"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7

VNUKOV, A.K., kand.tekhn.nauk

Leaks in combustion chambers, their influence on the operation of boilers and simple control methods. Teploenergetika 7 no.3:44-48 Mr '60. (MIRA 13:5)

1. Yuzhnoye otdeleniye Gosudarstvennogo tresta po organizatsii i ratsionalizatsii elektrostantsiy.
(Boilers)

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7

SOV/96-59-7-5/26

AUTHORS: Vnukov, A.K., Candidate of Technical Sciences and Madoyan, A.A., Engineer

TITLE: The Automatic Control of Drum-type Ball Mills According to the Level of the Fuel in the Drum (Avtomatizatsiya sharovykh barabannykh mel·nits po urovnyu topliva v barabane)

PERIODICAL: Teploenergetika, 1959, Nr 7, pp 19-21 (USSR)

ABSTRACT: During the last year and a half many stations in the south of the country burning anthracite fines have introduced control of the loading of ball mills according to the level of fuel in the mill. Good results have been obtained even though the actual concept of fuel level is somewhat obscure. The word 'level' is used on the assumption that the milled fuel is in the lower part of the drum and behaves as a liquid. This concept has been used to explain the operation of the signalling devices, such as those illustrated in Figure 1, in the following way: two tubes through which air is blown are connected together externally by a differential pressure gauge. Inside the mill the lower tube is at a certain depth below

Card 1/6

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7

The Automatic Control of Drum-type Ball Mills According to the Level of the Fuel in the Drum

the level of fuel and the upper tube is in the air. The air in the lower tube has to overcome the resistance of the fuel layer and the magnitude of this resistance is proportional to the depth of immersion. Instead of pumping the air in from outside it may be induced by lowering the pressure in the mill. This induction method was used in studying the level in a mill type Sh-16 milling Donets anthracite fines. During the test the mill operated with a 28-ton load of balls, and the fuel residue on an 88-mesh sieve was 7 to 9%. The mill output could not be measured, but the fuel level in the mill was maintained constant by automatic control. During the test the upper tube remained fixed and different lower tubes were used so that the pressure-difference field could be measured in a number of places. The partial vacuum in the mill air-duct was 180 - 200 mm water; the pressure drops observed at different places on the section of the mill about 150 mm from the end of the drum are shown in Figure 2. A curve of pressure increase along the vertical diameter of the

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7

The Automatic Control of Drum-type Ball Mills According to the Level of the Fuel in the Drum

drum is shown in Figure 3. Above the fuel level the pressure drop is practically zero, and below the level the pressure drop increases rapidly to 100 mm water. Although the assumption that the fuel behaves as a liquid satisfactorily explains the operation of the device illustrated in Figure 1, it was found that the device continued to operate if the holes used to supply air to the tubes were stopped up. In order to investigate this question further, two tubes were introduced into the drum and differential pressure gauges connected between them, as shown in Figure 4. The mill was emptied before the test and at the start of the test the rate of coal delivery was sharply increased. As the load in the drum increased the partial vacuum in the lower tube steadily dropped to zero and after about 38 minutes there was a pressure difference of 110 mm water. The process of pressure increase was followed until there were signs that the mill was becoming overloaded. It will be seen from the results plotted in Figure 4 that the partial vacuum beyond the

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7

The Automatic Control of Drum-type Ball Mills According to the Level of the Fuel in the Drum

mill measured in the usual way varied little and was about 190 mm water. That in the upper tube also changed little and was 120 mm water. Two explanations of the facts are possible. If the fuel behaves as a liquid it may be supposed that the dust penetrates into the vertical part of the lower tube and compresses the air in it. Another explanation is that the pressure-drop reflects the actual air-pressure conditions within the drum. By putting a porous barrier in the end of the lower tube to prevent ingress of fuel it was shown that the first explanation does not hold. The air-pressure distribution in the drum can be explained as follows. As the fuel and balls rotate, the fuel is thrown to the far side of the balls, as shown in Figure 2. As the fuel falls back, the upper layers of fuel/air mixture compress the lower ones, so causing the observed pressure distribution. Air pressure is also set up by retardation of fuel particles and their movement relative to the air. As the quantity of fuel in the drum

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7

The Automatic Control of Drum-type Ball Mills According to the Level of the Fuel in the Drum

increases, the pressure starts to rise in the upper tube. In this case the pressure difference between the upper and lower tubes becomes almost constant, and does not depend on the air conditions in the drum. It will be seen from Figure 4 that changes in the ventilation of the mill had little effect on the pressure drop between the tubes. The effect is compared with the useful head during the circulation of a steam-water emulsion. In any case, there is a simple relation between the quantity of fuel in the drum and the pressure drop between the tubes, which provides a very convenient signal of fuel level. The best value of pressure-drop to be maintained should be determined from mill output tests. A mill automation arrangement based on this device was used at a southern power station. A schematic diagram of the equipment is shown in Figure 5. The tubes are 16 mm diameter and are supported at the point of entry into the drum; it is found that they do not become blocked, presumably because they vibrate. This scheme has a number of advantages over previous ones; in particular

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7

The Automatic Control of Drum-type Ball Mills According to the Level of the Fuel in the Drum

it is not necessary to maintain a constant partial vacuum in the mill and the fuel load can be controlled over a very wide range.
There are 5 figures and 2 Soviet references.

ASSOCIATION: Yuzhnoye otdeleniye ORGRES (The Southern Division of ORGRES)

Card 6/6

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7

VNUKOV, A.K., Cand Tech Sci -- (diss) "Certain ~~questions on~~ problems in the firing of high pressure cylindrical boilers" . ~~Lvov,~~ L'vov, 1957. 17 pp with ~~designs (diagrams)~~ sketches 22 cm (Min of Higher Education USSR. Mos Order of Lenin Power Engineering Inst im (V.M.) Molotov). 100 copies

(KL, 9-57, 101)

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7

VNUKOV, A. K.

AID P - 2038

Subject : USSR/Engineering

Card 1/1 Pub. 110-a - 11/14

Author : Vnukov, A. K., Eng.

Title : Experiments with the ignition of high-pressure boilers

Periodical : Teploenergetika, 4, 54-57, Ap 1955

Abstract : The article describes experiments made with the firing of high-pressure boilers of two different designs. The main factors which determine the distribution and variation of temperature in boilers were investigated. The author reports some observations on the uneven heating of watertubes and drums and recommends complete and early valve opening before commencement of ignition. Six diagrams.

Institution: None

Submitted : No date

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7

VNUKOV, A.K., kand. tekhn. nauk

Electric radiometer as an instrument for determining the thermal flow of radiant energy. Teploenergetika 5 no. 8:91-92 Ag '58. (MIRA 11:8)

(Radiometer)

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7

AUTHOR: Vnukov, A.K. (Cand.Tech.Sci.) SOV/90-58-10-6/25

TITLE: Temperature conditions and thermal stresses in high-pressure boiler drums during normal and accelerated shut-down.(Temperaturnyy rezhim i termicheskiye napryazheniya v barabanakh kotlov vysokogo davleniya pri obychnoy i uskorennoy ostanovke)

PERIODICAL: Teploenergetika, 1958, No.10. pp. 23-25 (USSR)

ABSTRACT: When a boiler cools down, heat exchange takes place between the walls of the drum, the surrounding atmosphere, and the substance filling the drum. The drum cools most rapidly from within. A cooling curve for the drum walls of a boiler type TP-230 is given in Fig.1; the theoretical curve (1) is calculated by equation 2. The experimental curve (2) shows that cooling is actually four or five times more rapid than indicated by curve (1). Hence, external cooling of the drum is of secondary importance and internal cooling predominates. This question is then considered in more detail. After disconnecting the boiler superheater, blow-down is continued for up to an hour, or even longer during accelerated shut-down. During this time, the boiler operates as a heat accumulator, so that the whole mass of water is cooled as the pressure falls. During a normal shut-down, the drum continues to deliver steam, which is condensed in the superheater tubes. Temperature changes of various points on the small and large drums of a boiler type TP-230 during shut-down are plotted in Fig.2. Typical curves of temperature difference along the length of the drum, and

Card 1/2

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7

round the perimeter, are given in Figs. 3, & 4, respectively. It is shown that, during normal cooling, temperature differences in the most massive part of the drum are not more than 20°C, and the corresponding thermal stresses are negligible. Tests of rapid shut-down, with increased output of steam to ensure cooling, show that temperature differences of 80 - 100°C can arise in the salty sections of the boiler (See Fig.5.). The corresponding stress conditions in the drum are estimated and the change in the maximum temperature difference during cooling is graphed in Fig.6. The cooling stresses are greatest only after the internal pressure stresses have become much reduced and, therefore, the total stress is not excessive. It is concluded that the cooling time of drum-type boilers could be cut to 5 - 6 hours without risk to the drum. There are 6 figures and 1 Soviet reference.

ASSOCIATION: Southern Division of ORGRES (Yuzhnoye Otdeleniye ORGRES)

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7

SOV/96-58-8-19/22

AUTHOR: Vnukov, A.K. (Candidate of Technical Science)

TITLE: An Electric-radiometer, an Instrument for determining the Thermal Flow of Radiant Energy (Elektricheskiy radiometr - pribor dlya opredeleniya teplovogo potoka luchistoy energii)

PERIODICAL: Teploenergetika, 1958, Nr 8, pp 91-92 (USSR)

ABSTRACT: In tests on furnaces and radiant heating-surfaces, measurements of intensity of heat flow are usually made by means of water calorimeters. A water supply is required and the method of measurement is rather complicated. A platinum-plate radiometer is somewhat simpler to use but also requires cooling water and periodic calibration. This article describes an instrument free from these defects; its operation is based on an equation of radiant-heat exchange, that is given. There is a fairly wide temperature range within which the temperature of the heated body has practically no influence on the heat flow. An equation is then written for the rate of temperature rise of a small thin plate insulated on one side. The equation used in the design of the instrument is based on these two formulae. Experimental curves of

Card 1/3

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7

An Electric-radiometer - an Instrument for determining the Thermal Flow of Radiant Energy

the temperature of the heated plate and the rate of change of temperature as functions of time are given in Fig 2. To make a measurement, the instrument, which has previously been cooled, is rapidly placed in the furnace or flue and the time required for the galvanometer needle to cover a certain temperature range is noted. The heat flux is then calculated from the design formula. The heated element is in the form of a disc insulated at the back and edges. A form of compensating guard plate is used, as illustrated in Fig 3, and there are radial compensating rings, as shown in Fig 4. A sectioned diagram with dimensions is given in Fig 5. The particular instrument illustrated was intended for measurements of the thermal loading of furnace

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7

An Electric-radiometer - an Instrument for determining the Thermal Flow of Radiant Energy

screens. Special calculations have shown that, with a thermal flux of 100,000 kcal/m^2hr, the total error of the instrument including the galvanometer does not exceed 3.5%, which is very satisfactory.

There are 5 figures, no literature references.

1. Radiometers--Design 2. Radiometers--Performance 3. Thermal radiation--Measurement 4. Mathematics--Applications

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7

VNUKOV, A.K., kand. tekhn. nauk

Increase in the heat-release rate of gas and mazut furnaces.
Energ. i elektrotekh. prom. no.1:5-8 Ja-Mr'64.
(MIRA 17:5)

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7

VNUKOV, A.K., kand. tekhn. nauk; SINYAKEVICH, B.G., inzh.; CHABAN, O.I., inzh.

Heat loss due to external cooling of high and very high capacity units. Teploenergetika 5 no.4:94-95 Ap '58. (MIRA 11:5)
(Boilers) (Steam turbines)

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7

VNUKOV, A. K.

91-58-7-6/27

AUTHORS: Dutikov, S.S.; Shevelev, A.A.; Vaytsman, V.M., Engineers and Vnukov, A.K., Candidate of Technical Sciences

TITLE: Exchange of Experience(Obmen opytom). The Automated Operation of Mills(Avtomatizatsiya raboty mel'nits).

PERIODICAL: Energetik, 1958, Nr 7, pp 19-20 (USSR).

