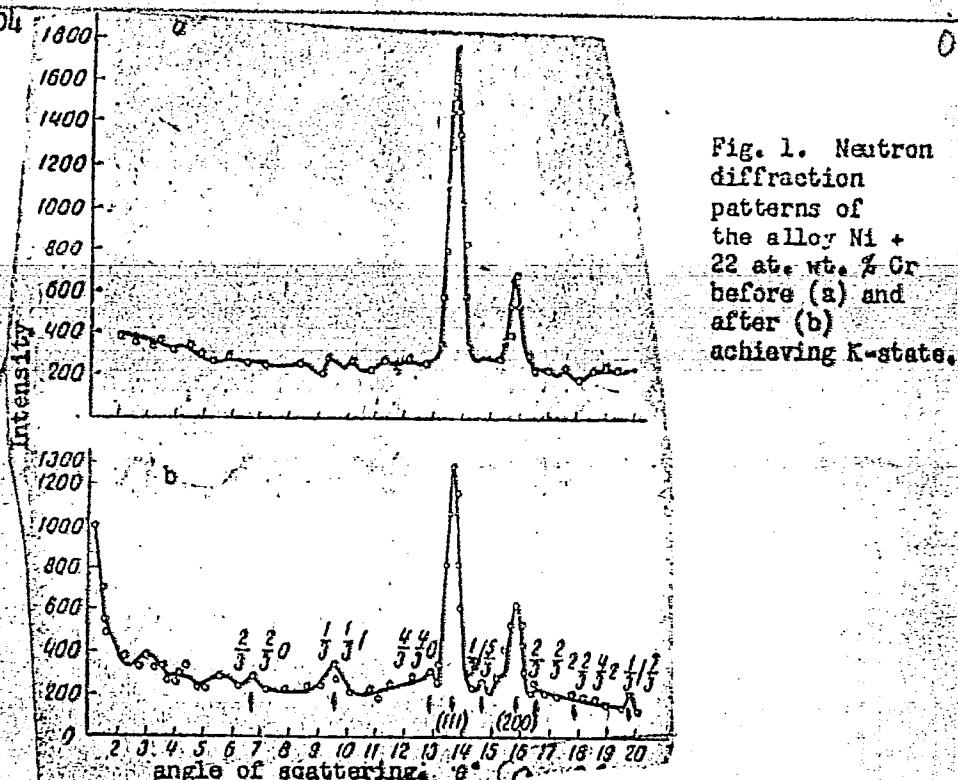


Fig. 1. Neutron diffraction patterns of the alloy Ni + 22 at. wt. % Cr before (a) and after (b) achieving K-state.

Card 2/3

L 26670-66

ACC NR: AP6010404

0

Orig. art. has: 1 table and 3 graphs.

SUB CODE: 11,20/ SUBM DATE: 08Jun65/ ORIG REF: 006/ OTH REF: 006

Card 3/3 BLG

NEDOSPASOV, A.V.; PANKOVA, G.I.; KONAKH, V.Y.,

Investigating the strata in argon. Zhur.tekh.fiz. '30 no.1:125-128  
Ja '60. (MIRA 13:8)

(Argon)

(Ionization)

DESPILLER, O.D.; KONAKHOVSKAYA, S.M. [Konakhovs'ka, S.M.]; LIFSHITS, Ya.I.  
[Lifshyts', Ya.I.]

Qualitative analysis of carbocholine. Farmatsov. zhur. 18 no.2:  
42-43 '63. (MIRA 17:10)

1. Kafedra obshchey khimii Vinnitskogo meditsinskogo instituta im.  
Pirogova i Laboratoriya aptechnogo upravleniya Vinnitskogo oblastnogo  
otdela zdravookhraneniya.

KONAKOV, D.

Standardization

Technical standardization in U.S.S.R. industry.  
Prof. sciuzy no. 5. '52.

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

KONAKOV, D. M.

Sotsialisticheskoye Vospriozvodstvo [Socialist Reproduction] Moskva, Izd-vo Znaniye, 1953. 39 p. tables.

N/5  
781  
.K7

1. KONAKOV, D.
2. USSR (600)
4. Industry
7. Socialist broadened production, Prof. soiuzy, 8, no. 5, 1953.
  
9. Monthly List of Russian Accessions, Library of Congress, April 1953, Uncl.

KONAKOV, D.M.; KOZLOV, G.A., redaktor.

[Wages] Zarabotnaia plata. Moskva, Vysshiaia partiinaia shkola pri  
TsK KPSS, 1954. 28 p.  
(Wages)

(MIRA 8:4)

KOHAKOV, D.M.

[Organization of technical norms and wages in Soviet industry]  
Organizatsiia tekhnicheskogo normirovaniia i zarabotnoi platy v  
promyshlennosti SSSR. Moskva, Vysshiaia partiinaia shkola pri  
TSK KPSS, 1955. 27 p.

(Wages)

(MLRA 8:11)

KONAKOV, D.

Setting up labor norms in industry. Sov.profsoiuzy 3 no.9:56-61  
S '55.  
(Time study) (Labor productivity)

"APPROVED FOR RELEASE: 06/13/2000

CIA-RDP86-00513R000824130001-2

*ANNAKUO.RU*  
KORYAGIN, Aleksandr Georgiyevich; KOMAKOV, D.M., tekhn.red.; NAUMOV, K.M., tekhn.red.

[Socialist reproduction] Sotsialisticheskoe vosproizvodstvo. Moskva,  
Vysshiaia partiinaiia shkola, 1957. 61 p. (MIRA 11:2)  
(Russia--Economic conditions)

APPROVED FOR RELEASE: 06/13/2000

CIA-RDP86-00513R000824130001-2"

BELYAYEVA, Z.; BUDARIN, V.; VASHENTSEVA, Ye.; KOPTEV, M.; KOROLEV, S.;  
MESHCHERYAKOV, V.; SEMIN, S.; KONAKOV, D., otv.red.; ROCHKO, V.,  
red.; SOSKIN, A., red.

[Political economy; a manual of visual aids] Politicheskaya  
ekonomika; nagliadnoe posobie. Otvetstvennyi red. D.Konakov.  
Moskva, Gos.izd-vo polit.lit-ry, 1959. 159 p. (MIRA 13:3)  
(Economic history) (Audio-visual aids)

KOZLOV, Genrikh Abramovich, prof.; SHIRINSKIY, Ivan Dmitriyevich,  
dotsent; KONAKOV, Dmitriy Maksimovich, prof.; MOROZOV,  
Aleksandr Vasil'yevich, dotsent; BELYAYEVA, Zoya Nikolayevna,  
kand.ekonom.nauk; KORYAGIN, A.G., red.; PROKOF'YEV, S.P.,  
red.; NAUMOV, K.M., tekhn.red.

[Capitalist methods of production] Kapitalisticheskii sposob  
proizvodstva. Moskva, Izd-vo VPSh i AOL pri TeK KPSS. Pt.1.  
1959. 237 p. (MIRA 12:6)

1. Kommunisticheskaya partiya Sovetskogo Soyuza. Vysshaya  
partiynaya shkola. Kafedra politicheskoy ekonomii.  
(Economics) (Capitalism)

ALEKSEYEV, A.; ANCHISHKIN, A.; BERRI, L.; BARABANOV, M.; BOGOMOLOV, O.;  
BRAGINSKIY, B.; IOFFE, Ya.; KOVAL', T.; KONAKOV, D.; KUVARIN, V.;  
KUDROV, V.; LITVYAKOV, P.; MUROMTSEV, M.; OBOLESKIY, K.; POKATAYEV,  
Yu.; TOLKACHEV, A.; KATS, V., red.; KRYLOV, P., red.; KANEVSKAYA,  
T.M., red.; GERASIMOVA, Ye.S., tekhn.red.

