

GRMOS, I.

Scientific problems related to the creation of gardens around settlements of dwellings; also, remarks by M. Kocsenyi and others. p. 409.
(KOZLEMENYI. Vol. 12, no. 1/1, 1957, Budapest, Hungary)

SO: Monthly List of East European Accessions (MEAL) LC. Vol. 6, no. 12, Dec. 1957.
Incl.

ORMOS, Imre, dr., Kossuth-dijas egyetemi tanar

Agricultural engineers. Musz élet 19 no. 5:4 27 F '64.

1. Magyar Agrartudományi Egyesület elnöksége tagja.

KORPASSY, B.;ORMOS, J.;BACHRACH, D.;BENCZE, G.

Peptic ulcer and cancer of the stomach. Acta med. hung. 2 no.2:243-
257 1951. (GML 21:2)

1. Of the Institute of Pathological Anatomy and Histopathology of
Szeged Medical University.

ORMOS J.

KORPASSY, B.; ORMOS, J.; SARKADI, A.; GERLEI, F.; SARVAY, T.

Giant follicular lymphoblastoma (Brill-Symmers disease) as a preblastomatosis with transition into malignant hemoblastoses. Acta morph. hung. 4 no.2:201-208 1954.

1. Institut für Pathologische Anatomie (Direktor: Prof. B.Korpassy) und I. Klinik für Innere Medizin (Direktor: Prof. G.Hetenyi) der Medizinischen Universität in Szeged; Abteilung für Innere Medizin (Leiter: T.Sarvay) und Abteilung für Pathologie (Leiter: F.Gerlei) des Komitatskrankenhauses von Szabolcs-Szatmar, Nyiregyhaza (Director: B.Zempleni)
(LYMPHOSARCOMA
giant follicular, pathol.)

ORMOS, JENO

LUSZTIG, Gabor; **ORMOS, Jeno**; HORVATH, Eva; KOSZEGI, Bela

Antilipemic and hyperglycemic effect of heparin in alloxan diabetes. Kiserletes orvostud. 6 no.6:557-564 Nov 54.

1. Szegedi Orvostudományi Egyetem Kóronctani és Kórszövettani Intézete.

(DIABETES MELLITUS, exper.

antilipemic & hyperglycemic eff. of heparin in dogs)

(HEPARIN, eff.

antilipemic & hyperglycemic in alloxan diabetes in dogs)

(LIPIDS, in blood

eff. of heparin in alloxan diabetes in dogs)

(BLOOD

lipids, eff. of heparin in alloxan diabetes in dogs)

(BLOOD SUGAR, in various dis.

alloxan diabetes, eff. of heparin in dogs)

ORMOS, Jeno, dr.

KORPASSY, Bela, dr.; ORMOS, Jeno, dr.; SARKADI, Adam, dr.; SARVAY,
Tivadar, dr.; GERLEI, Ferenc, dr.

Giant follicular lymphoblastoma (Brill-Symmers' disease) as
preblastomatous process with transition into other malignant
hemoblastoses. Orv hetil 95 no.19:508-512 My '54. (ERAL 3:8)

1. A Szegedi Orvostudományi Egyetem Korbonctani Intézetének
(igazgató: Korpassy Bela dr. egyet. tanár) és I. sz. Belklinika-
jának (igazgató: Hetenyi Geza dr. egyet. tanár), a Szabolcs-
Szatmár megyei Tanács Kórháza Nyíregyháza (igazgató: Zempleni
Bela dr.) Belgyógyászati Osztályának (főorvos: Sarvay Tivadar dr.)
és Korbonctani-kórszövettani Osztályának (főorvos: Gerlei Ferenc
dr.) közleménye.

(LYMPHOSARCOMA

*giant, follicular, transition from giant follicular
lymphadenopathy)

ORMOS, Jenő, dr.; SZTANÓJEVITS, Anna, dr.

Aortic coarctation and arteriosclerosis. Orv. hetil. 95 no.40:
1087-1090 3 Oct 54.

1. A Szegedi Orvostudományi Egyetem Korbonctani és Kórszövetani
Intézetének (igazgató: Korpási Béla, dr. egyet. tanár) közleménye
(COARCTATION OF AORTA, compl.
arteriosclerosis)
(ARTERIOSCLEROSIS, compl.
coarctation of aorta)

ORMOS, Jenó.; USZTIG, Gabor.; BOTOS, Arpad.; KORPASSY, Bela, professor.

Adrenalin-type arteriosclerosis induced by experimental coarctation of the aorta in rabbits. Acta morph. hung. 6 no.1:129-139 1955

1. Dept. of Pathological Anatomy and Histology (Director: prof. B. Korpassy) and the Dept. of Exper. Surgery (Director: Prof. G. Petri) of the Medical University, Szeged. Szeged, Kossuth L.s. u. 40 Hungary (for: Ormos, Jenó; Usztig, Gabor; Korpassy, Bela.) Szeged, Kossuth L. s.u. 35 Hungary. (for: Botos, Arpad.)

(COARCTATION OF AORTA, experimental,
causing arteriosclerosis in rabbits)
(ARTERIOSCLEROSIS, experimental,
prod. by coarctation of aorta)

PAIDY, László; GRMOS, Jeno.

Congenital tuberculosis. *Gyermekgyógyászat* 6 no.6:182-189 June 55.

1. A Szegedi Orvostudományi Egyetem Gyermekklinikájának (igazgató: dr. Waltner Károly egyetemi tanár) és Korbonctani és Kórszövettani Intézetének (igazgató: dr. Dorpassy Béla egyetemi tanár) közleménye.

(TUBERCULOSIS

congen., fatal)

(INFANT NEWBORN, dis.

tuberc., congen., fatal)

ORMOS, Jeno.; LUSZTIG, Gabor.; BOTOS, Arpad.; KORBASSY, Bela.

Experimental arteriosclerosis of the adrenalin type in rabbits, induced by surgical coarctation of the aorta. Kiserletes orvostud. 7 no.5:517-524 Sz. 55.

1. Szegedi Orvos udomanyi Egyetem Korbonctani es Korszovettani es Sebeszeti Anatomiai Intezete.

(COARCTATION OF AORTA, experimental

causing adrenalin type aortic sclerosis & aortic aneurysm in rabbits, relation to blood pressure)

(ARTERIOSCLEROSIS, experimental

aortic, adrenalin type with aortic aneurysm, induced in rabbits by exper. coarctation of aorta)

(ANEURYSM, experimental

aortic with adrenalin type aortic sclerosis, induced in rabbits by exper. coarctation of aorta)

EXCERPTA MEDICA Sec 7 Vol 10/12 Pediatrics Dec 56

2670. ORMOS J. and PALDY L. Kinderklin. und Pathol. Inst., Med. Univ., Szeged.
Über die konnatale Tuberkulose. Congenital tb. ZBL. ALLG. PATH.
PATH. ANAT. 1955, 94/3-4 (117-122) illus. 2

A case of congenital tb is described. Two days after partus miliary tb was observed in the mother, and 3 months later meningitis. She recovered. The placenta was not examined. As early as on the 6th day of life the child showed miliary dissemination in the lungs, which was still present in unchanged form on the 50th day. The child died on the 80th day. During the illness the tuberculin reaction remained negative. Autopsy yielded multiple caseated foci in lungs, spleen and liver, productive generalized dissemination and caseated lymph nodes in the minor omentum and tracheobronchially. Some caseated foci in liver and minor omentum were calcified. References: 40.

Straub - Rotterdam (V. 7, 15)

ORMOS, Jeno, dr.,; JAKOBOBITS, Antal, dr.

Nephroblastoma (Wilms tumor) in adults with special reference to genital metastases. Orv. hetil. 96 no.28:774-778 10 July 55.

1. A szegedi Orvostudományi Egyetem Korbonctani és Korszovettani (igazgató: Korpássy Béla dr. egyet. tanár) közleménye.

(NEPHROBLASTOMA,

kidneys, metastases to genitalia)

(KIDNEYS, neoplasms,

nephroblastoma, metastases to genitalia)

(GENITALIA, neoplasms,

nephroblastoma, metastatic)

ORMOS, J.

