

AUTHORS:

Gudriniyetse, E., Vanag, G.,
Kursemniyeks, A., Grants, Z.

S/153/60/003/01/031/058
B011/B005

TITLE:

Interaction Between Sulfuryl Chloride and Beta Diketones

PERIODICAL:

Izvestiya vysshikh uchebnykh zavedeniy. Khimiya i khimicheskaya
tekhnologiya, 1960, Vol 3, Nr 1, pp 119-121 (USSR)

TEXT: The authors proved that sulfuryl chloride is a good chlorination reagent for cyclic β -diketones. Ether, dioxane, CCl_4 , 1,2-dichloroethane, chloroform, and benzene were used as solvents. The highest yields in dichloro- β -diketones were obtained in dioxane at a ratio of β -diketone : sulfuryl chloride = 1 : 2.5. The reaction was carried out at different temperatures between 0 and 80°. At higher temperatures, the reaction proceeds faster, but only 2,2-dichlorodiketones-1,3 (I) are formed. Without a solvent, the reaction proceeds very vigorously, and the product becomes resinous. Application of ultraviolet light (quartz lamp) and anhydrous aluminum chloride did not lead to the formation of sulfochlorides. The compounds produced are: 2,2-dichloroindandione-1,3, 2,2-dichlorodimedone, 2,2-dichloro-5-phenylcyclohexanedione-1,3, and 2,2-dichloroperinaphthindandione. The table (p 120) shows the reaction temperatures, solvents, yields, and the calculated and measured melting points of the products obtained. There are 1 table

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Interaction Between Sulfuryl Chloride and Beta
Diketones

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and 13 references, 3 of which are Soviet.

ASSOCIATION: Rizhskiy politekhnicheskoy institut; Kafedra organicheskoy khimii
(Riga Polytechnic Institute; Chair of Organic Chemistry) ✓

SUBMITTED: February 23, 1959

Card 2/2

KURZENKOV, S., podpolkovnik, geroy Sovetskogo Soyuza.

Prompted by experience. Vypel 10 no.15:5-6 ^{AG} '47.
(MIRA 12:9)

(Russia--Air Force)

KURZEPA, Henryka

Effect of pantothenic acid on *Acetobacter xylinum*. *Acta microb.*
polon. 10 no.3:323-333 '61.

1. From the Department of Nutrition, State Institute of Hygiene,
Warsaw.

(ACETOBACTER pharmacol) (PANTOTHENIC ACID pharmacol)

CHOJECKA, Barbara, KURZEPA, Stanislaw

Determination of oxytocic properties of the blood from the cubital vein
and from the cervix uteri in labor. Polski tygod. lek. 13 no.14:526-528
7 Apr 58

1. (Z III Kliniki Poloznictwa i Chorob Kobietych Akademii Medycznej
w W-wie; kierownik: prof. dr med. Jan Lesinski i z Zakladu Farmakologii
Instytutu Matki i Dziecka; dyrektor: prof. dr med. Franciszek Groer)

Adres: Warszawa, III Kl. Polzn. i Chor. Kobietych A.M. w W-wie.

(LABOR, blood in,

oxytocic properties (Pol))

(OXYTOCICS, in blood,

in labor (Pol))

CHOJECKA, Barbara; KURZEPA, Stanislaw; LESINSKI, Jan

Oxytocic properties of blood serum of parturients and newborn infants.
Polski tygod. lek. 13 no.48:1937-1938 1 Dec 58.

1. (Z Działu Matki; kierownik: prof. dr Jan Lesinski; i z Zakładu Farmakologii Instytutu Matki i Dziecka; dyrektor; prof. dr Franciszek Groer). Adres: Warszawa, ul. Madalinskiego 25. Inst. Matki i Dziecka Klin. Polozn.

(LABOR, blood in
oxytocic properties (Pol))

(INFANT, NEWBORN, blood in
same)

Country : Poland H-17
Date: :
Pub. Jour. : 46824
Author : Kurzepa, S.; Podlewska, A.
Instit. :
Title : Serotonin (Enteramine, 5-Hydroxy-Triptamine).

Orig. Pub. : Farmac. polska, 1958, 14, No 8, 114-118

Abstract : Description of pharmacological and physiologic action of serotonin, of its significance in the organism, and also of the methods of biological and chemical study. Bibliography 24 references. -- Ya. Shteynberg.

Card:

CIEŚLAK, J.; KURZEPA, Stanisław; LESIŃSKI, Jan; PODLEWSKA, Alicja,

Effect of several uronic & onic acids & their lactones on uterus
in vitro. Polski tygod. lek. 14 no.12:513-515 23 Mar 59.

