"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9

KUTATELADZE, K.S.; KINKLADZE, K.A.

Effect of electrolytes on the activity of the surface of inert fillers. Trudy GPI [Gruz.] no.5:113-120 '62.

(MIRA 17:10)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9

34979
S/133/62/000/003/002/008
A054/A127

24,5500
15.2200

AUTHORS: Kutateladze, K. S., Zenginidze, Ye. N., Pirumova, R. A.

TITLE: Carborundum tips with nitride bond for immersible thermocouples

PERIODICAL: Stal', no. 3, 1962, 237

TEXT: Silicium-nitride bonded carborundum materials have a heat resistance of up to 1,800°C, a low heat expansion coefficient [(3.25 ÷ 4.50)10^{-6}, 1/degree] and sufficient heat conductivity (14.4 cal/m·hour·°C). This makes them suitable for thermocouple tips. The charge for the tips consisted of 60% carborundum, 25% silicium, 15% clay, crushed to a grain size of less than 60 μ. The tips (70 - 80 mm long, with an internal diameter of 8 mm and a wall-thickness of 2 mm) were produced by pressing and casting. After drying in air and in a desiccator, they were roasted in a nitrogen current, the temperature being raised to 1,600°C, within 3 - 4 hours, with 30-minute holding at this temperature. The tips were tested under laboratory and plant conditions. 10 tips tested in steel of 1,550 - 1,600°C stood 20 - 30 immersions, after which they did not show even traces of metal or slag on them. In an induction furnace 10 tips were tested; two withstood 40 immersions; in an industrial-scale arc furnace 5 tips were immersed

Card 1/2

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9

Carborundum tips with... S/133/62/000/003/002/008
A054/A127

10 - 15 times. (In both furnaces the tests had to be stopped for technological reasons and not on account of the inadequacy of the tips). On 5 tips, tried 15 - 20 times in an open-hearth furnace, there were no traces of slag or metal. The immersion (heating time, until 1,620°C is indicated) lasted 30 seconds. Tips of the material tested are suitable for thermocouples being used in quick and frequent temperature measurements of liquid metal. The tests were carried out with the co-operation of L. Sh. Lordkipanidze, Engineer, and T. V. Nozadze, Technician.

ASSOCIATION: Nauchno-issledovatel'skiy institut promstroymaterialov Gruzinskoy SSR (Scientific Research Institute of Industrial Building Materials of the Gruzinskaya SSR)

Card 2/2

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9

37231
S/131/62/000/005/002/004
B105/B138

24.5500
15.2210

AUTHORS: Kutateladze, K. S., Zedginidze, Ye. N., Nozadze, T. V.

TITLE: Sheaths for immersion thermocouples for measuring the temperature of molten metals

PERIODICAL: Ogneupory, no. 5, 1962, 223-225

TEXT: The quartz sheaths used to protect the junctions of thermocouples only last for a single immersion in molten steel. Alumina sheaths with an admixture of 1% TiO_2, made in the Podol'skiy zavod ogneupornykh izdeliy (Podol'sk Plant of Refractory Materials), will stand two immersions, and zirconium dioxide sheaths made in the Institut metallurgii Ural'skogo filiala AN SSSR (Institute of Metallurgy of the Ural Branch of the AS USSR) can be kept in molten steel for 40-50 min. Those made by the process developed by the Leningradskiy tekhnologicheskiy institut im. Lensoveta (Leningrad Technological Institute imeni Lensovet) last for 15 short immersions in molten steel at 1650-1720°C. This article presents the experimental results obtained for sheaths which stand

Card 1/2

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9

Sheaths for immersion thermocouples ... S/131/62/000/005/002/004
B105/B138

repeated immersion in molten metals. They were produced from a mixture of 87.5% kaolin and 12.5% aluminum powder, dried out, and burned at 1400°C in purified nitrogen. Refractoriness was 1850°C, bulk weight 1.8 g/cc, porosity 38.4% and water absorption 21.32%. Experiments in molten steel, pig iron, ferromanganese, aluminum, zinc, cadmium, lead, tin, and bismuth showed that the sheaths could stand repeated immersions at temperatures ranging from 1620° for the steel to 350° for zinc. The technology suggested is simple, and the starting materials are inexpensive. There are 4 figures.

ASSOCIATION: NII Promstroymaterialov SNKh Gruzinskoy SSR (NII of Promstroy Materials of the SNKh, Gruzinskaya SSR)

Card 2/2

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9

KUTATELADZE, K.S., prof., doktor tekhn. nauk; CHKHIKVADZE, I.I., inzh.

Possibility of producing weatherproof products from lime-pozzolan cement. Stroi. mat. 9 no.7:27-28 Jl '63. (MIRA 16:11)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9

KUTATELADZE, K.S., doktor tekhn. nauk; KHIZANISHVILI, I.G., kand. tekhn. nauk; GAPRINDASHVILI, G.G., inzh.

Black andesite glaze. Stek. i ker. 20 no.8:38-39 Ag '63. (MIRA 16:11)

1. Nauchno-issledovatel'skiy institut promyshlennosti stroitel'nykh materialov i silikatov soveta narodnogo khozyaystva Gruzinskoy SSR.

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9

GABADADZE, T.G.; DZHINCHARADZE, N.G.; KUTATELADZE, K.S.

Water-resistant expanding portland cement. TSement 29 no.3: 13-15 My-Je '63. (MIRA 17:1)

1. Nauchno-issledovatel'skiy institut stroitel'nykh materialov, Gruzinskaya SSR.

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9

KUTATELADZE, K.S.; CHKHIKVADZE, I.I.

Effect of firing temperature on the binding properties of low-magnesia milled quicklime. Soob. AN Gruz. SSR 31 no. 3: 589-596 S '63. (MIRA 17:7)

1. Institut promyshlennykh stroymaterialov, Tbilisi. Predstavleno chlenom-korrespondentom AN Landiya.

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9

KUTATELADZE , K.S.; ZEDGINIDZE, Ye.N.

Nitration of kaolin. Zhur.prikl.khim. 36 no.2:283-287 F '63. (MIRA 16:3)

(Kaolin) (Nitration)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9

KHINCHADZE, L.I.; KUTATELADZE, K.S.; GABADADZE, T.G.

Expansible cement on the basis of blast furnace slag. Stroi.mat. 10 no.4:34 Ap '64. (MIRA 17:5)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9

KUTATELADZE, K.S., doktor tekhn. nauk, prof.; [illegible], I.I., inzh.

Effective utilization of lime-pozzolanic binders and lime filler. Strei. mat. 10 no.11:30-32 N '64.

(MIRA 18:1)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9

L 19[illegible]-65 EWG(j)/EWT(m)/EPF(c)/EWG(s)-2/EPF(n)-2/EPR/EWP(j)/EWA(h)/EWA(i)
[illegible]/Pa-4/Pa-4/Pab RM
ACCESSION NR: AP5001277 S/0089/64/017/006/0515/0516

AUTHOR: Kutateladze, K. S.; Rustambekov, A. V.

TITLE: Special heavy cement with high [radiation] absorption capacity

SOURCE: Atomnaya energiya, v. 17, no. 6, 1964, 515-516

TOPIC TAGS: cement, heavy cement, cement absorption capacity, nuclear installation shielding, concrete shielding, radiation absorbing cement

ABSTRACT: To improve biological shielding of various nuclear installations, the Tbilisi Scientific Research Institute of Construction Materials has developed a new cement consisting of 60—75% lead slag and 25—40% portland-cement clinker with 5% gypsum. This cement has a high bend strength, a specific gravity of 3.80—3.95 ton/m^3 (compared to 1.5 ton/m^3 for portland cement), and a higher radiation absorption capacity than conventional concrete. Its water-holding capacity at 50—300C is approximately the same as that of portland cement. The high specific gravity and high radiation absorption make it possible to increase the cement content and,

Card 1/2

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9

L 19773-65

ACCESSION NR: AP5001277

consequently, the water content in concrete structures, which are important factors for reduction of neutron flow. Orig. art. has: 1 table.