4315. Nephroblastoma (Wilms tumour) in adults with particular
reference to the appearance of metastases in the genitalia. J. Ormos
and A. Jakobovits *Psychow Arch. path. Anat.*, 1955, 327, 391-399
(Path. Inst. der Med. Universität Szeged, Hungary).—Two cases
of Wilms tumour in adults aged 34 and 18 are described. The
second case was unique in that metastases were found in the ovary
and vagina, having reached those sites as blood borne emboli.
(German) M. PICKFORD.

ORNOS, Jeno; JAKOBOVITS, Antal

Histomorphology of malignant kidney tumors. Neoplasma, Bratisl. 4
no.3:213-223 1957.

(KIDNEYS, neoplasms
histopathol.)

EXCERPTA MEDICA Sec 15 Vol 12/5 Chest Diseases May 59

VENTRICULAR PAROXYSMAL TACHYCARDIA IN A CASE OF MYO-CARDIAL SARCOIDOSIS COMBINED WITH A PULMONARY EMBOLISM. CLINICAL-PATHOLOGICAL STUDY - Ventrikuläre paroxysmale Tachycardie bei einem mit pulmonaler Embolie verbundenen Fall von myokardialer Sarkoidose. Klinisch-pathologische Studie - Ferkai B., Ormos J. and Rák K. 1. Med. Klin., Szeged - Z. GES. INN. MED. 1958, 13⁹-10 (358-365)

Ventricular tachycardia not only the most frequently occurring myocardial in-terruption should be thought of, but also similar morbid processes, e.g., myocardial sarcoidosis, which is very rare, but sometimes does give rise to errors. A case is reported in which the diagnosis was serious disease of the myocardium and pul-monary embolism. Clinically, recurring ventricular tachycardial attacks were the leading feature. Pathological-mistological examination after the fatal termination of the disease demonstrated a sarcoidosis extending to lymph nodes, myocardium, liver and spleen. The disease was combined with a pulmonary embolism with pro-gress episodes.

Patten - Warstein (XV, 5, 6, 18)

FELKAI, Bela, Dr.; ORMOS, Jeno, Dr.; RAK, Kalman, Dr.

Ventricular paroxysmal tachycardia in a case of myocardial sarcoidosis associated with pulmonary embolism. Orv. hetil. 99 no.32:1101-1105
10 Aug 58.

1. A Szegedi Orvostudományi Egyetem I. sz. Belgyógyászati Klinikájának (igazgató: Hetenyi Géza dr. egyet. tanár) és Kóronctani Intézetének (igazgató: Kórpássy Béla dr. egyet. tanár) közleménye.

(TACHYCARDIA, PAROXYSMAL, etiol. & pathogen.

ventric. paroxysmal tachycardia in myocardial sarcoidosis with pulm. embolism (Hun))

(PULMONARY EMBOLISM AND THROMBOSIS, etiol. & pathogen.

myocardial sarcoidosis in etiol. of pulm. embolism, with ventric. paroxysmal tachycardia (Hun))

(SARCOIDOSIS, compl.

myocardial sarcoidosis with pulm. embolism & ventric. paroxysmal tachycardia (Hun))

(MYOCARDIUM, dis.

sarcoidosis, with pulm. embolism & ventric. paroxysmal tachycardia (Hun))

GAL, Gyorgy, dr.; ORMOS, Jeno, dr.

Hodgkin's disease of the stomach. Orv.hetil. 101 no.32:1137-1139
7 Ag '60.

1. Szegedi Orvostudományi Egyetem, I. sz. Sebészeti Klinika és
Korbonctani Intézet.

(STOMACH NEOPLASMS case reports)

(HODGKIN'S DISEASE case reports)

ORMOS, Jeno, dr.

Fatal malignant embolism. Orv.hetil. 101 no.45:1602-1606 6 H '60.

1. Szegedi Orvostudományi Egyetem Kóronctani és Kórszovettani
Intézete.

(NEOPLASMS compl)

(EMBOLISM etiol)

ORMOS, Jeno, dr.; KORPASSY, Bela, dr.

Experimental studies on the absence of extracranial metastases in intracranial tumors. Orv.hetil. 101 no.46:1621-1625 13 H '60.

1. Szegedi Orvostudományi Egyetem, Kórbántani és Kórszövettani Intézet.

(BRAIN NEOPLASMS exper)

SZEGVARI, Menyhert, dr.; SZEREDAY, Zoltan, dr.; ORMOS, Jenő, dr.

Breast cancer metastasizing to the uterus. Orv. hetil. 104
no.47:2241-2243 24 N '63.

1. Szegedi Orvostudományi Egyetem, Szülészeti és Nőgyógyászati
Klinika és Korbonctani Intézet.

(BREAST NEOPLASMS) (NEOPLASM METASTASIS)
(UTERINE NEOPLASMS) (LYMPHATIC METASTASIS)
(HYSTERECTOMY) (MASTECTOMY) (LYMPH NODE EXCISION)
(NEOPLASM RADIOTHERAPY) (PATHOLOGY)
(CARCINOMA, SCIRRHUS)

ORMOS, Pal, dr., foorvos (Hodmezovasarhely)

Stones in the human body. Elovilag 6 no.6:36-44 N-D '61.

ORMOS, Pal, dr.; OCSOVNSKY, Laszlo, dr.; HEVER, Odon, dr.

Dysentery epidemics through drinking water. *Nepegeszsegugy* 36
no.1:15-19 Jan 55.

1. Közlemeny a Csongrad megyei tanacs vb. XI. egeszsegugyi
osztalaraol es a hodmezovasarhelyi korhaz korzeti laboratoiumabol.

(DYSENTERY, epidemiology

in Hungary, transm. by drinking water.)

(WATER SUPPLY

drinking water, transm. in dysentery epidemics in
Hungary.)

ORMOS, Pal, dr.; BALOGH, Jozsef, dr.

Fiedler's myocarditis. Orv.hetil. 101 no.7:245-247 F '60.

1. Hodmezovasarhelyi Korhaz, prosectura.
(MYOCARDITIS case reports)

EXCERPTA MEDICA Sec.5 Vol.11/3 Gen.Pathology,etc.Mar58

- ORMOS, P.
668. ONCOCYTE-CONTAINING, ADENOMA-LIKE HYPERPLASIA OF THE LACRIMAL SAC - Onkozytenhaltige adenomartige Hyperplasie des Tränensackes - Ormos P. and Csillag Fr. Städt. Krankenh., Hódmezővásárhely, Ungarn. - ZBL. ALLG. PATH. PATH. ANAT. 1956, 95/9-10 (441-447) illus. 4

Description of a tissue in the lacrimal sac which showed an adenoma-like hyperplasia of cells, in the presence of chronic inflammation. The hyperplastic epithelium contained for the most part oncocytes, regarded as degenerated cell forms. It is not considered necessary to give them a special name and it is not true that these cells are capable of transformation into malignant cells of a wholly different nature. The latter forms are only interpreted as metaplasias. When they die off, cavities develop, which thus give rise to adenoma-like structures. Application of this interpretation to the salivary glands is considered advisable.

Rabl - Neustadt/Holst (V, 16)

GRMOS, Pal, dr.; DEUTSCH, Bela, dr.; BENKO, Gabor, dr.; NYIRI, Istvan, dr.

Thrombotic thrombocytopenic purpura (thrombotic microangiopathy).
Orv. hetil. 103 no.16:744-748 22 Ap '62.

1. Hodmezovasarhelyi Korhaz.

(PURPURA THROMBOPENIC in adolescence)

ORMOS, V.

From the Csepel wireless-radio station to television.

P. 104 (RADIOTECHNIKA) Budapest, Hungary Vol. 7, No. 1, Mar. 1957.

SO: Monthly Index of East European Accessions (AEEI) Vol. 6, no. 11 November 1957.

ORNO, V.

From the Csepef wireles radio station to television. Pt.