[Economic competition between the U.S.S.R. and the U.S.A.; a criticism  
of the views of American bourgeois economists] Ekonomicheskoe srovnova-  
vanie mezhdu SSSR i SShA; kritika vsegliadov amerikanskikh burzhuaznykh  
ekonomistov. Moskva, Gosplanizdat, 1959. 240 p. (MIRA 12:3)

1. Moscow. Nauchno-issledovatel'skiy ekonomicheskiy institut. 2. Sotrud-  
niki Nauchno-issledovatel'skogo ekonomicheskogo instituta Gosplana SSSR  
(for all except Kata, Krylov, Kanevskaya, Gerasimova)  
'(United States--Economic conditions) (Russia--Economic conditions)

BELYAYEVA, Z.; KONAKOV, D.

Collection of articles on labor in the U.S.S.R. ("Labor in  
the U.S.S.R." Reviewed by Z. Beliaeva; D. Konakov) Sots. trud.  
4 no. 3:144-148 Mr '59. (MIRA 12:4)  
(Labor and laboring classes)

"APPROVED FOR RELEASE: 06/13/2000

CIA-RDP86-00513R000824130001-2

KONAKOV, D.

Improving material incentives is an important lever of accelerating  
the rate of the building of communism. Sots. trud 7 no.12:26-3,  
D '62.

(Incentives in industry)

(Wages)

(MIRA 16:2)

APPROVED FOR RELEASE: 06/13/2000

CIA-RDP86-00513R000824130001-2"

KONAKOV, G. A., Cand. Tech. Sci. (diss) "Investigation of Initial Parameters of System of Automatic Control of Marine Reversing Engine," Gor'kiy, 1961, 18 pp. (Gor'kiy Polytech. Inst.)  
200 copies (KL Supp 12-61, 268).

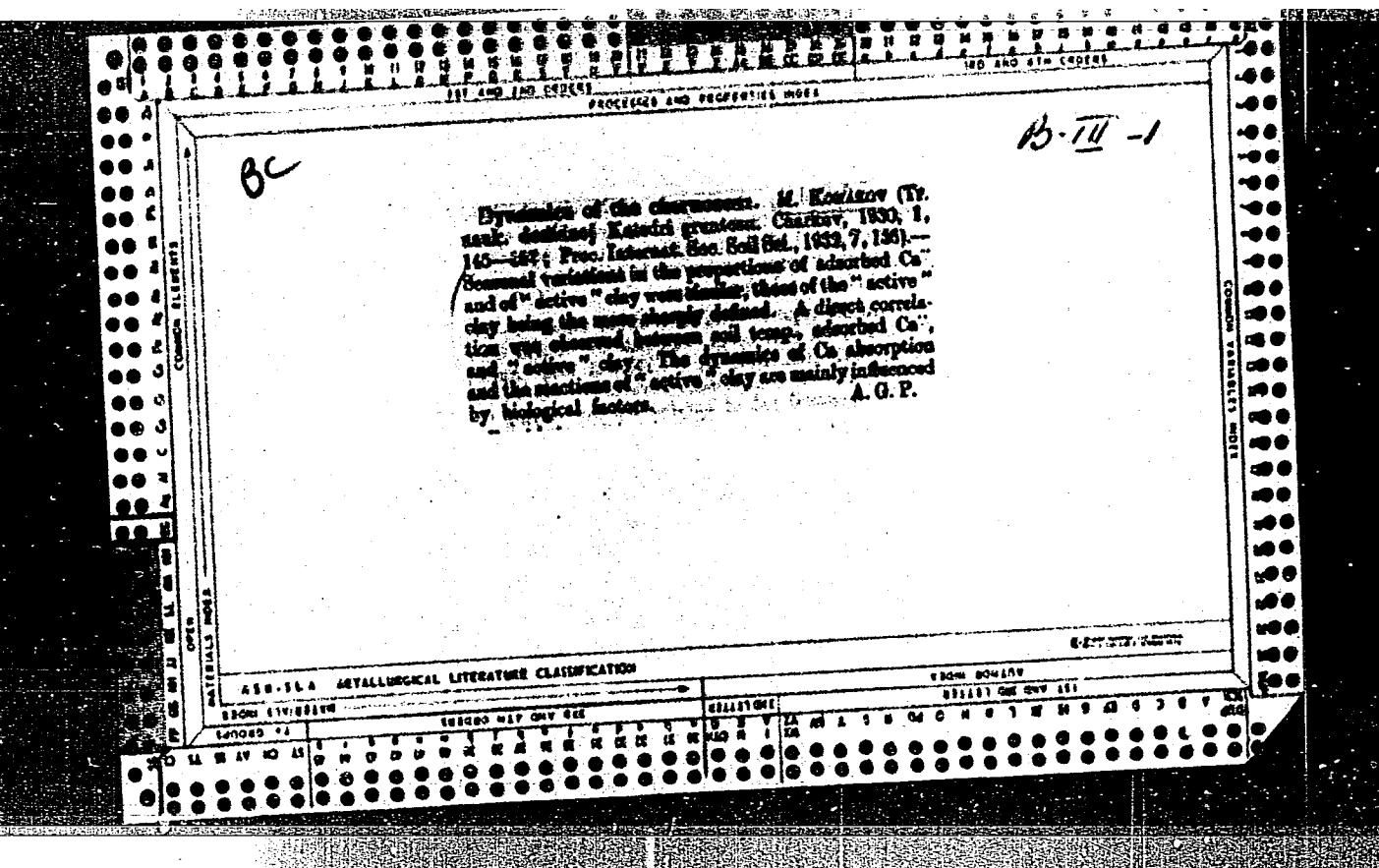
KONAKOV, G.A., kand.tekhn.nauk

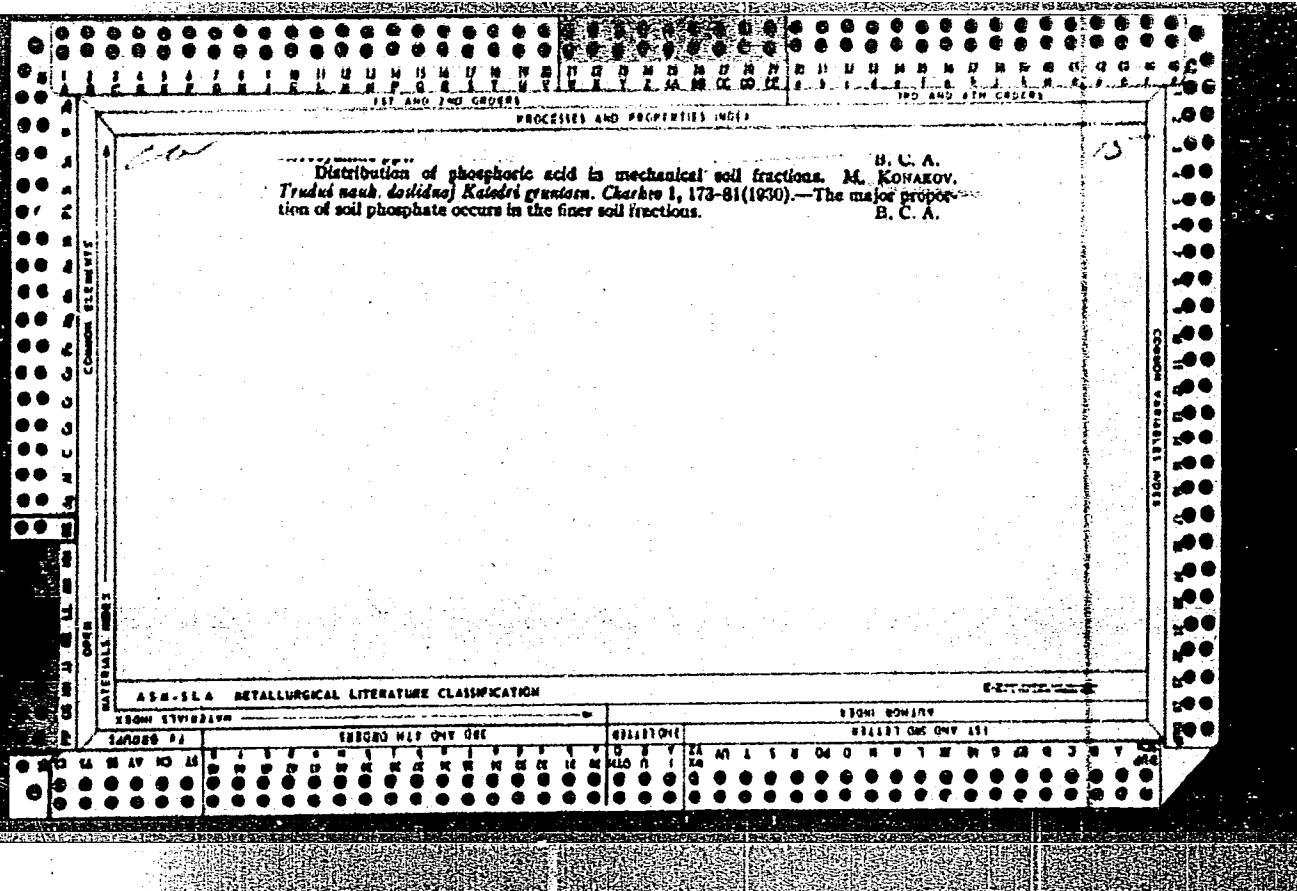
Graphic method of determining the start of braking of a reversible engine. Sudostroenie 29 no.6:28-29 Je '63. (MIRA 16:7)  
(Marine engineering—Graphic methods)

