"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000520420018-9

8(6) SOV/143-59-11-16/19

AUTHOR: Kapinos, V.M., Candidate of Technical Sciences, and Matsevityy, Yu.M., Engineer

TITLE: The Determination of the Stationary Temperature Field Taking into Account the Dependence of the Heat-Conductivity Factor on Temperature

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Energetika, 1959, Nr 11, pp 123-126 (USSR)

ABSTRACT: The authors try to prove that their new, simplified, mathematical approach to the problem of determining the plane stationary temperature field, described by a linear differential heat-conductivity equation, is as good as the calculations based on the method of finite differences or the method of nets. The results obtained by applying the simplifying approximations of the authors differ only in a negligible way from the results obtained by standard complicated accurate calculations. A plate made of "EI612"

Card 1/2

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SOV/143-59-11-16/19

The Determination of the Stationary Temperature Field Taking into Account the Dependence of the Heat-Conductivity Factor on Temperature

austenite steel has been used by the authors in their experiments. There are 1 graph and 2 Soviet references.

ASSOCIATION: Khar'kovskiy politekhnicheskiy institut imeni V.I. Lenina (Khar'kov Polytechnic Institute imeni V.I. Lenin)

SUBMITTED: July 1st, 1959

Card 2/2

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"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000520420018-9

IL'CHENKO, O.T.; KAPINOS, V.M.

Thermal resistance of a contact layer. Trudy KhPI. Ser.mash. 19 no.5:169-181 '59. (MIRA 14:9)
(Heat--Radiation and absorption)

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000520420018-9"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000520420018-9

67814

24.5200
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SOV/143-60-1-11/21

AUTHOR: Kapinos, V.M., Candidate of Technical Sciences

TITLE: Temperature Distribution in the Tail-Joint Section of the Working Blades of a Cooled Rotor

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy: Energetika, 1960, Nr 1, pp 78 - 88 (USSR)

ABSTRACT: The article gives a series of formulae for determining heat exchange and temperature distribution in the tail-joints sections, first for forked tail joints and secondly for herringbone and gear tail joints. In the case of a two-pronged blade tail and single-flanged disc rim heat exchange of the flange of the disc rim with those of the tail of the blade takes place through the contact layer of rough protuberances. The differential equation for heat distribution in the flange of the disc, if it is assumed that the ring defined by radii

Card 1/5

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SOV/143-60-1-11/21

Temperature Distribution in the Tail-Joint Section of the Working Blades of a Cooled Rotor

$r_1$ and $r_2$ $\left(\frac{r_1}{r_2} \approx 1\right)$ may be replaced by a rectilinear bar, takes the following form:

$$\lambda_1 f_1 \frac{d^2\vartheta}{dx^2} - 2ku(\vartheta - \theta) = 0 \qquad (1)$$

where $\lambda_1$ and $\lambda_2$ are the coefficients for heat conductivity of the materials of the disc and blades; $f_1$ - area of the cross section of the flanges of the rim; k - heat conductivity of the contact layer, formed by the rough protuberances; $\vartheta$ - temperature of the middle flanges of the rim; u - extent of the contact surface and heat-exchange surface with the cooling medium in a direction perpendicular to the plane of the diagram (Figure 1);

Card 2/5

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SOV/143-60-1-11/21

Temperature Distribution in the Tail-Joint Section of the Working Blades of a Cooled Rotor

$\Theta$ - temperature of the outer flanges of the blade tail. Experiments made by the ETA method in the Institut teploenergetiki AN USSR (Thermal Power Engineering Institute UkrSSR) on actual specimens in the KhPI showed that the thermal flow through the gas gap in a tail joint is negligible. Figure 2 shows temperature distribution in the three-pronged tail joint of an RD-10 engine. For herringbone and gear tail joints in turbines where the cooling medium washes not only the disc and the flanges of the rim but also flows in the mounting gaps of the tail joint, the equations for heat distribution in the rim area and tail are as follows:

Card 3/5

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SOV/143-60-1-11/21

Temperature Distribution in the Tail-Joint Section of the Working Blades of a Cooled Rotor

$$\frac{d^2t}{dx^2} - \mu_1^2 (t-t_v) - \gamma_1^2 (t-t_{vo}) = 0 \qquad (29)$$

$$\frac{d^2\theta}{dx^2} - \mu_2^2 (\theta-t_v) - \gamma_2^2 (\theta-t_{vo}) = 0$$

where $\gamma_1^2 = \frac{2\alpha_2 b}{\lambda_1 f_1}$ ; $\gamma_2^2 = \frac{2\alpha_2 b}{\lambda_2 f_2}$ ; $\alpha_2$ is the coefficient of heat emission towards the flow of the cooling medium in the mounting gap; $t_{vo}$ - average temperature of the cooling medium along the mounting gap; $f_1$ and $f_2$ - mean areas of the cross sections of the rim area and blade tail respectively

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SOV/143-60-1-11/21

Temperature Distribution in the Tail-Joint Section of the Working Blades of a Cooled Rotor

$t_y$ - temperature of the surrounding medium; b - width of the rim; $\theta$ - temperature of the blade. There are 2 graphs, 1 diagram, 1 set of diagrams and 8 Soviet references.

ASSOCIATION: Khar'kovskiy politekhnicheskiy institut imeni V.I. Lenina (Khar'kov Polytechnical Institute imeni V.I. Lenin)

SUBMITTED: July 11, 1959, by the Kafedra turbinostroyeniya (Chair of Turbine Construction)

Card 5/5

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000520420018-9"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000520420018-9

BUBLIKOV, Ye.I., kand.tekhn.nauk; KAPINOS, V.M., kand.tekhn.nauk

Investigating the temperature field of the cooled rotor of a steam turbine. Energomashinostroenie 6 no.4:8-12 Ap '60. (MIRA 13:8)

(Steam turbines)

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33030 R
S/096/60/000/011/011/018
E194/E384

26.5100

AUTHOR: Kapinos, V.M., Candidate of Technical Sciences

TITLE: Solution of the Problem of Steady-state Thermal Conductivity Allowing for the Relationship Between the Coefficient of Thermal Conductivity and Temperature, by the Electrothermal Analogy Method

PERIODICAL: Teploenergetika, 1960, No. 11, pp. 74 - 78

TEXT: The electrothermal analogy method is of great practical importance in studying steady-state heat-transfer problems which are very difficult to solve mathematically. The electrothermal analogy method is based on the identity between the differential equations of a temperature field and of an electrical potential field. The analogy breaks down if allowance is made for the dependence of the thermal conductivity coefficient on temperature. In this case the steady-state temperature field is described by a nonlinear equation of the form of

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$$\frac{\partial}{\partial x}\left[\lambda(t)\frac{\partial t}{\partial x}\right] + \frac{\partial}{\partial y}\left[\lambda(t)\frac{\partial t}{\partial y}\right] = 0 \qquad (1)$$

Obviously, in this case the thermal field cannot be directly replaced by an electrical one. The problem of determining the temperature field with allowance for the dependence of the coefficient of thermal conductivity on temperature can still be solved on an electrical model if it is used to determine the field of some auxiliary function. In the calculations it is assumed that the thermal conductivity is a linear function of temperature and the following expression is derived for the auxiliary function with first-order boundary conditions

$$\overline{\Phi} = \xi \frac{\lambda_{cp}(t)}{\lambda_{cp}} \qquad (3)$$



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where $t$ - current values of the temperature;
$t_H$, $t_B$ are given minimum and maximum temperatures in the circuit, respectively;
$\varphi_H$, $\varphi_B$ are minimum and maximum values of the function $\varphi$ in the circuit, respectively, determined from given boundary conditions.