ASSOCIATION: none

SUBMITTED: 00 ENCL: 00 SUB CODE: MT, NP

NO REF SOV: 002 OTHER: 000 ATD PRESS: 3160

Card 2/2

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9

KUTATELADZE, K.S., doktor tekhn.nauk; TANDILOVA, K.B., kand.tekhn.nauk; SOSELIYA, L.D., inzh.; DZHADZHANASHVILI, O.S., inzh.; CHRDILELI, O.G., inzh.

Increasing the activity of clinkers. TSement 30 no. 2:7-8 Mr-Ap '64. (MIRA 17:5)

1. Gosudarstvennyy nauchno-issledovatel'skiy institut stroitel'nykh materialov, Tbilisi, i Rustavskiy tsementnyy zavod.

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9

[illegible], T.G., [illegible]

Expandin[illegible] [illegible] [illegible]ized rock. Sov. [illegible] Cruz. [illegible] 33 no. [illegible] (MIRA 17:7)

1. Sovet [illegible] [illegible] [illegible] Institut stroyman[illegible], [illegible].

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9

KUTATELADZE, K.S.

Mechanism of reactions in the solid phase. Zhur.prikl. khim. 37 no. 5:1009-1013 My '64. (MIRA 17:7)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9

A L 10255-66 EWP(e)/EWT(m)/ETC/EPE(n)-2/EWG(m)/T/EWP(t)/EWP(b) IJP(c)
ACC NR: AP6000757 JD/WW/JG/WH SOURCE CODE: UR/0131/65/000/012/0008/0013

AUTHOR: Kutateladze, K. S.; Zedginidze, Ye. N.; Karumidze, R. A.

ORG: Tbilisi Scientific Research Institute of Building Materials (Tbilisskiy nauchno-issledovatel'skiy institut stroitel'nykh materialov)

TITLE: Aluminonitrosilicothermic preparation of nitride refractories

SOURCE: Ogneupory, no. 12, 1965, 8-13

TOPIC TAGS: refractory product, corundum refractory, refractory compound, refractory oxide, silicon compound, nitride, thermal stability, high temperature material, corrosion resistance

ABSTRACT: A new type of corundum refractory containing silicon nitride binder has been prepared by the aluminonitrosilicothermic method proposed by the authors. The method which is described consisted of firing at 1400C a mixture of finely ground clay and aluminum powder in a stream of purified nitrogen. Under the given conditions, aluminum reduces silica from the clay to silicon and is oxidized itself to form Al_2O_3. Then, nitrogen reacts with silicon to form Si_3N_4. Samples of the new refractory contained 13—20% Si_3N_4 and combined high refractoriness and thermal stability, high resistance to molten metals, and acid-resistance with low oxidability in the air. The refractoriness was 160C higher than that of the starting clay material and the yield point was above 1600C under a 2 kg/cm^2 load. The samples remained unaffected after 50 thermal cycles. Crucibles made of the new refractory were

Card 1/2 UDC: 666.76:661.55

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9

L 10255-66

ACC NR: AP6000757

not wetted by molten ferrous and nonferrous metals even after 40 hr contact. Tubular tips made of the same material were unaffected by molten zinc, tin, lead, bismuth, or cadmium after 200 immersions, and by molten aluminum after 600. Orig. art. has: 7 figures and 5 tables. [JK]

SUB CODE: 11/ SUBM DATE: none/ ORIG REF: 009/ OTH REF: 002/ ATD PRESS: 4161

Card 2/2

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9

KUTATELADZE, K.S.; ZEDGINIDZE, Ye.N.; KARUMIDZE, R.A.

Thermocouple tips for measuring temperature of liquid aluminum. TSvet. met. 38 no.9:53-54 S '65.

(MIRA 18:12)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9

KUTATELADZE, K.S.; ZEDGINIDZE, Ye.N.; KARUMIDZE, R.A.

Nitride refractories prepared by the method of "alumonitro-silicothermy". Ogneupory 30 no.12:8-13 '65.

(MIRA 18:12)

1. Tbilisskiy nauchno-issledovatel'skiy institut stroitel'nykh materialov.

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9

L 20624-66 EWT(m)/T/EWP(e) WH

ACC NR: AP6011224 SOURCE CODE: UR/0413/66/000/006/0062/0062

INVENTOR: Kutateladze, K. S.; Verulashvili, R. D.

ORG: none

TITLE: Electrical insulation glass. Class 32, No. 179884 [announced by Tbilisi State Scientific Research Institute of Construction Materials (Tbilisskiy Gosudarstvennyy nauchno-issledovatel'skiy institut stroitel'nykh materialov)]

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 6, 1966, 62

TOPIC TAGS: electrical insulation glass, dielectric glass

ABSTRACT: An Author Certificate has been issued for an electrical insulation glass with good dielectric properties. The glass has the following composition: SiO_2, 52—58%; Al_2O_3, 8—10%; Fe_2O_3, 1.5—2%; MnO, 5—7%; CaO, 8—10.5%; MgO, 4—6%; Na_2O, 8—13%; K_2O, 2.5—4%. In addition to these ingredients the glass contains 0.1—0.5% TiO_2.

[BO]

SUB CODE: 11/ SUBM DATE: 06Jul64/ ATD PRESS: 4225

Card 1/1

UDC: 666.112.3
666.117.9:537.226

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9

L 44190-66 EWT(m)

ACC NR: AP6013322 (A) SOURCE CODE: UR/0413/66/000/008/0142/0142 38

INVENTOR: Kutateladze, K. S.; Rustambekov, A. V.

ORG: none

TITLE: Method for obtaining a cement. Class 80, No. 180987

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 8, 1966, 142

TOPIC TAGS: cement, material roasting, radiation shielding, nuclear reactor shield

ABSTRACT: An Author Certificate has been issued describing a method of obtaining a cement by roasting the charge and the ground finished product. To increase the protective properties against radiation, anglesite and baryte which are used as the initial components of the charge are subjected to a simultaneous roasting at 800—850C over a period of 3—4 hr. [Translation]. [NT]

SUB CODE: 11,13,18/SUBM DATE: 04Nov63/

Card 1/1 UDC: 666.968.9

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9

L 04470-67 EWP(e)/EWT(m) WH

ACC NR: AT6016928

SOURCE CODE: UR/0072/66/000/005/0019/0021

AUTHOR: Kutateladze, K. S. (Doctor of technical sciences); Verulashvili, R. D. (Candidate of technical sciences)

ORG: Tbilisi Scientific Research Institute of Structural Materials (Tbilisskiy nauchno-issledovatel'skiy institut stroymaterialov)

TITLE: Glass composition based on perlite for production of high-voltage insulators

SOURCE: Steklo i keramika, no. 5, 1966, 19-21

TOPIC TAGS: electric insulator, insulating material, glass, dielectric material

ABSTRACT: The authors study the insulating properties of perlite-based glasses with the following compositions (in %): 55-59 SiO_2, 0.1-0.5 TiO_2, 8-10 Al_2O_3, 0.5-[illegible] Fe_2O_3, 6-7 MnO, 9-10 CaO, 5-6 MgO, 2.5-4 K_2O and 2.3-3 Na_2O. All compositions were founded in two-liter fireclay vessels at 1440-1480° for two hours. A table is given comparing the dielectric indices and a number of other physical and chemical characteristics of these glasses with the properties of 13v glass and glass made by the L'vov Plant No. 1. The perlite glasses show dielectric characteristics as good as those of low-alkali 13v glass and are even superior with respect to some indices (low sensitivity of tan δ to changes in temperature). The effect of R_2O additives on the dielectric properties of perlite glass is studied. It is found that the addition of 6-7% Na_2O causes a

Card 1/2

UDC: 666.18.6

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9

L 53470-65

ACC NR: AT6016928

considerable reduction in the volumetetric resistivity of the glass. The resistivity then begins to increase with sodium oxide concentration reaching a maximum at 10-11% which may be due to the neutralization effect of potassium oxide in the glass composition. This effect begins to disappear at a sodium oxide concentration of 15-17%. One of the most important properties of the perlite glasses is their resistance to change in the tangent of the dielectric loss angle with changes in temperature from 20 to 70-80° in spite of the high concentration of alkali oxides (up to 20%). Another important advantage of the new glasses is that the concentration of Na_2O and K_2O is not critical with respect to high-voltage insulating properties of the glasses. Orig. art. has: 3 figures, 2 tables.

