"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723210004-2

KLIVENYI, F.

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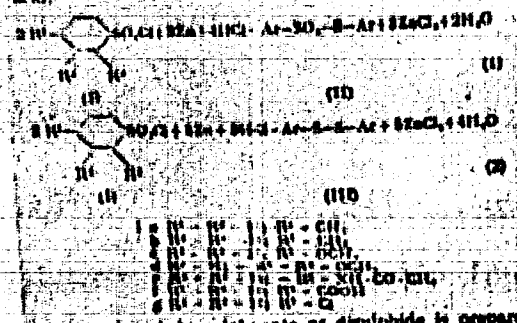
CH

24. Preparation of aromatic sulphonic acid thiol esters and disulphides by the bimolecular reduction of sulphonic acid chlorides — F. Klivényi, F. Kiss (ex). (*Magyar Kémiai Folyóirat* — Vol. 60, 1954, [illegible] 215—219)

The sulphonic acid chloride compounds (I a to g) are reduced with good yield by the calculated amount of zinc dust — see equations (1) and (2) — into the corresponding simple thiosulphonates (II) or disulphides (III) respectively in the presence of excess mineral acid.



Di-1-naphthyl thiosulphonate or disulphide is prepared in analogy by the reduction of naphthalene-1-sulphonic acid chloride. This procedure proved to be more advantageous for the preparation of thiosulphonates (*a*. disulphides than other methods described in literature.

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KLIVENYI, F.

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17. The spatial structure of thiosulphonic acid esters determined by chemical methods, II. Reactions of aromatic thiolsulphonic acid esters and sulphonic anhydrides with chlorine. (In German) P. Klivényi, J. Szabó, R. Vinkler. *Acta Chimica Academiae Scientiarum Hungaricae*, Vol. 6, 1955, No. 3-4, pp. 373-380.

Aromatic thiolsulphonic acid esters are split by the action of chlorine into the corresponding sulphonic chlorides and sulphenic chlorides. Sulphenic acidic anhydrides are decomposed under identical conditions into the corresponding sulphinic acidic chlorides and sulphenic chlorides. Thus the structural asymmetry of the thiolsulphonic acid esters was verified by chemical reactions. However these reactions failed to furnish any further information concerning the real structure of the compounds *i. e.* which of the two possible structural isomerides corresponds to the compounds prepared.

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"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723210004-2

KLIVÉNYI, FERENC

"Bimolecular reduction of aromatic sulfonyl chlorides."

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2 May

Reactions of "sulfonic acid anhydrides." Proof of the identity of the alleged "sulfonic acid anhydrides" and thiol esters of sulfonic acids. Elemér Vinkler and Ferenc Klivényi. *Magyar Kém. Folyoirat* 64, [illegible]-53(1958).—Thiol esters of sulfonic acids (I) have been proven to be structurally identical with the alleged "sulfonic acid anhydrides" (I). The hydrolysis of sulfenyl chlorides and the resulting products (I) are discussed in the light of these findings.

A. Lasz[illegible]

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KHIVENYI, F.

Confirmation of the identity of the alleged sulfenic anhydrides and thiosulfinates. E. Vinkler and F. Khivenyi. *Acta Chim. Acad. Sci. Hung.* 11, 15-22(1957).—The alleged sulfenic anhydrides have been found to be identical to the known thiosulfinates obtained from the disulfides by BzO_2H oxidation. The formation of thiosulfinates by hydrolysis of sulfenyl chlorides is explained by the interaction of the 2 tautomeric forms of sulfenic acid [ArSOH and ArS(:O)H (I)] with each other and loss of H_2O. Reaction of the sulfenyl chloride and I, with loss of HCl, could also explain the formation of thiosulfinates. p-MeC_6H_4SCl (15.9 g.) in 30 ml. petr. ether with 160 ml. of 5% Na_2CO_3 soln. gave 82% $RS(O)SR$ (II, R = p-tolyl) (IIa), m. 108.6°. Other II prepd. were (R and m.p. given), p-$MeOC_6H_4$ (III), 96°; p-ClC_6H_4 (IV), 84-6°; p-ClC_6H_4 (V), 87-8°; 1-$C_{10}H_7$ (VI), 96°. II in $CHCl_3$ were oxidized by adding a $CHCl_3$ soln. of BzO_2H and allowing the mixt. to stand for 24 hrs. giving the respective $RS(O_2)SR$, m. 76-7°, 80-8°, 133-4°, and 118-20°. Similarly the following thiosulfinates were obtained from the corresponding disulfide: from $(p\text{-}O_2NPhS)_2$, m. 152-4° (VII); $(1,2\text{-}ClC_6H_4S)_2$, m. 109° (decompn.) (VIII); $(p\text{-}ClC_6H_4S)_2$, m. 87-8°; $(1\text{-}C_{10}H_7S)_2$, m. 96°. Further BzO_2H acid oxidation gave the thiosulfonate of VII, m. 180°, and of VIII, m. 151-2°.

R. W. Layer

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"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723210004-2

KLIVENYI, F.

Country : Hungary G-2
Category : Organic Chemistry. Synthetic Organic Chemistry

Abs. Jour. : Ref. Zhur.-Khimiya No. 3, 1959 19418

Author : Vinkler, E.; Klivenyi, F.; Szabo, J.
Institut. : Hungarian Academy of Sciences
Title : Investigations in the Field of Organic Sulfur Compounds. Short Communication.

Orig. Pub. : Acta chim. Acad. scient. hung., 1958, 15, No 4, 385-388

Abstract : Reduction of $ArSO_2Cl$ [I, wherein Ar = C_6H_5, p-$CH_3C_6H_4$, o-$CH_3C_6H_4$, p-$CH_3OC_6H_4$, 3,4-$(CH_3O)_2C_6H_3$, p-CH_3-$CONHC_6H_4$, m-$HOOCC_6H_4$, p-ClC_6H_4] with Zn in acid medium takes place over the stages $ArSO_2H$ (II), $ArSO_2SAr$ (III) and ArSSAr (IV), to ArSH. By action of Cl_2 on III were obtained I and ArSCl (V), which excludes the possibility of the structure ArS(O)S(O)Ar in lieu of III. The product obtained by Zincke (Zincke Th., Farr F., Liebigs Ann. Chem., 1912, 391, 55), to which the structure ArSOSAr was ascribed, has actually the structure ArS(=O)SAr (VI) and was obtained by oxidation of IV with C_6H_5COOOH (VII). By action of VII on VI there was obtained III, which negates the possibility of a structure

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Ilona Szegedi

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"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723210004-2

Country : Hungary G-2

Category= :

Abs. Jour. : 19418

Author :
Institut. :
Title :

Orig. Pub. :

Abstract : ArS(O)OSAr in lieu of III. To check the assumption (Hinsberg O., Ber., 1908, 41, 2838) that the mechanism of conversion of II to III consists in the formation of $ArSO_3H$ and ArSOH (VIII) from II, followed by condensation of VIII with another molecule of II to yield III, a reaction was carried out between VIII (Ar = 1-anthraquinonyl) and II, whereby $ArSO_2SAr'$ (IIIa) were actually obtained, in which Ar = 1-anthraquinonyl, Ar'= C_6H_5, p-$CH_3C_6H_4$ and p-ClC_6H_4. The assumption is made that the mechanism of formation of VI on hydrolysis of V, consists in the formation of VIII which can react in tautomeric form ArS(=O)H (VIIIa). Interaction

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"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723210004-2

Country : HUNGARY G
Category : Organic Chemistry. Synthetic Organic Chemistry

Abs. Jour : Ref Zhur - Khim., No 5, 1959, No. 15375

Author : Vinkler, E.; Klivenyi, F.; Klivenyi, E.
Institut. : Hungarian AS
Title : On Reactions of Aromatic Ethers of Thiosulfinic Acids with Grignard Reagents. On the Preparation of Certain Salts of Aromatic Sulfonic*
Orig Pub. : Acta chim. Acad. scient. hung., 1958, 16, No 2, 247-249

Abstract : It was established that ArS(O)SAr (I) (where Ar = 4-$CH_3C_6H_4$ (Ia) or α-naphthyl) with C_6H_5-CH_2MgCl (II) forms $ArSOCH_2C_6H_5$ (III) and ArS-MgCl, and that Ia or I (Ar = C_6H_5) reacts with RMgBr (where R = C_3H_7 or C_6H_5) with the formation of RSAr and ArSOMgBr (IV). Hydrolysis of IV takes place according to the formula: 2 IV + $2H_2O \rightarrow 2HOMgBr + 2ArS(=O)H \rightleftarrows 2HOSAr \rightarrow 2$ I + H_2O. By the reaction of IV with II, III and

* Acids. Preliminary Report

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R'-4-R''C_6H_3SCl (II); after several minutes the solution is filtered, the ether is distilled off, and 4-$RC_6H_4SO_2S$-X_6H_3R'-2-R''-4 (III) is isolated. The R, R', and R'' in the following III, the yield

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"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723210004-2

HUNGARY/Organic Chemistry. Synthetic Organic Chemistry. G

Abs Jour: Ref Zhur-Khim., No 2, 1959, 4669.

in %, and the mp in °C (solvent are given in that order: H, H, H, 64, 44-45, (CH_3OH); H, H, H, OCH_3, 69, 58-59 (CH_3OH); CH_3, H, OCH_3, 78, 55-57 (alc); CH_3CH_3H, 55, 97-98 (CH_3OH); H, CH_3, H, 79, 58-60 (CH_3OH); CH_3H, H, 53, 77-78 (CH_3OH); H, H, CH_3, 73, 52-54 (CH_3OH): CH_3, H, CH_3, 73, 76-77 (CH_3OH); OCH_3, H, Cl, 51, 95-96 (alc); H, H, Cl, 74, 69-70 (CH_3OH); Cl, H, Cl, 69, 133 (alc). The above reactions have shown that the condensation of II with I forms III in inert solvents (ether, benzene, benzine) as well as in Na_2CO_3 solutions; in the majority of cases the yields obtained with the new procedure are very good. -- S. Rozenfeld.