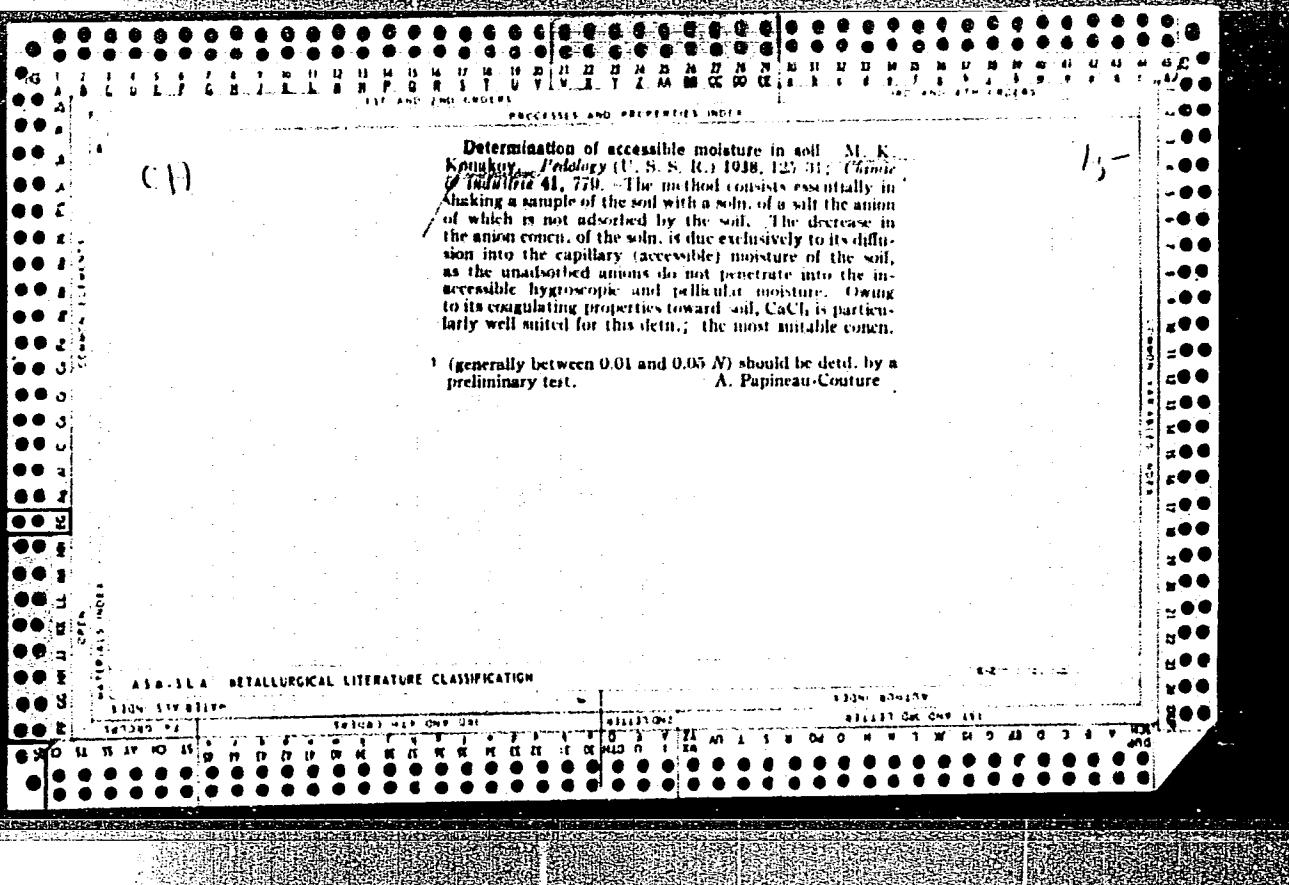
MAR'YANOVSKIY, I.M.; GORBACHEV, A.G.; RYVKIN, G.M.; RYABOY, A.Ya.;  
KONAKOV, G.A.; GRIGOR'IEV, N.I.

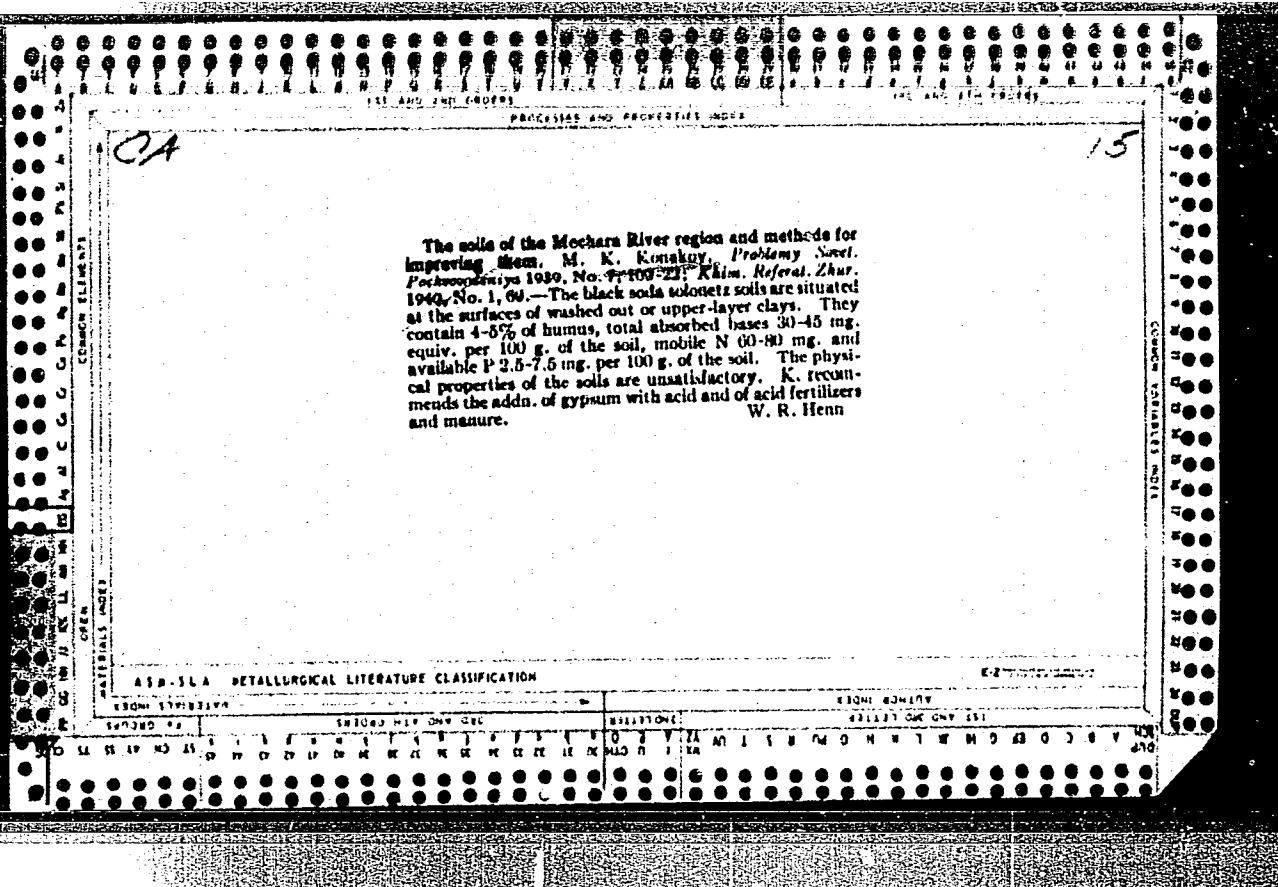
Authors' abstracts of dissertations. Vest.mashinostr. 42  
no.5:89 My '62. (MIRA 15:5)