SUB CODE: 11/ SUBM DATE: none/ ORIG REF: 002/ OTH REF: 000

Card 2/2 egh2

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9

ACC NR: AP7005417 SOURCE CODE: UR/0072/66/000/011/0024/0027

AUTHORS: Kutateladze, K. S. (Doctor of technical sciences); Verulashvili, R. D. (Candidate of technical sciences)

ORG: Tbilisi Scientific Research Institute for Building Materials (Tbilisskiy nauchno-issledovatel'skiy institut stroymaterialov)

TITLE: Electric insulating pyroceramics derived from rocks

SOURCE: Steklo i keramika, no. 11, 1966, 24-27

TOPIC TAGS: electric insulator, ceramic material, ceramic dielectric

ABSTRACT: The rocks perlite, serpentinite, and dolomite were investigated for their suitability as raw materials in the production of pyroceramics. The investigation supplements the results of S. I. Sil'vestrovich et al. (Zhurnal VKhO imeni D. I. Mendeleyeva, 1960, t. 5, No. 2). The physical and chemical properties of two series of mixtures consisting of various amounts of perlite and serpentinite, and perlite, dolomite, and quartz sand, respectively, were studied. The mixtures were subjected to chemical analysis, x-ray spectroscopy, electron microscopy, and thermogravimetric analysis. In addition, the electrical properties of the specimens were determined. The experimental results are summarized in graphs and tables. It was found that mixtures consisting of perlite, dolomite, and quartz sand yielded the most satisfactory high-voltage electric insulators. Orig. art. has: 3 tables and 2 graphs.

SUB CODE: 11/ SUBM DATE: none/ ORIG REF: 001/ OTH REF: 001

Card 1/1 UDC: 666.117.3:546

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9

KUTATELADZE, N. G.

USSR/Physics - Dispersion 1950

"Influence of Rotator's Amplitude of Oscillation on the Function of Distribution in an Alcohol Suspension," P. Ye. Kikvidze, Inst of Phys and Geophys, Tbilisi, Acad Sci Georgian SSR

"Soob Ak Nauk Gruz SSR" Vol XI, No 1, pp 11-16

Concludes that increase of amplitude for identical particle dimensions and same duration of agitation causes alcohol suspensions to form with increasing effective sp surface, and that after the max is reached the effective sp surface of the particles of the alc suspension gradually decreases as a result of aggregation. Submitted 16 Jun 49 by N. G. Kutateladze, Act Mem, Acad Sci Georgian SSR

PA 192T58

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9

KUTATELADZE, N. G.

SOV/124-58-6-6666

Translation from: Referativnyy zhurnal, Mekahnika, 1958, Nr 6, p 52 (USSR)

AUTHOR: Kutateladze, N. G.

TITLE: Investigation of a Novel Bottom-type Water Intake and Sand Trap for Use on Mountain Streams (Issledovaniye novogo tipa donnogo vodopriyemnika-peskolovki na gornykh rekakh)

PERIODICAL: Tr. Gruz. politekhn. in-t, 1957, Nr 2(50), pp 13-28

ABSTRACT: Laboratory investigations of a bottom-type water intake are described. The novel intake was proposed by G. A. Dzhimsheli (alias Dzhimshelishvili; Transl.Ed. Note). The operational principle of the water intake consists of a layerwise division, in a vertical sense, of a silt-carrying flow and the removal of the upper, relatively clean, layers of the water only. The barrage comprises a wide-crested weir within which the water intake and the passage tunnels and apertures are contained. The hydraulic and sedimentation regime of the device and its discharge capacity were studied experimentally. The investigations revealed a satisfactory performance of the water intake during the periodic removal of the solid suspensions without any impairment of the delivery of water to the feeder pipe. The tests yielded the values

Card 1/2

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9

SOV/124-58-6-6666

Investigation of a Novel Bottom-type Water Intake and Sand Trap (cont.)

of the discharge coefficients of the screen, also the depths of the water at the leading and trailing edges of the screens as expressed in terms of the critical depths. The water intake was recommended for water intake rates up to 6 m^3/sec. Bibliography: 5 references.

V. V. Fandeyev

1. Inland waterways--USSR 2. Water--Control

Card 2/2

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9

14(6) SOV/112-59-5-8744

Translation from: Referativnyy zhurnal, Elektrotekhnika, 1959, Nr 5, p 47 (USSR)

AUTHOR: Kutateladze, N. G.

TITLE: Laboratory Investigation of a New Type of Submerged Grit-Catcher-Type Intake as an Element of an Intake Structure

PERIODICAL: Skvartvelos politekhnikuri instituti. Shromebi, Tr. Gruz. politekhn. in-t, 1957, Nr 9 (57), pp 169-192 (Summary in Georgian)

ABSTRACT: A number of laboratory experiments conducted in the hydro-engineering laboratory, TNISGEI, is described in detail. They were intended to devise the shape of a submerged grit-catcher-type intake that would be free of shortcomings inherent to existing types of intakes. The shortcomings include inadequate taking of water and insufficient control of drift. On the basis of an analysis of the results obtained, practical recommendations are offered for selecting the intake type and for rational laying out the submerged intakes for mountain rivers. Methods of calculation are indicated.

A.A.K.

Card 1/1

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9

KUTATELADZE, N. G., Cand Tech Sci -- (diss) "Experimental research into a new type of bottom water sand-receiving trap for mountain rivers." Tbilisi, 1960. 21 pp with charts; (State Committee of Higher and Secondary Specialist Education of the Council of Ministers Georgian SSR, Georgian Order of Labor Red Banner Polytechnic Inst im V. I. Lenin); 150 copies; price not given; (KL, 17-60, 155)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9

[illegible], E.G.; CHIKVASHVILI, B.M.

Determining the value of the coefficient of the resistance at the entering area of a rectangular pressure pipe. Trudy GPI [Groz.] no.1:127-134 '63. (MIRA 18:2)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9

USSR/Human and Animal Physiology - Circulation. V-4

Abs Jour : Ref Zhur - Biol., No 4, 1958, 18214

Author : N.M. Kutateladze

Inst : The Institute of Clinical and Experimental Cardiology of The Academy of Sciences of the Georgian SSR.

Title : Data from the X-Ray Examination of Young Patients in the First Stage of Hypertensive Disease.

Orig Pub : Tr. In-t klinich. i eksperim. kardiol. AN GruzSSR, 1956 (1957), 4, 33-44

Abstract : No abstract.

Card 1/1

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013

KUTATELADZE, N. M. Cand Med Sci -- (diss) "On the problem of X-ray irradiation of the heart of first-stage hypertension patients (in youth)." Tbilisi, 1958. 24 pp (Tbilisi State Med Inst), 150 copies (KL, 52-58, 107)

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9

KUTAISHVILI, N.M.

X-ray characteristics of the heart and the vascular bundle in hypertension. Trudy Inst. [illegible] Akad. Nauk Gruz. SSR 8 207-217 [illegible]. (MIRA [illegible])

1. Institut kardiologii AN [illegible] Tbilisi.

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9

MAKHARADZE, Sh.K., KUTATELADZE, N.M. [illegible]

Experimental coronary angiography. Trudy Ins. [illegible] per. kard. AN Gruz. SSR 8:559-563 [illegible]

1. Institut kardiologii AN GruzSSR, Tbilisi.

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9

KUTATELADZE, SH. I.