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"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723210004-2

VINKLER, Elemer, Doz., dr. (Szeged); KLIVENYI, Ferenc, dr. (Szeged)

Contribution to the mechanism of hydrolysis of aromatic sulfenyl chlorides; a new contribution to the chemistry of thiosulfinic-acid ester. Acta chimica Hung 22 no.3:345-358 '60. (EEAI 9:11)

1. Institute of Pharmaceutical Chemistry, Medial University, Szeged.

(Hydrolysis)
(Aromatic compounds)
(Sulfenyl chlorides)
(Thiosulfinic acids)
(Esters)

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"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723210004-2

VINKLER, Elemer; LAZAR, Janos; KLIVENYI, Ferenc

Proving the composition of the so-called "cystine disulfoxide" by synthesis. Magy kem folyoir 67 no.7:303-306 Jl '61.

1. Szegedi Orvostudomanyi Egyetem Gyogyszereszi Vegytani Intezete.

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"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723210004-2

VINKLER,Elemer,dr.,doz.(Szeged,Eotvos u.2); LAZAR,Janos,dr.(Szeged,Eotvos u.2);
KLIVENYI,Ferenc,dr.(Szeged,Eotvos u.2)

Data on the constitution of the so-called"cystine disulphoxide."
Acta chimica Hung 30 no.2:233-238 '62

1. Pharmazeutisch-Chemisches Institut der Medizinischen Universitat.

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"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723210004-2

VINKLER, Elemer; KLIVENYI, Ferenc

Mechanism of the hydrolysis of aromatic sulfenyl chlorides.
Magy kem folyoir 65 no. 11:4[illegible]-452 N'59.

1. Szegedi Orvostudomanyi Egyetem Gyogyszereszi Vegytani Intezete.

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L 33619-66 EWP(j) RM

ACC NR: AP6025016 SOURCE CODE: HU/0005/65/071/011/0481/0489

AUTHOR: Klivenyi, Ferenc; Vinkler, Flemer; Lazar, Janos

ORG: Institute of Pharmaceutical Chemistry, College of Medicine, Szeged (Szegedi Orvostudomanyi Egyetem Gyogyszereszi Vegytani Intezete)

TITLE: Further studies on the reduction of sulfochlorides and thiolsulfonic acid esters

SOURCE: Magyar kemiai folyoirat, v. 71, no. 11, 1965, 481-489

TOPIC TAGS: ester, chemical reduction, sulfonic acid, mercaptan

ABSTRACT: Reduction of aliphatic and alicyclic sulfochlorides proceeds, at room temperature, through the sulfinic acid and probably sulfonic acid, yielding mercaptan. The process takes place parallel to the formation of disulfide, which results from the reaction of sulfinic acid and mercaptan. When the reduction is carried out at the boiling point, a part of the sulfinic acid is converted into sulfonic acid and thiolsulfonic acid ester. In the case of the reduction of aromatic sulfochlorides with zinc and acid the sulfinic acid formed at room temperature further reacts to give thiolsulfonic acid ester. At the boiling point the yield of thiolsulfonic acid ester increases. Orig. art. has: 5 tables. [Based on authors' German abst.] [JPRS: 33,906]

SUB CODE: 07 / SUBM DATE: 19Mar65 / ORIG REF: 007 / SOV REF: 001 / OTH REF: 008

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APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723210004-2"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723210004-2

ACC NR: A16033879 SOURCE CODE: HU/2502/65/046/004/0357/0372

AUTHOR: Klivenyi, Ferenc--Fliveni, F. (Doctor; Szeged); Lazar, Janos--Lazar, Ya. (Doctor; Szeged); Vinkler, Elemer (Professor; Doctor; Szeged)

ORG: Institute for Pharmaceutical Chemistry, Medical University, Szeged

TITLE: Further investigations on the reduction of sulfochlorides and thiosulfonic acid esters

SOURCE: Academia scientiarum hungaricae. Acta chimica, v. 46, no. 4, 1965, 357-372

TOPIC TAGS: sulfur compound, organic sulfur compound

ABSTRACT: A great number of sulfochlorides and thiosulfonic acid esters was reduced with zinc and acid under various experimental conditions and the products of the reaction were determined. The results are presented in full detail. Further reactions between the reaction products and/or the initial reaction components were also discussed. This paper provides further data on the findings reported by the authors Ibid., vol. 1, 1951, p. 319 and vol. 5, 1954, p. 159. Mrs. Doctor E. Rozsa carried out the experiment. Orig. art. has: 2 tables. [Orig. art. in German] [JPRS: 34,165]

SUB CODE: 07 / SUBM DATE: 18May65 / ORIG REF: 006 / SOV REF: 001
OTH REF: 010

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"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723210004-2

KLIVER, I.G.

Treating hypertension with physical apparatus in a polyclinic. Vop. kur., fizioter. i lech. fiz. kul't. 24 no. 4:321-315 Jl-Ag '59. (MIRA 13:8)

1. Iz bol'nitsy No. 1 g. Karpinska Sverdlovskoy oblasti (glavnyy vrach M.B. Fisun).
(HYPERTENSION) (PHYSICAL THERAPY)

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"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723210004-2

KLIVER, I.G.

Treatment with sapropel from Knyaspinskoye Lake of diseases of the lumbosacral roots and sciatic nerve in polyclinics. Vop. kur., fizioter. i lech. fiz. kul't. 26 no.4:306-309 Jl-Ag '61. (MIRA 15:1)

1. Iz Karpinskoy gorodskoy bol'nitsy No.1 (glavnyy vrach M.B.Fisun) Sverdlovskoy oblasti i Sverdlovskogo instituta kurortologii i fizioterapii (dir. - kand.med.nauk N.V. Orlov).
(KNYASPINSKOYE LAKE (SVERDLOVSK PROVINCE)--SAPROPELS)
(SCIATIC NERVE--DISEASES) (NERVES, SPINAL--DISEASES)

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"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723210004-2

GDYNIA, Jerzy, mgr; KLIWER, Elzbieta, mgr inz.

Division of production costs in the electrolytic processing of white salt. Chemik 15 no.11:388-391 N '62.

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723210004-2"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723210004-2

KLIYA, M. O.

Kliya, M. O. (Geology) The problem of the change of the form of calcite with lowering of the crystallization temperature. P. 91

Chair of Crystallography and
Crystallochemistry
June 5, 1950

SO: Herald of the Moscow University (Vestnik), Series on Physical, Mathematical and Natural Sciences, No. 2, Vol. 6, No. 3, 1951

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"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723210004-2

LEMLEIN, G. G. KLIYA, M. O.

Crystallization
New data on the deposition of crystall substance on the walls of a liquid inclusion. Dokl. AN SSSR 82 no. 5: 765-768 F '52.
Institut Kristallografii Akademii Nauk SSSR Recd. 12 Dec. 1951

Monthly List of Russian Accesions, Library of Congress, July 1952, UNCL.

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"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723210004-2

KLIYA, M. O. and LEMMLEYN, G. G.

"Special Characteristics of Healing of Cracks in a Crystal Under Conditions of Reduced Temperature", Dokl. AN SSSR, Vol. 87, No. 6, p 957, 1952.

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"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723210004-2

KLIYA, M.O.

Changes in liquid inclusions by reheating effects. G. G. LEIDLEIN AND M. O. KLIYA. *Doklady Akad. Nauk S.S.S.R.* 94, 233-36 (1954); *Chem. Abstr.* 49, 8[illegible] 2054f (1955).—Although in phenocrysts of quartz, as in the occurrence at Metzdorf near Chemnitz, Saxony, Germany, negative crystals containing small gas bubbles occur, similar negative [illegible] larger bubbles that are [illegible] scope inclusions are observed [illegible] These latter (secondary) inclusions are oriented, as on the faces of the hexagonal prism and the base, indicating pre-existing but healed cracks in the crystals. Experiments with rhombohedral crystals of $NaNO_3$ show that the negative crystals with aureoles and secondary inclusions always occur if the host crystals have undergone a thermal treatment that deforms the [illegible] of the negative crystals beyond the limit of elasticity and causes oriented cracks into which the liquid and gaseous material of the primary inclusions intrude. After cooling, the cracks appear sealed, but in the typical aureole the secondary inclusions remain and the volume of the primary gas bubbles is increased. Such aureoles and enlarged bubbles are general indicators of secondary heat treatments in the history of the crystals concerned.