The following expression is then derived for the auxiliary function

$$\frac{\alpha}{b}\left[(a^2 + 2b\Psi)^{0.5} - (a + b\Theta)\right] = \frac{\partial \Psi}{\partial n} \qquad (7)$$

but the algebraic nonlinearity of this expression must be removed to simplify the boundary conditions for the analogies. Accordingly, the following expression is derived



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$$\beta_1(\Phi_1 - \eta_1) = -\frac{\partial \Phi_1}{\partial n} \qquad (8)$$

where

$$\beta_1 = \frac{a}{(a^2 + 2b\Phi_0)^{0.5}};$$

$$\eta_1 = \Phi_0 + \frac{a}{\beta_1}\left(\frac{a}{b} - \frac{a}{b\beta_1} + 1\right).$$

Then the conditions of similarity of boundary conditions are determined. On solving the problem with the boundary conditions of Eq. (8), the distribution of the auxiliary function may be determined to a first approximation. The following expression is derived for the auxiliary function:

$$\Phi \approx c_1 + c_2 t \qquad (10)$$



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and the approximate boundary conditions are obtained in the following form

$$\beta^{*} (\Phi - \eta^{*}) = - \frac{\partial \Phi}{\partial n} \qquad (11)$$

where

$$\beta^{*} = \frac{\alpha}{c_2} ; \quad \eta^{*} = c_1 + c_2 \theta .$$

Solution of the problem of these boundary conditions is still approximate but is accurate enough for most technical problems without further correction of the boundary conditions being required. The approximate solution can also be used as a first approximation for an accurate solution. Methods of allowing for contact thermal resistance in various cases are then considered and



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E194/E384

Solution of the Problem of ....

appropriate boundary conditions are derived. The problems that arise when it is required to determine the thermal resistance in a body as well as the temperature distribution are considered. Examples of determination of temperature distributions by the electrothermal analogy method using electrolytic baths allowing for the influence of the temperature on the coefficient of thermal conductivity are given in Figs. 1. 2 and 3. Fig. 1 shows the temperature distribution in a body cooled by a system of cylindrical ducts with given first-order boundary conditions. Fig. 2 shows the distribution of the auxiliary function and of temperature in a body cooled by ducts. The temperature distributions obtained in the first and second approximations are compared in Fig. 3 and it will be seen that the difference is not serious. Thus, the approximate method of determining the temperature distribution is sufficiently effective and so in most cases only one or two approximations are necessary, the second being made mainly to check the first and to assess the error of the temperature determination. Fig. 3 also shows the curves of temperature distribution corresponding

Card 6/7

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Solution of the Problem of ....

to constant thermal conductivity coefficients independent of temperature and it will be seen that in this case the error is not great if the thermal conductivity is related to the air temperature of 800 °C. The procedure described above for solving the boundary conditions of thermal conductivity with allowance for the relationship between the coefficient of thermal conductivity and temperature is based on linearisation of the differential equations and of the boundary conditions. Therefore, it is naturally applicable not only to the case of modelling a temperature field in electrolytic baths or on electrically conducting paper but also to the analytical solutions of problems, in particular, by the grid method and when using methods based on analogy between grids and the analytical method.
There are 3 figures and 4 Soviet references.

ASSOCIATION: Khar'kovskiy politekhnicheskiy institut (Khar'kov Polytechnical Institute)

Card 7/7

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"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000520420018-9

BUBLIKOV, Ye.I.; K[illegible], V.N.

Determining the cooling effect on the steam turbine rotor.
Trudy KhPI 29 no.2:133-146 '60. (MIRA 14:10)
(Steam turbines—Cooling)

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S/587/60/029/002/005/008
D262/D302

26.2124

AUTHORS: Kapinos, V. M. and Bublikov, E. I.

TITLE: Temperature field of a semi-limited body cooled by a series of cylindrical or slit ducts

SOURCE: Khar'kov. Politekhnicheskiy institut. Trudy. v. 29, no. 2, 1960. Parovyye i gazovyy turbiny, 147-161

TEXT: The authors consider, in a simplified formulation, a problem treated previously by them. The method used is the ETA method. The installation consists of a rectangular reservoir (which is a model of a section of the rotor) with a movable internal wall and a number of insertions representing cylindrical and slit-shaped ducts. Seven series of experiments were carried out with insertions of various sizes and shapes and at various distances from the heated wall. The results are recorded in form of graphs. Electrical resistance of the model was also measured in each case in order to find the corresponding thermal resistance. Calculations of the temperature field and thermal resistance applying

Card 1/4

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$$t = 1 - \frac{1}{2R_0} \left[ \sum_{n=0}^{\infty} \ln \frac{(ns - x)^2 + (h_0 + y)^2}{(ns - x)^2 + (h_0 - y)^2} + \right.$$

$$\left. + \sum_{n=1}^{\infty} \ln \frac{(ns - x)^2 + (h_0 + y)^2}{(ns + x)^2 + (h_0 - y)^2} \right]. \qquad (2)$$

Here $2h_0$ - distance between sources and drains

$$h_0 = \sqrt{h^2 - \frac{d^2}{4}}$$

and



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$$R = \frac{1}{2\pi\lambda} R_0 = \frac{1}{2\pi\lambda} \ln\left[2\frac{h_0}{d} + \sqrt{\left(2\frac{h_0}{d}\right)^2 + 1}\right] + \sum_{n=1}^{\infty} \ln\frac{(ns)^2 + \nu^2}{(ns)^2 + \mu^2},$$

where $\nu = h_0 + h - \frac{d}{2}$, $\mu = h_0 - h + \frac{d}{2}$. (3)

(symbols explained in Fig. 6), confirmed, in general, the experimental results. The relationships between the thermal resistance, heat flow and the parameter $\frac{d}{s}$ are analyzed. It is concluded that the efficiency of cooling increases with the diameter of ducts, for the same flow of the cooling medium; it decreases, however, with increasing duct pitches and decreasing distances between the ducts and the heated surface. Relative thermal resistance, defined as the part of the heat flow absorbed by the cooling medium through



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the surfaces of halves of ducts on the side opposite to the heated surface, is the criterion of efficiency for a given system of ducts. There are 16 figures, 1 table and 3 Soviet-bloc references.