1. 108 (1957) THE NEWSPAPER Budapest, Hungary Vol. 7, No. 4, Aug. 1957.

30: Monthly Index of East European Acquisitions (1951) Vol. 6, No. 11 November 1957.

ORMOS, V.

"From the Csepel spark transmitter to television. VI."

p. 11 (Radiotechnika) Vol. 8, no. 1, Jan. 1958
Budapest, Hungary

SO: Monthly Index of East European Accessions (EEAI) LC. Vol. 7, no. 4,
April 1958

ORMOS, Vilmos

Marginal notes on-polytechnical education. Radiotechnika 10 no.2:
2 of cover F '60.

ORMOS, Vilmos

Is the culture of technical workers one-sided? Radiotechnika 10 no.4:
of cov. p. 160.

ORMOS, Vilmos

Conversation with two radio operators from Vietnam. Radiotechnika 11 no.8:
2 of cover Ag '61.

ORMOS, Vilmos

Cibernetics on railroads. Radiotechnika 12 no.5:2 of cover
My '62.

ORMOS, Vilmos

General education of technicians has remained a current topic.
Radiotechnika 12 no.9:290-291 9 '62.

ORMOS, Vilmos

TV education. Radiotechnika 13 no.5:195 My '63.

ORMOS, Vilmos

The forty-year-old Szekesfehervar radio station. Radio-
technika 14 no.11:3 of cover. N '64.

SHIN, L.; BERTSI, D.; GAL, D.; OBMOSH, Ye.

Conservation and transplantation of arteries. *Khirurgia* no.10:70-75 0 '53.
(MLRA 6:11)

1. Iz khirurgicheskoy kliniki (direktor - professor Yaki Dyula) i Instituta patologii (direktor - professor Korpashi Bela) Segedskogo universiteta (Vengriya).
(Arteries--Transplantation)

MOLNAR, Istvan (Sentes, Berehat u³11); ORMOSHEGYI, Erno, dr. (Tiszajeno)

Motorists' letters. Auto motor 14 no.17:5 S '61.

MCHEDLISHVILI, G.I.; AKHOBADZE, V.A.; ORMOTSADZE, L.G.;

Hemodynamic mechanisms in the compensation of cerebral circulation during temporary occlusion of the cranial (superior) vena cava. Fiziol.zhur. 48 no.6:684-691 Je '62. (MIRA 15:8)

1. From the Institute of Physiology, Georgian S.S.R. Academy of Sciences, Tbilisi.

(BRAIN--BLOOD SUPPLY) (VENAE CAVA)

MCIBDLISIVILI, G.I.; ORMOTSADZE, L.G.

Study of the reflex effects from the venous sinuses to the regional cerebral arteries. Biul. eksp. biol. i med. 53 no.2:9-13 F '62. (MIRA 15:3)

1. Iz otdela patofiziologii (zav. - pochetyny akademik AN Gruzinskoy SSR V.V. Voronin [deceased]) Instituta fiziologii AN Gruzinskoy SSR. Predstavlena akademikom I.S. Beritashvili.
(BRAIN—BLOOD SUPPLY)
(NERVES, CRANIAL)

MCHEDLISHVILI, G.I.; ORMOTSADZE, L.G.

A haemodynamic regulating mechanism compensating for decreased blood supply to the cerebral cortex. *Physiol. bohemoslov.* 12 no.2: 100-105 '63.

1. Department of Pathophysiology and Morphology, Institute of Physiology, Academy of Sciences, Tbilisi, Georgian SSR.
(CEREBRAL CORTEX) (BLOOD VESSELS) (PHYSIOLOGY)
(ISCHEMIA) (BLOOD CIRCULATION) (CEREBRAL ISCHEMIA, TRANSIENT)
(ELECTROENCEPHALOGRAPHY)

MCHEDLISHVILI, G.I.; AKHOBADZE, N.A.; ORMOTSADZE, L.S. (Tbilisi)

Dynamics of disorders of brain blood circulation and their compensation following temporary occlusion of the aorta.

Pat. fiziol. i eksp. gerat. no. 34.7-73. Mv-1412 (MIRA 1974)

1. Iz otdela patologicheskoy fiziologii i morfolologii nervnoy sistemy (zav. - pochetnyy akademik AN GruzSSR V.V. Voronin [deceased]) Instituta fiziologii AN GruzSSR.

MCHEDLISHVILI, G.I.; AKHOBADZE, V.A.; ORMOTSADZE, L.G.

Dynamics of disorders of the cerebral circulation and their compensation in a temporary occlusion of the aorta. Trudy Inst.klin. i eksper. kard. AN Gruz. SSR 8:543-549 '63.

Experimental investigations of cerebral circulation in a temporary occlusion of the cranial (superior) vena cava. Ibid.:537-541 (MIRA 17:7)

1. Institut kardiologii i institut fiziologii AN GruzSSR, Tbilisi.

WICIK, Karol, inz.; ORNACKI, Jan, inz.

A new technology of liquid-concrete stowing in the Orzel Bialy mine.
Rudy i metale 6 no.6:252-258 Je '61.

LEMPART, Stanislaw, inz.; KACPRZAK, Kazimierz, inz.; ORLINSKI, Henryk, mgr;
~~GRNACKI, Jan, inz.~~; WARCHAL, Boguslaw, mgr inz.; WOJCIECHOWSKI, Jacek,
mgr inz.

Analysis of the utilization of supporting pillars with concrete
stowing. Rudy i metale 6 no.9:389-394 S '61.

5(2)

SOV/32-25-4-65/71

AUTHOR:

Ornadskiy, P., Head of the Engineering Department of the Plant
"Laborpribor"

TITLE:

Gas Analyzer of the Type GOU - 1 (Gazoanalizator tipa GOU-1)

PERIODICAL:

Zavodskaya Laboratoriya, 1959, Vol 25, Nr 4, p 507 (USSR)

ABSTRACT:

At the Klin'skiy zavod laboratornykh izdeliy "Laborpribor" (Klin Plant of Laboratory Equipment) production has been started of the gas analyzer GOU-1 (Fig). The apparatus is used for the determination of the aggregate carbon contents of cast iron, steel, alloys, and other materials. In contrast with the apparatus GOU all glass parts of the apparatus GOU-1 are mounted on a wooden frame. The apparatus has but one adsorption vessel, while the cooler is more reliable, since no rubber stoppers are used. The balancing vessel possesses a parallel side pipe by means of which it is possible to measure the liquid level with greater accuracy. The frame of the apparatus has a second holding device for the balancing vessel on its top, so that the sample can also be burnt under pressure. Since the apparatus is calibrated at 20° and

Card 1/2

Gas Analyzer of the Type GCU-1

SOV/32-25-4-65/71

760 mm Hg, measurements must be adjusted by means of the tables supplied with the apparatus. There is 1 figure.

ASSOCIATION: Klinskiy zavod laboratornykh izdeliy "Laborpribor" (Klin Plant of Laboratory Equipment "Laborpribor")

Card 2/2

CERNAL'DO, P. (Saratev)

~~Screw press for ironing. Pres. keep. no. 9:18 8 '56. (MIRA 9:10)~~
(Pressing machinery)

ORNAL'DO, P. (g. Saratov)

Modernizing a brickmaking press. Prom.koop. 13 no.1:22 Ja '59.
(MIRA 12:2)

(Brickmaking machinery)

OPNMI '00, P.S.

Modernization of the drying drum. 1963. 1 REF. 20 NOV 63
36-37 S 163. J.M. 10.16

ORNATSKAYA, N. V.

CHAYKA, V. V.: ORNATSKAYA, N. V.

Tuberculosis

Scientific session of the A. Ya. Shternberg Leningrad Tuberculosis Research
Institute. Probl. tub. No. 4, 1952.

9. Monthly List of Russian Accessions, Library of Congress, December 1957² Uncl.

ORNATSKAYA, N. V.

Summaries of papers presented at the XVI Congress of Surgeons of the USSR, Moscow, 20 - 27 January 1955, included:

Lung Resection in Tuberculosis.