1. Z Zakładu Farmakologii, p.o. kier.: mgr St. Kurzepa oraz Działu
Matki kier.: prof. dr Jan Lesinski, Instytutu Matki i Dziecka w Warszawie;
dyrektor: prof. dr Fr. Groer. Adres: Warszawa, ul. Madalinskiego 25,
Inst. Matki i Dziecka.

(GLUCONATES, eff.

gluconic acid & gluconic acid lactones on uterus in vitro
(Pol))

(URONIC ACIDS, eff.

galacturonic acid & galacturonic acid lactones on uterus in
vitro (Pol))

(GLUCURONATES, eff.

glucuronic acid & glucuronic acid lactones on uterus in vitro
(Pol))

(UTERUS, eff. of drugs on

galacturonic, gluconic & glucuronic acids & their lactones
on uterus in vitro (Pol))

CIECIOROWSKA, Anna; KURZEPA, Stanislaw; TELKO, Miroslaw

Effect of adrenalin and noradrenalin on non-pregnant uterus
in women and in certain experimental animals. Gin.polska 30
no.3:309-314 My-Je '59.

1. Z Kliniki Poloznictwa i Chorob Kobietych oraz Zakladu
Farmakologii Instytutu Matki i Dzidcka w Warszawie Dyrektor
Instytutu: prof. dr med. F. Groer Kierownik Kliniki: prof.
dr med. J. Lesinski Kierownik Zakladu Farmakologii (p. o.):
mgr St. Kurzepa.

(UTERUS pharmacol)

(EPINEPHRINE pharmacol)

(NOREPINEPHRINE pharmacol)

CHOJECKA, Barbara; KURZEPA, Stanislaw

Oxytocic properties of the blood serum in women with pregnancy toxemias. Polski tygod. lek. 15 no.20:766-767 16 My '60.

1. Z Działu Matki; kierownik: prof. dr. med. Jan Lesinski, z Zakładu Farmakologii, p.o. kierownik: dr Stanislaw Kurzepa, a Instytutu Matki i Dziecka; dyrektor: prof. dr. med. Franciszek Groer.

(PREGNANCY TOXEMIAS blood)
(OXYTOCICS blood)

CIECIOROWSKA, Anna; KURZEPA, Stanislaw; TELKO, Miroslaw

Effect of adrenalin and noradrenalin on contractile activity of the human uterus. Gin.polska 31 no.2:141-148 Mr-Apr '60.

1. Z Kliniki Chorob Kobietych i Poloznictwa oraz z Zakladu Farmakologii Instytutu Matki i Dziecka w Warszawie. Dyrektor Instytutu: prof.dr med. F. Groer. Kierownik Kliniki: prof.dr med. J. Lesinski P.o. Kierownik Zakladu Farmakologii: mgr St. Kurzepa.

(UTERUS pharmacol.)

(EPINEPHRINE pharmacol.)

(NOREPINEPHRINE pharmacol.)

BIBLECKI, Antoni; KURZEPA, Stanislaw

Effect of largactil and of fluoro- and bromo-promazine on the isolated human oviduct. Gin.polska 31 no.3:275-279 My-Je '60

1. Z Kliniki Poloznictwa i Chorob Kobietych i Zakladu Farmakologii Instytutu Matki i Dziecka w Warszawie Dyrektor: prof. dr med. F.Groer; Kierownik Kliniki : prof. dr med. J.Lesinski p.o. Kierownika Zakladu: dr St.Kurzepa
(PROMAZINE rel cpds)
(OVIDUCTS pharmacol)
(CHLORPROMAZINE pharmacol)

KURZEPA, S.