49180. KUTATELADZE, SH. I., Novyy vid roda chrysosplenium L. iz severnoy Abkhazii. Zametki po sistematike i geografii rasteniy (Akad. nauk Gruz. SSR, In-t botaniki), Vyp. 14, 1948, s. 69-71. -- Rezyume na gruz. yaz.

SO: Letopis'Zhurnal'nykh Statey, Vol. 47, 1949.

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9

KUTATELADZE, SH. I.

The Committee on Stalin Prizes (of the Council of Ministers USSR) in the fields of science and inventions announces that the following scientific works, popular scientific books, and textbooks have been submitted for competition for Stalin Prizes for the years 1952 and 1953. (Sovetskaya Kultura, Moscow, No. 22-40, 20 Feb - 3 Apr 1954)

Name	Title of Work	Nominated by
Kapeller, C. A.	"Flora of Georgia" (Vols I- VIII)	Institute of Botany, Academy of Sciences Georgian SSR
Kemulariya-Natadze, I. L.		
Ketskhoveli, N. N.		
Kutateladze, Sh. I.		
Makashvili, A. K.		
Nandenova, A. P.		
Sakhokia, I. P.		
Sosnovskiy, D. I.		
Ter-Khachaturova, S. Ya.		
Kharadze, A. I.		
Shkhiyan, A. S.		

SO: W-30604, 7 July 1954

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9

KUTATELADZE, Sh. I

New species of the genus Tragopogon L. in the Caucasus.
Zam.po sist.i geog.rast. no.17:28-47 '53. (MLRA 8:9)
(Caucasus--Chicory)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9

[illegible]

"I[illegible]ledovaniye teploperedachi ot podzemn[illegible] [illegible] [illegible]elirovaniya." (Investigation of Heat Transfer from Underground Tubing by Modeling) Zhurnal tekhnicheskoy fiziki, [illegible], No. [illegible], [illegible] [illegible].

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9

[illegible]

"Nekotoryye [illegible] Transfer [illegible]. [illegible], No. 10, p. [illegible] f.

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9

[illegible], A. [illegible]

"[illegible] (Heat Transfer from a Non-Insulated [illegible] Condition) [illegible] Central'nyy [illegible] (Collect [illegible]), [illegible]

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9

[illegible]

"[illegible]." ([illegible] Underground Heat Conductors). [illegible], Kotloturbinnyy Institut im. I. I. [illegible]. Sbornik trudov ([illegible] works), [illegible] 11, [illegible].

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9

[illegible]

"Novoye [illegible] v [illegible] protsessov t[illegible] [illegible] sostoyaniya v [illegible]" ([illegible] Investigation of Heat Transfer in the Change of the Aggregate Condition of [illegible]) Sovetskoye kotloturbostroyeniye, [illegible], [illegible], pp. [illegible].

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9

[illegible], A. I.

"[illegible] (Formula [illegible] for [illegible] of the general heat transfer coefficient [illegible] [illegible] 195[illegible])"

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9

[illegible]

[illegible]

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9

[illegible]

"[illegible] trubka [illegible] (Nast [illegible] Zavodskoye Kontrol'noye Laboratoriya, [illegible], No. [illegible], pp. [illegible].

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9

PROCESSES AND PROPERTIES

C4

Decorator mixer. S. S. Kutateladze and V. A. Zyma
Russ. 55,977, Oct. 31, 1938. Construction details.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9

[illegible]

[illegible]

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9

[illegible]

"[illegible]" ([illegible] Change in the Aggregate Condition) [illegible], [illegible], [illegible], p. [illegible].

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9

[illegible]

"Eksperimental'noye [illegible] teploperedachi [illegible]" (Experimental Investigation of Heat Transfer during the Boiling of Mercury), Sovetskoye kotloturbostroyeniye, [illegible], No. [illegible], pp. 2[illegible]-[illegible].

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9

915. FLOW OF STEAM-LIQUID MIXTURES THROUGH PIPES AND GENERALIZED COORDINATES FOR ITS ANALYSIS. Kutatelaoze, S.S. (Sovet. Kotloturbostroenie, 1946, No. 2, 19-26).

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9

[illegible]

"[illegible]" (Heat Transfer from Metallic Tubing to Boiling Water), [illegible] Aerodinamika, [illegible] 2, [illegible], 194[illegible].

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9

32

Two-Phase Flow in Tubes. (In Russian) S. S. Kutateladze. *Kotloturbostroenie* (Boiler and Turbine Manufacture), no. 6, Dec. 1947, p. 17-21.

Attempts to analyze the above type of flow for a general case on the basis of theoretical concepts. Equations and charts are presented. 10 ref.

Basic

This essay is a shortened version of the report read by the author session of the Committee of the Academy of Sciences USSR on High Pressure steam. in May 1946.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9

[illegible]

[illegible]

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9

CA

The evaporation of a liquid from the spheroidal condition. V. M. Borishanskii and S. S. Kutateladze. *Zhur. Tekh. Fiz.* 17, 891-902(1947); *Chem. Zentr.* (Russian Zone Ed.) 1948, II, 1284-5.—Two crit. temps. are concerned in the evapn. of drops of liquid from a hot surface. The first temp. corresponds to the instant of establishment of the spheroidal condition; the second corresponds to the establishment of a film of vapor completely sepg. the liquid droplets from the hot surface. The rate of evapn. depends upon the dimensions of the spheroids, the temp., and the material and roughness of the hot surface. In the case of large spheroids large bubbles of vapor are formed, whose sepn. causes a pulsation of the liquid and a resulting intensification of the heat loss. On the other hand, in the case of "normal, flat" spheroids the intensity of the heat loss is approx. proportional to the size of the spheroids and the temp. of the hot surface; it increases correspondingly with the thickness of the vapor film. Further similarities between the evapn. of liquids from the spheroidal condition and from films are established.

M. G. Moore

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9

F

M

2124. ORIGIN OF "LAYER BOILING" UNDER CONDITIONS OF FREE CIRCULATION. Kutateladze, S. S. (Kotloturbostroenie (Boiler and Turbine Manufacture), May-June 1948, 10-12).

Investigates the above theoretically. The presence of hysteresis change of heat transfer to the boiling liquid from the heated surface at variable capacity of heat flow is indicated. The influence of heat-flow capacity and pressure on the intensity of heat transfer during "layer boiling" was determined.

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9

KUTATELADZE, S. S. and TSUKERMAN, R. V.

"An Outline of the Developement of the Theory of Heat in the Work of Russian Scientists of the 18th and 19th Centuries" (Ocherk razvitiya teorii teploty v rabotakh russkikh uchenykh XVIII i XIX stoletiy), Gosenergoizdat, Moscow-Leningrad 1949, 156 pp, 9 rubles.

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9

[illegible], [illegible] and [illegible], [illegible].

"[illegible]" ([illegible]), Kotloturbostroyeniye, [illegible], No. [illegible], pp. 1-[illegible].

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9

F

2374. PROBLEM OF INFLUENCE OF PRESSURE ON MECHANISM OF EVAPORATION IN BOILING LIQUID. Zymina Moloshen, LM and Kutateladze, SS (J. Tekh. Fiz. (J. Tech. Phys. U.S.S.R.), 1950, vol. 20, (1), 110-116). Some results of an experimental investigation of boiling in conditions of free circulation are given. These investigations were undertaken specifically to clarify the conditions governing the heat transfer during the boiling stage, as the accepted theory is based on physical misconceptions and its results, except for the case of atmospheric pressure, are at variance with facts.