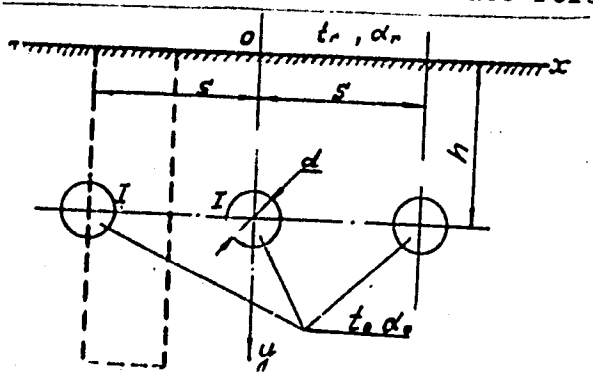


Fig.6

Mathematical determination of temperature field. $R_0$ - geometrical factor of thermal resistance; R - one of the endless series of ducts in semi-limited body



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D203/D302

26.2120

AUTHORS: Kapinos, V. M. and Il'chenko, O. T.

TITLE: Calculating thermal resistance of blade root joints

SOURCE: Khar'kov. Politekhnicheskiy institut. Trudy. v. 29, no. 2, 1960. Parovyye i gazovyy turbiny, 163-168

TEXT: The authors give a method for the above based on the solution of contact problem conductivity. The method also enables one to determine the temperature distribution in the root joint. The solution is obtained first for a simple swallow tail root. Calculated and experimental values of thermal resistance of three different types of root joints are then compared and the agreement is found to be good. Measured and calculated temperature distributions of the contacting surfaces do not coincide. The divergence is supposed to be due to the inaccuracy of the determination of the thermal conductivity coefficient which depends, in particular, on compression pressure. A fir-tree root can be calculated by applying the solutions of former equations to each contact segment separate-

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ly and equating temperatures and heat flows at the junctions. However, it is much simpler to use the same solution as for the swallow-tail root and a mean coefficient of heat transfer. The temperature field was obtained by electro-thermal analogy. A graph gives calculated and measured temperatures. There are 4 figures, 1 table and 6 references: 5 Soviet-bloc and 1 non-Soviet-bloc.



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"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000520420018-9

KAPINOS, V.M.

Heat transfer from a freeling rotating nonuniformly heated disk. Inzh.-fiz.zhur. 6 no.3:12-20 Mr '63. (MIRA 16:4)

1. Politekhnicheskiy institut imeni V.I.Lenina, Khar'kov.
(Heat—Transmission)

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L 17834-63 EPR/EPF(c)/EWT(1)/EPF(n)-2/BDS AFFTC/ASD/IJP(C)/SSD
Ps-4/Pr-4/Pu-4 WW
ACCESSION NR: AP3004736 S/0170/63/006/008/0028/0036 71 70

AUTHOR: Kapinos, V. M.

TITLE: Determination of the boundary heat-transfer conditions in turbomachines 21

SOURCE: Inzhenerno-fizicheskiy zhurnal, v. 6, no. 8, 1963, 28-36

TOPIC TAGS: turbine, gas turbine, heat transfer, startup, rotor disk, housing, regular temperature regime, transient operating condition

ABSTRACT: Approximate methods are given for calculating the boundary conditions of heat transfer during turbine startup or shutdown from steady and unsteady temperature fields measured on the surfaces of basic parts of steam and gas turbines. The following parts were investigated. 1) Single-disk and drum rotors: The heat transfer coefficients are determined separately on the cylindrical and flat surfaces of constant-thickness disks. It is assumed that heat transfer coefficients and the temperatures of the gas differ from those of the surfaces. 2) Disk rotor: Because of small transverse temperature gradients, the application of the method used for calculating drum disks may give serious errors; therefore this problem is treated as one-dimensional. 3) Cylindrical and

Card 1/2

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ACCESSION NR: AP3004736

spherical turbine housings: A system of equations is given for calculating the temperature field of an insulated cylindrical turbine housing under a regular temperature regime. The assumption of the one-dimensional temperature field is based on the fact that the thickness of the housing is much smaller than its length and the heat transfer conditions are practically the same along its entire length. 4) Rotor and stator blades and shaft: Conditions on the surfaces of blades and shaft are calculated on the basis of the solution of a one-dimensional heat-transfer problem for a bar of constant cross section. 5) Disk and blade: The steady-state temperature distribution is calculated by the heat transfer equations for a symmetrically cooled disk and for cylindrical surfaces. The heat transfer coefficient for rotor and stator blades is determined analogously as that for a disk. The approximate method of heat transfer measurement is less accurate than the calorimetric method, but it may be used to determine heat transfer in turbine installations under actual operating conditions. Orig. art. has: 2 figures and 40 formulas.

ASSOCIATION: Politekhnicheskiy institut im. V. I. Lenina, Khar'kov (Polytechnic Institute)

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L 14401-63 EWP(r)/EPF(c)/EWT(1)/EPF(n)-2/EDS AFFTC/ASD/SSD Pr-4/Pu-4
IJP(C)

ACCESSION NR: AP3003047 S/0170/63/000/006/0045/0053

AUTHOR: Kapinos, V. M. (Kharkov) 65

TITLE: Heat transfer of a disk and a screen with a nonuniform temperature distribution on the heat exchange surfaces

SOURCE: Inzhenerno-fizicheskiy zhurnal, no. 6, 1963, 45-53

TOPIC TAGS: Heat transfer coefficient, heat exchange

ABSTRACT: Formulas for calculating the heat transfer coefficients of a disk and a screen are derived from an approximate theoretical solution and the results of an experimental investigation of the heat transfer of a freely rotating disk. The results indicate that screen cooling is just as efficient as radial air cooling. Original article has: 44 formulas and 3 figures.

ASSOCIATION: Politekhnicheskiy Institut im. V. I. Lenina, Kharkov (Polytechnic Institute)

SUBMITTED: 15Sept62 DATE ACQ: 22Jul63 ENCL: 00
SUB CODE: PH NO REF SOV: 006 OTHER: 004
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"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000520420018-9

KAPINOS, V.M., kand. tekhn. nauk; NIKITENKO, N.I., inzh.

Determination of convective heat transfer in the combustion chambers of gas turbine systems. Teploenergetika 10 no.8: 19-24 Ag '63. (MIRA 16:8)

1. Khar'kovskiy politekhnicheskiy institut.
(Gas turbines)

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000520420018-9"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000520420018-9

ACCESSION NR: AP4011532 S/0170/64/000/001/0003/0011

AUTHOR: Kapinos, V. M.

TITLE: Heat transfer between a turbine rotor and a coolant flowing radially

SOURCE: Inzhenerno-fizicheskiy zhurnal, no. 1, 1964, 3-11

TOPIC TAGS: heat transfer, turbine rotor, radial gas cooling, drum rotor, disk rotor, temperature distribution, heat transfer coefficient

ABSTRACT: Heat transfer between a rotating disk or drum and a gaseous coolant flowing radially under turbulent conditions is studied. Flow conditions in the coolant injected at the hub and moving in a narrow space across the face of the rotor are discussed. Approximate analytical solutions (in terms of Nusselt numbers) are obtained for the local and average heat transfer coefficients, taking into account the radial temperature gradient. The temperature distribution in a thin disk is calculated approximately. Approximate relations are obtained for the local and average heat transfer coefficients which avoid successive approximations. Orig. art. has: 2 figures and 30 formulas.