Distr: 4E3d 1

N-Substituted phenoxazines. The oxygen analog of chlorpromazine. Jerzy Cielak, Stanislaw Kurzepa, and Krystyna Ostalska (Univ. Warsaw). Rozprawy Chem. 34, 103-104 (1960) (English summary).—The synthesis of 10-[N-dimethylamino)propyl]phenothiazine (Ia) and its O analog, 2-chloro-10-[(N-dimethylamino)propyl]phenoxazine (Ib) (b. 126-30°/0.005 mm., yield 91%; HCl salt m. 215-16°) was described. 2-Chloro-9-nitrophenoxazine was reduced with SnCl₂ to 2-chloro-9-aminophenoxazine-HCl (II), m. 228-30°. II (16 g.) in 300 ml. EtOH, 30 ml. CCl₄, and 5 ml. concd. H₂SO₄ was boiled with addn. of 6 g. NaNO₂ and cooled below 0° to yield 85% compd. (III), m. 186-7°, with 3 N atoms forming a triazine system. III (12.3 g.) and 1.5 g. powd. Cu was boiled in 200 ml. EtOH-20 ml. H₂SO₄ and the soln. poured into 1 l. H₂O to ppt. 91% 2-chlorophenoxazine (IV), m. 144-5° (Me₂CO). IV (10.8 g.) in 60 ml. xylene was boiled with 6.1 g. 1-chloro-3-(N-dimethylamino)propane and 1.9 g. Na amide, Ib extd. with H₂O contg. HCl, KOH added, the mixt. extd. with Et₂O, and distd. *in vacuo*. Similarly were obtained (m.p. of HCl salt given): Ia 102-3°; II 165-6°; III 168-9°; and IV 155-6°. The described transformation cycle was a convenient method of obtaining asymmetric 1-, 2-, 3-, or 4-substituted phenoxazines. A. Kreglewski

5
 1-13W (12W)
 1-Jag (AB)
 1

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KURZEPA, Stanislaw; CIESLAK, Jerzy

Halogen analogues of chlorpromazine; synthesis of 2-bromo-10-
[(n-dimethylamine)-propyl]-phenothiazine and 2-fluoro-10-[(di-
methylamine)-propyl]-phenothiazine. Roczniki chemii 34 no.1:111-117
'60. (EEAI 10:9)

1. Department of Organic Chemistry, University, Warsaw and Department
of Pharmacology, Institute of Mother and Child, Warsaw.

(Halogen) (Chlorodimethylaminopropylphenothiazine)
(Dimethylaminopropylphenothiazine)
(Bromodimethylaminopropylphenothiazine)
(Fluorine)

CHOJECKA, Barbara; GOLISZEK, Janina; KURZEPA, Stanislaw; LESINSKI, Jan;
SAMOJLIK, Eugeniusz

Studies on the level of urinary 5-hydroxyindolacetic acid in women with
and without previous psychoprophylactic preparation in labor. Polski
tygod. lek. 16 no.11:383-385 13 Mr '61.

1. Z Kliniki Ginekologiczno-Polosniczej; kierownik: prof. dr J. Lesinski
i Zakladu Farmakologii; p.o. kierownik: dr St. Kurzepa, Instytutu Matki
i Dziecka; dyrektor: prof. dr F. Groer.

(INDOLACETIC ACID urine) (LABOR urine)

WOLSKI, A.; KURZEPA, St.; PADZIK, H.

Studies on the etiopathogenesis of cervical incompetence. Gin.
polaka 32 no.5:639-648 '61.

1. Z III Kliniki Położnictwa i Chorob Kobietych AM Kierownik:
prof. dr J.Lesinski Zakładu Farmakologii P.O.kierownik: dr
St.Kurzepa Laboratorium Chemiczno-Bakteriologicznego Kierownik:
dr W.Solecka Instytutu Matki i Dziecka w Warszawie Dyrektor:
prof. dr F.Groer.

(CERVIX UTERI dis) (PREGNANCY compl)

Uhhoh
P/016/62/000/011/002/006
D218/D307

21.3500

AUTHORS:

Bojarska-Dahlig, Halina, Docent, Doctor,
Engineer (Director, see Association) and
Kurzepa, Stanislaw, Doctor (Director,
see Association)

TITLE:

Monoamine oxidase and its inhibitors. I

PERIODICAL:

Wiadomości Chemiczne, no. 11, 1962, 659-669

TEXT:

It has been established that changes in the equilibrium and level of chemical transmitters, such as adrenaline, noradrenaline, acetylcholine, histamine and sero tonin, are similar to the γ - aminobutyric acid in that they give rise to clear disturbances in psychic states. Studies of the various processes involved in this phenomenon, which modifies the concentration of neurohormones, have led to the discovery of enzymes affecting the level of neurohormones, including monoamine oxidase (MAO). The authors review published work on the physiological significance of MAO together with the pharmacological and clinical

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27.3500

P/016/62/000/012/002/003
D461/D307

AUTHORS: Bojarska-Dahlig, Halina, Docent, Doctor, Engineer,
and Kurzepa, Stanislaw, Doctor, Director (see Asso-
ciation)