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"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723210004-2

KLIYA, M.O.

USSR/Chemistry - Crystallography

Card 1/1 Pub. 22 - 17/52

Authors : Kliya, M. O.

Title : Obtaining an equilibrium crystal-solution drop system

Periodical : Dok. AN SSSR, 100/2 259-262, Jan 11, 1955

Abstract : The behavior of several crystals situated in one drop was investigated for the purpose of obtaining an equilibrium crystal-solution drop system, and to determine the spontaneity of the recrystallization process. The basic objects of above mentioned investigation were NH_4Cl and $AgNO_3$ known for their high solubility. The positive as well as negative results obtained are described. Five USSR references (1901-1954). Illustrations.

Institution : Academy of Sciences USSR, Institute of Crystallography

Presented by: Academician A. V. Shubnikov, November 1, 1954

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"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723210004-2

KLIYA, M.O.

The mechanism of the transformation of dendritic crystals. M. O. Kliya (Inst. Cryst., Acad. Sci. U.S.S.R., Moscow). Kristallografiya, 1, 677-82(1948). — The transformations of unstable dendritic crystals of NH_4O were recorded by microcinematography. The focus of [illegible] and then transformation in a grams is explained. The dependence of the time of breakdown of the dendrite fronds on their initial thicknesses in the region of breakdown was measured with an error of about 20%. A. I. Mackay

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"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723210004-2

AUTHORS: Kliya, M.O. and Lemmleyn, G.G 70-3-2-11/26

TITLE: Transformations of the Shapes of Liquid Inclusions on Change of Temperature (Preobrazovaniye formy zhidkikh vklyucheniy pri izmenenii temperatury)

PERIODICAL: Kristallografiya, 1958, Vol 3, Nr 2, pp 206 - 208 (USSR).

ABSTRACT: The processes involved in the transformations of the shapes of liquid inclusions in nitrate crystals have been observed by cine-microphotography during sharp changes of temperature. On heating to 300 °C the volume of the cavity of the inclusion and the amount of dissolved matter increase several times. On rapid cooling, the cavity assumes a non-equilibrium form and contains a gas phase. The results of these experiments are compared with observations on high-temperature inclusions in natural crystals.

Plates of potassium nitrate were prepared which contained a few inclusions of diameters up to 0.5 mm. They were blackened with Indian ink and fixed on the stage on a microscope together with an inertia-less heater capable of heating the preparation at a regulated rate up to 300 °C. A stream of cold air could be directed onto the specimen to cool it suddenly. Cavities in

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70-3-2-11/26

Transformations of the Shapes of Liquid Inclusions on Change of Temperature

these plates formed natural, high-temperature and high-pressure cells with transparent walls which permitted the use of a microscope equipped with a cine camera for recording purposes. Heating at first led to the dissolution of material from the walls of the cavity and then, for a definite temperature and rate of heating, to the appearance of internal cracks. Solution proceeds most rapidly near these cracks. At 300 °C the contents of the cavity are homogeneous but on rapid cooling a gas phase appears and crystalline nitrate is also precipitated. After several days the inclusion returns most of the way to its original state.

The views of Lemmleyn on the process of the formation of high-temperature inclusions in natural crystals of beryl, topaz and fluorite are confirmed and make it probable that the crystallisation of drusy minerals in pegmatites occurs from very concentrated solutions without appreciable change on account only of the fall in temperature and pressure. There are 3 figures and 3 Soviet references.

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"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723210004-2

70-3-2-11/26

Transformations of the Shapes of Liquid Inclusions on Change of Temperature

ASSOCIATION: Institut kristallografii AN SSSR (Institute of Crystallography Ac.Sc. USSR)

SUBMITTED: August 15, 1957

Card 3/3

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723210004-2"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723210004-2

AUTHORS: M.O. Kliya and Sokolova, I.G. 70-3-2-14/26

TITLE: The Enclosure, by a Growing Crystal, of Drops of an Emulsion During Crystallisation from Solutions (Zakhvat rastushchim kristallom kapel'emul'sii pri kristallizatsii iz rastvorov)

PERIODICAL: Kristallografiya, 1958, Vol 3, Nr 2, pp 219 - 224 (USSR).

ABSTRACT: The detailed mechanism by which inclusions in crystals are formed during crystallisation in an aqueous medium containing an oil in emulsion has been examined. The form and character of the inclusions is shown to be dependent on the amount of wetting of the faces of the crystal by the oil and on the normal rates of growth of the faces. The results are compared with data on xenogenic inclusions in natural crystals. After various trials borax, $Na_2B_4O_7$ and sodium ammonium phosphate, $NaNH_4HPO_4 \cdot 4H_2O$ were chosen. The use of an oil emulsion had the advantage that ultraviolet light would produce a fluorescence which distinguished the oil inclusions from the solution. In borax crystals only inclusions of oil without mother liquor formed but with the other material homogeneous inclusions of mother liquor formed for low rates of crystallis-

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"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723210004-2

70-3-2-14/26

The Enclosure, by a Growing Crystal, of Drops of an Emulsion During Crystallisation from Solutions

ation but hetereogeneous inclusions when the crystallisation was rapid. Experiments were carried out on a hot stage between 20 and 70 °C. Micro-cinematograph records of the entrainment of oil are reproduced. For borax a linear dependence of the ratio length/width of the inclusions on the rate of deposition of material on the crystal faces was found (for rates of 1.5 to 20 μ/min). It is concluded that the mechanism of the formation of inclusions in natural crystals is like that found here, that is, it began with the sticking of a drop of liquid carbon dioxide to the surface of a growing crystal. With the changing physico-chemical conditions, the surface tension and consequently the wetting power change within very wide limits and this is especially characteristic of CO_2. Therefore, with changes in the normal rate of growth of the crystals inclusions are obtained which contain CO_2 or CO_2 plus mother liquor or mother liquor only. Acknowledgments to Professor G.G.Lemmleyn. There are 5 figures and 7 references, 5 of which are Soviet and 2 German.

Card 2/3

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723210004-2"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723210004-2

70-3-2-14/26

The Enclosure, by a Growing Crystal, of Drops of an Emulsion During Crystallisation from Solutions

ASSOCIATION: Institut kristallografii AN SSSR (Institute of Crystallography, Ac.Sc. USSR)

SUBMITTED: June 21, 1957

Card 3/3

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723210004-2"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723210004-2

AUTHOR: Kliya, M.O. SOV/70-4-2-34/36

TITLE: On the Question of Healing Cracks in Crystals of Ice (K voprosu o zalechivanii treshchin v kristallakh l'da)

PERIODICAL: Kristallografiya, 1959, Vol 4, Nr 2, pp 263-265 + 2 plates (USSR)

ABSTRACT: Cracks filled with a gas phase have been studied at different temperatures below freezing point in a thermostatted room. A piece of transparent lake ice was cut into plates with a hot wire. The plates were first polished on emery paper and then on matt glass to 2-5 mm thickness. The lower face of each was frozen to a slide and the upper face was polished. Cracks were then produced by a sharp blow from a needle on the upper surface. They were usually about 3-4 mm long and 2-3 μ high at the point of emergence being distributed in the plane of the plate. The process of healing, as observed on a microscope stage, was very slow below - 10°C. At temperature above - 3 °. specimens were spoilt by evaporation. Between -5 and -8 ° healing took 5-8 hours. The process was filmed, special precautions against

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SOV/70-4-2-34/36

On the Question of Healing Cracks in Crystals of Ice

heating being taken, initially at several frames per second and later slower at two per minute. Crystallisation of vapour in open cracks proceeded through the liquid phase. Where they were closed cracks containing water vapour healed only because of the recondensation of material from the plane parts of the surface of the crack on the curved parts. The process is like the healing of a crystal in a solution. On the walls of the cavity dendrites grow and ahead of the growth front in the form of the dendrites there is always observed a border of growth. Soon the branches close together and rough bands remain filled with saturated vapour. Inclusions thus formed have initially irregularily developed forms which in time become isometric. Acknowledgments are made to Professor G.G. Lemmleyn. There are 5 references, 4 of which are Soviet and 1 French.

Card 2/3

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723210004-2"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723210004-2

SOV/70-4-2-34/36

On the Question of Healing Cracks in Crystals of Ice

ASSOCIATION: Institut kristallografii AN SSSR
(Institute of Crystallography of the Ac.Sc., USSR)

SUBMITTED: November 14, 1958

Card 3/3

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723210004-2"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723210004-2

KLIYA, M.O.; LEMMLEYN, G.G.