N. V. ORNATSKAYA

SOURCE: ~~SECRET~~ A-46013 (Official Publication) Unclassified.

ORNATSKAYA, O.I.

Some works on thermal conditions on the Moon. Astron. Zh. 41
no. 5:995-997 S.O. 1964. (MIRA 1964)

ACC NR: AP6022085 SOURCE CODE: UR/0141/66/009/003/0615/0617

AUTHOR: Ornatskaya, O. I.; Al'ber, Ya. I.

ORG: Scientific-Research Institute of Radiophysics, Gor'kiy University (Nauchno-issledovatel'skiy radiofizicheskiy institut pri Gor'kovskom universitete)

TITLE: Problem of thermal history of the Moon [Report at the Conference on Planetary Cosmogony, Moscow, 21Jun65]

SOURCE: IVUZ. Radiofizika, v. 9, no. 3, 1966, 615-617

TOPIC TAGS: moon, cosmogony

ABSTRACT: While recent Soviet works have separately considered homogeneous and striated Moon models, the present article tries to take into account the differentiation of the Moon's interior by varying the average concentration of radioactive elements, without adopting any Moon model. First, the radioactive

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UDC: 523.3

ACC NR: AP6022085

elements are assumed to be uniformly distributed and then at the melting temperature in the Moon's center, these elements are assumed to be exponentially distributed, falling off toward the center. It is found that: (1) With a higher assumed radioactive-matter content, this matter lies mainly at depths over 10 or 20 km; at some time in its history, the Moon was completely molten; now, the Moon's crust is hardened to 600-700-km depth; (2) With a lower assumed radioactive-matter content, the Moon has never been completely molten; now, the Moon's hardened crust is 250-400-km thick. "The authors wish to thank V. S. Troitskiy and V. N. Gol'dberg for their constant attention." Orig. art. has: 1 table.

SUB CODE: 03 / SUBM DATE: 24Mar66 / ORIG REF: 006 / OTH REF: 003

Card 2/2

ACC NR: AP7008806

SOURCE CODE: UR/0033/67/044/001/0158/0165

AUTHOR: Ornatskaya, O. I.; Al'ber, Ya. I.

ORG: Radiophysical institute, Gor'kiy State University (Radiofizicheskiy institut Gor'kovskogo gosudarstvennogo universiteta)

TITLE: Thermal history of the moon

SOURCE: Astronomicheskii zhurnal, v. 44, no. 1, 1967, 158-165

TOPIC TAGS: radioactivity, ~~bedding, crust~~ lunar surface, heat flow, *LUNAR TEMPERATURE, LUNAR RADIATION*

ABSTRACT: The results are given of computer calculations of the past and present thermal conditions of the Moon for different contents of radioactive elements. Calculations were carried out first for the homogeneous distribution of radioactive elements inside the Moon and then for an exponential distribution with a different depth of the principal concentration of radioactive elements (the second calculation was performed to determine the loss of radioactive elements during surface melting). The dependence of the effective depth of bedding of radioactive elements on the concentration and on the thickness of the crust was found. The time dependence of the Moon's temperature at different distances from the center and the heat flow through the Moon's

Card 1/2

UDC: 523.32

ACC NR: AP7008806

surface are given. The temperature distribution along the Moon's semidiameter is also given for different radioactive element concentrations. Some physical aspects of the thermal history of the Moon are discussed. Orig. art. has: 6 figures, 5 formulas, and 1 table. [BA]

SUB CODE: 03/ SUBM DATE: 11Jan66/ ORIG REF: 005/ OTH REF: 003

Card 2/2

ORNATSKAYA, V.A., kand.tekhn.nauk; SELIVERSTOVA, M.S., kand.tekhn.nauk

Investigating the slay mechanism of a loom. Izv.vys.
ucheb.zav.; mashinostr. no.2:43-54 '59. (MIRA 13:3)

1. Moskovskiy tekstil'nyy institut.
(Looms)

ORNATSKAYA, V.A., kand.tekhn.nauk; SELIVERSTOVA, M.S., kand.tekhn.nauk

Warp-thread moving mechanism of a loom designed by the
Sulzer Company. Izv.vys.ucheb.sav.; mashinostr. no.5:67-72
'59. (MIRA 13:4)

1. Moskovskiy tekstil'nyy institut.
(Looms)

ORNATSKAYA, V.A., dotsent, kand.tekhn.nauk; SELIVERSTOVA, M.S., dotsent,
~~kand.tekhn.nauk~~

What type of beating-up mechanisms should be used for the new
loom types? Tekst.prom. 22 no.12:24-29 D '62. (MIRA 16:1)

1. Kafedra proyektirovaniya mashin i avtomatov Vsesoyuznogo
zaochnogo instituta tekstil'noy i legkoy promyshlennosti (VZITLP)
(for Ornatskaya). 2. Kafedra teorii mekhanizmov i mashin
Vsesoyuznogo zaochnogo instituta tekstil'noy i legkoy promyshlennosti
(for Seliverstova).

(Looms)

ORNATSKAYA, V.A., dotsent; SELIVERSTOVA, M.S., dotsent

Concerning the book "Pneumatic and hydraulic looms." Tekst.prom.
23 no.8:89 Ag '63. (MIRA 16:9)

1. Vsesoyuznyy zaochnyy institut tekstil'noy i legkoy promyshlennosti.
(Looms)

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OHNATSKAYA, V.M.; KHABIBMINNIKOVA, G.V.; LGALOV, V.G., red. (deceased);
KACHEROVSKIY, N.V., red.

[Calculating shear strength of reinforced concrete building
elements] K voprosu rascheta elementov zhelezobetonnykh kon-
struktsei na skalyvanie. Pod red. V.G.Lgalova. Moskva, 1957.
25 p. (MIRA 12:4)
(Reinforced concrete) (Shear (Mechanics))

ORNATSKAYA, V.M., inzh.; SOKOL'SKIY, M.M., inzh.

Methods for conducting construction operations of dams using local
materials. Energ. stroi. no.41:77-85 '64. (MIRA 17:11)

ORNATSKAYA, Z. I

USSR/Physical Chemistry - Crystals, B-5

Abst Journal: Referat Zhur - Khimiya, No 19, 1956, 60934

Author: Ornatskaya, Z. I., Shalimova, G. G.

Institution: None

Title: Electric Properties of Sodium-Tungsten Bronze and of the System Sodium Tungstate-Sodium Tungsten Bronze

Original Periodical: Nauch. yezhegodnik za 1954 g. Saratovsk. un-ta, Saratov, 1955, 627-629

Abstract: One of the components -- Na_2WO_4 (I) -- has a typical semiconductor conductivity. Investigation of conductivity of the other -- Na_2WO_3 (II) -- (tungsten bronze) showed: specific electric conductivity σ is 2 orders lower than according to the data of Haegg (Haegg, G., Z. phys. chem., 1935, B29, 192); σ increases in temperature interval between room temperature and $215^\circ\text{--}250^\circ$, after which up to 250° it remains almost constant; temperature coefficient of σ is 1.1-0.9, dissociation energy $\Delta E = 2.1 \text{ eV}$.

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001238

SOV/112-58-1-102

Translation from: Referativnyy zhurnal, Elektrotehnika, 1958, Nr 1, p 10 (USSR)

AUTHOR: Ornatskaya, Z. I.

TITLE: Investigation of Effective Temperature on Electric Conductivity of Lithium Tungstate (Issledovaniye temperaturnoy zavisimosti elektroprovodimosti vol'framata litiya)

PERIODICAL: Nauch. yezhegodnik za 1954 g. Saratovsk. un-t., Saratov, 1955, p 630

ABSTRACT: Compacted samples of fine-crystal lithium tungstate were investigated. Lithium tungstate is an electronic semiconductor; its conductivity is $\delta - 7.41 \times 10^7 \text{ ohms}^{-1} \cdot \text{cm}^{-1}$ at 365; $\ln \delta$ is linearly dependent on the reciprocal value of absolute temperature T. The dissociation energy of lithium tungstate calculated from $\ln \delta$ (1/T) curve is 1.43 ev. The δ values of lithium tungstate are stable; they are not affected by duration of preliminary calcination or by heating of lithium tungstate in vacuum.