ABSTRACT: In 1957, 5 drum ball mills (4 mills of "Sh-16" type and 1 biconical mill of "ShK-25" type) were automated according to the design suggested by Yuzhnoye otdeleniye ORGRES (the "ORGRES" South Branch Office). The following equipment was utilized: electronic controllers of "ER-III" type on 2 mills and electomechanical direct feedback columns of the "Energodetal' " plant on 3 mills. Their structural details and operation are described. The first experimental service of this automated system proved its operational stability and wide control range, as well as easy maintenance. The various requirements to be met for automating mills, such as good dust system, continuous aeration etc. are

Card 1/2

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7

outlined. The "dust level" automation of mills must guarantee a decrease in consumption of electric energy for the preparation of pulverized coal by 3 to 4 kwh per ton of milling. There are 2 diagrams.

1. Ball mills--Operation 2. Ball mills--Electronic controls

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7

VNUKOV, A.K.

DUTIKOV, S.S., inzh.; SHEVELEV, A.A., inzh.; VAYTSMAN, V.M., inzh.; VNUKOV, A.K., kand.tekhn.nauk

Automatic control of ball mill operation. Energetik 6 no.7: 19-20 Jl '58. (MIRA 11:10)
(Pulverizers) (Automatic control)

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7

VAYTSMAN, V.M., inzh.; VNUKOV, A.K., kand.tekhn.nauk; MARKIN, V.P., inzh.

Automation of the charging of fuel into ball mills. Elek.sta.29 no.3:85 Mr '58. (MIRA 11:5)
(Pulverizers)

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7

Vnukov A K

96-4-24/24

AUTHORS: Vnukov, A.K., Cand.Tech.Sc., Sinyakevich, B.G., Engineer and Chaban, O. I., Engineer.

TITLE: Thermal-losses resulting from external cooling of sets working at high and super-high steam conditions. (Teplovyye poteri ot naruzhnogo okhlazhdeniya blokov vysokikh i sverkhvysokikh parametrov).

PERIODICAL: Teploenergetika, 1958, No.4, pp.94-95. (USSR).

ABSTRACT: In 1957 the Southern Division of ORGRES tested the thermal insulation of a high-pressure set in the Pridneprovsk regional power station and of a super-high-pressure set in the Cherepetsk Power Station. Measurements were made of the thermal losses through the insulation and of the distribution of the losses between sets and equipment. Thermal losses from particular parts of the sets are tabulated. In the high-pressure unit, 1.26% of the total heat was passing through the insulation, and in the super-high-pressure sets 1.48%. Not all this heat is wasted because some returns to the boiler with the air blast. About 80% of the losses occur in the boiler-house. The losses are greater in the super-high-pressure set because the temperature is higher and the piping is longer. Considerable thermal losses occur through uninsulated

Card 1/2

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7

96-4-24/24

Thermal-losses resulting from external cooling of sets working at high and super-high steam conditions.

parts of fittings. These form about a quarter of all the thermal losses. Shrouding the insulation with aluminium sheet gives a small reduction in the heat loss. There is 1 table.

AVAILABLE: Library of Congress.

Card 2/2

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7

VNUKOV, A.K., kand. tekhn. nauk.

Review of L.B. Krol's book "Characteristics of the high-pressure boiler installation." A.K. Vnukov. Energetik 6 no.2:39-40 F '58. (MIRA 11:1)
(Boilers)
(Krol, L.B.)

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7

VNUKOV, A.K., inzh.; YAKUBENKO, A.A., inzh.

Drying boiler linings. Elek.sta. 29 no.1:89 Ja '58. (MIRA 11:2)
(Boilers--Drying)

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7

VNUKOV, A.K., kandidat tekhnicheskikh nauk.

Performance of metal in wall-type radiation steam superheaters.
Teploenergetika 4 no.9:45-48 S '57. (MLRA 10:8)

1. YuzhORGES.

(Superheaters)

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7

SOV/91-58-2-31/31

AUTHOR: Vnukov, A.K., Cand. of Techn. Sciences

TITLE: A Review of the Book by L.B. Krol' "Characteristics of High-Pressure Boiler Sets", published by the Gosenergoizdat, 1957 (Retsenziya na knigu L.B. Krolya "Osobennosti kotel'nykh agregatov vysokogo davleniya", Gosenergoizdat, 1957 g)

PERIODICAL: Energetik, 1958, Nr 2, p 39-40 (USSR)

ABSTRACT: The above mentioned book is reviewed.

Card 1/1

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7"

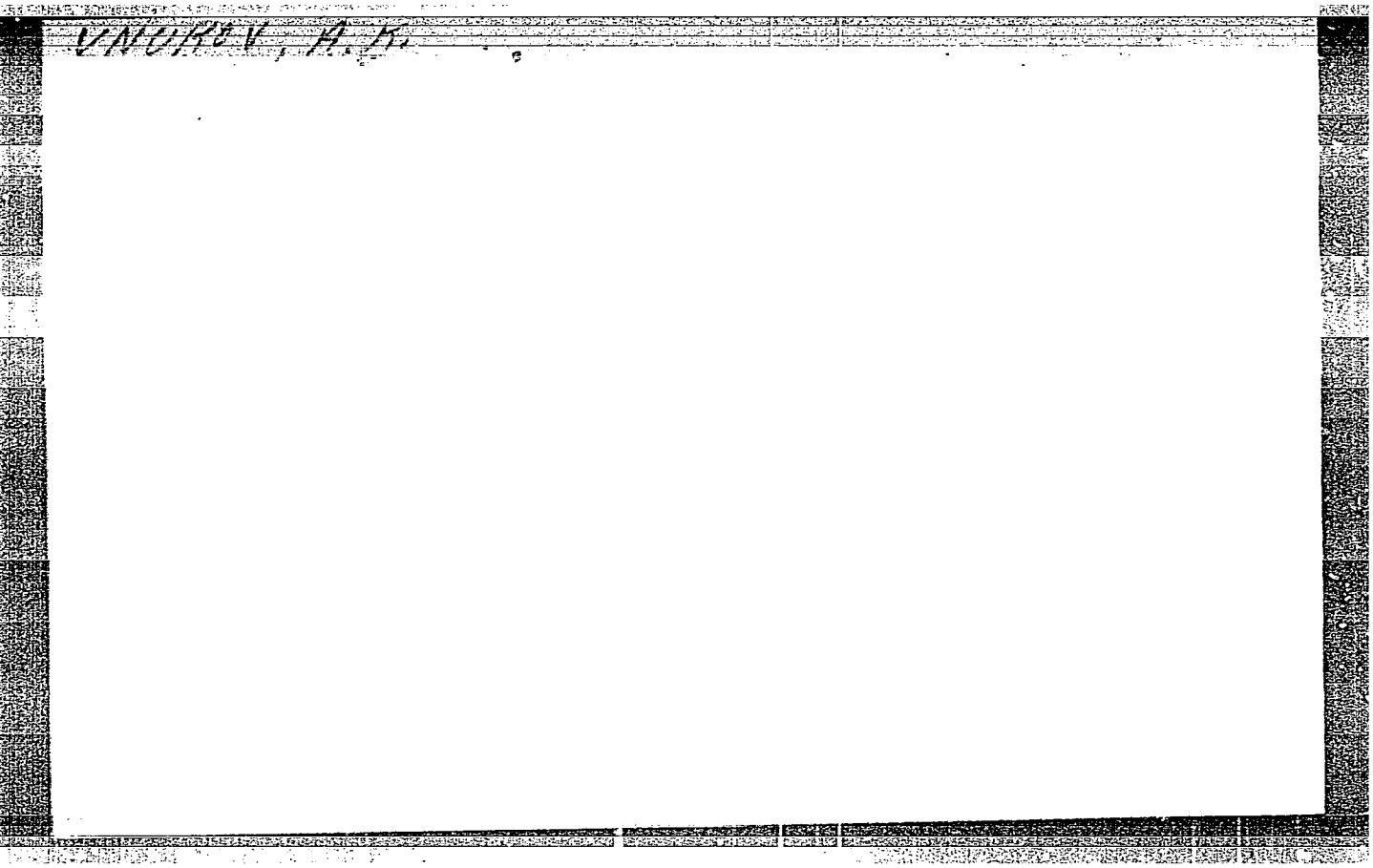
"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7

VNUKOV, A.K., kand.tekhn.nauk; SINYAKEVICH, B.G., inzh.; CHARAN, O.I., inzh.

Investigating heat losses to neighboring media in electric power plants equipped with high- and superhigh-pressure units. Elek. sta. 29 no.11:19-22 N '58. (MIRA 11:12)
(Electric power plants)

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7



APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7

AUTHORS: Yarema, S.Ya. (Eng.) and Vnukov, A.K. (Eng.) (Southern Division of ORGRES). 256

TITLE: On the question of the strength of boiler drums during starting and stopping. (K voprosu prochnosti barabanov kotlov pri puske i ostanovke).

PERIODICAL: "Teploenergetika" (Thermal Power), Vol.4, No.4, April, 1957, pp. 33 - 36 (U.S.S.R.)

ABSTRACT: According to existing standards in calculating the strength of boilers, temperature stresses that arise in the boiler walls during periods of starting up and shutting down are not taken into account. In operation the magnitude of the temperature stresses is limited by the permitted temperature differences. According to Soviet and some foreign standards the temperature difference between any two points in the drum should not exceed 30 to 50°C. This article gives an evaluation of the magnitude of temperature stresses and their influence on the total stresses in the cylindrical part of the drum. Measurements carried out whilst steam was being raised in boilers showed that the temperature field on the outside of the drum can be represented by a simple diagram. The temperature of the walls above water level practically coincides with the saturation temperature of the steam with which they are in contact and is thus uniform over the entire surface. Starting at the water surface and below, the drum wall temperature decreases

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7

On the question of the strength of boiler drums during starting and stopping. (Cont.)

linearly and in the lower part of the drum the water temperature is again constant. This simplified diagram is shown to be in good agreement with practical measurements. Analysis of the solution of problems on temperature stresses in the cylindrical part of a drum shows that in the middle of the drum the normal stress acting in an axial direction preponderates over the tangential and radial stresses. A formula is given for this stress but it is applicable only to the middle part of the drum. The simplified diagram of the temperature field is then applied to this formula to give an evaluation of the normal stress which is plotted as a function of the position on the drum. Analysis of the equations shows that the maximum stresses occur at the inflection points in the temperature distribution and the corresponding values are substituted in the expression for the stress. The absolute values for the temperature stresses corresponding to measured temperature distributions are tabulated. In individual cases the stresses reach the designed values. The stress due to the internal steam pressure must be added to the internal temperature stress and an expression is obtained for their sum. Finally, an expression is derived for the permissible temperature difference between two points on

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7

On the question of the strength of boiler drums during starting and stopping. (Cont.)

the drum with a given configuration of temperature field and safety factor. The equation is solved and the results are plotted on a graph, which is applicable to the drum of a boiler TP-170. With a safety factor of 1.65 the safe temperature difference at the commencement of firing may be 113°C. At the instant of connecting to the steam main (90 atm.) the temperature difference should not be greater than 85°C. With a safety factor of 1.11 the temperature difference at the start of firing is practically unlimited and at the end should not exceed 148°C. The temperature difference of 50°C permitted in certain standards corresponds to a safety factor 1.93 at a pressure of 100 atm. and of 3.68 at a pressure of 10 atm. The calculated results were verified by tests on a model of a boiler drum which is described. The surface temperatures of the model were measured with thermocouples and the stresses by resistance strain gauges. The temperature distribution on the circumference of the model is plotted alongside a curve obtained on a high pressure boiler drum. The distribution of axial thermal stresses in the model are plotted, the normal stresses measured along an arc in the middle part of the drum were quite small and are not shown in the graph. Results calculated from the

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7

On the question of the strength of boiler drums during starting and stopping. (Cont.)

temperature field of the model are plotted on the same graph. Good agreement is shown. 7 figures, 2 literature references (2 Russian).

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7

VNUKOV, A.K., inzhener; VOLKOVA, Ye.I., inzhener; PAVLIV, Yu.V., inzhener.

Measuring the temperatures in high-pressure boiler drums during firing. Energetik 3 no.12:10-11 D '55. (MLRA 9:2)
(Boilers)

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7

VNUKOV, A.K., inzhener.