Primary gas inclusion in crystals. Zap.Vses.min.ob-va 90 no.3:260-265 '61. (MIRA 14:10)

1. Institut kristallografii AN SSSR, Moskva.
(Crystals)

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723210004-2"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723210004-2

LEMMLEIN, G.G.; KLIYA, M.O.; OSTROVSKIY, I.A.

Conditions for the formation of minerals in pegmatites as revealed by a study of primary inclusions in topaz. Dokl. AN SSSR 142 no.1:81-83 Ja '62. (MIRA 14:12)

1. Institut kristallografii AN SSSR i Institut geologii rudnykh mestorozhdeniy, petrografii, mineralogii i geokhimii AN SSSR. Predstavleno akademikom A.V. Shubnikovym.
(Pegmatites) (Topaz) (Mineralogy)

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723210004-2"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723210004-2

ACCESSION NR: AP4024991 S/0070/64/009/002/0231/0241

AUTHORS: Lemaleyn, O. O. (Deceased); Kliya, M. O.; Chernov, A. A.

TITLE: A morphological study of artificial diamond crystals

SOURCE: Kristallografiya, v. 9, no. 2, 1964, 231-241

TOPIC TAGS: diamond, synthetic diamond, artificial diamond, artificial diamond crystal, octahedral face, cubic form, spiral layer, dislocation, dislocation growth, cylical twinning, spinel law, skeletal crystal

ABSTRACT: The diamonds in this study were grown from the liquid phase. They developed chiefly a skeletal structure, formed as a rule by octahedral faces. This skeletal structure indicates a marked deviation from equilibrium in the solution. Faces of the cubic form are truncated. These form in spiral layers, attesting to a dislocation mechanism of growth. The ribbing on the spirals ranges from a few angstroms to 100 Å in height. The octahedral faces do not have such relief, and they show no typical development of spiral form of dislocation origin. A cyclic type of twinning was observed, developing according to the spinel law.

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"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723210004-2

ACCESSION NR: AP4024991

The twinning occurs on the (111) face and the angle between twins is on the order of 70°32'. The forms of these cyclic twins and their topography are very similar to the photographs of faces of the orthorhombic dodecahedrons of artificial diamond described by H. P. Bovenkerk (Some observations on the morphology and physical characteristics of synthetic diamond, Industr. Diamond Rev.). This type of twinning is rarely observed in nature, but it may be more common than observations lead us to suspect. Orig. art. has: 12 figures.

ASSOCIATION: Institut kristallografii AN SSSR (Institute of Crystallography AN SSSR)

SUBMITTED: 05Sep63 DATE ACQ: 16Apr64 ENCL: 00

SUB CODE: PH NO REF SOV: 001 OTHER: 006

Card 2/2

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723210004-2"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723210004-2

FLINT, K.V.; SLESAREVA, N.V.; KLIYA, M.O., kand. geol.-miner. nauk, otv. red.

[Synthesis and physical properties of diamond; bibliographical index, 1934-1961] Sintez i fizicheskie svoistva almaza; bibliograficheskii ukazatel' 1934-1961. Moskva, Izd-vo "Nauka," 1965. 119 p. (MIRA 18:3)

1. Akademiya nauk SSSR. Sektor seti spetsial'nykh bibliotek.

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723210004-2"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723210004-2

L 07838-67 EWT(1)/EWP(e)/EWT(m)/EWP(t)/ETI IJP(c) JD/CG/WH

ACC NR: AP6024671 (N) SOURCE CODE: UR/0070/66/011/004/0656/0661

AUTHOR: Kliya, M. O.; Chernyshova, N. A.

ORG: Institute of Crystallography AN SSSR (Institut kristallografii AN SSSR)

TITLE: Decoration of dislocations in corundum crystals

SOURCE: Kristallografiya, v. 11, no. 4, 1966, 656-661

TOPIC TAGS: corundum, crystal dislocation, ruby, crystal impurity, annealing

ABSTRACT: The method of reversible decoration, first proposed by one of the authors (Chernyshova, Kristallografiya, v. 9, no. 6, 931, 1964) has been applied to the study of the dislocation and structure of ruby crystals, grown by the Vernouil method, and corundum crystals with Fe, V, Mn, and Ni impurities. Plates of thickness 1 -- 2 mm were cut along the base of the (0001) plane at different orientations, polished, and annealed. The decoration was observed with an oil-immersion microscope with large magnification and with various types of illumination. The results have shown that only corundum crystals with impurities become decorated, and that the character of the decoration does not depend on the type of impurity. The intensity of decoration increased not only with increasing impurity concentration,

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L 07838-67

ACC NR: AP6024671 3

but also with increasing heat treatment. The dislocations were shown to move in the basal plane as a result of annealing, and the dislocations were shown to be produced by mechanical stresses. The results have displayed the dislocation structure of the crystal in the prismatic glide bands, the distribution of dislocations in the regions of splitting of block boundaries, of crossing of the block boundaries by tracks of prismatic gliding, and tracks of prismatic gliding of different systems over one another. Large variety of decoration pictures were observed at the block boundaries. The presence of prismatic dislocation loops was disclosed. The dislocation lines form usually irregular grids located predominantly in planes parallel to the basal plane. Prismatic dislocation loops decorated with larger particles are observed in the basal plane. In the prismatic glide planes, closely lying dislocation lines, elongated along the <10$\bar{1}$0> direction were observed. Regions with few dislocations were observed near the block boundaries. It is emphasized that the displacement of the dislocations could be observed during the decoration process. The authors thank M. V. Klassen-Neklyudova, V. L. Indenbom, and A. A. Chernov for a discussion and interest in the work. Orig. art. has: 10 figures.

SUB CODE: 20/ SUBM DATE: 08Oct65/ ORIG REF: 005/ OTH REF: 010

Card 2/2 bc

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723210004-2"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723210004-2

KLIYØ O. A., Engineer

"Harvesting Lodged Crops With Combines and the Measures for Decreasing Loss of Grain Behind a Header." Sub 20 May 47, All-Union Sci Res Inst of Mechanisation and Electrification of Agriculture(VIME)

Cand. Tech Sci.

Dissertations presented for degrees in science and engineering in Moscow in 1947

SO: Sum No. 457, 18 Apr 55

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723210004-2"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723210004-2

KLIYA, O.A., kandidat tekhnicheskikh nauk.

Stage harvesting of grain is a means of controlling losses. Zemledelie 4 no.6:73-76 Je '56. (MLRA 9:8)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut mekhanizatsii sel'skogo khozyaystva.

(Harvesting)

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723210004-2"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723210004-2

S/115/60/000/03/031
D002/D003

AUTHOR: Kliyentov, N.A.

TITLE: Measuring Scales of the Object-Micrometer Type

PERIODICAL: Izmeritel'naya tekhnika, 1960, Nr 2, pp 5-6 (USSR)

ABSTRACT: This is a description of a specialized instrument (Figure, photograph) developed for measuring with a high accuracy object-micrometer scales (glass scales with a length of 1 ± 0.003 mm with 0.01±0.001 mm divisions, line width 0.002±0.001 mm). The instrument is based on the "IZA-2" horizontal comparator with the "MBI-Z" biological microscope instead of a visual, and the "OS-41" objective. The object-micrometer (microscale) is placed on the microscope's table, pressed to it by means of clamps, and the microscope is focussed on the object-micrometer lines. The errors do not exceed ±0.001 mm in the 20 ± 3° C temperature range. The instrument can check micro-scales in accordance with the requirements of

Card 1/2

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"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723210004-2

KLIYENTOV, N. V.

33896. Obtyekaniye Profilya Kryla Ogranichyeenim Potokom Zhidkosti. Uchyen. Zapiski. Kazansk. Gos. Un-ta Im. Lyenina, T. CIX, KN 1, 1948, C.3-14.

SO: LETOPIS' Zhurnal'nykh Statey, Vol. 46, Moskva, 1949.

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723210004-2"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723210004-2

S/196/62/000/010/019/035
E073/E155

AUTHOR: Kliyentov, N.V.

TITLE: On the theory of calculation of the resistance and the heat transfer in the case of a jet flowing past an unlimited barrier

PERIODICAL: Referativnyy zhurnal, Elektrotekhnika i energetika, no.10, 1962, 3, abstract 10 G14. (Tr. Kuybyshevsk. aviats. in-t, no.12, 1961, 99-103)

TEXT: A simplified mathematical model of the process of flow of a jet past an unlimited barrier is constructed on the basis of physical conceptions of the process. The solutions obtained are to be compared with experimental data from a special experimental set-up. It is also proposed to integrate the system of differential equations for the case of variable thermophysical characteristics of the jet.
4 references.

[Abstractor's note: Complete translation.]

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APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723210004-2"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723210004-2

L 31870-65 EWT(1)/EWP(m)/EPR/FCS(k)/EWA(1) Pd-1/Ps-4 AM

ACCESSION NR: AR5005867 S/0124/64/000/011/B076/B076

32
B

SOURCE: Ref. zh. Mekhanika, Abs. 11B482

AUTHORS: Klyentov, N. V.