P. I. Z.

AVAILABLE: Library of Congress

Card 1/1

1. Lithium tungstate--Electrical properties 2. Lithium tungstate
--Temperature factors

PA - 2177

AUTHOR:

ORNATSKAJA, Z.I.

TITLE:

Electrical Properties of Some Complex Tungsten Oxides. (Elektricheskie svoystva nekotorych sloznych vol'framovykh okislov, Russian).

PERIODICAL:

Zhurnal Tekhn.Fiz. 1957, Vol 27, Nr 1, pp 130-137 (U.S.S.R.)

Reviewed: 4 / 1957

ABSTRACT:

I) On the electrical properties of the sodium-tungsten oxide and the lithium tungsten oxide: The problem of the modification of the electrical characteristics of matter is solved in the case of some semi-conductors by the introduction (as admixtures) of heterogeneous atoms or of surplus atoms of one of the components. Complex oxides which contain a metal of the transition group, and crystallize in cubical structure with a dense oxygen packing, change their properties in connection with the modification of the degree of ionization of one of the occurring cations. The samples were pressed from fine crystalline sodium tungsten oxide of the δ -modification (this δ -modification is stable at room temperature up to 583°C) and were annealed in an ordinary atmosphere and in the vacuum at $\sim 550^{\circ}\text{C}$. The results of the investigation of the temperature dependence of the electric conductivity of the Na_2WO_4 agree well with the curve typical for semiconductors $\ln\sigma(1/T)$: Between 350 and 500°C the incline of the curve $\ln\sigma(1/T)$ is the same for the differently treated samples. The temperature coefficient of electric conductivity changes in this temperature range from $3,7$ up to $1,7\%$ per degree of C. The duration and the conditions of the pre-treatment influence the behavior of

Card 1/2

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247700

3:301

S/058/62/000/005/086/119
A061/A101

AUTHORS: Ornatskaya, Z. I., Lukashinskaya, L. L., Nesterova, G. F.

TITLE: The electrical properties of AlSb and CdSb

PERIODICAL: Referativnyy zhurnal, Fizika, no. 5, 1962, 30, abstract 5E235
("Nauchn. yezhegodnik Saratovsk. un-t. Fiz. fak. i N.-i. in-t
mekhan. i fiz.", 1955, Saratov, 1960, 135-137)

TEXT: Electrical conductivity σ , thermo-emf, and rectification in the point contact were measured on polycrystalline AlSb and CdSb specimens. The value of σ for AlSb at room temperature was $\sim 0.9 \text{ ohm}^{-1} \cdot \text{cm}^{-1}$. When temperature was increased, σ dropped exponentially in correspondence to the forbidden band width $\Delta E = 0.43 \text{ ev}$. The roasting of CdSb at $\sim 20^\circ \text{C}$ led to the stabilization of σ magnitude (increase from 10^{-1} to $\text{ohm}^{-1} \cdot \text{cm}^{-1}$ units).

A. Yu.

[Abstracter's note: Complete translation]

Card 1/1

24,7700(1043,1136,1160)
26.2532

30958
S/576/61/000/000/017/020
E032/E514

AUTHOR: Ornatskaya, Z.I.

TITLE: Electrical properties of some new tertiary compounds

SOURCE: Soveshchaniye po poluprovodnikovym materialam, 4th. Voprosy metallurgii i fiziki poluprovodnikov; poluprovodnikovyye soyedineniya i tverdyye splavy. Trudy soveshchaniya. Moscow, Izd.-vo AN SSSR, 1961. Akademiya nauk SSSR. Institut metallurgii imeni A. A. Baykova. Fiziko-tekhnicheskiy institut. pp.145-147

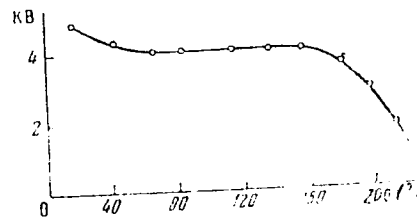
TEXT: The author has investigated the electrical properties of $ZnIn_2Se_4$, $ZnIn_2Te_4$, $CdIn_2Se_4$ and $CdIn_2Te_4$. These are semi-conducting substances with a chalcopyrite-type lattice. The synthesis was carried out by heating the components in evacuated quartz ampoules and subsequent recrystallization. X-ray analysis of $CdIn_2Te_4$, $CdIn_2Se_4$ and $ZnIn_2Se_4$ confirmed the presence of a diamond-type structure. The results obtained are summarized in Figs. 1 and 2 and in the table. There are 2 figures, 1 table and Card 1/4

Electrical properties of some ... ^{3095B}
S/576/61/000/000/017/020
E032/E514

7 references: 3 Soviet and 4 non-Soviet. The English-language references read as follows: Ref.5: C.H.L. Goodman, R.W. Douglas, Physica, 1954, 20, 1107; Ref.6: E.Meoser, W.B.Pearson, J. Chem. Phys., 1957, 26, 4, 893.

Fig.2. Legend

Rectification factor (KB)
on the temperature in the
case of $CdIn_2Se_4$



Card 2/4

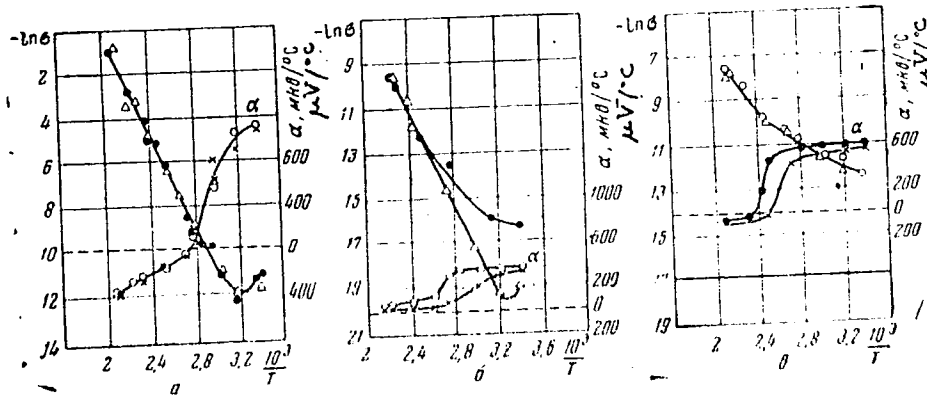
Electrical properties of some ...

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E032/E514

Fig.1. Legend

Dependence of the electrical conductivity (σ),
and the thermoelectric power (α) on the
temperature.

a - $ZnIn_2Se_4$; b - $ZnIn_2Te_4$; b - $CdIn_2Te_4$



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Electrical properties of some ... ^{1095B} S/576/61/000/000/017/020
E032/E514

Table ^{xx}

Compound	a, k λ	Type of con- duction	α , $\mu\text{V}/^\circ\text{C}$	ΔE , eV	σ 20 $^\circ\text{C}$, $\text{ohm}^{-1}\text{cm}^{-1}$	τ , μsec
ZnIn ₂ Te ₄			380	1.8 ^x	1 \cdot 10 ⁻⁸ 0.6 \cdot 10 ⁻⁶	
CdIn ₂ Te ₄	5.803(2)	P	580	0.88	0.5 \cdot 10 ⁻⁵	
ZnIn ₂ Se ₄	5.609 \pm 0.005	P	1000	1.95	0.3 \cdot 10 ⁻⁵	52
CdIn ₂ Se ₄	5.80(10) \pm 0.001	P	70		2 \cdot 9 \cdot 10 ⁻⁴	55

^x Measured in vacuum.

^{xx} τ is the minority carrier lifetime.

Card 4/4

ORNATSKAYA, I.I.