1. Leningradskiy politekhnicheskiy institut imeni M.I.Kalinina  
(for Mar'yanovskiy, Gorbachev).
  2. Moskovskiy stankoinstrumental'-nyy institut (for Ryvkin).
  3. Krasnoyarskiy institut tsvetnykh metallov imeni M.I.Kalinina (for Ryaboy).
  4. Khar'kovskiy politekhnicheskiy institut imeni A.A.Zhdanova (for Konakov).
  5. Leningradskiy korablestroitel'nyy institut (for Grigor'yev).
- (Bibliography—Mechanical engineering)









USSR/Meadow Cultivation.

L

Abs Jour. : Ref Zhur Biol., No 14, 1958, 63269

Author : Kayrakan, M.A., Konakov, M.K., Mashkevich, N.G.,  
Skorokhod, V.G.

Inst : Voroshilovgrad Agricultural Institute.

Title : Meadows of Kolkhoz imeni Budenny of Novo-Aydarskiy  
Rayon and Ways to Improve Them.

Orig Pub : Nauchn. sap. Voroshilovgradsk. s.-kh. in-ta, 1956, 4,  
No 1, 88-97

Abstract : No abstract.

Card 1/1

... S. A new form of  
surface-to-surface  
missile has been  
developed by  
the Chinese.  
The missile is  
capable of  
carrying a nuclear  
warhead.

SULIMOVSKAYA, N.A., doktor med.nauk; KONAKOVA, N.M.; BOGACHEVA, M.Ye.

Therapeutic value of the droplet method of introducing milk into the stomach in peptic and duodenal ulcer. Vrach.delo no.10:108-109 O '60.  
(MIRA 13:11)

I. Kafedra terapii (zav. - doktor med.nauk N.A.Sulimovskaya)  
Instituta usovershenstvovaniya vrachey i klinicheskaya bol'nitsa  
goroda Khar'kova.  
(MILK--THERAPEUTIC USE)  
(PEPTIC ULCER)

KONAKOV, N. N.

IA 29T107

1000/Zoology

Fauna

Jul/Aug 1947

"Zoogeography of the Southern Kuriles," N. N. Konakov,  
2 pp

"Iz Vsesoyuz Geog Obschestva" Vol LXXX, No 4

There is no other portion of Soviet land which is as large an archipelago and composed of as many islands as the Kuriles. Up to the acquisition of these islands the fauna of the Soviet Union was studied on the basis of continental fauna. Now there is a whole new field of study. Discusses the general fauna of the chain.

LC

29T107

"APPROVED FOR RELEASE: 06/13/2000

CIA-RDP86-00513R000824130001-2

KONAKOV, P. K.

"Experiment in Applying Theory of Similarity to Analysis of Operation of Steam-Engine Locomotive." No. 9, 1945. Iz. Ak. Nauk. SSSR. Otdel. Tekh. Nauk.

BR-52059019.

APPROVED FOR RELEASE: 06/13/2000

CIA-RDP86-00513R000824130001-2"

"APPROVED FOR RELEASE: 06/13/2000

CIA-RDP86-00513R000824130001-2

KONAKOV, P. K.

"A New Formula for the Coefficient of Resistance in Smoothtubes," Dok. AN, 51, No. 7,  
1946

APPROVED FOR RELEASE: 06/13/2000

CIA-RDP86-00513R000824130001-2"

PA 4T42

KONAKOV, P. K.

Apr 1947

USSR/Fuel Economy  
Locomotives

"Heating of Feedwater in Locomotives," P. K. Konakov,  
3 pp

"Za Ekonomiya Topliva" Vol IV, No 4

Author describes his new water-heater, of greater  
simplicity and economy. Gives two cross sections and  
a graph of operating data.

4T42

"APPROVED FOR RELEASE: 06/13/2000

CIA-RDP86-00513R000824130001-2

KONAKOV, P.K., doktor tekhnicheskikh nauk

Direct heat emission from locomotive fireboxes. Tekh.zhel.dor.  
6 no.9:17-19 S'47. (MLRA 8:12)  
(Locomotives--Fireboxes)

APPROVED FOR RELEASE: 06/13/2000

CIA-RDP86-00513R000824130001-2

"APPROVED FOR RELEASE: 06/13/2000

CIA-RDP86-00513R000824130001-2

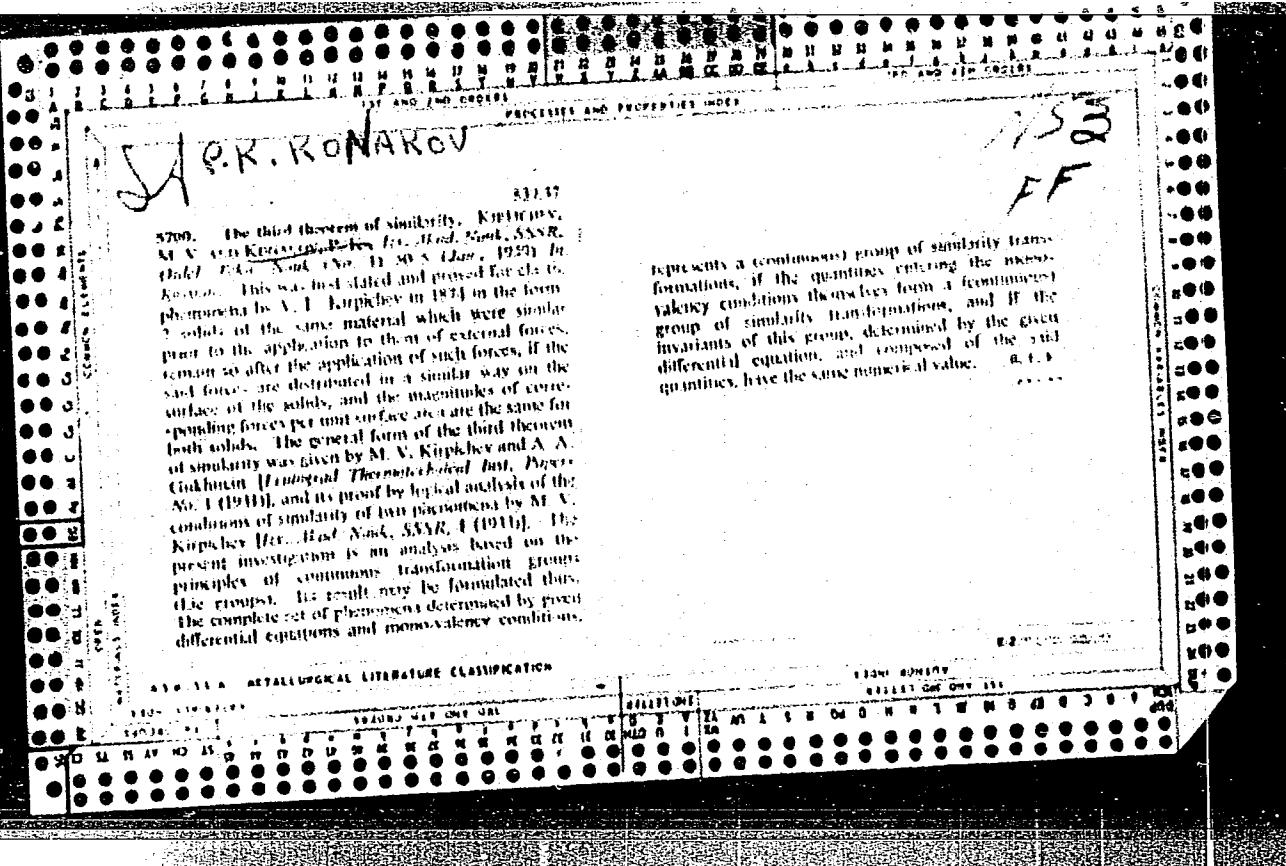
K. Makarov, P. K. Federman

3000-1000-1000

être envisage comme une équation  
A. Federman [cf. Ann. [Izvestia] Inst. Polytechn. St. Peters-  
bourg 16 (1952) p. 109-110].