TITLE: Concerning an estimate of nontriviality of the solutions of hydrodynamic and thermal problems in the propagation of a turbulent jet pulsating from a radial diffuser along a solid wall

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723210004-2"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723210004-2

CITED SOURCE: Tr. Kuybyshevsk. aviats. in-t, vyp. 15, ch. 2, 1963, 65-72

TOPIC TAGS: hydrodynamic equation, turbulent flow, turbulent jet, turbulent boundary layer, diffuser flow

TRANSLATION: The problem considered is that of propagation of a turbulent jet pulsating from a radial diffuser along a solid wall.

The system of differential equations that determine the hydrodynamic and thermal problems, as applied to a turbulent boundary layer, has in cylindrical coordinates the form

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ACCESSION NR: AR5005867

0

$$V_r \frac{\partial V_r}{\partial r} + V_z \frac{\partial V_r}{\partial z} = \frac{1}{\rho} \frac{\partial \tau_{rz}}{\partial z}$$

$$\frac{\partial (rV_r)}{\partial r} + \frac{\partial (rV_z)}{\partial z} = 0$$

$$V_r \frac{\partial t}{\partial r} + V_z \frac{\partial t}{\partial z} = \frac{1}{c_p \rho} \frac{\partial q_z}{\partial z}$$

The projections V_z and V_r of the averaged turbulent velocity and the temperature t satisfy the boundary conditions

$$V_r = 0, \quad V_z = 0, \quad t = 0 \text{ при } r = 0$$

$$V_r = 0, \quad t = 0, \quad \frac{\partial t}{\partial z} = 0 \text{ при } z = \infty$$

The system of equations and boundary conditions has a trivial zero solution. To obtain additional conditions characterizing the intensity of the jet, the equations and the boundary conditions are used to derive the integral invariants

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ACCESSION NR: AR5005867

$$\int_0^\infty rV_r^2\left(\int_0^s rV_r ds\right) ds = E = \text{const}$$

$$\int_0^\infty rV_r\left(\int_0^s V_r ds\right) ds = E_1 = \text{const}$$

The nontrivial solution is determined by specifying the quantities E and E_1. These conditions have been generalized also in the case of a compressible liquid. The nontriviality conditions, introduced by N. I. Akatnov (Tr. Leningr. politekhn. in-t, 1958, No. 198, 151--159 -- RZhMekh, 1961, 10B671) for the propagation of jets along a wall for several specified velocity profiles, are derived by an analogous method. Bibliography, 7 titles. M. I. Gurevich.

SUB CODE: ME

ENCL: 00

Card 3/3

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723210004-2"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723210004-2

L 54810-65 EWT(1)/EWP(m)/EWT(m) Pd-1 JD

ACCESSION NR: AR4049249 S/0136/64/000/008/0009/0010

532.356

SOURCE: Ref. sh. Elektrotekhnika i energetika, Abs. 8055

15
8

AUTHOR: Kliventov, N. V.

TITLE: Evaluating the nontriviality of solutions of the hydrodynamic and thermal problems when a turbulent jet coming from a radial diffuser propagates along a solid wall

CITED SOURCE: Tr. Kuybyshevsk. aviats. in-t, vyp. 15, ch. 2, 1963, 65-72

TOPIC TAGS: turbulent jet, turbulent layer effect, hydrodynamic problem, thermal problem

TRANSLATION: A set of differential equations describing the hydrodynamic and thermal problems suitable for a turbulent boundary layer has this form in the cylindrical coordinates:

$$V_r\frac{\partial V_r}{\partial r}+V_z\frac{\partial V_r}{\partial z}=\frac{1}{\rho}\frac{\partial \tau_{rz}}{\partial z};\qquad \frac{\partial(rV_r)}{\partial r}+\frac{\partial(rV_z)}{\partial z}=0;\qquad V_r\frac{\partial t}{\partial r}+V_z\frac{\partial t}{\partial z}=\frac{1}{c_p\rho}\cdot\frac{\partial q_z}{\partial z}.$$

The projections V_z, V_r of the averaged turbulent velocity and the temperature t

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ACCESSION NR: AR4049249

satisfy these boundary conditions:

$$V_r = 0,\ V_z = 0,\ t = 0 \text{ with } z = 0;$$

$$V_r = 0,\ t = 0,\ \frac{\partial t}{\partial z} = 0 \text{ with } z =$$

The above set of equations and the boundary conditions have a trivial zero solution. To obtain additional conditions that characterize the jet intensity by means of equations and boundary conditions, these integral invariants are derived:

$$\int_0^\infty r V_r^2 \left(\int_0^z r V_r \, dz \right) dz = E = \text{const.}$$

$$\int_0^\infty r V_r \left(\int_0^z V_r \, dz \right) dz = E_1 = \text{const.}$$

Card 2/3

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ACCESSION NR: AR4049249

The nontrivial solution is determined by defining the quantities E and E_r. These conditions are also generalized to cover the case of compressible fluid. A similar method was used by N. I. Akatnov (Tr. Leningr. poli'ekhn. in-t, 1958, 198) for describing the nontriviality conditions in the propagation of a jet along the wall, with certain known velocity profiles.

SUB CODE: MK ENCL: 00

Card 3/3

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"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723210004-2

L 14526-66 EWT(1)/EWT(m)/EWP(m)/EPF(n)-2/EWG(m)/EWA(d)/T/ETC(m)/EWA(1) WW/JD/DJ

ACC NR: AT6003069 (A) SOURCE CODE: UR/3181/65/000/015/0041/0052

AUTHOR: Kliyentov, N. V.

ORG: None

TITLE: Hydrodynamic resistance and heat transfer in jet flow around an infinite obstruction

SOURCE: Kuybyshev. Aviatsionnyy institut. Trudy, no. 15, pt. 2, 1965. Doklady kustovoy nauchno-tekhnicheskoy konferentsii po voprosam mekhaniki zhidkosti i gaza (Reports of the Joint scientific-technical conference on problems of the mechanics of liquid and gas), 41-52

TOPIC TAGS: hydraulic resistance, turbulent heat transfer, jet flow, boundary layer theory, fluid flow, heat transfer coefficient, axisymmetric flow, laminar flow, thermal effect

ABSTRACT: It is assumed that a jet of a viscous incompressible fluid issues from a nozzle of finite dimensions with a velocity V_0 and strikes a solid infinite flat wall at a right angle. A diagrammatic scheme of the flow of the fluid is shown in Fig. 1. The article first considers mathematically the resistance and the heat transfer in laminar axisymmetric flow, and then passes on to a consideration of resistance and heat transfer in turbulent axisymmetrical flow past a flat wall. Solution of the problem for laminar flow shows that, by isolating the region $r \gg R_0$ (See Fig. 1), the difficult problem of determining the

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ACC NR: AT6003069

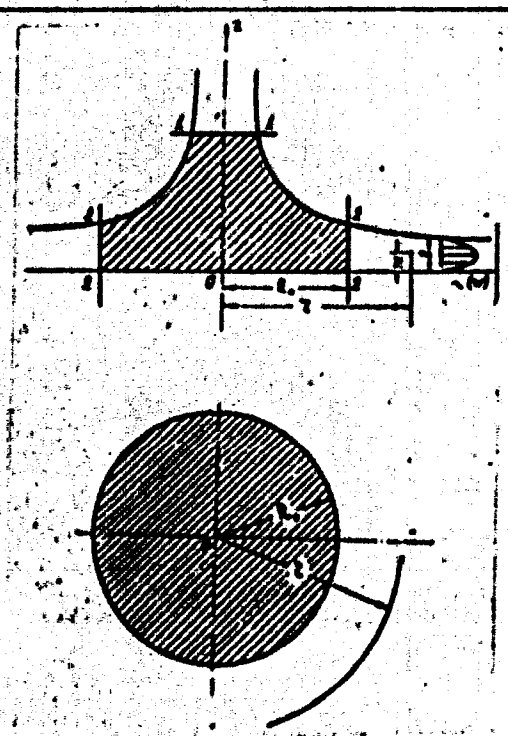

Fig. 1

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ACC NR: AT6003069

resistance and heat transfer coefficients reduces to the simple problem of the integration of a system of differential equations analogous to the equations of boundary layer theory, but with a symmetrical profile of the velocity and temperature distributions with respect to the wall and the surrounding medium. Solutions of the problem for the turbulent regime show that, to determine the resistance coefficient, use can be made of the known equations for the internal problem, while for determination of the heat transfer coefficient, it is necessary to introduce a correction in the form of the ratio V_T/V_0. The solutions presented in the article, together with certain other data from previous literature, are claimed to permit determination of the thermal effect and the effect of the dynamic action of the jet on the infinite obstruction in the most dangerous zone, at high temperatures of the jet, by the use of the classical theorems on the change of momentum and the change of energy. It is further stated that the solution of this problem has great industrial value. Orig. art. has: 46 formulas and 1 figure.