ERA

METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9

1ST AND 2ND CODES

PROCESSES AND PROPERTIES INDEX

3RD AND 4TH CODES

N

3135

HYDROMECHANICAL MODEL OF A CRITICAL STATE IN THE HEAT TRANSMISSION IN A BOILING LIQUID, FOR THE CASE OF FREE CONVECTION. S. S. Kutateladze. Zhur. Tekh. Fiz. 30, 1389-92(1960) Nov. (In Russian)

The amount of heat transmitted to a boiling liquid through the container wall is affected by the formation of a vapor film along the wall, when a certain critical value of the external heat supply is reached. A hydromechanical model of this phenomenon, for the case of free convection, is proposed which gives the critical heat value except for a proportionality factor.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9

KUTATELADZE, S. S.

Survey of the work of Russian scientists and engineers in the field of boiler technology.

Leningrad, Gos. energ. izd-vo, 1951.

226 p. (52-44644)

TJ285.K88

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9

USSR/Engineering - Heat Engineering Apr 51

"Hydrodynamic Theory of Changes in the Boiling of Liquids Under Conditions of Free Convection," S. S. Kutateladze, Cen Sci Res Boiler-Turbine Inst imeni I. I. Polzunov

"Iz Ak Nauk SSSR, Otdel Tekh Nauk" No 4, pp 529-536

Analyzes boiling mechanism assuming that both crit points, i.e., transition of liquid from bubbling to film-type boiling and inversely, represent entirely hydrodynamic phenomenon of disrupting stability of 2-phase flow near the heating surface.

190T54

USSR/Engineering - Heat Engineering (Contd) Apr 51

Substantiates theory by comparing conclusions with exptl data. Discusses effect of underheating liquid below satn temp. Submitted by Acad M. V. Kirpichev.

190T54

KUTATELADZE, S. S.

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9

KUTATELADZE, S. S. (Inlet)

"Problems of heat exchange when the aggregate state is varied" Gosenergoizdat, 1952.

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9

24(8) PHASE I BOOK EXPLOITATION SOV/3181

Kutateladze, S. S.

Teploperedacha pri kondensatsii i kipenii (Heat Transfer During Condensation and Boiling) 2nd ed., rev. and enl. Moscow, Mashgiz, 1952. 230 p. Errata slip inserted. 5,000 copies printed.

Reviewer: A. A. Kanayev, Candidate of Technical Sciences; Ed.: B. D. Katsnel'son, Candidate of Technical Sciences; Managing Ed. for Literature on Machine Building (Leningrad Division, Mashgiz): F. I. Fetisov, Engineer; Tech. Ed.: Ye. A. Dlugokanskaya.

PURPOSE: This book is intended for engineers and scientific research workers concerned with the heat exchange theory, thermodynamics, and the design of heat exchange apparatus. It will also be of interest to students of mechanical and electrical engineering.

COVERAGE: The book discusses the principles of heat exchange during a change of the aggregate state of a substance. Empiric data is provided on several cases of heat exchange during the condensation of steam and the boiling of liquid. Separate chapters

~~Card 1/13~~

7

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9

KUTATELADZYE, S. S. and TSUKERMAN, R. V.

"History of the Boiler Construction of the Fatherland by G. A. Matveyev," News of the Acad. of Scis. of the Soviet union, 1952.

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9

[illegible], G. A.; [illegible]; [illegible], R. V.

Boilers

"History of domestic boiler construction." G.A. Matveev. Reviewed by S. S. Kutateladze, R. V. TSukerman, Izv. AN SSSR Otd. tekh. nauk no. 6, 1952.

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

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9

KUTATELADZE, S.S., kandidat tekhnicheskikh nauk, redaktor; KATS-NEL'SON, A.D., redaktor; ZABRODINA, A.A., tekhnicheskiy redaktor.

[Problems of heat exchange in modifications of the aggregation state of matter] Voprosy teploobmena pri izmenenii agregatnogo sostoianiia veshchestva. Sbornik statei. Moskva, Gos. energ. izd-vo, 1953. 207 p. (MLRA 7:8)
(Heat)

p. 102-107, Kutateladze, S. S. and Shneyderman, L. L., "Experimental investigation of the influence of the Temperature of a Liquid on the Change in boiling Conditions.

p. 156-167, Kutateladze, S. S., Borishanskiy, V. M. and Zamyatin, M. M., and Nemchinskiy, A. L., "On Heat Exchange in the Tempering of Metallic Products in Liquid Media.

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9

KUTATELADZE, S. S., TSUKERMAN, R. V.

Heat

Contribution of Russian scientists to the study of heat. Fiz. v shkole No. 5, 1952.

9. Monthly List of Russian Accessions, Library of Congress, December 1952 ~~1953~~, Uncl.

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9

Subject : USSR/Electricity AID P - 2934

Card 1/1 Pub. 26 - 31/32

Authors : Baldina, O. M., Kand. Tech. Sci. and S. S. Kutateladze, Kand. Tech. Sci.

Title : M. A. Styrikovich, Vnutrikotovyye protessy (Processes inside the Boilers) Gosenergoizdat, 1954. (Book review)

Periodical : Elek. sta., 7, 62-63, Jl 1955

Abstract : The authors review the book very favorably and evaluate it as a considerable addition to the literature on boilers.

Institution : None

Submitted : No date

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9

Subject : USSR/Engineering AID P - 4805

Card 1/2 Pub. 110-a - 8/17

Author : Kuteladze, S. S., Prof., Dr. Tech. Sci.

Title : Some problems of heat transfer and friction in turbulent flows.

Periodical : Teploenergetika, 7, 40-45, Jl 1956

Abstract : A classification of heat carriers according to their properties is given. Equations of the mean turbulent flow of a compressible fluid are derived. The effect of the variation of density on the intensity of the turbulent transfer in a two-dimensional gas flow is evaluated. It is demonstrated, that the velocity in the nucleus of a two-dimensional turbulent flow of compressible gas is a function of the sine of the logarithm of the distance from the wall. Gas flows in a tube and past a plate are examined and used as examples. New methods of analysis are presented. Diagrams.

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9

KUTATELADZE, SAMSON SEMENOVICH

PHASE I BOOK EXPLOITATION 368

Kutateladze, Samson Semenovich

Osnovy teorii teploobmena (Fundamentals of Heat Exchange Theory) Moscow, Mashgiz, 1957. 382 p. 5,000 copies printed.

Reviewer: Shlykov, Yu.P., Candidate of Technical Sciences; Ed.: Deshkin, V.N., Doctor of Technical Sciences, Professor; Ed. of Publishing House: Gofman, Ye.K.; Tech. Ed.: Pol'skaya, R.G.

PURPOSE: This book is intended for scientists, engineers and physicists and may also be used by students specializing in physical thermotechnics.

COVERAGE: The book presents the physics of heat exchange phenomena and provides the fundamental mathematical expressions for the theory of heat propagation. The most important practical application of the mathematical principles and an analysis of experimental data are given. There are 135 references, of which 112 are Soviet, 14 English, 8 German, 1 French.

~~Card 1/8~~

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9

298

AUTHOR: Kutateladze, S.S., Professor, Doctor of Technical Sciences, and Borishanskii, V.M., Candidate of Technical Sciences.

TITLE: Influence of the speed of flow on the critical density of a heat flow during boiling of water. (Vliyanie skorosti techeniya na kriticheskie plotnosti teplovogo potoka pri kipenii vody)

PERIODICAL: "Energomashinostroenie" (Power Machinery Construction), 1957, No. 2, p. 10, (U.S.S.R.)

ABSTRACT: The published data on the influence of the speed of flow on critical conditions during boiling of water relate only to the first critical density of the heat flow at which bubble boiling is substituted by film boiling; so far, data on the magnitude at which a disruption of the steam film and establishment of the bubble boiling take place have not been published. The authors used the test set-up as shown in Fig. 1. This, and the methods of carrying out the experiments are described and data are given in a graph.