ASSOCIATION: Politekhnicheskiy institut im. V. I. Lenina, Khar'kov (Polytechnical Institute)

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L 40313- EOI-1 /EPF(c)/EPF(n)-2/EWT(m)/EPP Pr-4/Ps-4/Pu-4 WW

AP4044510

AUTHOR: Kapinos, V. M.

21

Flux heat exchange in a gap between

SOURCE: AN SSSR. Izv. Energetika i transport, no. 4, 1964, 511-521

TOPIC TAGS: flux heat exchange, heat exchange, gas turbine cooling system, analogy, rotating disk, flux

ABSTRACT: Approximate solutions obtained by the Reynolds analogy are considered

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the center. These conditions are encountered rather frequently in contemporary gas turbines. Data on flux torsion which may be used to calculate pressure

the radial channels of a gas turbine

None

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"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000520420018-9

KAPINOS, V.M., kand. tekhn. nauk; BUBLIKOV, Ye.I., kand. tekhn. nauk; MATSEVITNYY, Yu.M., inzh.; GOLOSHCHAPOV, V.N., insh.; PUSTOVALOV, V.N., insh.

Temperature distribution in the rotor and internal cylinder of a cooled steam turbine. Teploenergetika 11 no.7:32-37 Jl '64. (MIRA 17:8)

1. Khar'kovskiy politekhnicheskiy institut im. V.I. Lenina.

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"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000520420018-9

L 35035-65 EWT(1)/EPF(c)/EPF(n)-2/EIR/EWG(m)/T/EPA(bb)-2/EPA(1) Pr=4/Pa=4/Pu=4

ACCESSION NR: AP5002234 S/0143/64/000/011/0085/0092

AUTHOR: Kapinos, V. M. (Candidate of technical sciences)

TITLE: Hydraulic resistance and heat exchange of a free-rotating disk and hub

SOURCE: IVUZ. Energetika, no. 11, 1964, 85-92

TOPIC TAGS: hydraulic resistance, heat transfer, turbomachine

ABSTRACT: On the basis of Western and Soviet data, these formulas for the heat-exchange coefficient (HEC) are developed:

for local HEC: $$Nu_{\text{м}} = 0{,}0181\, Re_{\text{м}}^{0.8} \frac{(t_{\text{д}} - t_{\text{в}})^{0.25} r^{0.25}}{\left[\int_{r_0}^{r} (t_{\text{д}} - t_{\text{в}})^{1.25} r^{2.25} dr\right]^{0.2}}$$

for average HEC: $$Nu = 0{,}0226\, Re^{0.8} \frac{\left[\int_{r_0}^{R} (t_{\text{д}} - t_{\text{в}})^{1.25} r^{2.25} dr\right]^{0.8}}{R^{0.6} \int_{r_0}^{R} (t_{\text{д}} - t_{\text{в}})\, r\, dr}$$

Card 1/2

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"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000520420018-9

ACCESSION NR: AP5002234

The formulas are further simplified to cover a [illegible] that [illegible]. The results of calculations based on the above formulas agree well with the experimental [illegible] obtained by E. G. Cobb [illegible]

[illegible]

ASSOCIATION: Khar'kovskiy politekhnicheskiy institut im. V. I. Lenina (Khar'kov Polytechnic Institute)

SUBMITTED: 06Dec63 ENCL. [illegible] SUB CODE: FR

NO REF SOV: 007 OTHER: 006

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000520420018-9"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000520420018-9

EWP(m)/EWT(1)/EPF(c)/EPF(n)-2/EWP(m)/EWA(d)/EPR/FCS(k)/EWA(1)

$$\psi(r, z) = \frac{\quad}{kr^2}, \quad \psi(r, z) = \frac{\quad}{kr^2}, \quad \psi(r, z) = \frac{\quad}{kr^2} \qquad (2)$$

Card 1/3

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"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000520420018-9

AP5002027

represented by the 1/7 power law.

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000520420018-9"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000520420018-9

Author: Politekhnicheskiy institut im. V. I. Lenina. g. Khar'kov (Khar'kov Polytechnic Institute)

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000520420018-9"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000520420018-9

L 41781-65 EWT(d)/EWT(1)/EWT(m)/EWP(w)/EPF(c)/EPF(n)-2/EWG(m)/EPR Pr-4/

TITLE: Heat exchange between a disc rotating in a stator and a radially flowing coolant

SOURCE: Inzhenerno-fizicheskiy zhurnal, v. 8, no. 1, 1965, 48-52

TOPIC TAGS: heat exchange, heat transfer, Reynolds analogy, local heat transfer coefficient, Reynolds number, kinematic factor

ABSTRACT: This is a continuation of earlier work by the author (IFZh, No. 1, 1964) [illegible] the flow of a cooling medium in a gap between a disc and a stator, [illegible] towards the periphery, without [illegible] twisting of the fluid. The [illegible] the rotating disc [illegible]

[illegible] gap. The local heat-exchange [illegible] analogy, assuming that the temperature [illegible]

Card 1/2

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AP5005763

... of the disc, and that ...

... figures and 10 formulas.

... Polytechnicheskiy institut ...

17Apr64 ENCL: ... SUB CODE: TD, MS

Card 2/2

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"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000520420018-9

L 50510-65 EWT(1)/EWP(m)/EPF(c)/EPF(n)-2/EWG(m) [illegible] Pd-1 Pr-4

[illegible] M

[illegible] disk [illegible]

21

[illegible] Aviatsionnaya tekhnika, no 2 1965 [illegible]

[illegible] gas turbine, turbine cooling system, gas dynamics, heat exchange, turbine disk cooling

**ABSTRACT: Heat exchange between a heated rotating disk and a cooling medium flowing** radially from the center to the periphery in the clearance between the disk and the [illegible] encountered in gas turbines with cooled [illegible] Flow in a clearan[illegible]

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boundary conditions for individual cases are examined. Expressions are derived for the determination of boundary layer thickness and for the dimensionless stress of friction and the coefficient of the moment of resistance. The Reynold's analogy is employed to determine the heat exchange factor. At a Prandtl number of Pr = 1 and a quadratic distribution for the temperature head along the radius of a freely rotating

Card 1/2

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similarity in the profiles

similar in the case considered by the author, provided the temperature head is [illegible] from the initial temperature of the cooling medium. Functions for the [illegible] of friction stress, the coefficient of the moment of resistance and [illegible] heat exchange factors were [illegible]

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"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000520420018-9

ASSOCIATION: none

SUBMITTED: 27Oct64 ENCL: 00 SUB CODE: PR, TD

NR REF SOV: 009 OTHER: 003

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000520420018-9"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000520420018-9

KAPINOS, V.M., kand. tekhn. nauk; MATSEVITYY, Yu.M., inzh.