SUB CODE: 20/ SUBM DATE: 00/ ORIG REF: 007/ SOV REF: 000/ OTH REF: 001

Card 3/3

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"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723210004-2

L 11525-66 EWT(1)/EWP(m)/EPF(n)-2/EWG(m)/EWA(d)/T/ETC(m)-6/EWA(1)/EWT(m)

ACC NR: AT6003071 WW/JD/DJ SOURCE CODE: UR/3181/63/000/015/0065/0072

AUTHOR: Klyentov, M.Y.

ORG: None

TITLE: Evaluation of the non-triviality of solutions of the hydrodynamic and thermal problems in the propagation of a turbulent jet pulsating from a radial diffusor along a solid wall

SOURCE: Kuybyshev. Aviatsionnyy institut. Trudy, no. 15, pt. 2, 1963. Doklady kustovoy nauchno-tekhnicheskoy konferentsii po voprosam mekhaniki zhidkosti i gaza (Reports of the Joint scientific-technical conference on problems of the mechanics of liquid and gas), 65-72

TOPIC TAGS: turbulent jet, boundary layer theory, hydrodynamic theory, axisymmetric flow, fluid flow

ABSTRACT: A schematic diagram of the problem is shown in Fig. 1. Point o, in the neighborhood of which the axisymmetric jet spreads out along the infinite obstruction, is taken as the origin of a cylindrical system of coordinates, r, θ, z. The projections of the averaged turbulent velocity on the axis of coordinates are designated by V_r, V_θ, and V_z. The region of flow can be considered as a boundary layer with a null pressure gradient if it is assumed that the jet issues from a point source. The system of differential equations determining the hydrody-

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ACC NR: AT6003071

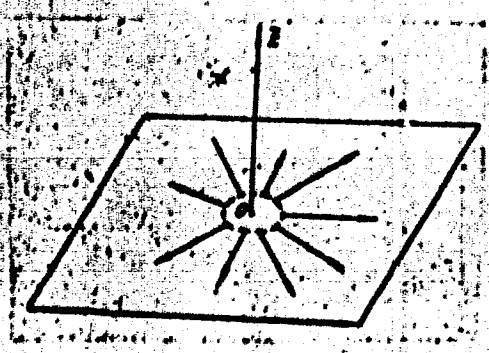

Fig. 1

namic and thermal problems, applicable to the boundary layer, are written as follows:

$$\left.\begin{aligned} &V_x\frac{\partial V_z}{\partial x}+V_z\frac{\partial V_z}{\partial z}=\frac{1}{\rho}\frac{\partial \tau_{xz}}{\partial z}; && \text{(a)}\\ &\frac{\partial(\rho V_x)}{\partial x}+\frac{\partial(\rho V_z)}{\partial z}=0; && \text{(b)}\\ &V_x\frac{\partial i}{\partial x}+V_z\frac{\partial i}{\partial z}=\frac{1}{c_p\rho}\frac{\partial q_z}{\partial z}, && \text{(c)}\end{aligned}\right\}\quad (1),$$

Card 2/3

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L 14525-66

ACC NR: AT6003071

The boundary conditions corresponding to the fluid flow under consideration are taken in the form:

$$\left.\begin{aligned} V_r = 0,\ V_\varphi = 0,\ t = 0 \text{ при } z = 0; \\ V_r = 0,\ t = 0,\ \frac{\partial t}{\partial z} = 0 \text{ при } z = \infty. \end{aligned}\right\} \quad (2)$$

The article demonstrates mathematically that there exists an analog for the non-triviality of the solution of the hydrodynamic and thermal problems for the propagation of a turbulent jet issuing from a point source along a wall, with constant and with varying thermophysical properties of the flow. A basic is established for derivation of the integral relationships necessary for determination of the parameters entering into the expression for the velocity profile in the external and internal flow regions. Orig. art. has: 43 formulas and 1 figure.

SUB CODE: 20/ SUBM DATE: 00/ ORIG REF: 006/ SOV REF: 000/ OTH REF: 001

Card 3/3

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723210004-2"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723210004-2

L 27363-66 EWT(1)/EWP(m)/EWA(d)/ETC(m)-6/EWA(1) WW

ACC NR: AT6003070 (A) UR/3181/63/000/015/0053/0063

AUTHOR: Kliyentov, N. V.

ORG: Kuybyshev Aviation Institute, Kuybyshev (Kuybyshevskiy aviatsionnyy institut)

TITLE: Propagation of a flat laminar jet of incompressible fluid along a rigid wall

SOURCE: Kuybyshev. Aviatsionnyy institut. Trudy, no. 15, pt. 2, 1963. Doklady kustovoy nauchno-tekhnicheskoy konferentsii po voprosam mekhaniki zhidkosti i gaza (Reports of the joint scientific-technical conference on problems of the mechanics of liquid and gas), 53-63

TOPIC TAGS: hydrodynamics, thermodynamics, incompressible fluid, differential equation, viscous fluid, approximation, aerodynamic slot, Prandtl number, boundary layer theory

ABSTRACT: A solution of the thermohydrodynamic problem of the propagation of a flat laminar jet of an incompressible viscous fluid along a rigid wall is presented. The integral relationship method was used, based upon an analogy between solved propagation problems of a semi-limited jet and free convection at a vertical wall. The schematics of jet origination and propagation are shown in Fig.1. The jet issued from an infinitely thin slot, (at 0), into the surrounding fluid. The thermohydrodynamic system of differential equations admitted a trivial (zero) solution; this was overcome by the addition of a conservation equation. For the solution, a hydrodynamic and a thermohydrodynamic integral relationship for the boundary layer was developed. Their characteristics

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L 27363-66

ACC NR: AT6003070

required the development of effective approximations to the velocity and temperature fields; these were based upon zero velocity postulates at the wall and at the outer boundary of the jet. Temperature profiles were determined and are presented as functions of the Prandtl's number. Orig. art. has: 2 figures and 68 formulas.

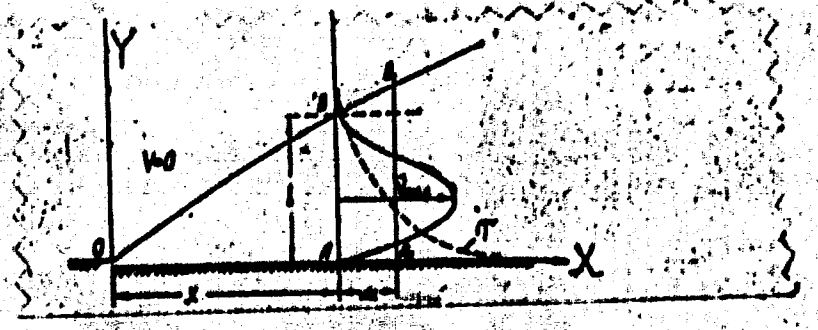

Fig. 1. Schematics of jet origination and propagation

SUB CODE: 20/ SUB DATE: None/ ORIG REF: 005/ OTH REF: 002

Card 2/2

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723210004-2"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723210004-2

L 14658-66 EWT(1)/EWP(m)/EWT(m)/EWA(d)/ETC(m)-6/EWA(1) JD/AW
ACC NR: AT6003072 (N) SOURCE CODE: UR/3181/63/000/015/0073/0084

62
B+1

AUTHOR: Klyentov, N. V.

ORG: Kuybyshev Aviation Institute (Kuybyshevskiy aviatsionnyy institut); Joint Scientific-Technical Conference on Problems of the Mechanics of Liquid and Gas (Kustovaya nauchno-tekhnicheskaya konferentsiya po voprosam mekhaniki zhidkosti i gaza)

TITLE: Application of the method of sources to study flow rebound in a group of nozzles during interaction of jets with a wall

SOURCE: Kuybyshev. Aviatsionnyy institut. Trudy, no. 15, pt. 2, 1963. Doklady kustovoy nauchno-tekhnicheskoy konferentsii po voprosam mekhaniki zhidkosti i gaza (Reports of the Joint scientific-technical conference on problems of the mechanics of liquid and gas), 73-84

TOPIC TAGS: nozzle, jet flow, incompressible flow, viscous fluid, complex function

ABSTRACT: The causes generating flow rebound in a set of nozzles with jet streams impinging on an infinite obstacle are studied analytically. The jet flow from the nozzles is assumed to be incompressible and axisymmetric. For a single jet impinging on the obstacle, a simple source flow solution gives for the radial velocity

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"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723210004-2

L 14658-66
ACC NR: AT6003072

the expression

$$V_r = \frac{\partial \psi}{\partial r} = \frac{Q}{2\pi r}.$$

Extending this source method to n-jets equally spaced on a circle of radius R with a single jet in the middle, the following expression is obtained for the radial velocity component

$$V_r = \frac{\partial \psi}{\partial r} = \frac{Q}{2\pi}\left(\frac{n}{r-R} + \frac{1}{r}\right).$$

where r is the radius of each nozzle and $V_\theta = 0$. The analysis is divided into two regions: $r > R$ and $r < R$. For the latter, a radius R' is found such that the radial velocity is negative for $R' < r < R$ and positive for $r < R'$ where $R' = R/(n + 1)$. This shows the reason for a flow rebound after jet impingement. It can also be seen that the presence of a central jet reduces the amount of rebound from the wall. The analysis is then further complicated by choosing two concentric rings of nozzles where the inner ring now corresponds to R' with the radial velocity now given by

$$V_r = \frac{Q}{2\pi R}\left(\frac{n}{\frac{r}{R}-1} + \frac{n}{\frac{r}{R}-\frac{R'}{R}} + \frac{1}{\frac{r}{R}}\right).$$

Orig. art. has: 29 equations and 7 figures.