Characteristics of a boiler installation equipped for rapid starting and shutting down. Teploenergetika 3 no.4:50-55 Ap '56. (MLRA 9:6)

1.Yuzhnoye otdeleniye Orgres.
(Boilers)

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7

VNUKOV, A. K.

AID P - 4368

Subject : USSR/Heat Engineering

Card 1/1 Pub. 110-a - 13/19

Author : Vnukov, A. K., Eng. Southern Branch of the Bureau for the Organization and Rationalization of Electric Power Plants and Networks.

Title : Some particular features in shaping boiler adjusted for quick starts and stops.

Periodical : Teploenergetika, 4, 50-55, Ap 1956

Abstract : The ways for quick firing and extinguishing the boiler are discussed. Recommendations are made for an improved design. Four diagrams.

Institution : None

Submitted : No date

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7

VNUKOV, A.K.

AID P - 2992

Subject : USSR/Electricity

Card 1/1 Pub. 29 - 7/28

Author : Vnukov, A. K., Eng.

Title : Prevention of deformation of the cooled panels of a chain-grate stocker

Periodical : Energetik, 6, 14-15, Je 1955

Abstract : Deformation of panels was observed in several boilers. The author describes preventive methods. Two drawings.

Institution : None

Submitted : No date

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7

VNUKOV, A.K.

AID P - 3699

Subject : USSR/Electricity

Card 1/1 Pub. 29 - 4/25

Authors : Vnukov, A. K., Ye. I. Volkova and Yu. V. Pavliv, Engs.

Title : Measuring the temperatures of drums of high pressure boilers during the firing

Periodical : Energetik, 12, 10-11, D 1955

Abstract : According to the circulars of the Technical Administration of the Ministry of Electric Power Stations 4/T52 and T1/54, the firing of high pressure boilers has to be done in such a way, that the temperature differences between the hottest and coldest parts of the boiler drums do not exceed 30° to 50° C. The authors present a simplified method of measuring drum temperatures. Three drawings.

Institution : None

Submitted : No date

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7

VIUKOV, A. K.

Welding

Flaws in place where thermoelements are welded to pipes; Rab. energ. 2 No. 1, 1952.

9. Monthly List of Russian Accessions, Library of Congress, May 1952 ////1953, Uncl.

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7

VNUKOV, A. K.

Pipe

Flaws in place where thermoelements are welded to pipes., Rab. energ., 2, No. 1, 1952.

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

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7

VNUKOV, A.K., kand.tekhn.nauk; PELESHOK, A.G., inzh.; POBEGAYLO, K.M., inzh.; MAKSIMOV, A.I., inzh.

Methods for adjusting the furnaces of large boiler units. Elek. sta. 32 no.11:10-13 N '61. (MIRA 14:11)
(Boilers) (Furnaces)

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7

VOLKOVA, Ye.I., inzh.; KHIRIN, N.D., inzh.; BARYSHNIKOV, A.P., inzh.; KOZHEVNIKOV, G.A., inzh.; KHOKHRIN, K.G., inzh.; BABKOV, V.A., inzh.; VNUKOV, A.K., kand.tekhn.nauk

Starting clutch for draft and blowing machinery and pit mills. Teploenergetika 8 no.6:31-32 Je '61. (MIRA 14:10)

1. Yuzhnoye otdeleniye Gosudarstvennogo tresta po organizatsii i ratsionalizatsii elektrostantsiy.
(Clutches (Machinery))
(Electric power plants--Equipment and supplies)

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7

VNUKOV, A.K., kand. tekhn. nauk

Efficiency of burning mazut. Elek. sta. 34 no.5:10-15 My '63.
(MIRA 16:7)

(Furnaces) (Mazut)

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7

VNUKOV, N.

Cut down on the loss of work time. Sots.trud 4 no.11:136-137 N '59. (MIRA 13:4)

1. Starshiy inzhener po trudu i zarabotnoy plate tresta "Sibstroymekhanizatsiya" Mintransstroya SSSR.
(Hours of labor) (Wages)

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7

FEDIN, Ye.I., inzh.; VNUKOV, P.K., inzh.

Mechanization and automatic control in industry is the main road toward reducing labor consuming operations in reinforced concrete shipbuilding. Sudostroenie 28 no.1:59-61 Ja '62. (MIRA 16:7)

(Ships, Concrete)
(Shipbuilding--Equipment and supplies)

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7

VNUKOV, Sergey Alekseyevich, inzh.; PERGAMENSHCHIKOV, B., red.; NEMYTOV, V., tekhn. red.

[Mechanization and automation of industrial production; practice of enterprises of the Orel Economic Region] Mekhanizatsiia i avtomatizatsiia proizvodstva; iz opyta predpriiatii Orlovskogo ekonomicheskogo administrativnogo raiona. Orel, Orlovskoe knizhnoe izd-vo, 1960. 78 p. (MIRA 17:3)

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7

VNUKOV, Sergey Alekseyevich; ZAKHARIK, Ye.; USIKOV, N.

[Orel economic region] Orlovskii ekonomicheskii administrativnyi raion. Orel, Orlovskoe knizhnoe izd-vo, 1959. 78 p.
(MIRA 13:8)

(Orel Province--Economic conditions)

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7

VNUKOV, V.D.

Finishing worm-thread cutting. Stan.i instr. vol. 24 no.9:34 S '53.
(MLRA 6:10)
(Spiral milling)

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7

OCHKIN, V.F.; VNUKOV, V.I.; GORODKOV, N.I.; LOVTSOV, A.P.; VIKTOROVA, A.G.; SOKOLOVA, Ye.Ya.; KOZLOV, A.N.; DRYUCHIN, A.P., obshchiy red.

[Economy of Saratov Province; statistical collection] Narodnoe khoziaistvo Saratovskoi oblasti; statisticheskii sbornik. Saratov, Gos.statisticheskoe izd-vo, 1959. 205 p. (MIRA 12:11)

1. Saratov (Province) Statisticheskoye upravleniye. 2. Nachal'nik Statisticheskogo upravleniya Saratovskoy oblasti (for Dryuchin). (Saratov Province--Statistics)

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7

VNUKOV, V.K.

Gas branch pipe to the Cherkassy Liquid Fertilizer Plant. Stroi. truboprov. 9 no.4:4-6 Ap '64. (MIRA 17:9)

1. Trest Ukrgazneftestroy, Kiyev.

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7

VNUKOV, V.K. inzh.

Welding elongated sections. Stroi. truboprov. 6 no.4:17 Ap '61. (MIRA 14:6)

1. Stroitel'nyy uchastok - 12 tresta Ukrgazneftestroy, g. Baranovichi.

(Pipe lines--Welding)

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7

VNUKOV, V.K.

Model study of automatic control processes in irrigation systems.
Izv.AN Kir.SSR.Ser.est.i tekh.nauk 3 no.6:71-93 '61.
(MIRA 15:11)

(Hydraulic models) (Automatic control) (Irrigation)

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7

L 8252-66 EWT(1)/EWA(h)
ACC NR: AR5018111 SOURCE CODE: UR/0271/65/000/007/A040/A040

SOURCE: Ref. zh. Avtomatika, telemekhanika i vychislitel'naya tekhnika. Svodnyy tom, Abs. 7A291

AUTHOR: Vnukov, V. K.

TITLE: Selecting some parameters of photoelectric function generators

CITED SOURCE: Sb. Avtomatiz. ob"yektov irrigats. sistem. Frunze, Ilim, 1964, 84-93

TOPIC TAGS: function generator, function generator design

TRANSLATION: A universal function generator designed with an electron-beam tube and a photomultiplier is considered. The generator is intended for producing functions of any form. A filter at the photomultiplier output is used for noise reduction. Operation of the system is analyzed. A total tracking error is determined which is a sum of the desirable-signal error and the noise-caused error (from the photomultiplier). The desirable signal is regarded as a stationary random process; noise is assumed to be white. The filter time constant is determined on the basis of the specified mean-square error and the noise signal. Bib 6, figs 4.

SUB CODE: 09

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7

VINUKOV, V.K., inzh.; GERASIMOV, V.N., inzh. (Baranovichi)

Constructing crossings across swamps using the method of continuous floating. Stroi. truboprov. 5 no.10:12-14 O'60. (MIRA 13:10)
(Gas, Natural--Pipelines)

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7

VNUKOV, Vladimir Petrovich, ed.

Artillery 2. ispr. i dop. izd. Moskva, Gos. voen. izd-vo, 1938.
366 p. (54-55820)

UF145.V6 1938

1. Artillery.

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7

VNUKOV, Vladimir Petrovich.

Physics and the defense of the country Izd. 5., ispr. Moskva Gos. izd-vo tekhn. - teoretidh. lit-ry, 1943. 339 p. (49-34461)

U104.V7 1943

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7"

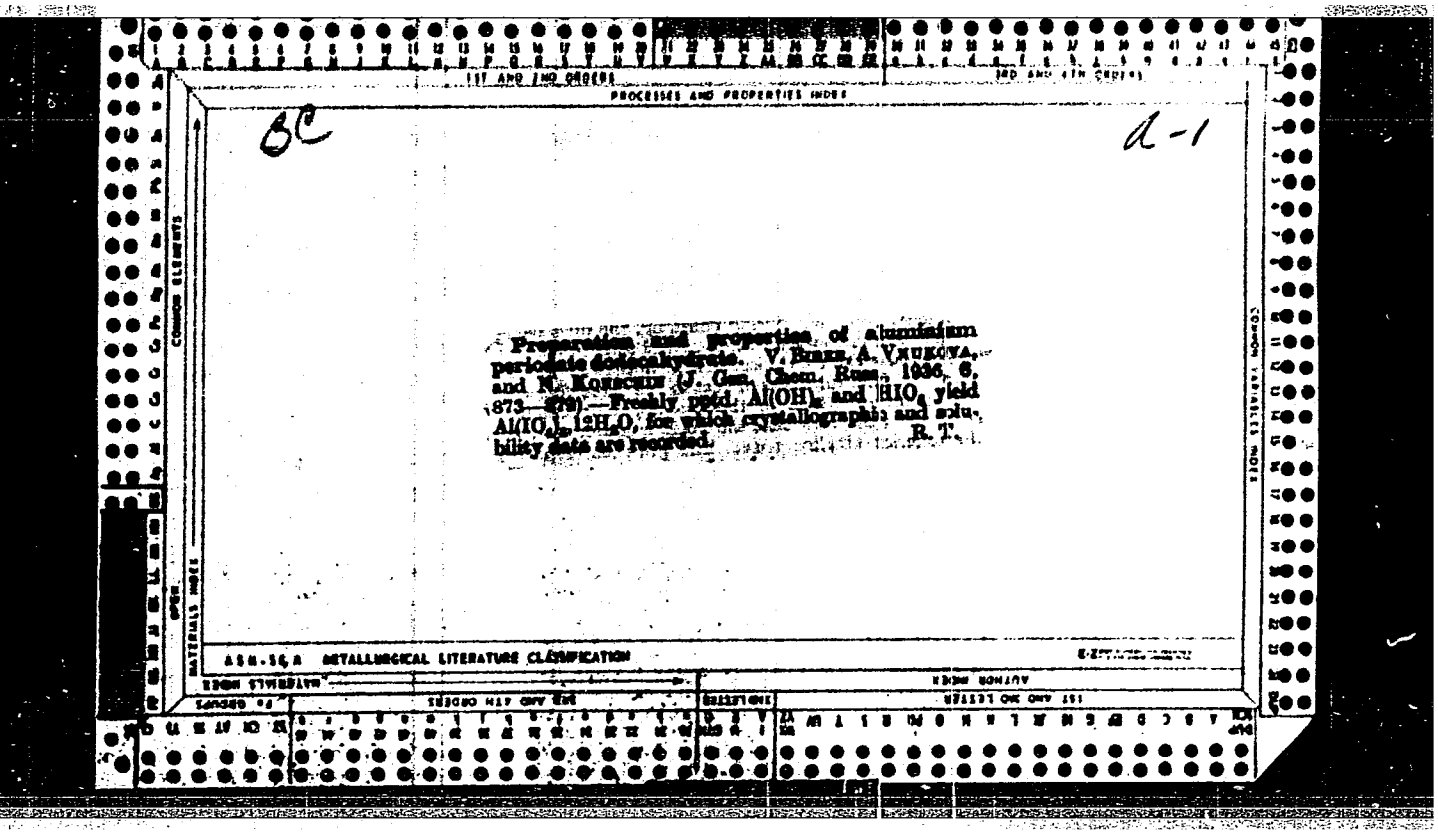
"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7

VNUKOV, Yu. (Krasnovodsk)

Heroic deed of a collective. Pozh.delo 9 no.7:27 Jl '63.