APPROVED FOR RELEASE: 06/13/2000

CIA-RDP86-00513R000824130001-2"



KONAKOV, P. K.

PA 161T59

USSR/Engineering - Hydrodynamics Oct 49

"Some Regularities of the Turbulent Motion of  
Liquids in Pipes," P. K. Konakov, Power Eng  
Inst imeni G. M. Krzhizhanovskiy, 13 pp

"Iz Ak Nauk SSSR, Otdel Tekh Nauk" No 10

Develops new formulas for curve of velocity  
distribution and for coefficient of hydraulic  
resistance during turbulent motion of liquids  
in round pipes. Submitted by Acad M. V. Kir-  
pichev.

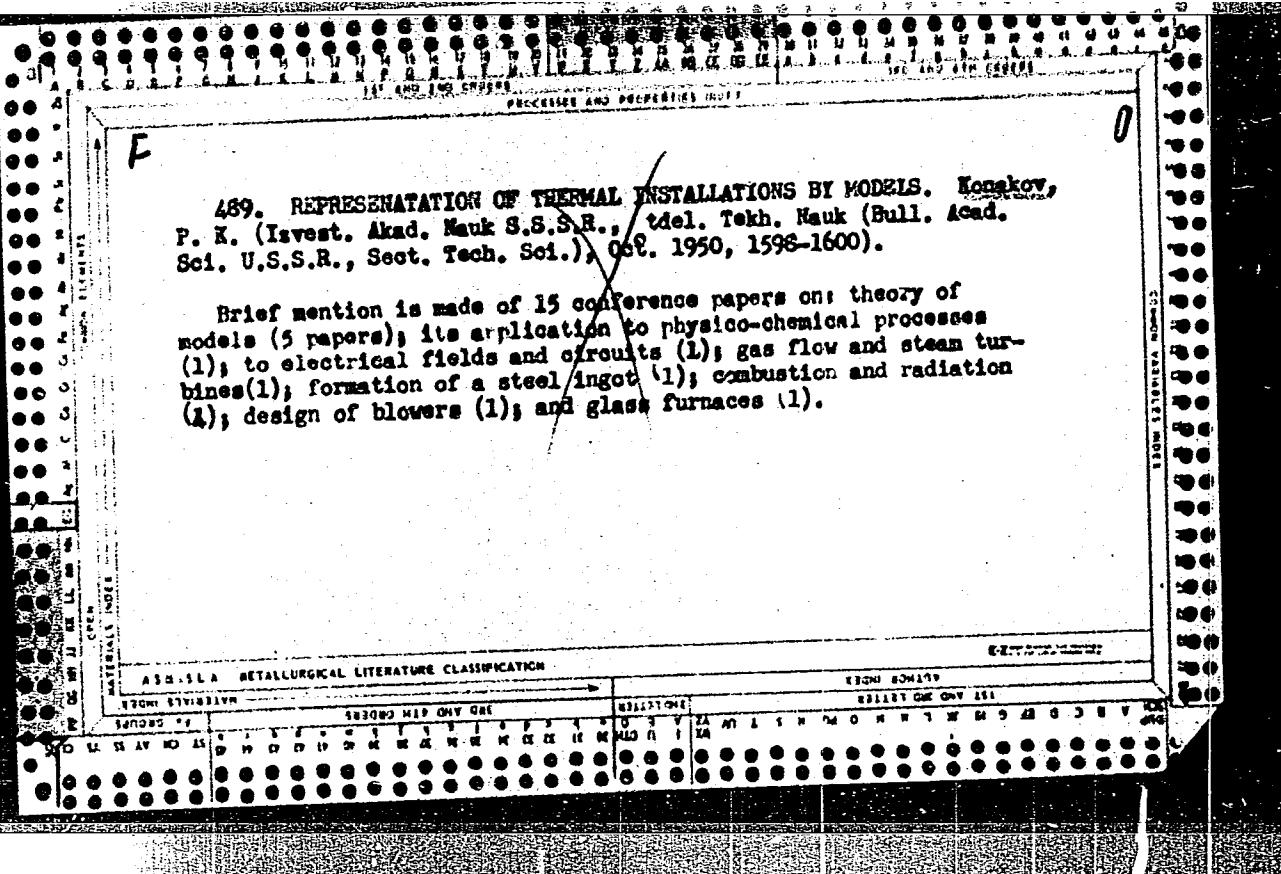
161T59

KONAKOV, P. K.

30459

Pryamaya otdacha parovoznoy topki. Trudy mosk. Elyektromyekhan.  
In-ta inzyezyerov Z.-A. Transporta im dzyerzinskogo vyp. 59, 1949,  
S. 3-31.

SO: Letopis' No. 34



KONAKOV, P. K.

168T23

USSR/Engineering - Heat, Furnace  
Boiler Furnace

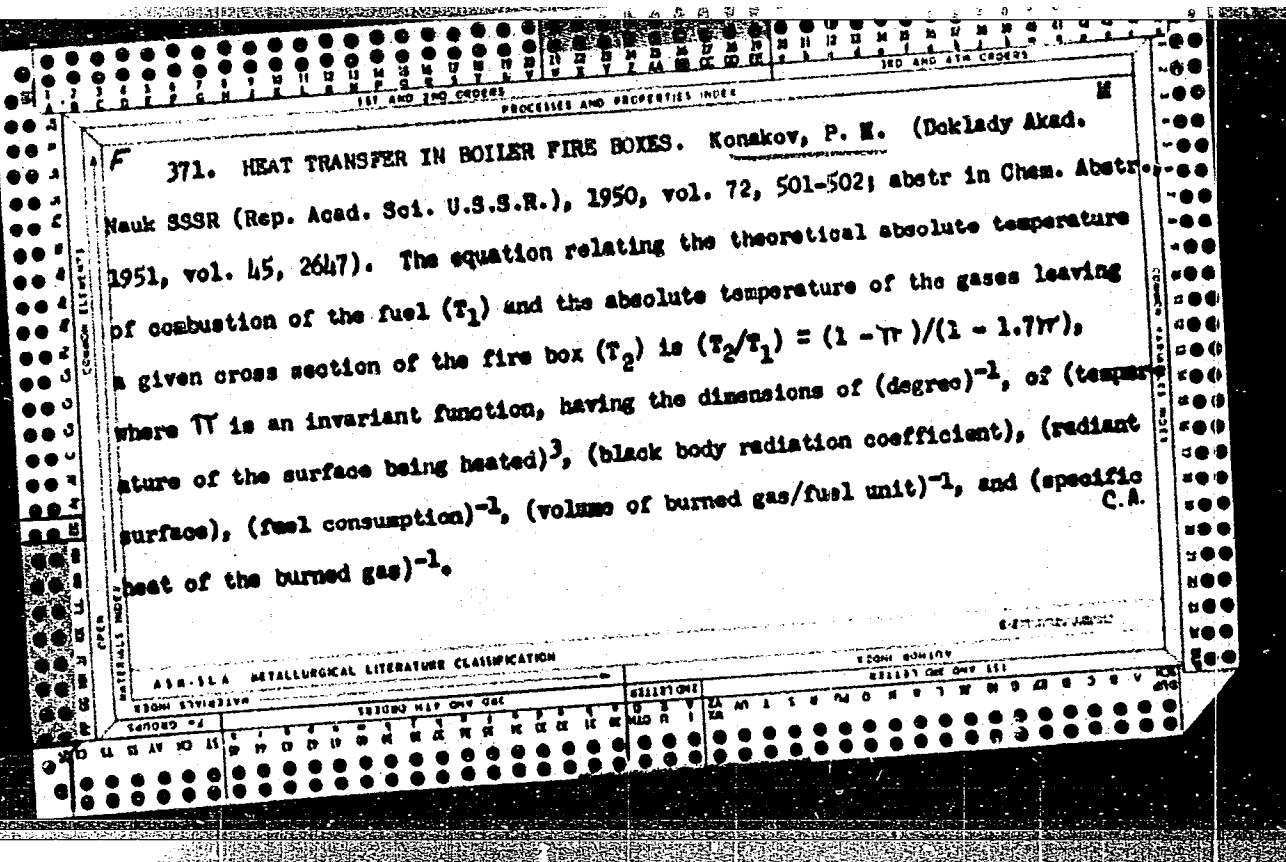
Jun 50

"Supply of Heat in the Boiler Furnace," P. A. Konakov,  
Power Eng Inst imeni Krzhizhanovskiy, Acad Sci USSR