Solution of a problem on steady heat conduction with consideration of the dependence of the thermal conductivity coefficient on temperature using a diagram method. Izv. vys. ucheb. zav.; energ. 8 no.5:77-83 My '65. (MIRA 18:6)

1. Khar'kovskiy politekhnicheskiy institut imeni Lenina. Predstavlena kafedroy turbinostroyeniya.

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000520420018-9"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000520420018-9

L 1453-66 EWT(1)/EPF(c)/ETC/EPF(n)-2/EWG(m) WW

ACCESSION NR: AP5016344 UR/0281/65/000/003/0111/0120

621.165

41, 35, 13

AUTHOR: Kapinos, V. M. (Khar'kov)

TITLE: Effect of the radial gradient of the relative peripheral component of velocity upon the heat exchange when a gas flows between two rotating disks

21,44,55

SOURCE: AN SSSR. Izvestiya. Energetika i transport, no. 3, 1965, 111-120

TOPIC TAGS: gas turbine, heat exchange

23,44,55

ABSTRACT: The cooling-air/gas heat-exchange problem is approximately solved for the case of an arbitrary prewhirl of the air entering the gap between two disks rotating with the same angular velocity; the air rate-of-flow is also arbitrary. Such a problem is encountered in calculating the heat-exchange coefficients for the side surfaces of cooled disks in gas turbines. Formulas describing the boundary-layer thickness, friction stress in the disks, local and average heat-exchange coefficients are developed. The formulas are verified against known

Card 1/2

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"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000520420018-9

L 31898-66 EWT(1)/EWP(m)/EWT(m)/ETC(f)/EWP(v)/T-2/EWP(k) IJP(c) WW/EM

ACC NR: AP6011793 SOURCE CODE: UR/0147/66/000/001/0123/0129

AUTHOR: Kapinos, V. M.

ORG: none

66
B

TITLE: Convective heat exchange in a closed space between two rotating discs under turbulent flow conditions

SOURCE: IVUZ. Aviatsionnaya tekhnika, no. 1, 1966, 123-129

TOPIC TAGS: heat transfer, turbulent flow, boundary layer, Nusselt number

ABSTRACT: The author uses the methods of dimensional analysis for deriving a closed system of equations describing heat exchange between two discs which are evenly heated along the radii and rotate at angular velocity ω. The temperatures of the discs are assumed to be unequal. It is further assumed that Archimedean lift moment is the prime moving force for the flow in the boundary layer. Power functions are given for velocity and temperature profiles during eddy flow in the boundary layer from the center to the periphery. The boundary conditions for these profiles are given. The thicknesses of the thermal and hydrodynamic boundary layers are assumed to be equal since the liquid moves under free convection only in the region of temperature perturbation. The Nusselt number is determined by averaging the local coefficients of heat transfer along the heat transfer surface. Convective heat exchange in the field of centrifugal forces

UDC: 629. 194.33: 536. 244

Card 1/2

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"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000520420018-9

L 31898-66

ACC NR: AP6011793

is determined from the Grashof number which takes a special form in this case. Equations are also given for calculating the heat exchange in a disc where the flow in the boundary layer is from periphery to center. Mean temperature differences are used for calculating the Grashof number, average heat dissipation and heat transfer coefficients. The limits of applicability of the formulas are discussed. Orig. art. has: 2 figures, 29 formulas.

SUB CODE: 20 SUBM DATE: 28Apr65/ ORIG REF: 006/ OTH REF: 001

Card 2/2

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000520420018-9"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000520420018-9

ACC NR: AP6036858 SOURCE CODE: UR/0147/66/000/004/0075/0080

AUTHOR: Kapinos, V. M.

ORG: none

TITLE: Heat transfer by natural convection in a closed cavity between two disks in a centrifugal force field in a laminar flow regime

SOURCE: IVUZ. Aviatsonnaya tekhnika, no.4, 1966, 75-80

TOPIC TAGS: convective heat transfer, [redacted] turbine cooling, laminar boundary layer, gas turbine, turbine rotor, laminar flow

ABSTRACT: The problem of natural convective heat transfer is being encountered in determining temperature fields of gas turbine rotors. This article presents an analysis of heat transfer between uniformly heated disks under the assumption that the gap between the disks is quite large to prevent the contact of boundary layers and that the flow in the boundary layers is laminar. The following formula is derived for calculating the mean heat transfer coefficient between disks:

$$k = \frac{\alpha_1 \alpha_2}{\alpha_1 + \alpha_2}$$

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"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000520420018-9

ACC NR: AP6036858

Where $\alpha_1$ and $\alpha_2$ are local heat transfer coefficients for the individual disks calculated from the heat balance equation. The maximal value of the Gr number at which the boundary layer flow on the disks remains laminar was found to be Gr $\approx 7 \times 10^7$. Orig.art.has: 1 figure and 19 formulas.

[WA-76]

SUB CODE: 20,21/ SUBM DATE: 08May65/ ORIG REF: 001

Card 2/2

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000520420018-9"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000520420018-9

ACC NR: AT7003558 (N) SOURCE CODE: UR/3240/66/000/001/0027/0033

AUTHORS: Kapinos, V. M.; Pustovalov, V. N.

ORG: Kharkov Polytechnic Institute (Khar'kovskiy politekhnicheskiy institut)

TITLE: Built-in alpha-calorimeter for the determination of heat transfer coefficients at elevated temperatures

SOURCE: Kharkov. Politekhnicheskiy institut. Energeticheskoye mashinostroyeniye, no. 1, 1966. Teploobmen i gazodinamika (Heat transfer and gas dynamics), 27-33

TOPIC TAGS: calorimeter, calorimetry, heat transfer, heat transfer coefficient

ABSTRACT: A general discussion of the theory and application of built-in alpha-calorimeters is presented. An alpha-calorimeter specifically designed for determining heat transfer coefficients at high temperatures is described and its schematic is presented. The performance of the calorimeter was evaluated after the method of V. M. Kapinos and N. N. Nikitenko (Teploenergetika, 1963, No. 8). The experimental data can be represented by the equation

$$Nu_f = 0.032\, Re_f^{0.8},$$

and are graphically compared with the exact dependence in Fig. 1. The authors conclude that the calorimeter is suitable for determining heat transfer coefficients at elevated temperatures.

Card 1/2

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"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000520420018-9

ACC NR: AT7003558

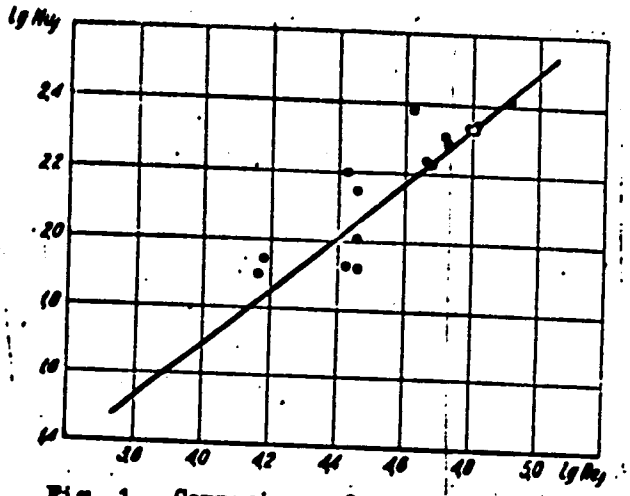


Fig. 1. Comparison of experimental data with the exact dependence $Nu_f = f(Re_f)$

Orig. art. has: 4 graphs and 16 equations.