Electric properties of oxygen vanadium bronzes. Fiz. Tver. Tela
6 no. 4:1254-1256 Ap '64. (MIR 1964)

1. Saratovskiy gosudarstvennyy universitet imeni N.G. Gerasimovskogo.

BILENKO, D.I.; DEMIDOV, V.K.; KOTELKOV, V.N.; NAZVANOV, V.F.;
NOSOVA, V.A.; ORNATSKAYA, Z.I.; ROKAKH, A.G.; SVERDLOVA,
A.M.; KAPSHTAL', G.G.; KIR'YASHKINA, Z.I., eds., red.;
VINNIKOVA, I.A., red.

[Textbook for practical studies on the physics of semiconductors]
Rukovodstvo k prakticheskim zaniatiyam po fizike poluprovodnikov;
uchebnoe posobie. [Saratov], Saratovskii univ., 1964. 115 p
(MIRA 18:11)

TOLUBINSKIY, V.I., otv. red.; FEDOSEYEV, V.A., doktor fiz.-mat. nauk, zam. otv. red.; DORFMAN, A.Sh., kand. tekhn. nauk, red.; DUSHCHENKO, V.P., kand. fiz.-mat. nauk, red.; DYBAN, Ye.P., kand. tekhn. nauk, red.; KREMNEV, O.A., doktor tekhn. nauk, red.; NAZARCHUK, M.M., kand. tekhn. nauk, red.; ORNATSKIY, A.P., kand. tekhn.nauk, red.; PAVLOVICH, V.P., doktor tekhn. nauk, red.; SHVETS, I.T., kand. tekhn. nauk, red.; SHCHEGOLEV, G.M., kand. tekhn nauk, red.; SHCHERBAN', A.N., akademik, red.; SYTNIK, N.K., red.

[Thermophysics and heat engineering] Teplofizika i teplo-tekhnika. Kiev, Naukova dumka, 1964. 339 p.

(MIRA 18:1)

1. Akademiya nauk URSS, Kiev. Instytut tekhnichnoy teplofizyky.
2. Institut tekhnicheskoy teplofiziki AN Ukr.SSR, Kiev (for Dorfman, Dyban, Nazarchuk, Tolubinskiy, Shchegolev).
3. Kiyevskiy tekhnologicheskiy institut pi-shchevoy promyshlennosti (for Dushchenko, Pavlovich).
4. Kiyevskiy politekhnicheskiy institut (for Ornatskiy).

(Continued on next card)

TOLUBINSKIY, V.I.-- (continued). Card 2.

5. Odesskiy universitet (for Fedoseyev). 6. Kiyevskiy universitet (for Shvets). Akademiya nauk Ukr.SSR (for Shcherban', Shvets). 7. Chlen-korrespondent AN Ukr.SSR (for Tolubinskiy). 8. Gosudarstvennyy komitet Soveta Ministrov po koordinatsii nauchno-issledovatel'skikh rabot (for Shcherban').

E.19018-65 EWT(1)/EPF(c)/EPF(n)-2/EPR/T/EPA(bb)-2/EWA(1) Pr-4/Ps-4/Pu-4
AFMDC/AEDC(a)/ASD(f)-2/AFETR WW
ACCESSION NH: AF5001155 3/0294/64/002/006/0910/0914

AUTHORS: Ornatskiy, A. P.; Glushchenko, L. F.; Chernobay, V. A.

TITLE: Effect of pressure on hydraulic resistance during surface boiling

SOURCE: Teplofizika vysokikh temperatur, v. 2, no. 6, 1964, 910-914

TOPIC TAGS: hydraulic resistance, boiling, turbulence, convective heat transfer

ABSTRACT: A special set of experiments was performed in small diameter tubes and circular channels to clarify the conflicting data published in the literature on the effect of pressure on the magnitude of hydraulic resistance during surface boiling. The tubes were 2 mm in diameter and 46 mm long. The mass velocity was $10^4 \text{ kg}\cdot\text{m}^{-2}\cdot\text{sec}^{-1}$, $\Delta t(\text{underheat}) = 50\text{C to }100\text{C}$ and $p = 9.8 \times 10^5 \text{ to } 49.1 \times 10^5 \text{ n/m}^2$. (In a circular channel, $p = 4.9 \times 10^5 \text{ to } 171.7 \times 10^5 \text{ n/m}^2$.) The results showed that the hydraulic resistance of the tubes during surface boiling of water was independent of the pressure in the range $10 \times 10^5 \text{ to } 150 \times 10^5 \text{ n/m}^2$. Over the ranges tested, the results indicated that the change in the liquid and vapor physical constants shows no effect on the hydraulic resistance during surface boiling. Thus, the hydraulic resistance under such conditions cannot be determined
Card 1/2

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ACCESSION NR: AP5001155

by the viscous properties of the liquid, and it is quite independent of "vapor roughness." Further tests were conducted in 2-mm tubes heated by electric currents and cooled by distilled water to obtain a developed surface boiling process as well as a convective heat transfer process without surface boiling. These results showed that the fundamental reason for the rise in hydraulic resistance during surface boiling is a loss caused by the displacement of a liquid mass from the near-wall layer into the core of the flow. The magnitude of this rise is found to depend on the ratio of the displaced fluid mass to that of the total mass flow at a given cross section per unit time. Orig. art. has: 5 figures and 1 formula.

ASSOCIATION: Kiyevskiy politekhnicheskiy institut (Kiev Polytechnic Institute)

SUBMITTED: 18May64

ENCL: 00

SUB CODE: ME

NO REF SOV: 006

OTHER: 001

Card 2/2

12T48

ORNATSEIY, A. I.

USSR/Gas Flow - Measurements
Turbines, Steam

Apr 1947

"Resistance of a Bundle of Tubes as a Function of
the Angle of Attack of a Flow of Gas," A. P.
Ornatskiy, 3 pp

"Kotloturbostroyeniye" No 2

Discussion of the results of experiments conducted
to determine the effect of the angle of attack of
a flow of gas from circular tubes upon the amount
of resistance of a passage-way bundle. Fully
illustrated with graphs and table.

12T48

ORNATSKIY, A.P., kand.tekhn.nauk; SHCHERBAKOV, V.K., inzh.

Intensification of heat exchange in the critical region by
means of ultrasound [with summary in English]. Teploenergetika
6 no.1:84-85 Ja '59. (MIRA 12:1)

1. Kiyevskiy politekhnicheskii institut.
(Heat--Transmission) (Ultrasonic waves)

ORNATSKIY, A.P., kand.tekhn.nauk

Effect of the length and diameter of a pipe on the value of the critical flow with forced motion of water heated below the saturation temperature. Teploenergetika 7 no.6:67-69 Je '60.

(MIRA 13:8)

1. Kiyevskiy politekhnicheskii institut.
(Heat--Transmission)

87760

S/095/61/000/002/013/014
E194/E155

11.9000

AUTHORS: ~~Ornatskiy, A.P.~~, Candidate of Technical Sciences, and
~~Kichigin, A.M.~~, Candidate of Technical Sciences

TITLE: An Investigation of the Relationship Between the
Critical Thermal Loading and the Rate of Flow by
Weight, the Underheating and the Pressure

PERIODICAL: Teploenergetika, 1961, No.2, pp. 75-79

TEXT: Several modern branches of engineering use very high
rates of heat transfer. It was accordingly necessary to
investigate the relationship between the critical thermal loading,
the rate of flow of fluid measured by weight, the amount by which
the fluid temperature is below the saturation point (the under-
heating), and the pressure. The work was carried out in 1955-57
by the Faculty of Boilers of the Kiyev Polytechnical Institute,
in collaboration with the Laboratories of Heat Exchange and of
Heat Exchange Equipment of the Institute of Heat Power
Engineering, AS Ukr.SSR. The experimental equipment was described
in an article by A.P. Ornatskiy published in Teploenergetika No.6,
1960. The test piece was a tube of copper alloy with an internal
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E194/E155

An Investigation of the Relationship Between the Critical Thermal Loading and the Rate of Flow by Weight, the Underheating and the Pressure