"Iz Ak Nauk SSSR, Otdel Tekh Nauk" No 6, pp 888-900

Considers process of heat supply in furnace chamber  
of steam boiler. Obtains new heat-supply equations on  
basis of similarity theory (dimensional analysis),  
which determine temperature of gases in output end of  
firebox. Submitted 19 Oct 49 by Acad M. V. Kirpichev.

168T23



KONAKOV, P. V.

Theory of similarity and its utilization in locomotive thermotechnics  
Moskva, Gos. nauchno-tekhn. izd-vo mashinostroit. lit-ry, 1951. 215 p.  
(55-30597)

TJ690.K6

KONAKOV, P. K.

PA 244T55

USSR/Engineering - Heat, Boilers

Mar 52

"Heat Transfer in Boiler Furnaces," P. K. Konakov

"Iz Ak Nauk SSSR, Otdel Tekh Nauk" No 3, pp 367-373

Analyzes results of experimental investigations conducted in USSR on furnaces using various fuels and establishes most probable value for factor of blackness, suggesting these values for use in designing boiler furnaces. Basing on insignificant variation of blackness factor in different boiler furnaces, develops simplified formula for approximate calculations. Submitted by Acad M. V. Kirpichev, 3 Sep 51

244T55

USSR

2330. Konakov, P. K., Some laws of heat exchange by radiation (in Russian), *Izv. Akad. Nauk SSSR Otd. Tekn. Nauk* no. 12, 1847-1855, Dec. 1953.

Author deals with a few examples of heat exchange, including absorption of the transmitting medium by using the concept of radiation energy vector and the vector calculus.

Y. R. Mayhew, England

KONAKOV, P.K., professor, redaktor; MAKHAN'KO, M.G., kandidat tekhnicheskikh nauk, redaktor; YUDZIN, D.M., tekhnicheskiy redaktor

[Ejector-type smokestacks on locomotives] Ezheletsionnye dymovytiazhnye ustanovki parovozov. Moskva, Gos. transp. zhel-dor. izd-vo, 1954.  
195 p.

(Locomotives--Design)

KONAKOV, P.K.

LAKHANIN, Vladimir Vladimirovich, prof. doktor tekhn.nauk; YUDITSKIY, F.L.,  
retsenzent; KONAKOV, P.K., red.; SHIENNIKOVA, Z.V., red. izd-va;  
TSVETKOVA, S.V., tekhn.red.

[Heat calculations for marine steam equipment based on the theory  
of similitude] Teplovoyi raschet sudovykh parovykh mashin, osnovan-  
nyi na teorii podobiia. Moskva, Izd-vo "Rechnoi transport," 1957.  
137 p. (MIRA 11:2)

(Marine engines) (Dimensional analysis)

KONAKOV, P. M., professor; MAKHAN'KO, M.G., kandidat tekhnicheskikh nauk, redaktor; BOBRUVA, Ye.N., tekhnicheskiy redaktor

[Theoretical principles of heat engineering] Teoreticheskie osnovy teplotekhniki. Moskva, Gos.transp.thel-dor.indavo, 1957. 298 p.  
(Heat engineering) (MIRA 10:9)

KONAKOV, P.K.

KONAKOV, P.K., doktor tekhnicheskikh nauk; FILIMONOV, S.S., kandidat  
tekhnicheskikh nauk; KHURTALEV, B.A., kandidat tekhnicheskikh nauk.

Calculation of heat exchange in boiler furnaces [with summary in  
English]. Teploenergetika 4 no.8:48-53 Ag '57. (MLRA 10:9)

1. Energeticheskiy institut Akademii nauk SSSR.  
(Boilers) (Heat--Transmission)

KONAKOV, P.K.

AUTHOR: KONAKOV, P.K., FILIMONOV, S.S., KHRUSTALEV, B.A. PA - 3562  
TITLE: On the Calculation of Radiative Heat Exchange in a Cooled Combustion Chamber. (K raschetu luchistogo teploobmena v okhlazhdennykh kamerakh goreniya, Russian)  
PERIODICAL: Zhurnal Tekhn. Fiz., 1957, Vol 27, Nr 5, pp 1066 - 1075 (U.S.S.R.)  
ABSTRACT: A scheme for the heat exchange process in combustion chambers is suggested, which makes it possible to determine the required radiation temperature  $T_s$  and to calculate the radiation heat exchange. It is assumed that near the heat absorbing surfaces there is a layer of the medium which is in equilibrium with radiation, the molecular temperature of the medium and the radiation temperature being equal to each other. It is assumed that on the way from the balanced layer to the wall radiation is not in interaction with the medium, i.e. there is a transfer of radiation energy by effusinn. It is therefore assumed that the temperature of this layer is equal to the  $T_s$  on the heat-absorbing surface. The temperature of the balanced layer adjusts itself in accordance with an interaction between the medium and the radiation in the core of the flow. The molecular-kinetic temperature of the balanced layer is determined by means of a field analysis of the molecular temperatures of the ignition chamber. Thus, the balanced layer dicides the ignition chamber into two zones: one that is close against the

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16(1)

PHASE I BOOK EXPLOITATION

sov/2652

Konakov, Petr Kuz'mich

Teoriya podobiya i yeye primeneniye v teplotekhnike (The Theory of Similitude and Its Application in Heat Engineering) Moscow, Gosenergoizdat, 1959.  
207 p. 5,500 copies printed.

Ed.: P. M. Brdlik; Tech. Ed.: G. I. Matveyev.

PURPOSE: This book is intended for scientific workers and engineers working in the fields of theoretical heat engineering.

COVERAGE: The author examines the equations of the process of motion of continuous media and the conditions of the single-valuedness of these equations. The foundations of the theory of similitude are presented and applications of this theory to certain heat engineering problems are given. The author uses as the basis for his study the analysis of a closed system of equations which defines a phenomenon. The book discusses dimensional analysis as the analysis

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The Theory of Similitude (Cont.)

SOV/2652

of equations which describe a phenomenon under study in general form. The author thanks Professor A. V. Lykov, Member of the Academy of Sciences, BSSR, for reviewing the book, and P. M. Brdlik, Candidate of Technical Sciences, for editing the book. There are 35 references: 30 Soviet, 2 French, 2 English, and 1 German.

## TABLE OF CONTENTS:

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Ch. I. Equations of the Nonstationary State of a Continuous Medium and Conditions of Being Single Valued	13
1. Equations of the conservation of mass and energy	13
2. On the motion of energy	19
3. Equations of motion of a medium with molecular transfer of mass and energy	33
4. Equations of motion of a medium with molar transfer of mass and energy	35
5. Transfer equations of radiant energy	40

Card 2/4

KUMSKOV, V.T., kand.tekhn.nauk; KONAKOV, P.K., doktor tekhn.nauk;  
NIKITIN, Ye.A., inzh.; AKSHEMOV, K.F., kand.tekhn.nauk;  
GUTKIN, L.V., kand.tekhn.nauk; BOBROVA, Ye.N., tekhn.red.