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7



BC

d-1

Preparation and properties of aluminium periodate dotetrahydrate. V. Braun, A. Vnukova, and N. Konschin (J. Gen. Chem. Russ., 1936, 6, 873—879).—Freshly ppd. $Al(OH)_3$ and HIO_4 yield $Al(IO_4)_3.12H_2O$, for which crystallographic and solubility data are recorded. R. T.

ASM-16A METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7

COUNTRY : USSR M-8
CATEGORY :

ABS. JOUR. : RZBiol., No. 19, 1958, No. 87252

AUTHOR : Vnukova, A. L.; Ayzha, V. K.
INST. : Odessk Agricultural Institute
TITLE : Application of Minor Elements Containing Fertilizers to Grapes

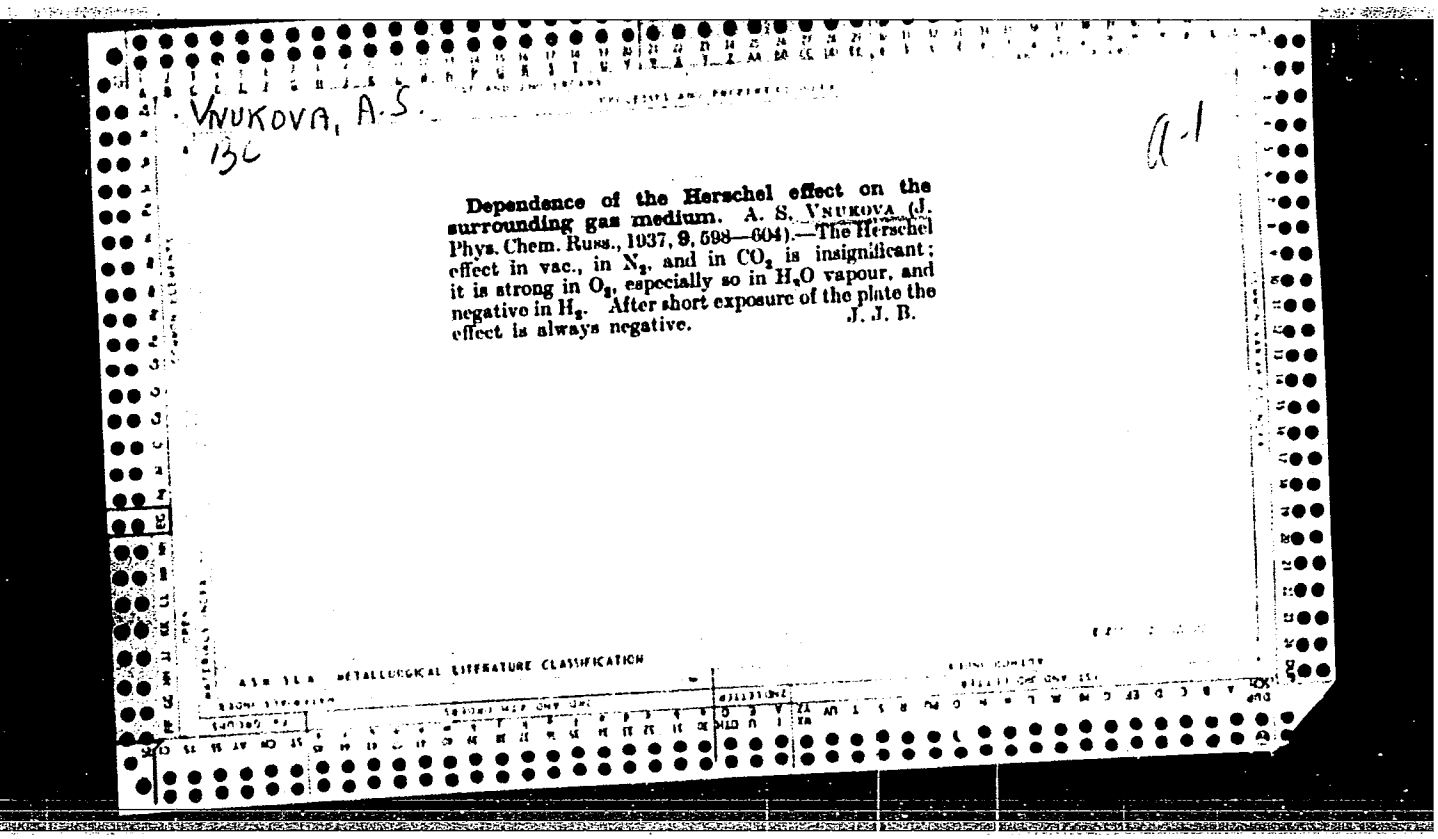
ORIG. PUB. : Tr. Odessk. s.-kh. in-ta, 1957, 8, 64-70

ABSTRACT : A study was made of the treatment of grapevines of the varieties Dama Cherryy, Senso, and Riesling, under conditions of Odesskaya Oblast', with boron and manganese, applied to the soil or as a spray, in combination with a complete mineral fertilizer. In application to the soil, before blooming, were tested: borax -- 2.6 g, $MnSO_4$ -- 10 g, and NPK -- 20 g, per vine. In spray application with a background of main application of NPK, were tested sprayings, before blooming and one month after it, with solutions of 2% NPK, 0.02% borax, and 0.06% $MnSO_4$ or $KMnO_4$. It was found that yield is increased and sugar content of the grapes is raised as a result of application

CARD: 1/2

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7



VNUKOVA, A.S.
13C

A-1

Dependence of the Herschel effect on the surrounding gas medium. A. S. VNUKOVA (J. Phys. Chem. Russ., 1937, **9**, 598—604).—The Herschel effect in vac., in N_2, and in CO_2 is insignificant; it is strong in O_2, especially so in H_2O vapour, and negative in H_2. After short exposure of the plate the effect is always negative. J. J. B.

ASM-WSA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7

VNUKOVA, A.S.

COUNTRY : USSR
CATEGORY : Cultivated Plants. Fruits. Berries. Nuts. Tea.

ABS. JOURN: Ref Zhur-Biologiya, No.5 , 1959, No.20507

AUTHOR : Vnukova, A.S.; Ryzha, V.K.
INST. : Odessa Agric.Inst.
TITLE : The Effect of Molybdenum as a Micronutrient on Grapes.

ORIG. PUB.: Tr. Odessk. s.-kh. in-ta, 1958, 13, 129-132

ABSTRACT : Foliar sidedressing with Mo together with NPK and Bordeaux mixture were applied at the Odessa Agricultural Institute in 1954. The solution contained NPK 2%, $(NH_4)_2MoO_4$ 0.0015% or 0.03% and Bordeaux mixture 1%. Sidedressing was sprayed before large-scale flowering of the grapes and after a month, during berry formation. The average berry weight increased by 10%, ripening was speeded up by 10 days,

CARD : 1/2

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7

VNUKOVA,A.S.

VNUKOVA,A.S., kandidat tekhnicheskikh nauk; RYZHA,V.K.

Role of the compounds of manganese and boron. Vin.SSSR 15 no.3:33-35 '55. (MLRA 8:8)

1. Odesskiy sel'skokhozyaystvennyy institut
(Grapes) (Plants, Effect of boron on) (Plants, Effect of manganese on)

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7

VNUKOVA, K.; KALAB, V.; REPIS, J.

"A method of measuring the heat of reaction in continous reactors." In English.

COLLECTION OF CZECHOSLOVAK CHEMICAL COMMUNICATIONS, Praha, Czech.,
Vol 24, no.5, May 1959

Monthly List of East European Accessions (EEAI), LC, Vol. 8, No. 6, Sept. 59

Unclassified

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7

Country : CZECHOSLOVAKIA F
Category: Laboratory Equipment. Instrumentation

Abs Jour: RZhKhim., No 17, 1959, No 60674

Author : Kalab, V.; Rapis, J.; Vnukova, K.
Inst : -
Title : Method of Determination of the Reaction Heats in Contineous Process

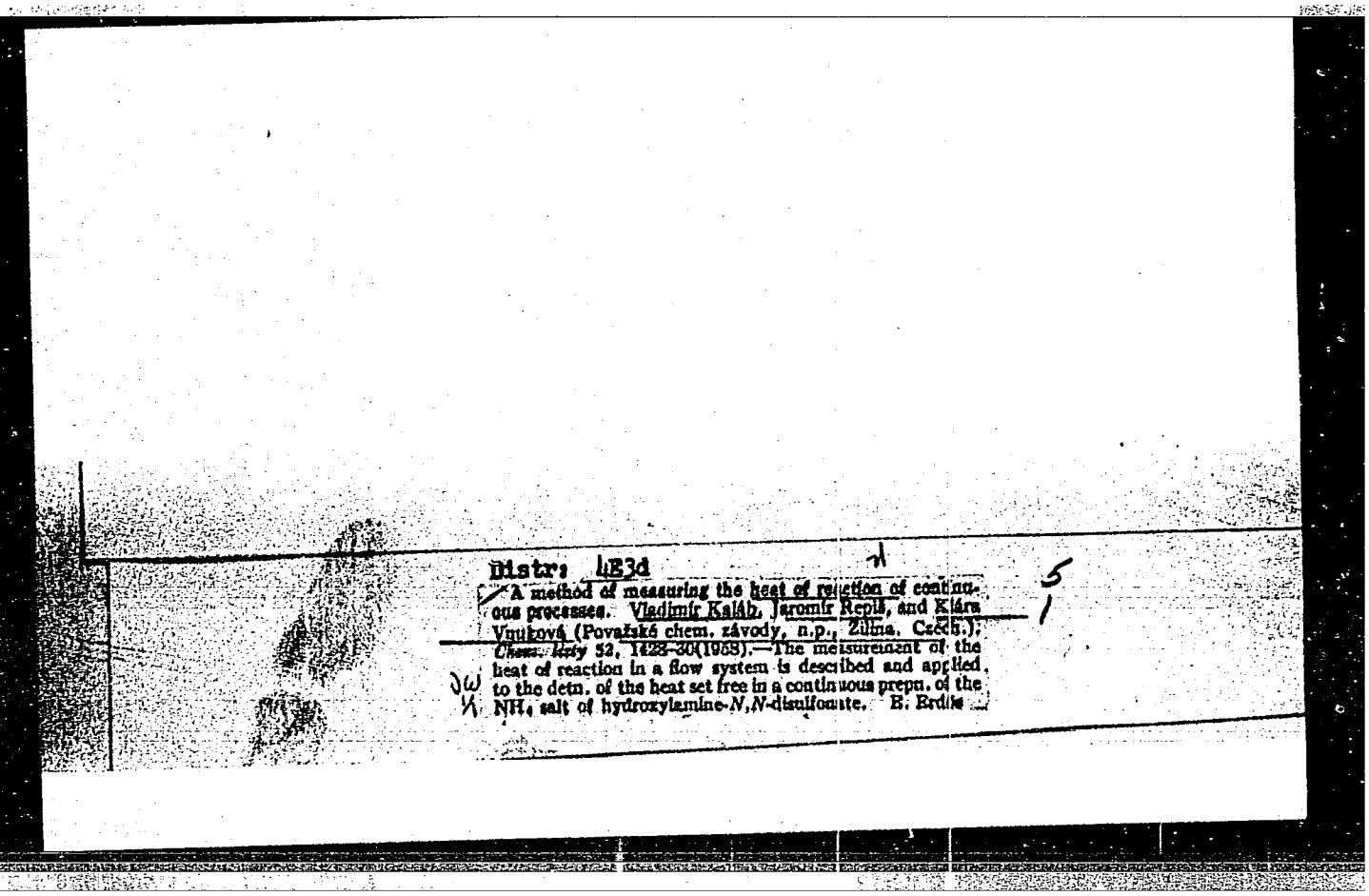
Orig Pub: Chem. listy, 1958, 52, No 8, 1428-1430

Abstract: A method for the determination of heat of chemical reactions in the reactors of contineous type was developed. The method is applicable for all such instances in which the course of reaction, when conducted in a calorimeter, differ basically from that occurring in the reactor pro-

Card : 1/2

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7



Distr: 4E3d

A method of measuring the heat of reaction of continuous processes. Vladimír Kaláb, Jaromír Repiš, and Klára Vnukova (Považské chem. závody, n.p., Žilina, Czech.); *Chem. listy* 52, 1428-30(1958).—The measurement of the heat of reaction in a flow system is described and applied to the detn. of the heat set free in a continuous prepn. of the NH_4 salt of hydroxylamine-*N*,*N*-disulfonate. B. Erdős

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7

KRATOCHVIL,M.; VNUKOVA,L.