SUB CODE: 14/ SUBM DATE: none/ ORIG REF: 020/ OTH REF: 003

Card 2/2

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000520420018-9"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000520420018-9

KAPINOSOV, V. P.: Master Tech Sci (diss) --- "Autoclave lye-loess material with organic filler". Kiev, 1958. 15 pp (Min Higher Educ Ukr SSR, Kiev Construction Engineering Inst), 150 copies (KL, No 2, 1959, 121)

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000520420018-9"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000520420018-9

KAPINSKA, Eugenia

SKURSKI, Adam; KAPINSKA, Eugenia; WIECZOREK, Zbigniew

Behavior of BCG strains of various origin in phagocytic reaction in vitro. Arch. immun. ter. dosw. 5:21-35 1957.

1. Instytut Immunologii i Terapii Doswiadczalnej PAN we Wroclawiu (Dyrektor: prof. dr. St. Slopek) Dzial Bakteriologii i Antybiotykow (Kierownik: prof. dr. St. Slopek)

(BCG VACCINATION
behavior of BCG strains of various origin in phagocytic reaction in vitro (Pol))

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000520420018-9"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000520420018-9

SKURSKI, Adam; KAPIESKA, Eugenia; WIECZOREK, Zbigniew; MORDARSKA, Halina

Phagocytosis of virulent & avirulent acid-fast tuberculosis bacilli in vitro. Arch. immun. ter. dosw. 5:37-57 1957.

1. Instytut Immunologii i Terapii Doswiadczalnej PAN we Wroclawiu (Dyrektor: prof. dr St. Slopek). Dzial Bakteriologii i Antybiotykow (Kierownik: prof. dr. St. Slopek)

(MYCOBACTERIUM TUBERCULOSIS
phagocytosis of virulent & avirulent acid-fast tuberc. bacilli in vitro (Pol))

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000520420018-9"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000520420018-9

... zh. Matematika, Abs. 12B2...

... Kapishev, K. K., Kharasakhal, V. Kh.

... solutions of differential ... a small ...

... SOURCE: Sb. tr. soiskateley i aspirantov. M-v ... vysh. i sredn. spets. ... Kaniya KazSSR, v. 1, no. 1, 1963, 30-32

... differential equation, almost ... differential equation, small parameter

TRANSLATION: The system

$$\frac{dx_s}{dt} = f_s(t, x_1, \ldots, x_n, x)$$

$$a\frac{dx}{dt} = F(t, x_1, \ldots, x_n, x, \ldots)$$

... F are continuous and provide existence ... in the region

Card 1/2

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"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000520420018-9

ACCESSION NR: AR5006734

$-\infty < t < +\infty$, has an almost

B. Bylov.

ENCL

MA

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"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000520420018-9

ACC NR: AP7007055 . SOURCE CODE: UR/0031/66/000/006/0042/0047

AUTHOR: Kapishev, K. K.
ORG: none

TITLE: Quasiperiodic solutions of nonlinear systems of differential equations containing a small parameter

SOURCE: AN KazSSR. Vestnik, no. 6, 1966, 42-47
TOPIC TAGS: differential equation system, nonlinear differential equation
SUB CODE: 12

ABSTRACT: A study is made of ordinary differential equations whose right-hand sides depend on a small parameter. The specific case examined is one in which the right-hand sides are discontinuous functions of the parameter and one which has not been treated yet in the literature.

The system of equations studied is

$$Dx_s = F_s(u_1, \ldots, u_m, x_1, \ldots, x_n) \quad (s = 1, \ldots, n),$$

where $Dx_s = (\ x_s/\ u_1) + (\ x_s/\ u_2) + \ldots + (\ x_s/\ u_m)$, and function $F_s$ is is continuous with continuous partial derivatives for all finite values of $u_j$ and $x$. Under certain conditions the given system becomes a system of ordinary derivatives.

Card 1/2

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"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000520420018-9

ACC NR: AP7007055

A simplified system of differential equations is then constructed and three theorems are given and proved. Orig. art. has: 14 formulas.

[JPRS: 38,417]

Card 2/2

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"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000520420018-9

L 06255-67 EWT(1)/EWT(m)/EWP(t)/ETI IJP(c) JD

ACC NR: AP6031959 SOURCE CODE: UR/0051/66/021/003/0332/0339

AUTHOR: Plachenov, B. T.; Avdonin, V. P.; Glinin, V. P.; Kapishevskiy, V.; Mikhal'chenko, G. A.

ORG: none

28

B

TITLE: Radioluminescence of NaCl single crystals

SOURCE: Optika i spektroskopiya, v. 21, no. 3, 1966, 332-339

TOPIC TAGS: sodium chloride, radioluminescence, thermoluminescence

ABSTRACT: The spectra and radioluminescence yield of NaCl crystals were studied in the 83-540°K range. The storage of current carriers in the crystals under the influence of beta irradiation and the effect of this storage on the radioluminescence yield were also investigated. A special device permitting a combined study of the optical and electric properties of single crystals in the 83-700°K range was constructed for these purposes. The presence of a relationship between the radioluminescence yield and the thermoluminescence of NaCl crystals was observed, particularly in the 170-213°K range: a shift in the position of the maximum of the radioluminescence spectrum and the presence of thermoluminescence maxima in the same temperature range indicate that current carriers become stored in the immediate vicinity of the luminescence center. It is concluded that the localization of charge in the NaCl crystal produces thermoluminescence and has an even stronger influence on the radioluminescence. This influence is

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"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000520420018-9

L 06255-67

ACC NR: AP6031959

also thought to be present in the luminescence of other alkali halide crystals. Orig. art. has: 8 figures.

SUB CODE: 20/ SUBM DATE: 06Apr65/ ORIG REF: 004/ OTH REF: 005

Card 2/2

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000520420018-9"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000520420018-9

ACC NR: AP6033439 SOURCE CODE: UR/0051/66/021/004/0460/0465

AUTHOR: Plachenov, B. T.; Avdonin, V. P.; Kapishevskiy, K.; Mikhal'chenko, G. A.