X

diameter of 2 mm and a wall thickness of 0.4 mm. The method of preparing the test pieces and the test procedure are described. The tests covered the pressure range of 10-75 atm, speeds of 5×10^3 to 30×10^3 kg/m² sec, and underheating from 0-10 to 200-220 °C. Two hundred and twenty test results are tabulated. The tests were made on condensate. Curves are plotted which show that there are two regions of heat exchange, depending on the value of the heat flow. In the first region, where the wall temperature is below the saturation temperature, there is convective heat exchange and the wall temperature rises steadily as the heat transfer rate increases. In the second region, where the wall temperature is somewhat greater than the saturation temperature, bubbles of steam form in the superheated layer of liquid near the tube walls. These bubbles condense, causing turbulence in the layer near the wall, so that the heat-transfer process is greatly intensified. Here the wall temperature depends very little on the

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S/096/61/000/002/013/014
E194/E155**An Investigation of the Relationship Between the Critical Thermal Loading and the Rate of Flow by Weight, the Underheating and the Pressure**

heat transfer rate. This region of developed surface boiling is terminated when the critical thermal loading is reached, filmwise boiling sets in and the test piece burns out. The results confirm that during the period of developed surface boiling the rate of flow and the temperature of the fluid have practically no influence on the rate of heat exchange. The value of the critical thermal loading is found to increase with the amount of underheating and the rate of flow measured by weight, and the influence of these factors depends on the degree of underheating. Moreover, if the underheating is great, the test piece usually fails in a number of places at once. The following empirical formula is recommended:

$$q_{cr} = c w_g^{0.44} \Delta t_{und}^{0.6} \text{ kcal/m}^2 \cdot \text{hr}, \quad (1)$$

where c is a constant which for pressures of 10-50 atm is 3.0×10^4 and for 75 atm 2.5×10^4 ; w_g is the rate of flow by

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87760
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An Investigation of the Relationship Between the Critical Thermal Loading and the Rate of Flow by Weight, the Underheating and the Pressure

weight, $\text{kg/m}^2 \cdot \text{sec}$; Δt_{und} is underheating of the liquid below the saturation temperature at the critical location, $^{\circ}\text{C}$.
About 85% of the test results lie within $\pm 15\%$ of the line corresponding to this formula. Of published formulae only that of Semenov published in Teploenergetika No.4, 1959, is based on experimental data in the same range as the present investigation, and it is shown that the formula recommended above gives much higher values than were obtained by Semenov. The reasons for this are discussed and it is suggested that Semenov did not take proper account of the specific electrical resistance of his test pieces and that the roughness of the surface is important when it is comparable with the wall thickness.
There are 5 figures, 1 table and 7 Soviet references.

ASSOCIATION: Kiyevskiy politekhnicheskii institut
(Kiyev Polytechnical Institute)

Card 4/4

26.5000

S/096/61/0007008/004/005
E194/E155

AUTHORS: Ornatskiy, A.P., Candidate of Technical Sciences, and
Kichigin, A.M., Candidate of Technical Sciences

TITLE: An investigation of hydraulic resistance during the
flow of underheated water in a small diameter tube
with high rates of heat transfer

PERIODICAL: Teploenergetika, 1961, No.8, pp. 56-60

TEXT: This article describes work carried out in the
Laboratoriya teploobmena i gazodinamiki (Laboratory of Heat Exchange
and Gas Dynamics) of the Kiyev Polytechnical Institute in 1957-59.
The first stage of the work included two series of tests, the
first with a water inlet temperature of 50 °C and the second with
the inlet temperature 50 °C below the saturation points at
pressures of 10, 25, 50 and 75 atm. The second stage of the work
consisted of four series of tests with test sections of constant
length and with temperatures of 50, 100, 150 and 200 °C below
saturation at pressures of 75, 100, 125 and 150 atm. Each series
of tests was carried out with the rates of flow by weight of
5000, 10000, 20000 and 30000 kg/m²sec. The tests were made on
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23953

S/096/61/000/008/004/005
E194/E155

An investigation of hydraulic resistance during the flow of underheated water in a small diameter tube with high rates of heat transfer

tubes with an internal diameter of 2 mm. The rig was a closed circuit made of steel 1X18H9T (1Kh18N9T); the test section was heated by direct current and cooled by water. The instrumentation and construction of the test pieces is described. The usual measuring facilities, including those for hydraulic resistance and temperature, were provided. It was found that over the range of Reynolds numbers $Re = 10^4 - 40 \times 10^4$ experimental values of the resistance coefficient were in satisfactory agreement with values calculated by the formulae of Blazius and Nikuradze. For values of Re greater than 40×10^4 some of the experimental values were higher than the theoretical, apparently because at these values the tube behaves as though rough. It was found that at temperatures below the saturation value the hydraulic resistance decreases with increase in the heat-transfer rate and the wall temperature. When the temperature is above the saturation temperature, however, the resistance increases, until the heat-transfer rate reaches a

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E194/E155

An investigation of hydraulic resistance during the flow of under-heated water in a small diameter tube with high rates of heat transfer

critical value and the element burns out. When the temperature approximates to the saturation temperature there is a range of change of heat flux in which the hydraulic resistance remains practically constant. The second stage of the work showed that over the pressure range studied the pressure has practically no influence on the hydraulic resistance either in the region of convective heat transfer or in that of surface boiling. The combined data of the first and second stages of the work led to an empirical equation and showed that in the pressure range of 10-75 atm the hydraulic resistance in the region of surface boiling increases with decrease in pressure. The following formula may be used to determine the hydraulic resistance in the region of convective heat exchange (below the saturation temperature) under conditions of non-isothermal flow of liquid at high rates of heat transfer:

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An investigation of hydraulic resistance during the flow of underheated water in a small diameter tube with high rates of heat transfer

$$\Delta p = \frac{0,18}{Re^{0,2}} \left(\frac{\mu_{ж}}{\mu_{с\tau}} \right)^{-0,25} \frac{l}{d} \frac{w_g^2}{2g\gamma} \cdot 10^{-4} \text{ кг/см}^2, \quad (3)$$

where: $\mu_{ж}$ is the absolute viscosity of the liquid at the mean temperature of flow; $\mu_{с\tau}$ is the absolute viscosity at the mean wall temperature; w_g is the rate of flow by weight, $\text{kg/m}^2/\text{sec}$; γ is the specific gravity, kg/m^3 ; l is the element length, m; d is the element diameter, m. This formula is in good agreement with one previously proposed by Academician M.A. Mikheyev; the divergence does not exceed $\pm 10-12\%$. Also this new formula more correctly reflects the tendency of the hydraulic resistance to alter with increase in the heat-transfer rate in the region of convective heat-transfer. The following empirical formula may be used to determine the resistance under conditions of surface boiling:

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S/096/61/000/008/004/005
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An investigation of hydraulic resistance during the flow of underheated water in a small diameter tube with high rates of heat transfer

$$\Delta p_{\text{кип}} = c \cdot q_{\text{кип}}^{1.2} w_g (\Delta t_{\text{неД}}^{\text{ср}})^{-1.15} \quad (\text{kg/cm}^2) \quad (5)$$

where: $\Delta p_{\text{кип}}$ is the increment of hydraulic resistance due to transition to surface boiling; $q_{\text{кип}}$ is the heat flow in the region of surface boiling; c is a coefficient that depends on the pressure and is given by the graph of Fig.7. This equation covers 80% of the experimental points obtained in the region of developed surface boiling to within $\pm 20\%$. Some simplification of the formula is possible. The meaning of the various terms of the formula is discussed. The amount of experimental data obtained in the work was insufficient to derive design formulae for the resistance when the Reynolds number is greater than 40×10^4 . There are 7 figures and 2 Soviet references. ✓

ASSOCIATION: Kiyevskiy politekhnicheskii institut
(Kiyev Polytechnical Institute)

Card 5/6

TOLUBINSKIY, V.I., doktor tekhn.nauk, prof.; ORNATSKIY, A.P., kand. tekhn.nauk, dotsent; SHCHERBAKOV, V.K., inzh.