The effect of splenectomy on the efficacity of chloralkylamine in influencing the regeneration capacity of the rat liver. Neoplasma 11 no.1:51-54 '64.

1. Research Laboratory for Surgical Pathophysiology, Medical Faculty, Komensky University, Bratislava, Czechoslovakia.

*

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7

CZECHOSLOVAKIA/Chemical Technology - Processes and Equipment in Chemical Technology. H.

Abs Jour : Ref Zhur - Khimiya, No 16, 1958, 54222

Author : Kalab, Vnukova, Rzhepish.
Inst : -

Title : The Efficiency of Extraction Columns Equipped with Mixers.

Orig Pub : Chem. listy, 1957, 51, No 7, 1249-1255

Abstract : The efficiency of two semi-industrial extraction columns with blace mixers were investigated:
1) those equipped with cross ring discs welded to the inner surface of the column, and
2) those having the sections filled with cylindrical packing. The blades of the mixer are located between the discs and the sections.

Card 1/1

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7

VNUKOVSKIY, G.; LYSENKO, I.; BERESHCHUK, N., red.; NAGIBIN, P., tekhn. red.

[The "Kiialinskii" State Farm] Sovkhoz "Kiialinskii." Alma-Ata, Kazsel'khozgiz, 1962. 31 p. (MIRA 17:2)

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7

VNUKOVSKIY, G., starshiy inzhener-leytenant

Responsibility of lecturers. Komm.Vooruzh.Sil 2 no.9:59-60 My '62. (MIRA 15:5)
(Russia--Armed forces--Political activity)

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7

L 52101-65 EPF(c)/EWA(m)/EWP(j)/T Pc-4/Pr-4 RM

ACCESSION NR: AP5015271 UR/0286/65/000/009/0051/0051

Kuvaldin, A. [illegible]; Tsukovskiy, Ya. T.; Sorokin, N. A.; Stolyarov, A. B.; Pautov, A. V.

TITLE: A turbomolecular high-vacuum pump. Class 27, No. 170609

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 9, 1965, 51

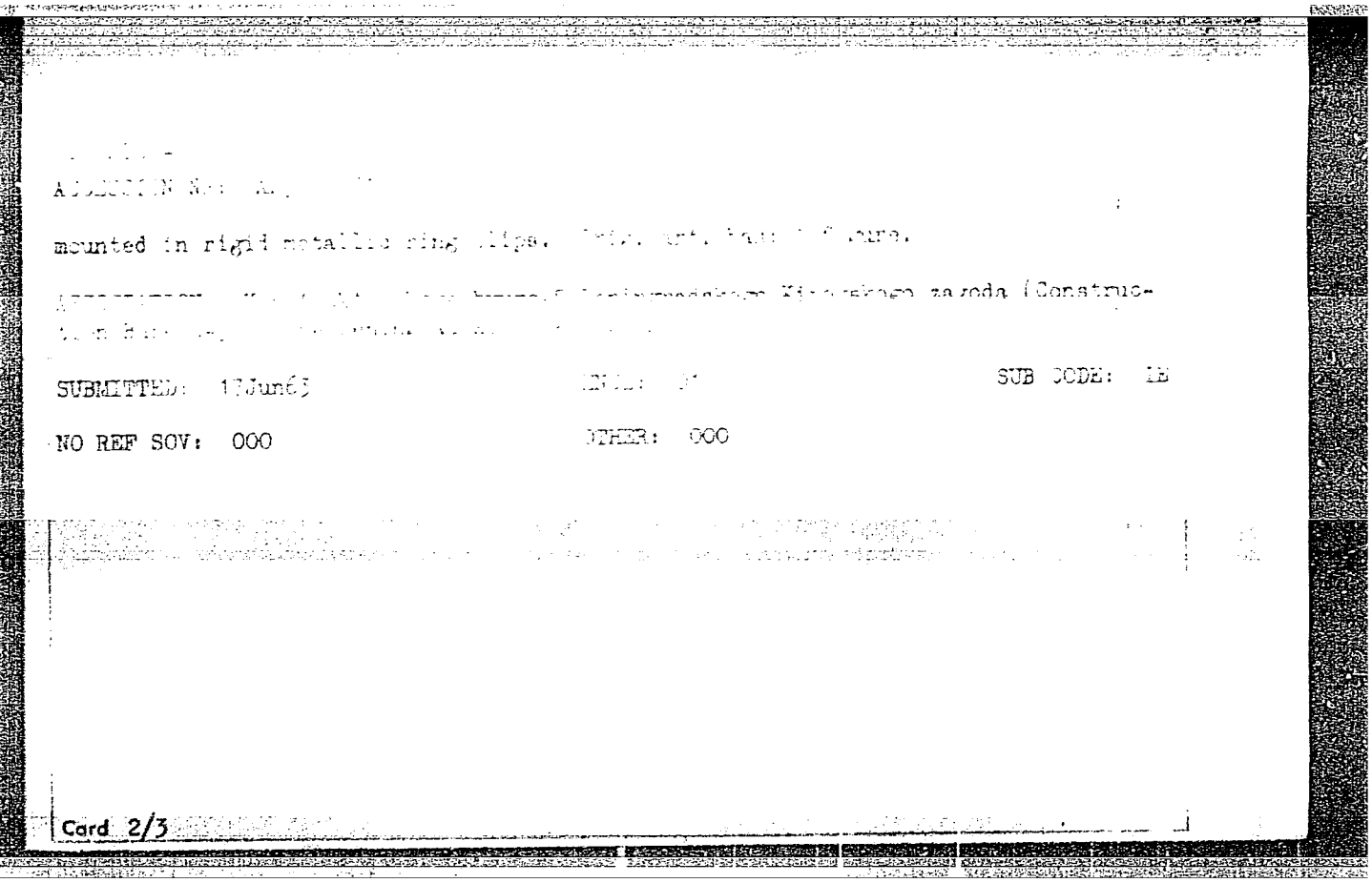
TOPIC TAGS: vacuum pump, turbomolecular vacuum pump

ABSTRACT: This Author Certificate presents a turbomolecular vacuum pump with a 2-stream rotor and an electric drive mounted in the fore-vacuum chamber (see Fig. 1 on the Enclosure). To increase its reliability, efficiency, and the power [illegible] cient, the electric [illegible] may be [illegible] of [illegible] work together [illegible] time, whereupon one of them is disconnected. To diminish the gas separation, the winding and the core of the electric motor [illegible] are coated with an [illegible] with a filler of low vapor tension. To diminish the vibrations and to increase the reliability of [illegible], the latter are

Card 1/3

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7



ACCESSION NR: [illegible]

mounted in right metallic ring clips. [illegible]

[illegible] zavoda (Construc-

[illegible]

SUBMITTED: 17Jun63 ENCL: 01 SUB CODE: EE

NO REF SOV: 000 OTHER: 000

Card 2/3

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7

ACCESSION NR: AP5013271

7- ring clip

Card 1/1

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7

VNUTSEVICH, Z. A.

14737* Problem of Accelerating the Tendency of Stainless Austenitic Steels to Intercrystalline Corrosion. K voprosu o vyiavlenii sklonnosti k mezhkristallitnoi korrozii nerzhaveiushchikh austenitnykh stalei. (Russian.) I. L. Rozenfel'd, Z. A. Vnutsevich, E. I. Tikova, and M. V. Feganov. *Zavodskaia Laboratoriia*, v. 21, no. 8, Aug. 1955, p. 931-936.

Comparison of sulfuric acid plus copper sulfate, and other combinations, in one- and two-day tests. Micrographs. 6 ref.