ORG: none

TITLE: Radioluminescence flash in NaCl crystal

SOURCE: Optika i spektroskopiya, v. 21, no. 4, 1966, 460-465

TOPIC TAGS: radioluminescence, sodium chloride, activated crystal, luminor, low temperature effect, radiation effect

ABSTRACT: This is a continuation of earlier work dealing with low-temperature radioluminescence in crystal phosphors based on NaCl, KCl, and KBr (Izv. AN SSSR ser. fiz. v. 29, 40, 1965 and earlier), where it was reported that exposure to beta or gamma radiation at low temperatures, followed by heating and cooling, makes the crystal phosphor capable of producing a flash of radioluminescence upon excitation by nuclear radiation. The present paper presents results of such a flash of beta luminescence of inactivated NaCl single crystals. The investigation was made in a vacuum chamber containing a source of beta particles (activity 0.5 or 2 Cu). The light was detected with photomultipliers and the resistivity was measured with the aid of an automatic amplifier and plotter. The tests consisted of measuring the depend-

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"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000520420018-9

ACC NR: AP6033439

ence of the radioluminescence flash on the irradiation time, the temperature dependence of the flash, spectra of the flash and of the stationary radioluminescence, and the temperature dependences of the thermoluminescence before and after the flash and after annealing. The results lead to the conclusion that the radioluminescence flash is due to the storing of holes by the activator levels after partial annealing of the crystal. In inactivated NaCl crystals, the principal role in the stationary radioluminescence is played by electron-recombination luminescence. Orig. art. has: 8 figures.

SUB CODE: 20/ SUBM DATE: 10Apr65/ ORIG REF: 004

Card 2/2

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000520420018-9"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000520420018-9

KAPISHNIKOV, A.L.; SADRISLAMOV, M.M.; KOLGANOV, V.I.

Using field data for calculating oil recovery factors. Trudy VNII no.24:141-156 '59. (MIRA 13:5)
(Petroleum geology)

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000520420018-9"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000520420018-9

KAPISHNIKOV, A.L.; KOLGANOV, V.I.

Analysis and prospects for developing the oil pool in the layer $B_2$ of the Zol'nyy Ovrag field. Trudy Giprovostoknefti no.3:214-232 '61. (MIRA 14:12)

(Kuybyshev Province--Oil fields--Production methods)

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000520420018-9"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000520420018-9

KAPISHNIKOV, A.L.; KOLGANOV, V.I.; YEGURTSOV, N.N.

Analysis of the development of the oil pool in the layer $B_2$ of the Strel'nyy Ovrag field. Trudy Giprovostoknefti no.3:233-244 '61. (MIRA 14:12)

(Kuybyshev Province--Oil fields--Production methods)

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000520420018-9"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000520420018-9

KAPISHNIKOV, A.L.; KOLGANOV, V.I.

Analysis of the oil pool in layer $B_2$ of the Zol'nyy Ovrag field and prospects for its development. Trudy Giprovostoknefti no.3: 214-232 '61. (MIRA 16:7)

(Samara Bend--Oil reservoir engineering)

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000520420018-9"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000520420018-9

KAPIZHNIKOV, A.L.; KOLGANOV, V.I.; YEGORTSOV, N.N.

Analysis of the development of the oil pool in layer $B_2$ of the Strel'nyy Ovrag field. Trudy Giprovostoknefti no.3:233-244 '61. (MIRA 16:7)

(Samara Bend—Oil reservoir engineering)

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000520420018-9"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000520420018-9

KAPISHNIKOV, A.L.; KOLGANOV, V.I.

Studies of oil recovery on the fields of the Samara Bend. Trudy Giprovostoknefti no.5:102-117 '62. (MIRA 16:8)

(Samara Bend--Oil reservoir engineering)

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000520420018-9"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000520420018-9

KAPISINSKA, V.

CZECHOSLOVAKIA/Analytical Chemistry - Analysis of Inorganic Substances. E-2

Abs Jour : Ref Zhur - Khimiya, No 8, 1958, 24760

Author : Singliar, M., Kapisinska, V.
Inst : -
Title : Determination of Mercury in Catalysts Used in the Production of Vinyl Chloride.

Orig Pub : Chem. zvesti, 1957, 11, No 7, 411-417

Abstract : It was found that aqua regia extracts from activated charcoal (AC) 70.9-97.0% $HgCl_2$, and a subsequent extraction, once or twice, with 30% $H_2O_2$ permits a quantitative removal of $HgCl_2$ from AC. In the determination of Hg in AC, 2.5-3 g of comminuted sample are boiled, in an Erlenmeyer flask fitted with a reflux condenser, with 30 ml aqua regia until evolution of oxides of N ceases (about 2 hours); then 5 ml 30% $H_2O_2$ are added and boiling is continued for 1 hour. The condenser is flushed with water and the

Card 1/2 Vyskumny ustav acetyl. chem, Novaky, Czech.

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Titration determination of diaminophenyl disulfide. Chem prum 14 no.2: 93-94 F'64

1. Chemicke zavody J.Dimitrova, n.p., Bratislava.

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KAPISINSKA, V.; KOMPISOVA, A.

Qualitative and quantitative determination of sodium p-nitrochlorobenzene sulfonate in presence of sodium p-nitrodiphenylamino sulfonate. Chem prum 15 no.1:33-34 Ja '65.

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Study on cathodic phenomena during amalgam electrolysis. p. 494.
CHEMICKE ZVESTI. Bratislava. Vol. 9, no. 8, Oct. 1955.

SOURCE: East European Accessions List (EEAL), LC, Vol. 5, no. 3, March 1956

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"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000520420018-9

2999 Ethylene analyser [illegible]
(Vysaumny [illegible] acetylenovy [illegible]
Czechoslovakia Chem. Prdmysl 1957 [illegible] 9 88 [illegible]

67.—The principle and construction of a new ethylene analyser based on the estimation of heat evolved in the chlorination of [illegible]

[illegible]

in the table below give some [illegible] of the instrument

[illegible]

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CZECHOSLOVAKIA/Chemical Technology - Chemical Products and Their Application, Part 1. - Checking and Measuring Devices, Automatic Control. H-3

Abs Jour : Ref Zhur - Khimiya, No 14, 1958, 47079

Author : Zeno Kapisinsky
Inst : -
Title : Signaling Device of Hypochlorite Appearance in Caustic Soda.

Orig Pub : Chem. prumysl, 1957, 7, No 9, 485-487

Abstract : In order to check the capacity of NaOH solution to absorb $Cl_2$ from circulating gases, a device was developed, which gives a signal, when the oxidation potential of solutions, proportional to the concentration of $ClO^-$ ions, reaches a certain magnitude .

Card 1/1

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B

CZECHOSLOVAKIA/Physical Chemistry. Electrochemistry.

Abs Jour: Ref Zhur-Khim., No 5, 1959, 14777.

Author : Kapisinsky Z.
Inst :
Title : Study of Cathodic Effects in an Amalgam Electrolysis.

Orig Pub: Chem. zvesti, 1958, 12, No 6, 325-329.

Abstract: There was corroborated the assumption regarding the possibility of reducing the accelerating influence of foreign cations on the decomposition of a Na amalgam by combining these cations into complexes. Of various tested complex-forming substances, tannin (I) appeared the most favorable; its complexes do not decompose in a highly alkaline medium under the action of dissolved Cl and at temperatures below 90°.