Critical thermal loads during surface boiling of water in circular canals. Izv. vys. ucheb. zav.; energ. 5 no19:63-71 S '62. (MIRA 15:10)

1. Kiyevskiy ordena Lenina politekhnicheskoy institut. Predstavlena kafedroy kotel'nykh ustanovok. 2. Chlen-korrespondent AN UkrSSR (for Tolubinskiy).

(Heat exchangers)

S/096/62/000/006/008/011
E194/E454

26 540
AUTHORS: Ornatskiy, A.P., Candidate of Technical Sciences,
Kichigin, A.M., Candidate of Technical Sciences

TITLE: Critical thermal loading and boiling of underheated
water in small diameter tubes at high pressures

PERIODICAL: Teploenergetika, no.6, 1962, 44-47

TEXT: The tests were made in a closed forced circulation system made of steel 1.18.9 T (1Kh18N9T); this system was described by the authors in earlier work (ibid. no.2, 1961). The test piece was a turned copper alloy tube with an internal diameter of 2 mm and wall thickness 0.4 mm with an effective length of 40 mm, heated by direct current and cooled by the circulating water. The general procedure was similar to that described earlier (ibid. no.2, 1961). The water used was power station condensate, particular care being taken to remove oxygen. The tests were carried out at pressures ranging from 75 to 150 atm with rates of mass flow ranging from 5000 to 30000 kg/m² sec and with underheat (difference between the actual steam temperature
Card 1/3

Critical thermal loading ...

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E194/E454

and its temperature corresponding to saturation at its actual pressure) ranging from 10 to 250°C. Critical boiling was recognized by the fact that the test piece burned out. About 170 tests were made and the results are tabulated. Graphs of critical loading as a function of the amount of underheat are very similar to those obtained previously in the range of 10 to 75 atm. Curves are plotted of critical loading as a function of the amount of underheat and the rate of mass flow at various pressures and of critical loading as a function of pressure and the rate of mass flow for various amounts of underheat. On the basis of the test results presented here and those previously given (ibid. no.2,1961) the following empirical formula is recommended for the critical thermal loading q_{cr} as a function of the rate of mass flow w_g , the degree of underheat Δt_{und} at pressure p for underheat greater than 50°C.

$$q_{cr} = 6.60 \times 10^3 \cdot w_g^{0.6} \cdot t_{und}^{0.6} \frac{\gamma' = \gamma''}{\gamma'} \cdot p^{0.9} \text{ kcal/m}^2 \text{ hour}$$

where w_g - rate of flow by weight kg/m² sec;
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Critical thermal loading ...

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Δt_{und} - the difference between the water temperature and the saturation point, °C; γ' - specific gravity of water at the saturation temperature, kg/m³; γ'' - specific gravity of dry saturated steam, kg/m³. The factor $(\gamma' - \gamma'')/\gamma'$ allows for the influence of pressure. Graphs show that 90% of points obtained in the experimental work reported in the two articles lie within + 20% of the line represented by this formula. Similar formulae suggested by other authors are discussed and considered to be less accurate than that presented here. There are 5 figures and 1 table.

ASSOCIATION: Kiyevskiy politekhnicheskiy institut
(Kiyev Polytechnical Institute)

Card 3/3

ORNATSKIY, A. P., KICHIGAN, A. M., LITOSHENKO, A. K. and TOLUBINSKIY, V. I. (All of Kiev polytechnical institute)

"Crises of heat exchange during boiling of water in very narrow annular channels".

Report presented at the Section on Heat Exchange During Change of Aggregate State, Scientific Session, Council of Acad. Sci. Ukr SSR on High Temperature Physics, Kiev, 2-4 April 1963.

Reported in Teplofizika Vysokikh temperatur, No. 2, Sep-Oct 1963, p. 321, JPRS 24,451. 19 May 1964.

ORNATSKIY, A. P., kand. tekhn. nauk

Critical thermal loads and heat emission during forced motion
of water in pipes in the region of supercritical pressures
(175-220 atm.). Teploenergetika 10 no.3:66-69 Mr '63,
(MIRA 16:4)

1. Kiyevskiy politekhnicheskii institut.

(Fluid dynamics) (Heat-Transmission)
(Boilers)

ACCESSION NR: AP4004148

S/0294/63/001/002/0260/0266

AUTHORS: Ornatskiy, A. P.; Glushchenko, L. F.

TITLE: Investigating hydraulic resistance in surface boiling of water in annular ducts

SOURCE: Teplofizika vy*sokikh temperatur, v. 1, no. 2, 1963, 260-266

TOPIC TAGS: hydraulic resistance, annular duct flow, annular duct, heat transfer, surface boiling, heat exchanger, fuel element cooling, nuclear reactor fuel element, reactor cooling, boiling water reactor, nuclear reactor, fuel element

ABSTRACT: Results are reported of investigations made in a pressure range from 5 to 175 atm. flow rate 500 to 3,000 kg/m² sec, temperature differential from 2--3 to 80C, and heat flux from 0.5 x 10⁶ to 2.0 x 10⁶ kcal/m² hr. The experimental setup used is described in Teploenergetika No. 8, 1961. The experimental element was an annular duct made up of two stainless steel (1Kh18N9T) tubes with inside diameter 10 mm and gap widths 1.0, 1.5, and 2.0 mm. The length

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ACCESSION NR: AP4004148

of the measuring section was 150 mm. The measurement procedures are described. A special series of experiments was devoted to the clarification of the contradictory published data on hydraulic resistance. Empirical formulas are derived from the experimental data to calculate the hydraulic resistance. The results of the empirical formulas agree well with results obtained for pipes by N. V. Tarasova and V. M. Orlov (Teploenergetika No. 6, 1962). Orig. art. has: 6 figures and 3 formulas.

ASSOCIATION: Kievskiy politekhnicheskiy institut (Kiev Polytechnic Institute)

SUBMITTED: 06May63

DATE ACQ: 26Dec63

ENCL: 00

SUB CODE: PR, AS

NO REF SOV: 004

OTHER: 002

Card 2/2

ACCESSION NR: AP4017721

S/0294/63/001/003/0425/0430

AUTHORS: Ornatskiy, A. P.; Shcherbakov, V. K.

TITLE: Determination of critical heat fluxes for heat-transfer surfaces covered by pins or transverse ribs and electrically heated

SOURCE: Teplofizika vy*sokikh temperatur, v. 1, no. 3, 1963, 425-430

TOPIC TAGS: heat transfer, critical heat flow, surface with pins, surface with ribs, heat flow electric analog

ABSTRACT: An experimental setup was prepared to measure the per-unit critical heat flow as a function of the liquid velocity for a smooth cylindrical element located inside an annular channel. Inasmuch as earlier tests of the critical heat flow were made with the test element heated electrically, whereas practical interest attaches to heat-exchange conditions without internal heat sources, a model was prepared to simulate electrically the field in the longitudinal

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ACCESSION NR: AP4017721

cross section of an experimental element. The electric model of an experimental element with external pins to increase the heat transfer is described, together with the field-plotting method. The plotted potential, current, and thermal fields lead to the following conclusions: the electric current density in the section of a cylindrical wall under the pin is much lower than in the section of a smooth wall. The current density in the pin itself is small and decreases rapidly with increasing height of the pin. The section of the smooth wall covered by the pin transfers less heat than the corresponding section without the pin. The per-unit heat flux from the surface of the pin is much lower than the per-unit heat flux from the smooth wall. This indicates that the increase in the heat flux caused by adding pins or ribs to a surface is not due to the increase in the surface size but to the increase in the critical density of the heat flux on the cylindrical surface between the pins. Although the tests were made with an element with pins, the results apply also to elements with ribs. Orig. art. has: 4 figures and 3

Card 2/5

ACCESSION NR: AP4017721

formulas.

ASSOCIATION: Kiyevskiy politekhnicheskiy institut (Kiev Polytechn c
Institute)

SUBMITTED: 27Apr63

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Card 3/5