2 figures. There are 9 references, 7 of which are Russian.

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9

Borishanskiy, V.M., Candidate of Technical Sciences and
Kutateladze, S.S., Doctor of Technical Sciences.

TITLE: On heat transfer and hydraulic resistance calculations for the flow of liquid metals in pipes. (O raschete teplootdachi i gidravlicheskogo soprotivleniya pri techenii zhidkikh metallov v trubakh.) 114-6-2/11

PERIODICAL: "Energomashinostroenie" (Power Generation Machinery Construction) 1957, Vol.3, No.6, pp. 5-8 (U.S.S.R.)

ABSTRACT: Reference is made to earlier work on the flow of mercury in pipes. This note describes experiments carried out in 1950-1955 to study friction with iso-thermal and non-iso-thermal flow of liquid metals in steel pipes. The materials tested were molten bismuth and the eutectic alloy of lead (43.5%) and bismuth (56.5%). The tests with bismuth were made in steel piping 9.09 mm internal diameter at temperatures of 360-470 °C and at Reynolds numbers (Re) up to 180 000. The tests were made on a small circuit consisting of a vertical pump the measured section and connecting pipes. The circuit was placed in a thermostat, the results are shown in a graph of the frictional resistance against Reynolds number.

To study the resistance on the Pb-Bi eutectic a set-up

Card 1/3

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9

On heat transfer and hydraulic resistance calculations for the flow of liquid metals in pipes. (Cont.)

114-6-2/11

was constructed so that the tests could be carried out with both iso-thermal and non-iso-thermal flow of medium. The equipment is illustrated by a sketch. The results are given in the form of a graph of the resistance against Re. Over the range of Re = 5 000 to 50 000 data are available for water and over the range 40 000 to 180 000 experimental data were obtained for Pb-Bi eutectic for iso-thermal and non-iso-thermal flow.

From the results it may be concluded that the hydraulic resistance of liquid metals with thermal loadings up to 1 million kcal/m^2hr may be calculated from the formulae for hydraulic head of ordinary liquids.

The article also present briefly the results of heat transfer measurements with the Pb-Bi eutectic and sodium in round pipes. In these tests a study was made of the influence on heat transfer of the speed, the pipe diameter, the relative length of tube, the heat flow and the physical properties of the liquid (Pr = 0.005-0.035). To evaluate the influence of additives on the nature of the contact between the surface and metal and its influence on heat transfer, special tests were made with Pb-Bi eutectic to which was added metallic magnesium. The test conditions are tabulated. The results of the tests are given in the form of a graph

Card 2/3

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9

On heat transfer and hydraulic resistance calculations for the flow of liquid metals in pipes. (Cont.) 114-6-2/11

of heat transfer against thermal loads and the results of all the tests on Pb-Bi eutectic for tubes with L/D greater than 30 in co-ordinates of $Nu = f(Pe)$ are given in a graph. In tests with sodium, special attention was paid to purifying the neutral gas and the actual metal. The results of tests over the range $Pe = 90-1\,800$ are given in the form of a graph. The graphs show that for values of Pe greater than 300 all the data are in satisfactory agreement. When Pe is less than 300 the experimental data for sodium are lower down to values of Nu less than 4.36, which corresponds to laminar flow. A line corresponding to the equation $Nu = 0.7Pe^{1/3}$ can be drawn through the exprimental points. The results obtained are in good agreement with published work of other authors.

There are 6 figures, 1 table and 6 literature references (5 Slavic).

Card 3/3

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9

PHASE I BOOK EXPLOITATION 775

Kutateladze, S.S., Borishanskiy, V.M., Novikov, Ivan Ivanovich, and Fedynskiy, O.S.

Zhidkometallicheskiye teplonositeli (Liquid Metal Heat-Transfer Agents) Moscow, Atomizdat, 1958. 204 p. (Series: Atomnaya energiya. Prilozheniye, 1958, no 2) 8,750 copies printed.

Resp. Ed.: Koryakin, Yu. I.; Tech. Ed.: Usachev, G.L.

PURPOSE: This book is intended for scientists and engineers working in the field of reactor construction and nuclear engineering. It can also be useful in other fields where liquid metal heat-transfer agents are applicable.

COVERAGE: This booklet, a 1958 supplement to the periodical "Atomic Energy," is devoted to a study of liquid metal heat-transfer agents used in nuclear power engineering. The authors present data from Soviet and foreign research in this field conducted within the last 10 years. The greater part of the

Card 1/4

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9

text was written by S.S. Kutateladze, V.M. Borishanskiy, and I.I. Novikov. Chapters I, III, V, and VIII were written in collaboration with O.S. Fedynskiy. G.M. Lyamkin, N.A. Prikhodchenko and Yu. I. Koryakin took part in preparing the manuscript. There are 81 references of which 40 are Soviet, 32 English, 5 German, and 4 French .

TABLE OF CONTENTS:

From the Editor 5

Ch. 1. Basic Properties of Liquid Metals 7

Ch. 2. Fields of Application of Liquid Metal Heat-Transfer Agents 23

Ch. 3. Hydraulic Resistance During Flow of Liquid Metals 27

Ch. 4. Turbulent Heat Transfer in Liquid Metals 38

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9

Liquid Metal Heat-Transfer Agents 775

Ch. 5. Heat Emission During Flow in Pipes 47

Ch. 6. Heat Emission During Longitudinal Flow Around a Plate 96

Ch. 7. Heat Emission During Transverse Flow Around Cylinders 112

Ch. 8. Heat Emission During Free Convection 118

Ch. 9. Heat Emission During Vapor Condensation 128

Ch.10. Heat Emission During Boiling 138

Ch.11. Heat Exchange Apparatus 162

Card 3/4

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9

Liquid Metal Heat-Transfer Agents 775

Ch. 12. Stability of Heat Resistant Materials in Liquid Metals 171

Ch. 13. Measuring Instruments 190

AVAILABLE: Library of Congress

Card 4/4

BK/nah
12-5-58

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9

KUTATELADZE, Samson Semenovich

PHASE I BOOK EXPLOITATION 615

Kutateladze, Samson Semenovich and Styrikovich, Mikhail Adol'fovich

Gidravlika gazo-zhidkostnykh sistem (Hydraulics of Gas-and-Liquid Systems) Moscow, Gosenergoizdat, 1958. 232 p. 4,000 copies printed.

Ed.: Vitman, L. A.; Tech. Ed.: Zabrodina, A. A.

PURPOSE: The book is intended for scientific workers, engineers, and students, specializing in the fields of physical thermotechnics, power engineering, hydromechanics, chemical processes and apparatus.

COVERAGE: The present book is a first attempt at a systematic description of the most fundamental flow mechanisms of the combined motion of a gas and a liquid. As basic objects of study, the book considers problems of the motion of a gas-liquid mixture in tubes, bubbling, atomization of a liquid by mechanical and pneumatic atomizers, critical regimes of boiling, and several other problems. Specific problems of gas-liquid motion in porous bodies, developed in the works of L.S. Leybenzon, are not treated in this book. The authors thank V. N. Moskvicheva, Candidate of Technical Sciences, for her assistance. They

Card ~~1/8~~

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9

also thank the reviewer, V. G. Levich, and the editor, L. A. Vitman. There are 81 references, 73 of which are Soviet, 2 German, 2 French, 4 English.

TABLE OF CONTENTS:

Symbols 8

Introduction 10

Ch. 1. Basic Parameters and Equations 12
1. Conditions for single-valuedness of the hydrodynamic regime of an isothermal gas-liquid system 12
2. Resulting phase velocities, true and mean discharge gas-content of the flow 12
3. Mean density of the mixture 15
4. Basic dimensionless parameters of a two-phase flow 15
5. Basic equations of hydrodynamics 18
6. Mechanical interaction of phases on the boundaries of separation 19
7. Shock wave on a boundary of separation of phases 22
8. Thermal phase interaction on the boundary of separation 23
9. Equation of the averaged, one-dimensional motion of a gas-liquid mixture in a round tube 24

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9

24(8) PHASE I BOOK EXPLOITATION SOV/1599

Kutateladze, Samson Semenovich and Veniamin Mironovich Borishanskiy

Spravochnik po teploperedache (Handbook on Heat Transfer) Leningrad, Gosenergoizdat, 1958. 414 p. 25,000 copies printed.