SUB CODE: 20/ SUBM DATE: none/ ORIG REF: 002

Card 2/2 BC

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723210004-2"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723210004-2

KLIYENKOV, N.V. (Kuybyshev)

"The application of integral relations to the approximate solution of problems of hydromechanics and heat transfer involving incompressible fluid jets along a flat wall".

report presented at the 2nd All-Union Congress on Theoretical and Applied Mechanics, Moscow, 29 Jan - 5 Feb 64.

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723210004-2"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723210004-2

L 16613-65 EWT(1)/EWP(m)/EPF(c)/EPF(n)-2/EPR/T/EPA(bb)-2/FCS(k)/EWA(1) Pd-1/
Pu-4/Pa-4/Pu-4 ESD(t)/AEDC(a)/ASD(f)-2/ASD(p)-3/AFTC(a) WW
ACCESSION NR: AR4049288 S/0264/64/000/009/A034/A035

SOURCE: Ref. zh. Vozdushny*y transport. Svodny*y tom. Abs. 9A242

AUTHOR: Kliyentgv, N.V. 21

TITLE: Evaluation of nontriviality of solutions to hydrodynamic and heat problems on the dissemination of a turbulent flow pulsating from a radial exit cone along a solid wall

CITED SOURCE: Tr. Kuyby*shevsk. aviats. in-t, vy*p. 15, ch. 2, 1964, 65-72

TOPIC TAGS: turbulent flow, pulsating turbulent flow, flow dissemination problem, solution non-triviality

TRANSLATION: The author demonstrates the existence of an analog of nontriviality of solutions to hydrodynamic and heat problems on the dissemination of a turbulent flow pulsating from a point source along a solid wall, for both constant and variable thermophysical characteristics of the flow. A basis is provided for the derivation of integral ratios required to determine those parameters utilized in expressions for velocity profiles in external and internal flow segments.

Card 1/2

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"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723210004-2

L 16613-65
ACCESSION NR: AR4049288

SUB CODE: ME, TD ENCL: 00

Card 2/2

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723210004-2"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723210004-2

KLIYENTOV, N. V.

"Application of integral relations to the approximate solution of hydromechanics and heat-transfer problems for the expansion of a jet of an incompressible fluid along a flat wall."

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

Kuybyshev Aviation Inst.

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723210004-2"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723210004-2

L 21578-66 EWT(1)/EWP(m)/EWT(m)/EPF(n)-2/EWG(m)/EWA(d)/ETC(m)-6/EWA(1) JD/WW/

ACC NR: AT6006929 GS/RM SOURCE CODE: UR/0000/65/000/000/0420/0432

79

Bt-1

AUTHOR: Kiiyentov, M. V.

ORG: Kuybyshev Aviation Institute (Kuybyshevskiy aviatsionnyy institut)

TITLE: Use of integral relationships for an approximate solution of problems in fluid mechanics and heat exchange in the case where a jet of incompressible fluid is propagated along a flat wall

SOURCE: Teplo- i massoperenos. t. II: Teplo- i massoperenos pri vzaimodeystvii tel s potokami zhidkostey i gazov (Heat and mass transfer. v. 2: Heat and mass transfer in the interaction of bodies with liquid and gas flows). Minsk, Nauka i tekhnika, 1965, 420-432

TOPIC TAGS: laminar flow, incompressible fluid, fluid flow, heat transfer, hydrodynamics, turbulent flow

ABSTRACT: A simple method is proposed for solving plane and axially symmetric heat exchange problems on propagation of laminar and turbulent jets of incompressible fluid along an infinite plane wall. It is assumed that a plane jet of gas flows

Card 1/2

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"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723210004-2

L 10668-65 EWT(m)/EPF(c)/EPF(n)-2 Pu-4/Pr-4/Pu-4 BSD JG/RM

ACCESSION NR: AP4041168 S/0062/64/000/006/0990/0996

AUTHOR: Kiseleva, Ye. D.; Chmutov, K. V.; Kliyentovskaya, M. M.; Pashkov, A. B.

TITLE: Investigation of the radiation stability of cation exchange carboxylic resin KB-6

SOURCE: AN SSSR. Izv. Seriya khimicheskaya, no. 6, 1964, 990-996

TOPIC TAGS: ion exchange resin, KB 6, radiation stability, oxidation, swelling, exchange capacity, water of hydration, reaction constant

ABSTRACT: The radiation stability of KB-6 resin depends on the chemical nature of the exchange ion, on the presence of oxygen and moisture and the acidity. Its radiation stability in the H^+, Na^+ and Cu^{++} forms differs. Irradiation of the ionite in the H^+ and Cu^{++} forms in water and of the Na^+ form in the dry state with 0.2-1.8 x 10^{23} ev/gm doses does not change the exchange properties significantly. The exception is irradiation in 7N HNO_3 in which the capacity increases and swelling decreases in doses of 0.3-0.6 x 10^{23} ev/gm; at 1.2 x 10^{23} ev/gm. the reverse obtains, apparently due to the oxidation of the KB-6 resin. Irradiation of the Na form in water or even moisture lowers the exchange capacity and increases

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L 10668-65

ACCESSION NR: AP4041168

swelling, while under a nitrogen atmosphere or in dry air the stability is actually increased somewhat. The peculiar role of the water of hydration in the ionite is discussed. The pK_a calculated from the potentiometric titration curves of the KB-6 in the H^+, Na^+ and Cu^{++} form in distilled water, varies from 5.6-6.4. Orig. art. has: 5 figures and 3 formulas.

ASSOCIATION: Institut fizicheskoy khimii Akademii nauk SSSR (Institute of Physical Chemistry Academy of Sciences SSSR)

SUBMITTED: 13Nov63 ENCL: 00

SUB CODE: MT, NP NO REF SOV: 006 OTHER: 002

Card 2/2

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723210004-2"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723210004-2

L 16067-65 EWG(j)/EWT(m)/EPF(c)/EPF(n)-2/EWP(j)/T/EWA(h)/EWA(1) Pc-4/
Pr-4/Peb/Pu-4 GG/RM
ACCESSION NR: AP4046086 S/0076/64/038/009/2316/2319

AUTHOR: Kiseleva, Ye. D.; Ragimov, A. V.; Chmutov, K. V.; Berlin, A. A.; Kliyentovskaya, M. M.; Bryushkova, T. A.

TITLE: Effect of an ionizing radiation current of accelerated electrons on polysulfophenylenequinone cationites

B

SOURCE: Zhurnal fizicheskoy khimii, v. 38, no. 9, 1964, 2316-2319

TOPIC TAGS: polysulfophenylenequinone cationite, ionite P3, ionite P4, ionite PS-3, radiation stability, accelerated electron radiation, radiolysis, dry atmosphere radiation, EPR spectrum, double bond oxidation

ABSTRACT: The stability of polysulfophenylenequinone cationites subjected to accelerated electron current radiation in water and in a dry atmosphere was investigated. The conjugated bond-containing ionites were obtained by reaction, in a weakly alkaline medium, of p-benzoquinone (I) with salts of bisdiazotised benzidinedisulfonic acid 2, 2 (II) (I:II=1:3 for ionite P3 and 1:4 for ionite P4) or

Card 1/3

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L 16067-65

ACCESSION NR: AP4046086

stilbenedisulfonic acid-2, 2(III) (I:III=1:3 for ionite PS-3). Radiation conditions: electron energy=4.0-4.2 ME, current strength = 5-10 milliamps, dosage = 1-3 x 10^{19} ev/gm. sec. On irradiation in water the capacity and weight of the cationites was reduced and swelling increased with increasing dosage. Destruction was believed to have been caused by oxidation of the quinone-hydroquinone group in P3 and P4 and oxidation of the double bond in PS-3 by the products of water radiolysis. On irradiation in the absence of water the radiation stability was considerably increased. The increased ion exchange capacity of the irradiated PS-3 cationite was explained due to the formation of carboxyl groups at the site of the double bond rupture. The stability to ionizing radiation by accelerated electrons was increased by an increasing amount of hydroquinone in the cationite; stability of the cationites decreased in the following order: P3>P4>PS-3. EPR signals of the irradiated samples showed an increased number of unpaired electrons attributed to formation of new radicals due to the C-S bond rupture. Orig. art. has: 5 figures and 2 tables.