[Thermal processes in electric and diesel locomotives] Teplo-  
nye protsessy teplovozov i elektrovozov. Moskva, Vses.izda-  
tel'sko-poligr.ob"edinenie M-va putei soobshchenia, 1960. 178 p.  
(MIRA 13:11)

(Diesel locomotives) (Electric locomotives)

KONAKOV, Petr Kuz'mich, prof., doktor tekhn.nauk; FILIMONOV, Sergey  
Sergeyevich, kand.tekhn.nauk; KHRUSTALEV, Boris Aleksandrovich,  
kand.tekhn.nauk; ARNOL'D, L.V., prof., retsenzent; LAKHANIN,  
V.V., prof., doktor tekhn.nauk, nauchnyy red.; SHLENNIKOVA,  
Z.V., red.izd-va; BOIROVA, V.A., tekhn.red.

[Heat exchange in the combustion chambers of steam boilers]  
Teploobmen v kamereakh sgoraniia parovykh kotlov. Moskva, Izd-vo  
"Techno transport," 1960. 269 p. (MIRA 13:5)  
(Boilers) (Furnaces)

KONAKOV, P.K., doktor tekhn. nauk

New contribution to the theory of heat and mass exchange. Izv.  
ASIA no.2:126-127 '60. (MIRA 13:7)  
(Mass transfer) (Heat--Transmission)

KONAKOV, P.K., doktor tekhn.nauk, prof.

Mass and energy transfer law. Trudy MIIT no.125:4-39 '60.

(Mass transfer) (Heat---Radiation and absorption)  
(MIRA 13:10)

"APPROVED FOR RELEASE: 06/13/2000

CIA-RDP86-00513R000824130001-2

KONAKOV, P.K., doktor tekhn.nauk, prof.

Thermal process equations for combustion chambers. Trudy MIIT  
no.125:40-75 '60. (MIRA 13:10)  
(Combustion)

APPROVED FOR RELEASE: 06/13/2000

CIA-RDP86-00513R000824130001-2"

KONAKOV, P.K., doktor tekhn.nauk, prof.

Some features of complex heat exchange. Trudy MIIT no.125,76-103  
'60. (MIRA 13:10)  
(Heat--Transmission)

S/649/61/000/139/001/018  
I028/I228

AUTHOR: Konakov, P. K.

TITLE: The theory of similitude and the prospects for its use in heat engineering

SOURCE: Moscow. Institut inzhenerov zheleznodorozhnogo transporta. Trudy, no. 139. 1961.  
Teoriya podobiya i yeye primeneniye v teplotekhnike trudy pervoy mezhvazovsky  
konferentsii, 4-10

TEXT: The principles of the theory of similitude, based on J. Bertrand's articles, namely—equation analysis and dimensional analysis—are defined, and the non-stationary equations of motion of a compressible fluid are analysed by both methods. The two methods are not opposed to each other and lead to the same invariant relationships. The possibilities of use of the theory in heat engineering—in the analytic solution of problems, the processing of experimental data, the modeling of phenomena—are mentioned. The author recommends that attention be given to the problem of the use of nonlinear transformations. ✓

ASSOCIATION: Moskovskiy institut inzhenerov zheleznodorozhnogo transporta (Moscow Institute of Railway-Transport Engineers)

Card 1/1

S/649/61/000/139/006/018  
I028/I228

AUTHOR: Konakov, P. K.

TITLE: Some laws of complex heat exchange

SOURCE: Moscow. Institut inzhenerov zheleznodorozhnogo transporta. Trudy, no. 139. 1961.  
Teoriya podobiya i yeye primeneniye v teplotekhnike; trudy pervoi mezhvuzovskoy konferentsii, 82-84

TEXT: The paper investigates a connection between heat transfer by radiation and heat transfer by conduction and convection. Formulas determining the complex heat exchange (defined as heat transfer by radiation, coduction, and convection) for the cases of a viscous medium impinging on a solid wall and the stationary motion of the medium in a circular pipe, are given. The radiant and convective heat transfers are interrelated. ✓

ASSOCIATION: Moskovskiy institut inzhenerov zheleznodorozhnogo transporta (Moscow Institute of Railway Transport Engineers)

Card 1/1

KONAKOV, P.K.

Present state of the similitude theory and prospects for using it in heat  
engineering. Trudy MIIT no.139:4-10 '61. (MIRA 16:4)

1. Moskovskiy institut inzhenerov zheleznodorozhnogo transporta.  
(Heat engineering) (Dimensional analysis)

KONAKOV, P.K.

Some laws governing complex heat exchange. Trudy MIIT no.139:82-84 '61.  
(MIRA 16:4)

1. Moskovskiy institut inzhenerov zhelezodorozhnogo transporta.  
(Thermodynamics) (Heat exchangers)

S/649/61/000/139/017/018  
I028/1228

AUTHORS: Konakov, P. K., Smirnov, V. A. and Verevochkin, G. E.

TITLE: Criteria for the thermal process of obtaining ingots by Chokral'skiy's method

SOURCE: Moscow. Institut inzhenerov zheleznodorozhnogo transporta. Trudy, no. 139. 1961.  
Teoriya podobiya i yeye primeneniye v teplotekhnike; trudy pervoi mezhvuzovskoy  
konferentsii, 210-217

TEXT: The paper describes a heat process for ingot growth and determines its criterial relationships. In the Chokral'skiy method, a priming fastened to a rotating shaft that can also move along the vertical is introduced into a melt contained in a vacuum furnace; an ingot is thereby extracted from the melt, passing during its growth through zones of different temperatures. The extraction of the ingot is described by its equations for continuity, motion and heat propagation of the melt, and the equation for heat propagation in the ingot. The conditions of single-valuedness are added to these equations. (a) At the boundary between the solid and liquid phases, the equations of matter and heat balance connect the magnitudes appearing in the equations. (b) This process is non-stationary; (c) The physical constants of the melt and the ingot depend on temperature of the melt and the ingot and criterial equations are determined as a results. There is 1 figure.

ASSOCIATION: Moskovskiy institut inzhenerov zheleznodorozhnogo transporta (Moscow Institute of Railway Transport Engineers).

Card 1/1

KONAKOV, P. K.

"Substance and Energy Transfer"

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

Institute of Railway Eng'g., Moscow

S/170/62/000/006/011/011  
B117/B138

AUTHOR: Konakov, P. K.

TITLE: Theory of similarity and its application to heat engineering

PERIODICAL: Inzhenerno-fizicheskiy zhurnal, no. 6, 1962, 132 - 135

TEXT: Two recent publications on the theory of similarity are briefly reviewed. The first one is a collection of reports delivered at the First Conference of Schools of Higher Education on the Theory of Similarity and Its Application to Heat Engineering. This conference was held in June 1960 at the Moskovskiy institut inzhenerov zheleznodorozhnogo transporta (Moscow Institute of Railroad Transportation Engineers), and attended by about 500 staff from higher educational establishments, scientific research and planning organizations. Reports on the present state of the theory of similarity and its further development were delivered at the plenary meetings. The conference work was divided into three sections: theory, heat-mass exchange, and heat engines. A. V. Lykov spoke about the necessity of a strictly mathematical definition of the problems of similarity; A. A. Gukhman about indices in the theory of similarity and obsolete ideas of "determinant" and "determinable" criteria; V. A. Venikov

Card 1/2

S/170/62/000/006/011/011

B117/B138

Theory of similarity and its ...

about the interrelations of physical and mathematical simulations and computer engineering. The other publication on the theory of similarity (A. S. Nevskiy's book) is criticized as being obsolete and faulty.

SUBMITTED: February 26, 1962

Card 2/2

STREL'TSOV, V.V.; SHCHUKIN, V.K.; REBROV, A.K.; FUKS, G.I.; KUTATELADZE, S.S.; LYKOV, A.V.; PREDVODITELEV, A.S.; KONAKOV, P.K.; DUSHCHENKO, V.P.; MAKSIMOV, G.A.; KRASNIKOV, V.V.