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7

1. VOLANAYA, A. TS,

2. USSR (600)

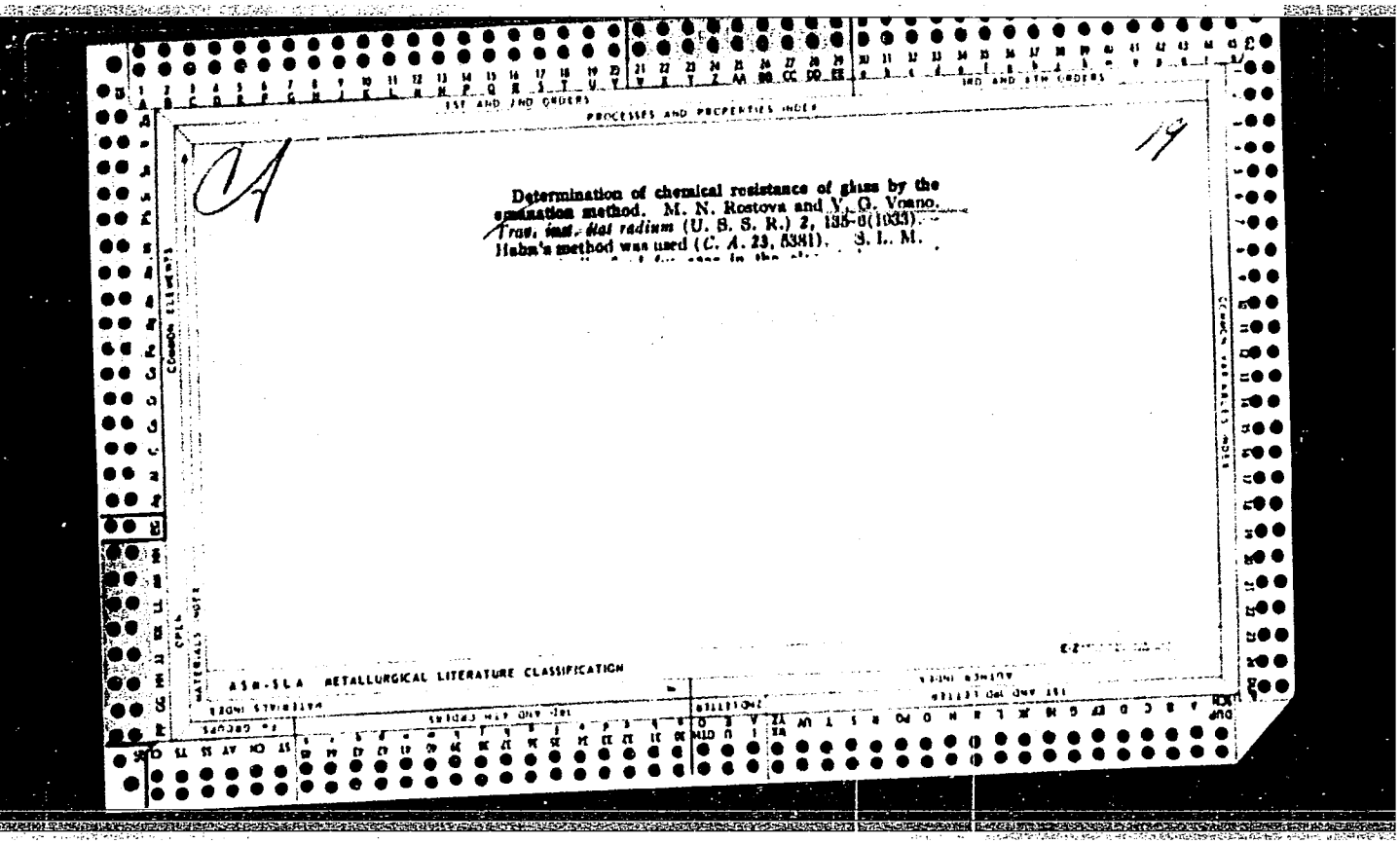
4. Cysticercosis, Cerebrospinal

7. Significance of complement fixation in diagnosis of cerebral cysticercosis, Vo . neirokhir. 17 No. 1, 1953.

9. Monthly List of Russian Accessions, Library of Congress, June 1953. Unclassified.

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7



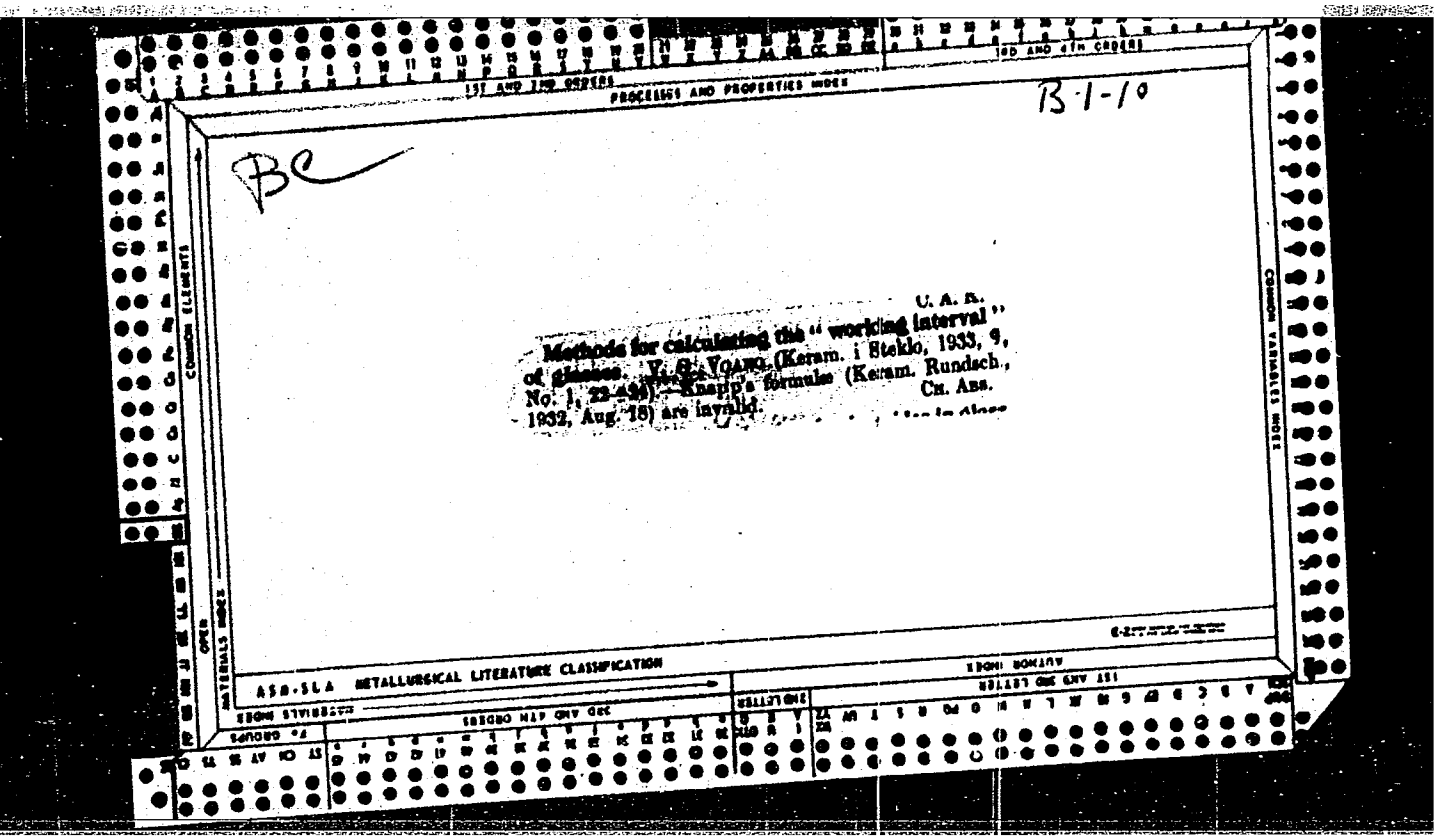
PROCESSES AND PROPERTIES INDEX

Determination of chemical resistance of glass by the
emanation method. M. N. Rostova and V. G. Vrano.
Trans. Inst. Stat radium (U. S. S. R.) 2, 135-9(1933).
Hahn's method was used (*C. A.* 23, 5381). S. L. M.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

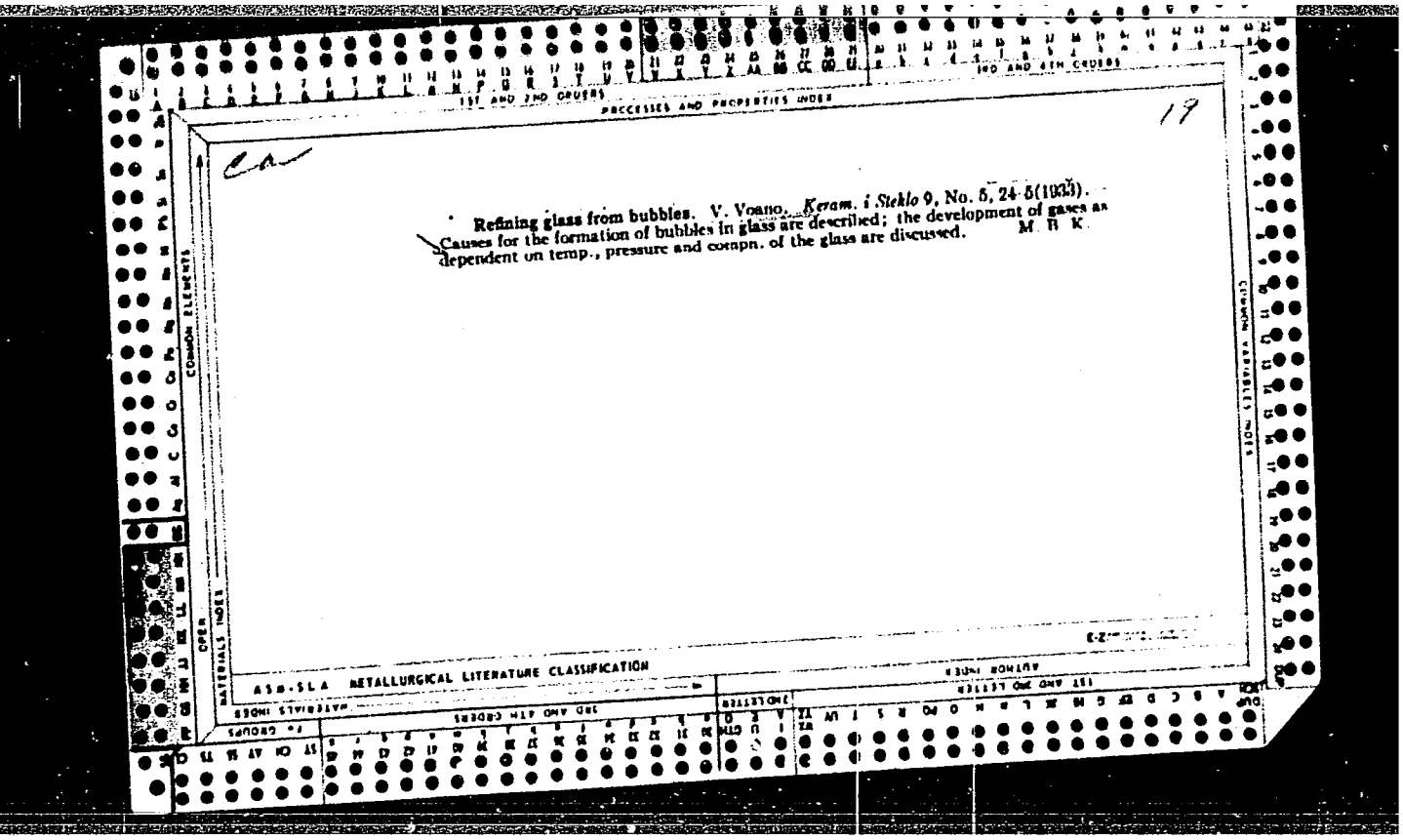
APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7



APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7



PROCESSES AND PROPERTIES INDEX

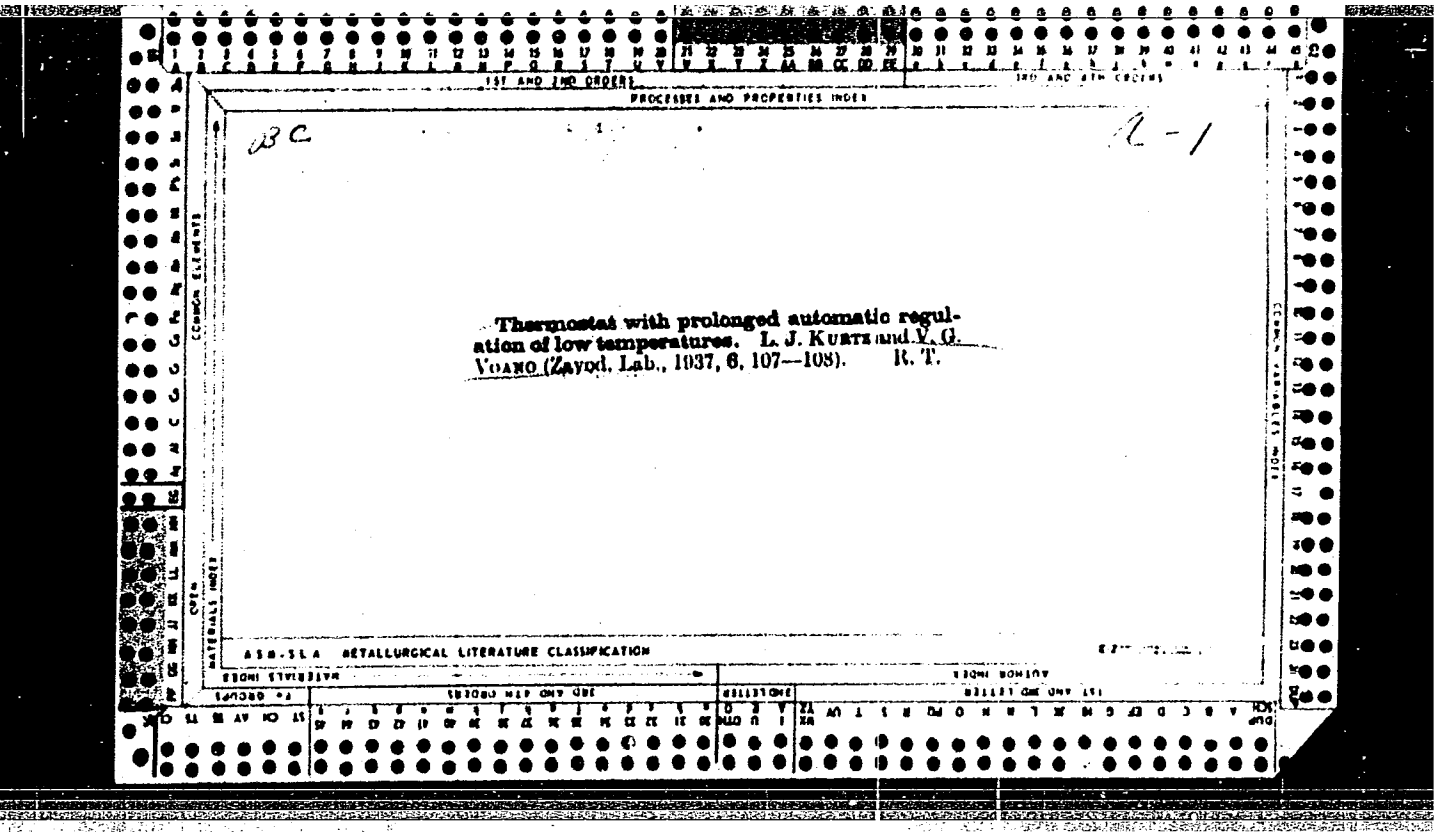
19

Refining glass from bubbles. V. Voano. *Keram. i Steklo* 9, No. 5, 24-5(1933).
Causes for the formation of bubbles in glass are described; the development of gases as dependent on temp., pressure and compn. of the glass are discussed. M. H. K.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7"