Ed.: S.I. Mochan; Tech. Eds.: A.A. Zabrodina and G.Ye. Larionov.

PURPOSE: This book is intended for engineers and thermodynamicists and may also be useful to students specializing in the various fields of thermodynamics.

COVERAGE: This handbook contains a brief outline of the basic concepts of the theory of heat transfer. The most important computational formulas are presented. A summary is given of the physical characteristics required for calculating heat transfer by conduction, convection, and radiation. Auxiliary data also are presented. The methods for calculation are based either on officially standardized data (of which, however, there exist only very few) or, mostly, on otherwise established and accepted data. In sections dealing with certain special fields such as gas dynamics, theory of drying, etc., where the problems of heat transfer cannot be considered without their

Card 1/25

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9

connection with other problems, only the most basic concepts and results, and also the necessary bibliographies, are given. The references used in compiling this handbook are enumerated at the end of each chapter. Several coauthors participated in the compilation of particular sections: A.G. Blokh (Ch. 14, 15); L.M. Zysina-Molozhen (section 8, 6); R. Ye. Krzhizhanovskiy (Ch. 4); E.V. Firsova (Appendix); A.A.Andreyevskiy (Ch. 17); and S.I. Mochanom (section 16, 4). The authors express their gratitude for valuable comments to the reviewers: A.A. Armand, L.D. Berman, V. Ye. Doroshchuk, V.L. Lel'chuk, M.S. Pirogov, S.A. Ryvkin, and Ye. Ya. Sokolov. There are 259 references of which 206 are Soviet, 33 English, 18 German, and 2 French.

TABLE OF CONTENTS:

Preface 3

List of basic symbols 15

Some useful mathematical definitions and formulas 19

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9

SOV/893-58-2-1/13

AUTHORS. Kutateladze, S. S., Borishanskiy, V. M., Novikov, I. I., Fedynskiy, O. S.

TITLE: Liquid Metal Heat Carriers (Zhidkometallicheskiye teplonositeli) Chapter 1: Basic Properties of Liquid Metals (Glava 1. Osnovnyye svoystva zhidkikh metallov)

PERIODICAL: Atomnaya energiya, 1958, Supplement 2, pp. 7-22 (USSR)

ABSTRACT: The physical properties are given in form of tables for the liquid state of the following elements:

1.) Mercury
2.) Sodium
3.) Kalium
4.) Lithium
5.) Bismuth
6.) Gallium
7.) Lead.

The theory of the thermodynamical similitude of real bodies is explained and applied to the investigation of the properties of liquid metals. This chapter further deals with the following subjects: Experimental data concerning the velocity of propagation

Card 1/2

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9

Liquid Metal Heat Carriers.
Chapter 1: Basic Properties of Liquid Metals SOV/895-58-2-1/13

of sound in liquid metals, and a method of estimating this quantity by calculation.
This and the following chapters take data published within the past 10 years into account both in the USSR and in other countries. The entire compilation was signed by S. S. Kutateladze, V. M. Borishanskiy and I. I. Novikov, as the responsible authors. O. S. Fedynskiy participated in compiling chapters 1, 3, 5 and 8. G. M. Lyamkin, N. A. Prikhodchenko and Yu. J. Komyakin assisted in writing the manuscript. There are 3 figures, 12 tables.

1. Liquid metals--Properties 2. Liquid metals--Sound transmission

Card 2/2

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9

AUTHORS: Kutateladze, S. S., Borishanskiy, V. M., Novikov, I. I., Fedynskiy, O. S. SOV/89S-58-2-2/13

TITLE: Liquid Metal Heat Carriers (Zhidkometallicheskiye teplonositeli) Chapter 2: Ranges of Application of Liquid Metal Heat Carriers (Glava 2.Oblasti primeneniya zhidkometallicheskikh teplonositeley)

PERIODICAL: Atomnaya energiya, 1958, Supplement 2, pp. 23-26 (USSR)

ABSTRACT: The following subdivision offers a survey of the various ranges of application:
a) General considerations.
b) Use of liquid metal heat carriers in steam-producing plants.
c) The use of liquid metal heat carriers in nuclear power plants.
There are 1 figure.

1. Liquid metals--Applications 2 Liquid metals--Heat transfer

Card 1/1

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9

AUTHORS: Kutateladze, S. S., Borishanskiy, V. M., Novikov, I. I., Fedynskiy, O. S. SOV/89S-58-2-3/13

TITLE: Liquid Metal Heat Carriers (Zhidkometallicheskiye teplonositeli) Chapter 3: The Hydraulic Resistance of Flowing Liquid Metals (Glava 3. Gidravlicheskoye soprotivleniye pri techenii zhidkikh metallov)

PERIODICAL: Atomnaya energiya, 1958, Supplement 2, pp. 27-37 (USSR)

ABSTRACT: The following subdivisions offer a survey of the matter dealt with:

1.) Flow in smooth tubes.
Investigations showed that the laws of resistance for flowing liquid metals in smooth tubes are practically the same as in the case of non-metal liquids.

2.) Flow in rough tubes.
The hydraulic resistance of steel tubes to H_2O, Hg and Sn is graphically represented.

3.) Influence exercised by the heat carrier.

4.) Local resistance.

5.) Friction of a revolving disk.
The consumption of energy necessary for the rotation of a

Card 1/2

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9

Liquid Metal Heat Carriers. SOV/893-58-2-3/13
Chapter 3: The Hydraulic Resistance of
Flowing Liquid Metals

smooth disk of 270 mm Ø and 10 mm thickness in Hg, oil, H_2O and petroleum is shown by a graph.
6.) Increase of pressure in the case of a hydraulic impact.
There are 10 figures

1. Liquid metals--Hydrodynamic characteristics
2. Fluid flow--Resistance 3. Friction

Card 2/2

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9

AUTHORS: Kutateladze, S. S., Borishanskiy, V. M., Novikov, I. I., Fedynskiy, O. S. SOV/89S-58-2-5/13

TITLE: Liquid Metal Heat Carriers (Zhidkometallicheskiye teplonositeli) Chapter 5: Heat Transfer in Flows Through Tubes (Glava 5. Teplootdacha pri techenii v trubkakh)

PERIODICAL: Atomnaya energiya, 1958, Supplement 2, pp. 47-95 (USSR)

ABSTRACT: The following subdivision allows a survey of this matter:

a) Theoretical solutions.
b) Experimental data concerning the heat transfer to mercury.
c) Experimental data concerning the heat transfer to the eutectic lead-bismuth.
d) Experimental data concerning the heat transfer to tin.
e) Experimental data concerning the heat transfer to the eutectic sodium-kalium.
f) Comparison of the empirical values obtained concerning the average heat transfer in tubes with $L/D > 30$ for:
   1.) mercury
   2.) sodium
   3.) eutectic: sodium-kalium
   4.) influence exercised by additions.

Card 1/2

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9

Liquid Metal Heat Carriers. SOV/89S-58-2-5/13
Chapter 5: Heat Transfer in Flows Through Tubes

g) Comparison of empirical values obtained concerning the heat transfer in slit.

There are 67 figures, 1 table

1. Liquid metals--Heat transfer

Card 2/2

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9

KUBATELADZE, S.S.