TITLE: Monoamine oxidase and its inhibitors. II

PERIODICAL: Wiadomosci Chemiczne, no. 12, 1962, 741-757

TEXT: A review paper covering the period up to 1961. The subject matter is considered under the following headings: (1) hydra-
zine derivatives, (2) harman derivatives, (3) 2-phenylcyclopropyla-
mine, (4) indole derivatives, (5) examples of MAO inhibitors belong-
ing to other groups of chemical compounds, and (6) MAO inhibitors
used in therapeutics. It is noted that MAO inhibitors are being
studied (since 1960) at the Pharmaceutical Institute in Warsaw. This
work is concerned with (1) the synthesis of new enzyme inhibitors,
and (2) the biological activity of these preparations. There are 5
tables and 37 references: 1 Soviet-bloc and 36 non-Soviet-bloc. √B

Card 1/2

Monoamine oxidase ...

P/016/62/000/012/002/003
D461/D307

ASSOCIATION: Bojarska-Dahlig: Zakład Syntezy I w Instytucie Farmaceutycznym w Warszawie (Department of Synthesis I of the Pharmaceutical Institute, Warsaw); Kurzepa: Zakład Farmakologii w Instytucie Matki i Dziecka w Warszawie (Department of Pharmacology at the Mother and Child Institute, Warsaw) and Pracownia Neurofarmakologiczna w Instytucie Farmaceutycznym w Warszawie (Neuropharmacological Laboratory of the Pharmaceutical Institute, Warsaw)

JB

Card 2/2

KURZEPA, Stanislaw; RUTKOWSKA, Alina

Pharmacodynamic reactivity changes in relation to the stage of development. I. Studies on the effect of pyramidon on brain tissue respiration in young and adult rats. Acta physiol. Pol. 13 no.1:167-175 '62.

1. Z Zakladu Farmakologii Instytutu Matki i Dziecka w Warszawie P.o.
Kierownika: dr St. Kurzepa Dyrektor: prof. dr F. Groer.

(AMINOPYRINE pharmacol) (BRAIN pharmacol)
(AGING)

KURZEPA, Stanislaw; RUTKOWSKA, Alina

Pharmacodynamic reactive changes related to the developmental stage. Studies on the drop of temperature in young and mature rats under the influence of increasing doses of pyramidon. Acta physiol. polon. 13 no.2:301-306 '62.

1. Zakladu Farmakologii Instytutu Matki i Dziecka w Warszawie p.o.
Kierownika: dr St. Kurzepa Dyrektor: prof. dr B. Gornicki.
(AGING) (BODY TEMPERATURE pharmacol)
(AMINOPYRINE pharmacol)

BOJARSKA-DAHLIG, Halina, doc dr inż.; KURZEPA, Stanislaw, dr, adiunkt

Monoamine oxidase and its inhibitors. II. Wiad chem 16 no.12:
741-757 D '62.

1. Kierownik Zakładu Syntezy I. Instytut Farmaceutyczny,
Warszawa (for Bojarska-Dahlig). 2. Kierownik Zakładu
Farmakologii, Instytut Matki i Dziecka, Warszawa i kierownik
Pracowni Neurofarmakologicznej, Instytut Farmaceutyczny,
Warszawa (for Kurzepa).

KURZEPA, Stanislaw; CHOJECKA, Barbara

Significance and use of serotonin in obstetrics and gynecology.
Ginek. Pol. 33 no.2:229-236 '62.

1. Z Zakladu Farmakologii Instytutu Matki i Dziecka w Warszawie P.o.
kierownik: dr S. Kurzepa Kierownik Dzialu Matki: prof. dr med. J.
Lesinski Dyrektor Instytutu Matki i Dziecka: prof. dr med. F. Groer.

(GYNECOLOGY) (OBSTETRICS) (SEROTONIN)

KURZEPA, Stanislaw; SAMOJLIK, Eugeniusz

Studies on the effect of some serine derivatives on the fertility and on the course of pregnancy in mice. Ginek. pol. 34 no.2:183-188 '63.

1. Z Zakladu Farmakologii Instytutu Matki i Dziecka Dyrektor: prof. dr B. Gornicki Kierownik: dr S. Kurzepa i z Kliniki Podoznicstwa i Chorob Kobietych Instytutu Matki i Dziecka Kierownik: prof. dr med. J. Lesinski.

(PREGNANCY, ANIMAL) (SERINE)
(FERTILITY) (ANTIMETABOLITES)

KURZEPA, Stanislaw; LODZINSKI, Kazimierz

Studies on the level of 5-hydroxyindolacetic acid in urine in burns
in children. *Pediat. pol.* 37 no.7:693-701 J1 '62.