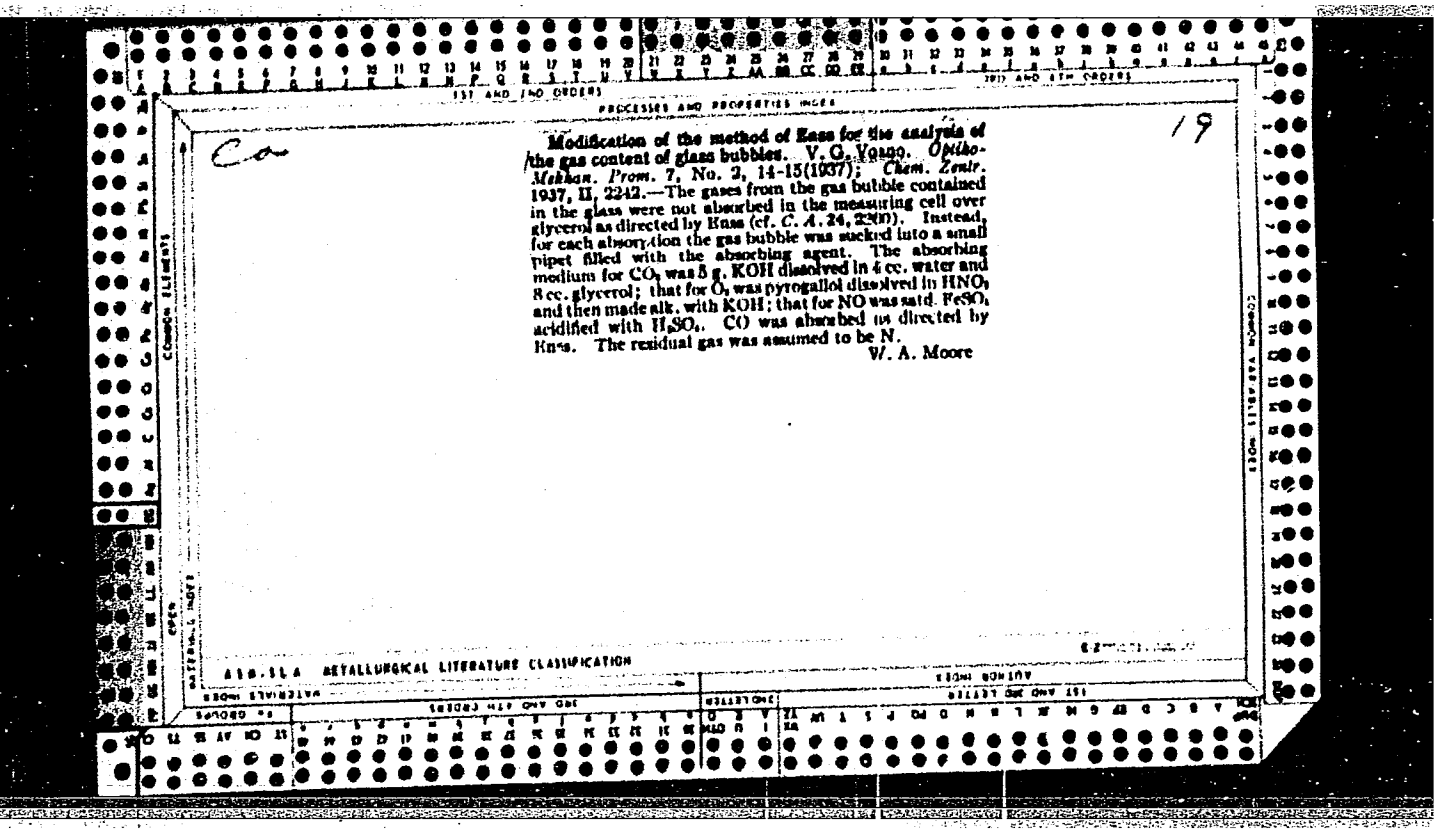
"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7



Thermostat with prolonged automatic regulation of low temperatures. L. J. KURTS and V. G. VOANO (Zavod. Lab., 1937, 6, 107—108). R. T.

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7



Co

19

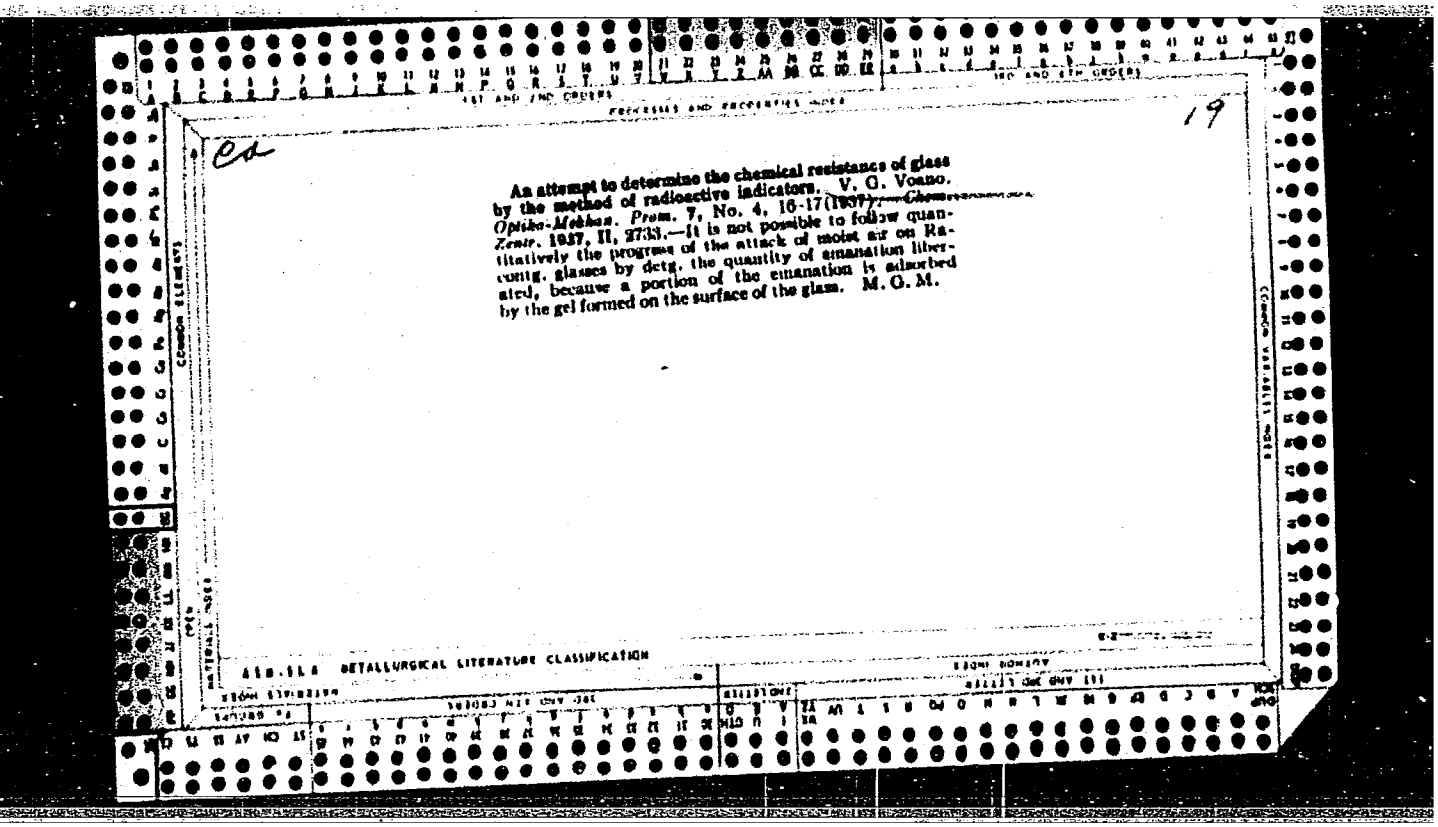
Modification of the method of Enss for the analysis of the gas content of glass bubbles. V. G. Vouno. *Optiko-Mekhan. Prom.* 7, No. 2, 14-15(1937); *Chem. Zentr.* 1937, II, 2242.—The gases from the gas bubble contained in the glass were not absorbed in the measuring cell over glycerol as directed by Enss (cf. *C. A.* 24, 2300). Instead, for each absorption the gas bubble was sucked into a small pipet filled with the absorbing agent. The absorbing medium for CO_2 was 5 g. KOH dissolved in 4 cc. water and 8 cc. glycerol; that for O_2 was pyrogallol dissolved in HNO_3 and then made alk. with KOH; that for NO was satd. $FeSO_4$ acidified with H_2SO_4. CO was absorbed as directed by Enss. The residual gas was assumed to be N.

W. A. Moore

A10.11A METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7



19

Cd

An attempt to determine the chemical resistance of glass by the method of radioactive indicators. V. O. Voano. *Optiko-Mekhan. Prom.* 7, No. 4, 16-17 (1937). — Ghem. *Zentr.* 1937, II, 2753.—It is not possible to follow quantitatively the progress of the attack of moist air on Raconstg. glasses by detg. the quantity of emanation liberated, because a portion of the emanation is adsorbed by the gel formed on the surface of the glass. M. G. M.

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7

VOANO, V.G

361. Classification and automatic supply of abrasive material to polishing-machines.—V. G. VOANO (*Glass & Ceramics*, Moscow, 10, No. 8, 9, 1953). (4 pp., 2 figs., 3 tables.)

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7

VOANO, V.G.

Classification and automatic feed of abrasive to the polishing machine. Stek.i ker. vol. 10 no.8:9-11 Ag '53. (MLRA 6:8)
(Grinding and polishing) (Glass manufacture)

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7

BOYKOVA, A.I. [translator]; BONDAR', A.I. [translator]; VOANO, V.G. [translator]; YEGOROVA, Ye.N. [translator]; NIKOGOSYAN, Kh.S. [translator]; TOROPOV, N.A., professor, redaktor; ZAKHAR'YEVSKIY, V.A., redaktor: OGANDZHANOVA, N.A., redaktor; DUMBRE, I.Ya., tekhnicheskiy redaktor

[Physical chemistry of silicates; a collection of articles. Translated from the English and German] Fizicheskaia khimiia silikatov; sbornik statei. Perevod s angliiskogo i nemetskogo A.I.Boikovoi i dr. Pod red. N.A.Toropova. Moskva, Izd-vo inostrannoi lit-ry, 1956. 302 p. (Silicates) (MIRA 9:7)

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7

24668-66 EWT(m)/EWP(j) RM

ACC NR: AP6015853 SOURCE CODE: UR/0318/65/000/001/0031/0033

AUTHOR: Yulin, M. K.; Vol'epshteyn, A. B. 22

ORG: Institute of Mineral Fuels (Institut goryuchikh iskopayemykh) B

TITLE: Processing of liquid alkyl phenols obtained from the production of p-tert-butylphenol

SOURCE: Neftepererabotka i neftekhimiya, no. 1, 1965, 31-33

TOPIC TAGS: alkylation, phenol, alcohol, chromatography

ABSTRACT: The authors describe a processing of alkyl phenols obtained by the alkylation of phenol with isobutyl alcohols, developed in order to reduce the yield of by-products. The processing is carried out in a reactor made of stainless steel. After driving off water, low-boiling compounds (isobutyl alcohol, isobutyl ether) and phenols at a temperature up to 195° at atmospheric pressure, the temperature was raised to 215°, and the dealkylation was performed at the same pressure for 2 hours. The yield of anhydrous dealkylation products was 83.7% (the composition, determined by gas-liquid chromatography, is fully tabulated). The stationary phase used was silicone oil. P-tert-Butylphenol (PTBP) was isolated from the 210-260° fraction by crystallization and centrifuging in 36.8% yield. The liquid portion of the fraction contained 35.1% PTBP, and phenol, o-tert-butylphenol, and di-tert-butylphenol. The percentage compositions of the products obtained are listed.