Readers' response to I.T. El'perin's article "Terminology of heat and mass transfer" in IFZh No.1, 1961. Inzh.-fiz. zhur. 5 no.7:113-133  
Jl '62. (MIRA 15:7)

1. Khimiko-tehnologicheskiy institut, g. Ivanovo (for Strel'tsov ).
2. Aviatsiomyy institut, Kazan' (for Shchukin, Rebrov). 3. Politehnicheskiy institut, Tomsk (for Fuks). 4. Institut teplofiziki Sibirsckogo otdeleniya AN SSSR, Novosibirsk (for Kutateladze). 5. Energeticheskiy institut AN BSSR, Minsk (for Lykov). 6. Gosudarstvennyy universitet imeni Lomonosova, Moskva (for Predvoditelev). 7. Institut inzhenerov zheleznodorozhnogo transporta, Moskva (for Konakov).
8. Institut legkoy promyshlennosti, Kiyev (for Dushchenko).
9. Vsesoyuznyy zaochnyy institut pishchevoy promyshlennosti, Moskva (for Maksimov). 10. Tekhnologicheskiy institut pishchevoy promyshlennosti, Moskva (for Krasnikov).

(Heat—Transmission)

(Mass Transfer)

KONAKOV, P.K.

Similarity theory and its use in heat engineering. Inzh. fiz. zhur. 5 no. 6:132-135 Je '62. (MIRA 15:12)

(Dimensional analysis)  
(Heat engineering)

L 14421-63

EPF(c)/EPR/EPF(n)-2/EWP(r)/EWT(l)/BDS AFFTC/ASD/SSD Pr-4/

ACCESSION NR: AP3003054 Pu-4/Ps-4 IJP(C)/WW 8/0170/63/000/006/0128/0136

AUTHOR: Konakov, F. K. (Moscow)

TITLE: Energy transfer in a gray medium

SOURCE: Inzhenerno-fizicheskiy zhurnal, no. 6, 1963, 128-136

TOPIC TAGS: energy transfer, gray medium, absorption coefficient

ABSTRACT: The gray medium consists of two related components (a molecular material and radiation), both of which take part in energy transfer. Use is made of the formal identity between the equations of heat conduction, electrical conduction, diffusion and filtration, in conjunction with the thermodynamic derivation, of the equation of heat conduction.

The article is a continuation of earlier treatments of the subject by the author [Konakov P. K. (Teoriya podobiya i yeye primeneniye v teplotekhnike. Gosenergoizdat, 1959; O zakone perenosa massy i energii. Trudy MIIT, Vol. 125, Transzheldorizdat, 1960)]. The transfer can be treated as two independent processes (molecular and radiative transfer), linked only by their relation to the

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L 14421-63

ACCESSION NR: AP3003054

molecular material. This implies that the absorption coefficient of a gray medium is directly related to the thermal conductivity. Only strictly equilibrium conditions are envisaged. The working equations are quoted from the earlier papers. Original article has: 67 formulas.

ASSOCIATION: Institut inzhenerov zheleznyodorozhnogo transporta, Moscow  
(Institute of Railroad Engineers)

SUBMITTED: 28May62

DATE ACQ: 22Jul63

ENCL: 00

SUB CODE: PH

NO REF Sov: 003

OTHER: 000

Card 2/2

LYKOV, A.V., akademik, red.; SMOL'SKIY, B.M., doktor tekhn. nauk, prof., red.; GINZBURG, I.P., doktor fiz.-matem. nauk, prof., red.; ZABRODSKIY, S.S., doktor tekhn. nauk, red.; KONAKOV, P.K., doktor tekhn. nauk, prof., red.; KOSTERIN, S.I., doktor tekhn. nauk, prof., red.; SHUL'MAN, Z.P., inzh., otv. za vypusk; KORIKOVSKIY, I.K., red.; LARIONOV, G.Ye., tekhn. red.

[Heat and mass transfer] Teplo- i massoperenos. Moskva, Gosenergoizdat. Vol.3. [General problems of heat transfer] Obshchie voprosy teploobmena. 1963. 686 p. (MIRA 16:6)

1. Akademiya nauk Belorusskoy SSR (for Lykov).  
(Heat—Transmission) (Mass transfer)

KONAKOV, P. K.

"On the mass- and energy-transfer law."

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

Moscow Inst of Railway Transport Engineers.

KONAKOV, P.K.

Use of the differential method in studying radiant heat transfer.  
Inzh.-fiz. zhur. 8 no.3:401-402 Mr '65. (MIRA 18:5)

1. Institut inzhenerov zheleznozdrozhnogo transporta, Moskva.

1. Experimental investigation of heat transfer in a laminar flow

405-16474

06/13/2000 47

44

2. V. I. Slobodcov, V. V. Kostylev

3. The problem of complex heat transfer in a laminar medium

4. The problem of complex heat transfer in a laminar medium  
based on the theory of boundary layers

5. Institut inzhenernykh materialov (Institute of engineering materials)  
Uprugoplasticheskaya i topograficheskaya laboratoriya (Plasticity and strain  
laboratory)

6. Issledovaniye poluprovodnikovykh materialov (Investigation of heat exchange in  
semiconductors and in equipment for their production)

7. Institute of applied physics, USSR Academy of Sciences

8. 1970

9. The present investigation is concerned with the

10. heat transfer in a laminar boundary layer with low thermal conductivity  
and low heat transfer coefficient. The boundary layer is formed near the surface  
of a body moving with a constant velocity  $U_\infty$ .

11. The plate with velocity  $U_\infty$ . A boundary layer is formed near the surface of  
the plate. The temperature of the air,  $T_\infty$ , is constant. The boundary layer is  
assumed to be laminar. The boundary condition at the surface is

AER 16474

the following system of boundary conditions:

$$\begin{aligned} \frac{\partial w_1}{\partial x} &= \frac{\partial w_2}{\partial x} = 0 \\ w_1 \frac{\partial w_1}{\partial x} - w_2 \frac{\partial w_2}{\partial x} &= 0 \\ w_1 \frac{\partial T}{\partial x} - w_2 \frac{\partial T}{\partial x} &= 0 \end{aligned}$$

This system of equations is

$$T = T_1 + 0.982(T_2 - T_1) \sqrt{P_{\text{ext}}} = 0.9827 T_2 - 14.4^{\circ}$$

where the temperature  $T$  is expressed in degrees Celsius,  $P_{\text{ext}}$  is the external pressure, and  $T_1$  and  $T_2$  are the temperatures at the outer and inner boundaries. The parameter  $\alpha$  is the thermal diffusivity,  $k$  is the thermal conductivity,  $\rho$  is the density, and  $c$  is the specific heat capacity. The boundary conditions are given by the equations above, which state that the first derivative of the velocity and temperature with respect to  $x$  is zero at the boundaries.

the overall flow of heat energy at the wall disappears. Equations  
describing the overall heat transfer

and heat energy exchange between the two media are given below.  
Chemical Engineers

ANL

ANL

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heat exchange and hydraulic losses

in a flat plate channel with a

stationary boundary layer, in

the presence of heat transfer

and fluid displacement

Table: thermodynamic analysis, heat exchange and hydraulic losses

**ABSTRACT:** This article examines the problem of complex heat exchange and hydraulic losses in a moving shear fluid with high initial temperature (up to 1000°K) and low thermal conductivity. Near the surface of the plate a laminar boundary layer is formed. During the transition from laminar to turbulent flow, the thickness of the temperature boundary layer fluctuates.

and solid media with very high optical density the share of radiant transfer of

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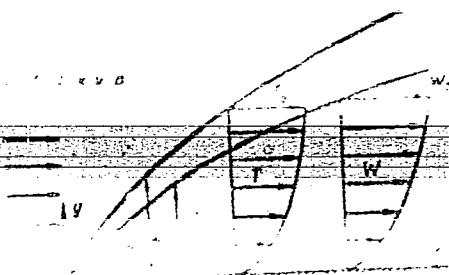


Fig. 1. Diagram of the hydraulic system.

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CIA-RDP86-00513R000824130001-2"

KONAKOV, P.K.

Law of mass and energy transfer. Inzh.-fiz. zhur. 9 no.3:  
337-347 S '65. (MIRA 18:9)

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