1. Z Kliniki Chirurgii Dziecięcej Kierownik: prof. dr med. W. Poradowska
i z Zakładu Farmakologii Instytutu Matki i Dziecka Kierownik: dr farm.
St. Kurzepa Dyrektor: prof. dr med. B. Gornicki.
(INDOLACETIC ACID rel cpds) (BURNS urine)

[HUNGARY

GROJECKA, B. Dr., GOLISZEK, J. Dr., KURZEPA, S. Dr., LESINSKI, J. Dr., SAMOJLIK, E. Dr.; Obstetrical and Gynecological Clinic and Department for Pharmacological Research; Institute for Maternity and Infant Care (Szülészeti és Nőgyógyászati Klinika és Gyógyszerkutatói Osztály; Anya és Csecsemővéde Intézet)*, Warsaw.

"5-Hydroxy-Indole-Acetic Acid Excretion of Maternity Patients Unprepared and Prepared by Psychoprophylactic Methods."

Budapest, Orvosi Hetilap, Vol 103, No 46, 18 Nov 62, pages 2175-2177.

Abstract: [Authors' summary] Psychoprophylactic preparation, by its effect on the central nervous system, resulted in a change in serotonin metabolism. It seemed that the excretion of 5-HIA was proportional to the success of the psychoprophylactic preparation. Post partum, there was no significant difference between the 5-HIA values of the prepared and control patients. Determination of 5-HIA excretion can be used for the evaluation of success of the psychoprophylactic preparation.

[This paper is published, as part of an exchange program, from the Polski Tygodnik Lekarski.]

[2 of the references are Western, 2 Soviet-bloc]
1/1.

KURZEPA, Stanislaw; SAMOJLIK, Eugeniusz

Studies on the effect of extracts from plants of the family
Rosaceae on gonadotropic and thyrotropic activity in the rat.
Endokr. pol. 14 no.2:143-150 '63.

1. Zaklad Farmakologii p.c. Kierownik: dr St. Kurzepa
Instytut Matki i Dziecka w Warszawie Dyrektor: prof. dr G.
Gornicki.

(ROSA) (PLANTS) (PHARMACOLOGY) (UTERUS)
(OVARY) (GONADOTROPINS, CHORIONIC) (THYROID)
(THYROTROPIN) (RESPIRATION) (BLOOD PRESSURE)

NANTKA-NAMIRSKI, Pawel; doc. dr.; KURZEPA, Stanislaw; DUSZKA, Jozef;
KAZIMIERCZYK, Jadwiga; KIERYLWICZ, Hanna.

Studies of the effect of the monoamine oxidase (MAO) inhibiting
action of some gamma-carboline derivatives. *Acta physiol. Pol.*
16 no.1:131-139 Ja-P'65.

1. Zaklad Farmakologii Instytutu Farmaceutycznego w Warszawie
(Dyrektor: doc. dr. P. Nantka-Namirski).

OLES, Andrzej; KURZES, Kazimierz

Vermitox in the treatment of oxyuriasis in children. Polski tygod.
lek. 14 no.29:1363-1364 20 July 59.

1. Z Poradni Schorzen Jelitowych Woj. Przych. w Rzeszowie)
(OXYURIASIS, ther.) (PIPFRAZINES, ther.)

KURZWEIL, Jaroslav (Praha)

"Mathematical theory of optimum processes" by A.S. Pontriagin,
[Pontryagin, A.S.], V.G. Boltianskii [Boltyanskiy, V.G.],
R.V. Gamkrelidze, E.F. Mishchenko [Mishchenko, Ye. F.].
Reviewed by Jaroslav Kurzweil. Cas pro pest mat 88 no.2:
256-258 '63.

POLAND / Chemical Technology. Chemical Products and
Their Application. Carbohydrates and Their
Processing.

H

Abs Jour: Ref Zhur-Khimiya, No 12, 1959, 43883.

Author : Kurzewski J.

Inst : ~~Not given.~~

Title : High Quality "Utfel III" Product.

Orig Pub: Przem. spozywczy, 1958, 12, No 7, 263-265.

Abstract: Presented are the results of observations made on
the composition of > 300 preparations of "utfel III"
product. Beneficial effects of evaporation and
crystallization on the product quality (>80 units)
were confirmed. In the derivation of high quality
"utfel III" product the sugar content in malasses
is lowered. -- D. Bronshtein.

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H-60

KURZEWSKI, JAN

POLAND/Chemical Technology. Chemical Products and Their
Application. Carbohydrates and Their Processing.