Orig. art. has: 1 figure and 1 table. [JPRS]

SUB CODE: 07 / SUBM DATE: none

Card 1/1 UDC: 655.5

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7

L 24741-66 EWT(1)
ACC NR: AP6008805 SOURCE CODE: UR/0039/65/068/003/0373/0416

AUTHOR: Volevich, L. R. (Moscow) 17 B

ORG: none 16

TITLE: Solvability of boundary value problems for general elliptic systems

SOURCE: Matematicheskiy sbornik, v. 68, no. 3, 1965, 373-416

TOPIC TAGS: boundary value problem, elliptic equation, Banach space, existence theorem, uniqueness theorem

ABSTRACT: The solvability is analyzed for a system of elliptic equations characterized by a disparity in both the unknown functions as well as in the equations. The study is divided into five parts. In part I the boundary value problem is defined for the elliptic system

$$\sum_{l=1}^{n} A_{jl}(x; D)\, u_l(x) = f_j(x) \quad (j = 1, \ldots, n),$$

where A_{ij} is a linear operator given by

$$A_{jl}(x, D) = \sum_{|\alpha| \leq a_{jl}} a_{jl}^{(\alpha)}(x) D^{\alpha}.$$

Three conditions are outlined for the problem: 1) the condition of ellipticity

$$\chi(x; \xi) \neq 0 \quad (\xi \neq 0, \xi \text{ real}, \quad x \in \bar{G});$$

2

Card 1/3 UDC: 517.946.9

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7

2) the condition of regular ellipticity; and 3) the condition of coercivity. Under condition 1), three types of elliptic systems are considered: homogeneous systems; I. G. Petrovskiy systems (Ob analitichnosti resheniy sistem differentsial'nykh uravneniy, Matem. sb., 5 (47) (1939), 3-68), and Douglis-Nirenberg systems (S. Agmon, A. Douglis, and L. Nirenberg, Estimates near the boundary for solutions, of elliptic partial differential equations, satisfying general boundary conditions I, II, Comm. Pure Appl. Math., 12 (1959), 623-727; 17 (1964) 35-92). In part II a functional scheme is constructed for a normal solution of the elliptic boundary value problem. This solution is constructed in G-space for the boundary value problem

$$\begin{cases} A(x; D)u = f(x) & (x \in G), \\ B(x'; D)u = g(x') & (x' \in \Gamma) \end{cases}$$

under the following four equivalent conditions: a) the above equations are elliptic; b) the $\mathfrak{A}$ operator in Banach space has left and right regularizations; c) the operator $\mathfrak{A}$ (operating from $H_l(G, \Gamma)$ in $H_{l+t}(G)$) appears as a Φ-operator with a d-characteristic independent of l $(l > l_0)$; d) for any function $u(x) \in H_{l+t}(G)$, the following is valid a priori

$$\|u\|_{H_{l+t}(G)} \leqslant \text{const} \cdot \left[\|Au\|_{H_{l+s}(G)} + \|Bu\|_{H_{l-m-\frac{1}{s}}(\Gamma)} \right].$$

In part III, the boundary value problem

$$\begin{cases} A(D)u(x) = f(x) & (x_\nu > 0), \\ B(D)u(x', 0) = g(x') & (x_\nu = 0;\ x' = (x_1, \ldots, x_{\nu-1})), \end{cases}$$

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7

is considered in the half-space R_+^ν with constant coefficients. By a Fourier transformation this problem leads to the ordinary differential equations

$$A(\xi', D_t)V(t) = 0 \quad (t > 0),$$
$$B(\xi', D_t)V(0) = h \quad (t = 0).$$

The fundamental matrices of this system are investigated and a priori values are introduced in the L_2-norm of the half-space. In part IV the structure of a regularizer is analyzed in three steps: constant coefficients in R^ν and R_+^ν; almost-constant coefficients in R^ν and R_+^ν; variable coefficients in arbitrary domains G. In part V, the analysis is centered on constructing a regularization function in the $W_p^{(l)}$ ($p \neq 2$) space. This means the general space for the function

$$f(x) \in L_p, \; D^\alpha f(x) \in L_p, \; |\alpha| \leq l,$$

with the norm

$$\|f\|_{W_p^{(l)}(G)} = \left[\sum_{|\alpha| \leq l} \int |D^\alpha f(x)|^p dx\right]^{\frac{1}{p}}.$$

It is shown that the operators constructed in part IV appear as regularization functions in the $W_p^{(l)}$ space for $p \neq 2$. A priori values are obtained for the elliptic problem in the L_p-norms. Orig. art. has: 165 equations.

SUB CODE: 12/ SUBM DATE: 15Jun64/ ORIG REF: 022/ OTH REF: 002

Card 3/3 MJS

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7

L 25508-66 EWT(1)

ACC NR: AP6011407 SOURCE CODE: UR/0057/66/036/003/0564/0565

57
B

AUTHOR: Vol'f, Ye.M.

ORG: none

TITLE: Effect of ionizing radiation on the breakdown potentials of air gaps

SOURCE: Zhurnal tekhnicheskoy fiziki, v. 36, no. 3, 1966, 564-565

TOPIC TAGS: spark gap, dielectric breakdown, air, radiation environment, ionizing radiation, radiation intensity

ABSTRACT: The author has measured breakdown potentials of air gaps in the presence of gamma and slow neutron radiation from a pile in order to obtain engineering data for design of electronic equipment for service in high radiation environments. Both dc and ac breakdown were investigated for gaps between spherical electrodes and between a point and a plane electrode; in the dc point to plane measurements the point was positive. The gamma intensity ranged from 2.5 to 25 000 r/sec and the neutron intensity from 2×10^9 to 2×10^{13} slow neutrons/cm^2 sec. The maximum ionization rate and ion density were 5.2×10^{13} cm^{-3}sec^{-1} and 5.6×10^9 cm^{-3}, respectively. The gap lengths are not given, but the breakdown potentials at low radiation intensities ranged from 3.2 kV (ac sphere gap) to 7.4 kV (positive point to plane). The ac and dc breakdown potentials of the sphere gap decreased monotonically with increasing radiation intensity; the breakdown potential under the most intense radiation was only

UDC: 537.521.7

Card 1/2

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7

L 25508-66

ACC NR: AP6011407

some 20% below its value with no radiation. The breakdown potential of the point to plane gap decreased rapidly with increasing radiation intensity, reached a minimum at 100-200 r/sec, and increased with further increase of the radiation intensity. The minimum dc breakdown potential of the point to plane gap was nearly 40% below its no radiation value. It is suggested that the initial decrease in the breakdown potential with increasing radiation intensity may be due to diffusion of electrons to the point electrode resulting in formation of a region of positive space charge; in more intense radiation fields the space charge gradient would be reduced by the presence of a higher concentration of negative charges and the breakdown potential would again increase. Orig. art. has: 1 formula and 2 figures.

SUB CODE: 20, 09 SUBM DATE: 22May65

Card 2/2 PB

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7

FAVOROV, A.M.; VLOKH, V.G.

Possibility of induced type formation in intervarietal potato hybrids. Agrobiologiia no.1:85-89 Ja-F '62. (MIRA 15:3)

1. Institut zemledeliya i zhivotnovodstva zapadnykh oblastey Ukrainy, L'vov. Chlen-korrespondent AN USSR (for Favorov).
(Potato breeding)

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7

VOBECKY, J.

5

PECENKA, J.; JANICEK, B.; HEJDIDEK, J.; SUCHANEK, M.; SEVRECVA, K.; TUHOVA, B.; VOBECKY, J.; VOJTOVA, H.; VOLAKOVA, E.

Immunological survey of influenza in the Czech regions. J.hyg. epidem., Praha 4 no.4:477-488 '60.

1. Institute of Epidemiology and Microbiology in Prague; Microbiological Department, Medical School, Brno University; Public Health Departments in Jihlava, Brno and Ostrava.
(INFLUENZA immunology)

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7

VOLAKOVA,N.; JANDASEK,L.; HABANEC,B.; VEDROVA,D.; ZBYTOVSKY,B.; VOBECKY,J.

Epidemic of myocarditis in newborn infants caused by Coxsackie B1 virus. Cesk. epidem. 13 no.2:88-95 8 My'64

1. Mikrobiologicky ustav lek.fak.UJEvP, Brno; II. Patol.-anat. ustav lek.fak. UJEvP, Brno; I.Detska klinika lek. fak. UJEvP, Brno; OUNZ Boskovice a KHES v Brne.

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7

PESEK, J.; VOBECKY, J.

Attempt to check the effectiveness of vaccination against poliomyelitis as a current antiepidemic practice. J. hyg. epidem. (Praha) 8 no.3:351-352 '64

1. Virological Laboratory, Epidemiological Department, Regional Hygiene and Epidemiology Station, Brno.

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7

PESEK,J.; VOBECKY,J.

Attempt to apply the results of serological surveys in epidemiological practice in influenza. J.Hyg. epidem., Praha 8 no.1: 21-36 '64

1. Virological Laboratory and Epidemiological Department, Regional Hygiene and Epidemiology Station, Brno.

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7

VOBECKY, J.; PESEK, J.; MACKU, M.; technicka spoluprace DOLEZALOVA, V.

Our experience with the use of a live vaccine against infantile paralysis during the spring of 1960. Cesk. epidem. 10 no.6:404-410 N '61.

1. Krajska hygienicko-epidemiologicka stanice v Brne.

(POLIOMYELITIS immunol) (VACCINATION in inf & child)

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7

PECENKA, J.; JANICEK, B.; NEDVIDEK, J.; SUCHANEK, M.; SEVRNOVA, K.; TUMOVA, B.; VOBECKY, J.; VOJTOVA, H.; VOLAKOVA, N.

Immunological survey of influenza in the Czech regions. J.hyg. epidem.,Praha 4 no.4:477-488 '60.

1. Institute of Epidemiology and Microbiology in Prague; Microbiological Department, Medical School, Brno University; Public Health Departments in Jihlava, Brno and Ostrava.
(INFLUENZA immunology)

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7

3

CZECHOSLOVAKIA

HAJNU, M., MD; VOBECKY, J., MD; ZESEK, J., MD.

1. Infectious Ward of the Faculty Children's Hospital (Infekcni oddeleni fakultni detske nemocnice), Brno; 2. Kraj Hygiene-Epidemiological Station (Krajska hygienicko-epidemiologicka stanice), Brno

Prague, Prakticky lekar, No 11, 1963, pp 409-412

"Methods of Determination of the Etiology of Paralytic Patients."

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7

SVOBODA, Karel, MUDr.; VOBECKY, Josef, MUDr.

Experience with utilization of insecticides against mosquitoes.
Cesk. epidem. mikrob. imun. 5 no.2:94-100 Apr 56.

1. Z krajske hygienicko-epidemiologicke stanice v Brne, reditel MUDr. Julius Mencl.
(MOSQUITOES,
control with insecticide NERA 30 (Cz))
(INSECTICIDES,
NERA 30, mosquito control (Cz))

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7

JELINKOVA, S.;VOBECKY, J.; JANICEK, B.

Value of transaminase activity determination in epidemiological practice. Cesk. epidem. mikrob. imun. 12 no.2:104-109 Mr '63.

1. Krajska hygienicko-epidemiologicka stanice v Brne.
(AMINOTRANSFERASES) (COMMUNICABLE DISEASES)

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7

PESEK, J.; VOBECKY, J.

The reduction of wild poliovirus circulation following vaccination with the live vaccine. A new factor in the oecology of enteric viruses? J. hyg.epidem. (Praha) 8 no.2:262-263 '64.

1. Virological Laboratory, Epidemiological Department, Regional Hygiene and Epidemiology Station, Brno.

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320013-7"