Card : 1/2



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KAPISINSKY, Z.

COUNTRY : Czechoslovakia h-3
CATEGORY :

ABS. JOUR. : RZKhim., No. 20 1959, No. 71749

AUTHOR : Kapisinsky, Z.
INST. :
TITLE : Gas Analyzers in Chemical Industry

ORIG. PUB. : Techn. praca, 1955, 11, No 1, 24-25

ABSTRACT : Brief description of the design of a polarographic gas analyzer for $O_2$, graduated from 0 - 0.1 to 0 - 25% $O_2$, and of a gas analyzer based on determination of the heat of absorption, which have been developed at the Institute of Acetylene Chemistry in Novaki.

S. Lukyanov.

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Analyzer based on the heat of neutralization. Chem prum 12 no.4:195-197 Ap '62.

1. Slovnaft, n.p., Bratislava.

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KAPISINSKY, Z., dr. inz.

Economic importance of the automation and mechanization of laboratory work in the mineral oil industry. Automatizace 6 no.8:195-196 Ag '63.

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KAUFMAN, L.; KAPISZEWSKI, S.

Blood serum viscosity in vertebrates at their respective minimum and optimum temperatures. In English. Bul Ac Pol biol 8 no.9: 523-525 '60. (EEAI 10:7)

1. Department of Animal Breeding Biology, College of Agriculture, Lublin. Presented by L. Kaufman.
(BLOOD) (VERTEBRATES)

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MOSKVICHEV, Ye.I.; KAPIT, B.F.; LIPILIN, V.A.

Using the method of least squares to process telluorgrams.
Geofis. razved. no.9:74-80 '62. (MIRA 15:9)
(Electric prospecting)

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BROD, I.O., red.[deceased]; KAPIT, B.F., ved. red.; BRONZOVA, I.A., tekhn. red.

[Experience in applying mathematical statistics in the study of local structures in the Volga-Ural oil-bearing region] Opyt primeneniia matematicheskoi statistiki pri izuchenii lokal'nykh struktur Volgo-Ural'skoi neftegazonosnoi oblasti. Moskva, TsNIIITEINEFTEGAZ, 1962. 151 p. (MIRA 17:3)

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KAPITADZE, K.

Immunity in convalescents from diphtheria. Soob.AN Gruz.SSR 23 no.1:109-114 Jl '59. (MIRA 13:1)

1. Tbilisskiy gosudarstvennyy meditsinskiy institut. Predstavleno chlenom-korrespondentom Akademii I.Ya.Tatishvili.
(IMMUNITY) (DIPHTHERIA)

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KAPITAL'NYY, M.G.

Carbonate hardness and bicarbonate alkalinity. Rech. transp. 16 no.4:9 Ap '57. (MLRA 10:5)
(Feed water purification)

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TSIPARIS, I.N. [Ciparis, I.]; DZHEKCHIORYUS, L.M. [Dzerkciorius, L.]; KAPITAL'NYY, V.G.; RYBNIKOV, A.N.

Extractive rectification of raw acetic acid using sodium acetate. Gidrolis. i lesokhim. prom. 17 no.4:16-19 '64 (MIRA 17:7)

1. Litovskaya sel'skokhozyaystvennaya akademiya (for TSiparis, Dzhekshioryus). 2. Dmitriyevskiy lesokhimicheskiy zavod (for Kapital'nyy, Rybnikov).

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POPLAVSKIY, Yu.V., kand.tekhn.nauk; KAPITAL'NYY, V.G., inzh.

All-ceramic column with injection-type trays for the production of organic acids. Khim.mashinostr. no.3:11-13 My-Je '64. (MIRA 18:1)

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KAPITANAKI, I.A., Cand Med Sci — (diss) "Congenital and acquired false joints in children." Len, 1959, 20 pp (State Order of Lenin Inst for the Advanced Training of Physicians im S.M. Kirov) 200 copies (KL, 35-59, 116)



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On nasal-pharynx probe for dehilminthization of horses.

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Veterinary Bacteriological Lab., Station Sukhobezvodnoe, Gorki Railroad.

"More attention to the fight against helminthous diseases of the young."

SO: Vet. 24 (4) 1947, p. 18

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KAPITANAKI, M.V.

Dynamics of disease at various periods in the lives of ducks and methods for their prevention. Veterinariia 35 no. 7:66-69 Jl '58. (MIRA 11:7)

1. Kanevskaya meshrayonnaya vetbaklaboratoriya Krasnodarskogo kraya. Veterinariia 35 no. 7:66-69 Jl '58. (MIRA 11:7)
(Ducks--Diseases and pests)

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"Streptococcicosis of hens."

Veterinariya, Vol. 38, No. 12, December 1961, P. 37.

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KAPITANAKI, M.V., kand.veter. nauk; FEDORCHENKO, Ye.A., veterinarnyy vrach

Resistance of microbes to antibiotics. Veterinariia no.12:49-52 D '63. (MIRA 17:2)

1. Krasnodarskaya nauchno-issledovatel'skaya veterinarnaya stantsiya (for Kapitanaki). 2. Krasnodarskaya veterinarnaya laboratoriya (for Fedorchenko).

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Use of dry vaccines of fowl pasteurellosis from the AB and K strains. Veterinariia 41 no.10:32-33 O '64.

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BIBIKOV, F.A.; KAPITANAKI, M.V., kand. veter. nauk (Krasnodarskiy kray); SKOROBAGATCHENKO, I.V.

Veterinary hygienic expertise of poultry products. Veterinariia 41 no.10:86-87 O '64. (MIRA 18:11)

1. Nachal'nik veterinarnogo otdela Krasnodarskoy krayevoy veterinarnoy laboratorii (for Bibikov). 2. Zaveduyushchiy otdelom bolezney ptits Krasnodarskoy krayevoy veterinarnoy laboratorii (for Skorobagatchenko).

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Specific prophylaxis of infectious diseases in pheasants. Veterinariia 42 no.8:48-50 Ag '65.

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[Physiological and biochemical principles underlying increase in the productivity of plants] Fiziologo-biokhimichni osnovy pidvyshchennia produktyvnosti roslyn; pratsi. Kyiv, Derzhsil'hospvydav URSR, 1963. 458 p. (MIRA 16:10)

1. Ukrains'ka Respublikans'ka naukova konferentsiia molodykh uchenykh v haluzi fizioiogii roslyn, 1st, 1962.
2. Akademiya nauk Ukr.SSR i Vsesoyuznaya akademiya sel'skokhozyaystvennykh nauk imeni V.I.Lenina (for Vlasyuk).
(Plant physiology) (Plants, Cultivated)

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Efficient fertilizers produced from industrial wastes. Khim.prom. [Ukr.] no.1:26-28 Ja-Mr '64. (MIRA 17:3)

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KAPITANCHUK, V.A.

Second Ukrainian Scientific Conference on Problems of Plant Physiology and Biochemistry. Dop. AN URSR no.9:1256-1259 '64. (MIRA 17:11)

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