H-26

Abs Jour: Ref Zhur-Khim., No 2, 1959, 6204.

Author : Kurzewski, Jan.

Inst :

Title : Concerning the Underestimation of Refining of Yellow Sugar.

Orig Pub: Gaz. kulrown., 1958, 60, No 1, 14-15.

Abstract: Refining of yellow sugar is discussed. The advantages
of refining and schedules of purification are shown.
Ya. Shteynberg.

Card : 1/1

115

KURZEJSKI, J.

Weighing of molasses and important factor in the control of technological processes.

p. 46. (GAZETA CUKROWNICZA.) (Warszawa, Poland) Vol. 60, No. 2, Feb. 1958

SO: Monthly Index of East European Accession (EEAI) LC Vol. 7, No. 5, 1958

Country : POLAND H
 Category : Chemical technology, medicinal products (part 2).
 Carbohydrates and their derivatives,
 Appl. Ser. : no. 249-1414, USSR, No 7, 24(00)
 Author : Kurkowski, J.
 Institute :
 Title : Discussion of the article of Kurkowski: "On the
 drying of the solid sugar" and on this issue for
 following
 Orig. Pub. : Chem. Industry, 1968, 66, No 9, 14-236
 Abstract : No abstract.
 See also: 249-1414, USSR, 24(00).
 * /Sugar - from the chemical industry, a semi-
 dissolved product obtained by boiling sugar syrup
 in a vacuum apparatus until a definite concen-
 tration of the solid substance is reached. The
 German name is explained by the fact that ori-
 ginally this product was poured into cone-shaped
 molds. /
 Sent: 1/1

L 44179-66 EMT(d)/EMP(1) IJP(c)

ACC NR: AP6010535

SOURCE CODE: UR/0376/66/002/003/0299/0308

AUTHORS: Krasovskiy, N. N.; Kurzhanskiy, A. B.

39
B

ORG: Ural State University (Ural'skiy gosudarstvennyy universitet)

TITLE: Toward the question of the observability of systems with time delay

SOURCE: Differentsial'nyye uravneniya, v. 2, no. 3, 1966, 299-308

TOPIC TAGS: control system, control theory, differential equation, system analysis, time, time optimal control, dynamic system, COORDINATE SYSTEM

ABSTRACT: A study is made of operations separating the unstable coordinates of a linear second-order system with delay according to admissible observation of a linear combination of phase coordinates. The work is related to the class of problems on the controllability and observability of dynamic systems. The observation problem is formulated for the system

$$\frac{dx_1}{dt} = a_{11}x_1(t) + a_{12}x_2(t) + b_{11}x_1(t-h) + b_{12}x_2(t-h), \quad (1.1)$$

$$\frac{dx_2}{dt} = a_{21}x_1(t) + a_{22}x_2(t) + b_{21}x_1(t-h) + b_{22}x_2(t-h),$$

with constant coefficients and a constant delay $h > 0$. The solution $[x_1(t), x_2(t)]$ of

Card 1/2

UDC: 517.949.22

L 44170-66

ACC NR: AP6010535

0

such a system for $t \geq t_0 = 0$ is determined by means of initial vector functions $\varphi(t) = \{\varphi_1(t), \varphi_2(t)\}$, given on the initial time interval $[-h, 0]$. A linear operation is defined in general terms, and it is shown that this type of operation can be useful in determining system observability along a coordinate or a linear combination of coordinates. The necessary condition is stated in the theorem: The system (1.1) is observable along the coordinate $y_1(t)$, ($i = 1, \dots, k$) in that case and only in that case where

$$b_1 d_1^{(i)} + b_2 d_2^{(i)} \neq 0.$$

The numbers $d_1^{(i)}$ and $d_2^{(i)}$ are components of vectors $d^{(i)}$, which are solutions of the systems

$$(A + B \exp(-\lambda_i h) - \lambda_i E) d^{(i)} = 0 \quad (i = 1, \dots, k),$$

and $y_1(t)$ is a coordinate separated through application of the investigated operation.

The necessity condition is proved and sufficiency follows from the proof given. Orig. art. has: 31 equations.