ASSOCIATION: Akademiya nauk SSSR Institut fizicheskoy khimii (Academy of

Card 2/3

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723210004-2"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723210004-2

L 16067-65

ACCESSION NR: AP4046086

Sciences SSSR Institute of Physical Chemistry)

SUBMITTED: 24Apr64 ENCL: 00

SUB CODE: GC, EM, GP NO REF SOV: 002 OTHER: 000

Card 3/3

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723210004-2"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723210004-2

L 41639-65 EWG(j)/EWT(m)/EWG(m)/EWP(j)/EWA(h)/EWA(1) Pc-4/Peb RAH/RM
ACCESSION NR: AP5008919 S/0076/65/039/003/0771/0773

44
39
B

AUTHOR: Kiseleva, Ye. D.; Chmutov, K. V.; Kliyentovskaya, M. M.

TITLE: Stability of the polycondensation cation-exchangers KU-5, KU-6, and EO-7 to radiation

SOURCE: Zhurnal fizicheskoy khimii, v. 39, no. 3, 1965, 771-773

TOPIC TAGS: cation exchange resin, polycondensation, radiation stability, electron bombardment, ionizing radiation, ion exchange capacity, KU-5 resin, KU-6 resin, EO-7 resin

ABSTRACT: The article discusses the effects of ionizing radiation consisting of a flux of accelerated electrons on the cation exchange resins KU-5, KU-6, and EO-7, particularly on the change in their ion-exchange capacity, swelling, and change in mass as a function of the dose. An IFKh accelerator was used. The dose rate was 1×10^{19} eV/g·sec; the dose was determined by the irradiation time. It was found that when irradiated with a dose of $0.2\text{-}1.5 \times 10^{22}$ eV/g, the resins EO-7 and KU-5 in distilled water and in 1.0 N hydrochloric acid showed a certain decrease in their exchange capacity (5-20%) and that their swelling changed, whereas the ion-exchange properties of KU-6G remained the same. The stability of KU-5G and KU-6G

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ACCESSION NR: AP5008919

5

to radiation is attributed to the special electronic structure of the fused rings of naphthalene and acenaphthene (KU-5G and KU-6G) and to the introduction of hydroquinone (labile electrons) into the system (EO-7). "The authors express their deep appreciation to A. B. Pashkov and M. A. Chukov for the resin samples supplied for the investigation." Orig. art. has: 2 figures and 2 tables.

ASSOCIATION: Institut fizicheskoy khimii, akademiya nauk SSSR (Institute of physical chemistry, academy of sciences of the SSSR)

SUBMITTED: 21Mar64 ENCL: 00 SUB CODE: MT

NO REF SOV: 003 OTHER: 000

Card 2/2

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723210004-2"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723210004-2

CHMUTOV, K.V.; KLIYENTOVSKAYA, M.M.; AVGUL', V.T.

Device for rapid sampling of liquids in the study of reaction kinetics. Zhur. fiz. khim. 39 no.5:1276-1277 My '65. (MIRA 18:8)

1. Institut fizicheskoy khimii AN SSSR.

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723210004-2"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723210004-2

KLIYENTOVSKIY, G., sud'ya respublikanskoy kategorii po avtomodel'nomu sportu.

Fuel mixtures. Za rul. 18 no.6:18-19 Je '60. (MIRA 13:8)
(Automobiles--Models)

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723210004-2"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723210004-2

KLIYENTOVSKIY, G.

The MK-12 "S" racing automobile model with engine. Za rul. no.12:insert D '57. (MIRA 11:1)
(Automobiles, Racing--Models)

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723210004-2"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723210004-2

KLIYENTOVSKIY, G.

KLIYENTOVSKIY, G.

Work of judges at automobile model competitions. Za rul. 15 no.7: 6-8 Jl '57. (MLRA 10:9)

(Automobiles--Models)

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723210004-2"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723210004-2

KLIYENTOVSKIY, O.

Increase of speeds, simplification of models. Za rul. 17 no.10:11 O '59. (MIRA 13:2)

(Automobiles--Models)

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723210004-2"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723210004-2

PSAKHIS, Z.Ya.; KLIMENTOVSKIY, G.B.; SUKHANOV, A.P.; YEFREMOVA, Ye.V., red.; BLAZHENKOVA, G.I., tekhn.red.

[Models of racing automobiles] Modeli gonochnykh avtomobilei. Moskva, Izd-vo DOSAAF, 1959. 173 p. (MIRA 13:3)
(Automobiles, Racing--Models)

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723210004-2"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723210004-2

KLIMENTOVSKIY, Gleb Borisovich; PSAKHIS, Zinoviy Yakovlevich; YEFREMOVA, Ye.V., red.; KANYAKINA, M.S., tekhn.red.

[Automobile models with rubber and spring-actuated engines] Modeli avtomobilei s rezinovymi i prushinnymi dvigateliami. Moskva, Izd-vo DOSAAF, 1960. 103 p. (MIRA 13:6)
(Automobile--Models)

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723210004-2"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723210004-2

KLIYER, K.

Spectra of pure nickel protoxide and nickel protoxide with adsorbed gases. Kin.i kat. 3 no.1:65-71 '62. (MIRA 15:3)

1. Institut fizicheskoy khimii Chekhoslovatskoy AN, Praga.
(Nickel oxide--Spectra)

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723210004-2"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723210004-2

CZECHOSLOVAKIA / Chemical Technology. Chemical Products and Their Application. Water Treatment. Sewage. H-5

Abs Jour: Ref Zhur-Khimiya, No 23, 1956, 76113.

Author : Eljacko, A. V.
Inst : Not given.
Title : Experiment With Water Purification in USSR in Clarifiers With Suspended Layer.

Orig Pub: Voda, 1957, 33, No 11, 287-292.

Abstract: No abstract.

Card 1/1

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723210004-2"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723210004-2

KLJAIC, Nikola, dr.

Stage 0 of the carcinoma of uterine cervix. Lijec. vjes. 76 no. 7-8:341-350 July-Aug 54.

1. Iz Klinike za zenske bolesti i porodjaje Medicinskog fakulteta Sveucilista u Zagrebu.

(CERVIX, UTERINE, neoplasms
epidermoid carcinoma, preinvasive)
(CARCINOMA, EPIDERMOID
uterine cervix, preinvasive)

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723210004-2"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723210004-2

COUNTRY : Yugoslavia 0
CATEGORY : Plant Diseases. Diseases of Cultivated Plants.

ABS. JOUR. : REF ZHUR - BIOLOGIYA, NO. 4, 1959; No. 15904

AUTHOR : Kljajic, Radojica

TITLE : Falling Off of Pimpinella anisum Blossoms.

ORIG. PUB. : Acta pharmac. jugosl., 1958, 8, No.1, 3-6

ABSTRACT : It was established that the falling of blossoms of the anise in some districts of Serbia and Croatia was due to a disease caused by the fungus Plasmopara nivea (Ung) Schr. In order to combat this affliction the author recommends a cleansing of the seed intended for planting, a selection of the most advantageous soil, and spraying of the plants with Bordeaux mixture.

CARD: 1/1

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723210004-2"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723210004-2

KLJAKIC, D.

"Daring jumps; the third Serbian parachute competition." p. 1. (Aero Svet. Vol. 3, no. 41, June 1953. Beograd).

SO: Monthly List of East European Accessions, Vol. 3, no. 6, Library of Congress, June 1954. Uncl.

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723210004-2"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723210004-2

KLJAKIC, D.

"On battlefields in the sky; Yugoslav autumn military maneuvers." p. 1. (Aero Svet. Vol. 3, no. 49, Oct. 1953. Beograd.)

SO: Monthly List of East European Accessions, Vol. 3, no. 6, Library of Congress, June 1954, Uncl.

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723210004-2"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723210004-2

KLJAKIC, Veselin, ins. CSc.; SYMAK, Juraj, ins.; PRIEHRADNY, Stanislav, PhMr. dr.

Results of experiments with fused magnesium phosphate. Rost vyroba 10 no.11:1135-1148 N '64.

1. Research Institute of Agrochemical Technology, Bratislava-Predmesti.

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723210004-2"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000723210004-2

KONRAD-JAKOVAC, Z.; JOVANOVIC, V.; JUKIC, M.; KLJUCARICEK, B.; PUCAR, Z.

Tracer level separations of cyclotron target components by means of continous electrophoresis. Croat chem acta 35 no.4: A14 '63.

1. Department of Physical Chemistry, Institute "Ruder Boskovic", Zagreb, Croatia, Yugoslavia.

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Pod org 17 no.7:324 Jl '63.

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(COLON, abnormalities,
*hepatodiaphragmatic interposition, x-ray)
(ABNORMALITIES,
*colon, hepatodiaphragmatic interposition, x-ray)

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1. Voj. nemocnice Olomouc
(HEPATITIS, INFECTIOUS, therapy
fever ther.)
(FEVER THERAPY, in various diseases
hepatitis, infect.)

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(SINUSITIS, compl.
bronchial dis., statist. (Cz))
(BRONCHI, dis.
with sinusitis, statist. (Cz))

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1. Interni klinika lekarske fakulty PU v Olomouci (prednosta prof. Dr. P. Lukl) a Vnitrni vojenske nemocnice v Olomouci (nacelnik MUDr. C. Cihalik).

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