96-3-23/26

AUTHOR: Zo-ulya, N.V. (Cand.Tech.Sci) &Balitskiy S.A. (Engineer)

TITLE: Session on heat exchange during change of aggregate state of matter. (Sessiya po teploobmenu pri izmenenii agregatnogo sostoyaniya veshchestva.)

PERIODICAL: Teploenergetika, 1958, No.3, pp. 91-93 (USSR)

ABSTRACT: The Commission on High Steam Conditions of the Power Institute of the Acad.Sci. of the U.S.S.R. and the Institute of Thermal Engineering of the Acad.Sci. of the Ukrainian SSR, held a scientific and technical session in Kiev on September23-28, 1957 on questions of heat exchange during change of aggregate state of matter. The session was attended by scientific workers of academic and research institutes and colleges, and workers in design institutes and industry. Forty reports were read in the plenary and sectional sessions. The main tasks of the session were to consider the research work that had been carried out, to co-ordinate research work and to determine the most promising lines for investigation into heat exchange during change of aggregate state of matter. In his report 'Some problems of the theory of heat exchange during large volume boiling in tubes' corresponding member of the Acad.Sci. Ukrainian SSR, V.I. Tolubinskiy, critically examined the best known criterial equations for boiling liquid. Dr.Tech.Sci. S.S. Kubateladze, of the Central Boiler Turbine Institute made a report about 'Some problems of the theory of crises in the mechanism of boiling' which

Card 1/7

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9

Session on heat exchange during change of aggregate state of matter. 96-3-23/26

systematised the results of investigations on critical densities of heat flow during boiling in large volume tubes. Dr.Phys.Math.Sci. A.A. Gukhman of the Moscow Division of the Central Boiler Turbine Institute made a report 'On the mechanism of influence of mass-exchange on heat-exchange during boiling', which analysed the influence of the developing gas phase on heat exchange during evaporation. Dr.Tech.Sci. L.D. Berman of the All-Union Thermo-Technical Institute delivered a report on the interrelationship between thermal and mass exchange during evaporation of a liquid and condensation of the steam in the presence of permanent gases. Corresponding Member of the Acad.Sci. of the U.S.S.R., G.N. Kruzhilin, discussed Tolubinskiy's report. Dr.Tech.Sci., V.G. Pastovskiy of the All-Union Electro-Technical Institute, gave information about experimental data obtained during boiling of a number of organic liquids and mixtures of them with water. Dr.Tech.Sci., B.S. Petukhov, Moscow Power Institute, pointed out the need for profound study of the mechanism of boiling of liquids. Cand.Tech.Sci., D.A. Labuntsov, Moscow Power Institute, expressed a similar opinion. The session on heat exchange during boiling in the region of moderate thermal loading heard 7 reports. Dr.Tech.Sci., V.D. Popov, (KTIPP) made a report on 'Heat transfer during boiling of crystallising solutions', Cand.Tech.Sci., V.G. Garyazha (KTIPP) presented the results of an experimental investigation of heat

Card 2/7

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9

Session on heat exchange during change of aggregate state of matter. 96-3-23/26

transfer during the boiling of massecuite. Dr.Tech.Sci., I.I. Chernobyl'skiy (Institute of Thermal Engineering of the Acad.Sci. Ukrainian SSR, Engineer S.A. Balitskiy (same Institute) and Engineer F.P. Minchenko of the Central Boiler Turbine Institute reported the results of an experimental investigation of heat transfer during boiling of aqueous solutions of lithium bromide and chloride under vacuum. Cand.Tech.Sci. I.E. Veneraki, of the Kiev Polythechnical Institute, reported the results of investigations on heat transfer of a horizontal bundle of tubes to boiling water and sugar solution under conditions of free convection and vacuum. Cand.Tech.Sci. R.Ya. Ladiyev of the Kiev Polythechnical Institute reported on 'The use of approximate thermo-dynamic similarity to establish heat transfer relationships during boiling. Dr.Tech.Sci. I.I. Chernobyl'skiy of the Thermal Engineering Institute of the Acad.Sci. of the Ukrainian SSR and Cand.Tech.Sci. G.V. Patiani of the Power Institute of the Acad.Sci. Georgian SSR reported the results of investigations on the heat transfer co-efficient when boiling Freon 12 in large volume on horizontal tubes. Contributions to the discussion were made by Cand.Tech.Sci. V.Ya. Gol'tsov (M.I.Kh.M), V.D. Popov of KTIPP, Cand.Tech.Sci. V.M. Borishanskiy of the Central Boiler Turbine Institute, Cand.Tech.Sci. N.Yu. Tobilevich (TsINS). The session on heat

Card 3/7

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9

exchange during boiling in the region of high thermal loadings heard 13 reports. Engineer V.G. Chakrygin, and Cand.Tech.Sci. V.A. Lokshin of the All-Union Thermo-Technical Institute, reported on the results of experimental investigation of the influence of non-uniformity of heat exchange round the perimeter of a horizontal steam raising tube. Cand.Tech.Sci. V.M. Borishanskiy (Central Boiler Turbine Institute) reported the results of experiments on heat transfer to boiling water at super-high and near critical pressures. Cand.Tech.Sci. E.I. Aref'eva and Cand.Tech.Sci. I.T. Alad'ev of the Power Institute of the Acad.Sci. of the U.S.S.R. reported on the influence of wetting on heat exchange during boiling. Cand.Tech.Sci. Z.L. Miropol'skiy and Cand.Tech Sci. M.E. Shitsman of the Power Institute of the Acad.Sci. of the U.S.S.R.. gave the results of experiments on heat transfer and permissible specific thermal loading in the steam raising tubes of boilers. Cand.Tech.Sci. N.V. Tarasova of the All-Union Thermal Technical Institute, gave the results of investigation on critical thermal loadings and heat transfer from the walls of tubes to water, and steam-water mixture. Cand.Tech.Sci. I.T. Alad'ev, Engineer, L.P. Dodenov and V.S. Udalov of the Power Institute of the Acad.Sci. of the U.S.S.R. gave a report on 'Heat Transfer and Critical Thermal Fluxes during boiling of under heated water in Tubes'. Cand.Tech.Sci. E.K. Averin of the Power Institute

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9

Session on heat exchange during change of aggregate state of matter. 96-3-24/26

of the Acad.Sci. of the U.S.S.R., reported on Heat exchange during boiling under conditions of forced circulation of water'. Engineer G.G. Treshchev of the All-Union Thermo-Technical Institute, reported on 'Experimental investigation of the mechanism of the heat exchange during surface boiling'. Dr.Tech.Sci. S.S. Kutateladze and Cand.Tech. Sci. V.N. Moskvicheva of the Central Boiler Turbine Institute, considered the relationship between the hydro-dynamics of a two-phase layer with the theory of crises in the mechanism of boiling. Cand. Tech.Sci. L.S. Sterman, Engineers V.V. Morozov and S.A. Kovalev of the Moscow Division of the Central Boiler Turbine Institute, reported on 'A study of heat exchange during boiling of liquids in tubes at various pressures up to 85 atms'. Cand.Tech.Sci. E.A. Kazakova (GIAP) reported on questions of heat exchange during the critical point under conditions of natural convection. The following took part in the discussion:- Dr.Phys.Math.Sci. A.A. Gukhman, Dr.Tech.Sci. B.S. Petukhov, Corresponding Member of the Acad.Tech.Sci. Ukrainian SSR, V.I. Tolubinskiy, Cand.Tech.Sci. A.P. Ornatskiy, Dr.Tech.Sci. V.G. Fastovskiy and Cand.Tech.Sci. M.I. Korneyev. The section on heat exchange during condensation and evaporation heard 7 reports. Dr.Tech.Sci. L.D. Berman of the All-Union Thermo-Technical Institute reported on 'Heat and Mass exchange during condensation of steam from a moving steam-air mixture on horizontal tubes'. Cand.Tech.Sci. N.V. Zozuli of the Institute of Thermal Engineering

Card 5/7

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000927910013-9"