SUB CODE: 12/ SUBM DATE: 31Jul65/ ORIG REF: 005

KS

Card 2/2

ACC NR: AP7002000

SOURCE CODE: UR/0040/66/030/006/1121/1124

AUTHOR: Kurzhanskiy, A. B. (Sverdlovsk)

ORG: none

TITLE: Control problem for a system of differential equations with delay

SOURCE: Prikladnaya matematika i mekhanika, v. 30, no. 6, 1966, 1121-1124

TOPIC TAGS: control system stability, linear differential equation

ABSTRACT: The problem of bringing a control system into a state of equilibrium when this system is described by linear differential equations with time delay, is considered. It is assumed that the system with delay has the form

$$\dot{x}(t) = Ax(t) + Gx(t - \tau) + Bu(t)$$

where A and G are constant n -dimensional square matrices; the constant matrix B of order $n \times m$ is rectangular; the function $u(t)$ designates m -dimensional control; the delay τ is constant. The problem requires the establishment of control law $u(t)$ which would first bring the system from the initial state $x_0(t) = \varphi(t)$ ($-\tau \leq t \leq 0$) into position $x(T) = 0$ and then maintain it in this position during the time interval $T \leq t \leq T + \tau$. The application of matrix theory and vector analysis reduces the problem to one of moments solved earlier by Krasovskiy. The determination of the control

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ACC NR: AP7002000

law yields a multivalued solution. The isolation of some specific $u^0(t)$ from a set of solutions requires that additional restrictions be placed on $u(t)$. These have the form of some optimality, for example, the minimum value of some norm of $u(t)$ and are achieved by a standard technique. Orig. art. has: 10 formulas.

SUB CODE: 12,13/ SUBM DATE: 21May66/ ORIG REF: 006/ OTH REF: 001

Card 2/2

ACCESSION NR: AP4036504

S/0103/64/025/005/0624/0630

AUTHOR: Kurzhan'skiy, A. B. (Sverdlovsk)

TITLE: Synthesizing, by the moment method, an optimum control that minimizes the mean-square error

SOURCE: Avtomatika i telemekhanika, v. 25, no. 5, 1964, 624-630

TOPIC TAGS: automatic control, optimum automatic control, automatic control synthesis, mean square error minimization

ABSTRACT: The problem of an optimum control of a linear system with minimizing the quadratic functional within a finite time interval is considered; damping transients are assumed. The system is described with this set of differential equations: $\dot{x} = A(t)x + b(t)u$, where x is a state vector of the phase space; $A(t)$ is the n -variate matrix that has continuous derivatives up to $(n - 1)$ -th order, inclusive; $b(t)$ is the n -variate vector. A control $u(t)$ is determined which

Card 1/2

ACCESSION NR: AP4036504

transfers the vector x from the state $x(0) = 0$ to the state $x(T) = x_0$ and which

minimizes the functional $G = \int_0^T \left[\sum_{i,j=1}^n \alpha_{ij} x_i(t) x_j(t) + u^2(t) \right] dt$, where $\sum_{i,j=1}^n \alpha_{ij} x_i(t) x_j(t)$ is a

non-negative quadratic form and α_{ij} are constants. The above problem is solved by reducing it to an L-problem. Orig. art. has: 23 formulas.

ASSOCIATION: none

SUBMITTED: 13Jul63

DATE ACQ: 03Jun64

ENCL: 00

SUB CODE: DP, IE

NO REF SOV: 014

OTHER: 002

L 52366-65 EWT(d) Pg-4 IJP(c)

ACCESSION NR: AP5012441

UR/0376/65/001/002/0204/0213

AUTHOR: Kurzhenskiy, A. B.

19
18
13

TITLE: Analytic construction of a control in a system with noise, depending on the control

SOURCE: *Differentsial'nyye uravneniya*, v. 1, no. 2, 1965, 204-213

TOPIC TAGS: optimal control, differential equation /6

ABSTRACT: By means of the method of dynamic programming the author solves several problems of construction of an optimal control taking a system described by differential equations from a given initial state into a neighborhood of some final one in a given time interval. A typical example of one problem is for a given initial position $x(t)$ at time t , to determine a control $u(x,t)$ minimizing

$$\int_0^T c(\tau)u^2(\tau)d\tau + \|x(T)\|^2 \quad (1)$$

over solutions of

$$\frac{dx}{dt} = A(t)x + b(t)u, \quad (2)$$

Card 1/2

L 52366-65

ACCESSION NR: AP5012441

Orig. art. has: 28 formulas.

ASSOCIATION: Ural'skiy gosudarstvennyy universitet im. A. M. Gor'kogo (Ural State University)

SUBMITTED: 28Sep64

ENCL: 00

SUB CODE: MA, IE

NO REF SOV: 008

OTHER: 003

gch
Card 2/2

L 50518-55 EWT(d)/EPF(n)-2/EWP(1) Po-4/Pq-4/Pg-4/Pu-4/Pk-4/Pl-4 IJP(o)
ACCESSION NR: AP5013105 WW/BC UR/0376/65/001/003/0360/0373

46
45
B

AUTHOR: Kurzhanskiy, A. B.

TITLE: Computation of optimal control in a system with incomplete information

SOURCE: Differential'nyye uravneniya, v. 1, no. 3, 1965, 360-373

TOPIC TAGS: optimal control, differential equation, random process

ABSTRACT: The author considers

$$\frac{dx}{dt} = A(t)x + b(t)u + r^{(1)}(t) \frac{dq_1}{dt} + \lambda r^{(2)}(t) \frac{dq_2}{dt}, \quad (1)$$

where $A(t)$, $b(t)$ are respectively an $n \times n$ matrix and an n -vector with continuous coefficients, u is a scalar control, and q is an n -vector whose components are independent Brownian motion processes. The vectors $r^{(1)}(t)$, $r^{(2)}(t)$ are continuous on $[0, T]$. The position x_0 at $t_0 = 0$ is known. The values of the coordinates of the vector x go into the regulator at random Poisson moments t_1, \dots, t_n , where n is a random variable depending on T and the frequency λ . The author assumes that the expectation of n goes to ∞ with λ for fixed T . At $t \geq 0$ assumed

Card 1/2

L 50518-65

ACCESSION NR: AP501310;

known are the values $x(t_k)$ for $t_{k-1} < t < t_k$ and $u(t + \theta)$ for all θ in $[t_k - t, 0]$.
He treats the problem of finding a control $u^0[t, t_k, x(t_k), \lambda^0, u^0(t + \theta), t_k - t \leq \theta < 0]$
and a frequency $\lambda^0(x_0, T)$ for which

$$M \left[\int_0^T u^2(t) dt + \|x(T)\|^2 / x(0) = x_0 \right] \quad (2)$$

is satisfied by solutions of (1), in the Euclidean norm. He also treats a limiting case. Orig. art. has: 40 formulas.

ASSOCIATION: Ural'skiy gosudarstvennyy universitet im. A. M. Gor'kogo (Ural State University)

SUBMITTED: 21Dec64

ENCL: 00

SUB CODE: MA, IE

AC REF SOV: 009

OTHER: 004

ml
Card 2/2

S/191/63/000/003/008/0222
B101/B186

AUTHORS: Fadeyeva, A. V., Lel'chuk, Sh. L., Shcherbak, P. N.
Kurzhenkova, M. S., Sergun'ko, A. M., Kosovova, Z. P.

TITLE: Method of eliminating the electrification of polyethylene
films during their production

PERIODICAL: Plasticheskiye massy, no. 3, 1963, 27 - 30

TEXT: The effect of alcohols on the electrostatic charge forming on high-density polyethylene (HDPE) was studied. Alcohols were obtained by oxo-synthesis of unsaturated products of petroleum cracking. Oxyethylated alcohols had the general composition C_nE_m , where C_n is the initial alcohol with n C atoms, and E_m is the number of ethylene oxide moles per alcohol mole. The effect of the following substances was tested: 0.2-1.0% $C_8E_{3.06}$, $C_{12}E_{4.2}$, $C_{12-16}E_{3.28}$, $C_{12-16}E_{3.08}$, $C_{16}E_{3.3}$, C_8E_7 , $C_{12}E_{6.4}$, $C_{12-16}E_{6.3}$, $C_{16}E_{6.0}$ added to HDPE at 120°C during rolling. The effect was determined by measuring the resistivity ρ_1 to the loss of charge by discharging a

Card 1/3

Method of eliminating the ...

S/191/63/000/003/003/022
B101/B186

capacitor. The equation $\rho_1 = k\tau/(\log v_0 - \log v)\epsilon$ was used for calculating ρ_1 ; $k = 4.9128 \cdot 10^{13}$; τ - duration of charged state (sec); v_0 - initial voltage of sample; v - voltage after 5 min; ϵ - dielectric constant at 10^3 cps. For an HDPE film without additive, ρ_1 was $\sim 2.6 \cdot 10^{18}$ ohm-cm. Results: On addition of 0.2%, all $C_{nm}E$ reduced ρ_1 to $\sim 10^{15} - 10^{16}$ ohm-cm. On addition of 0.5%, $C_8E_{3.06}$; $C_8E_{7.0}$; $C_{12}E_{4.0}$; $C_{12-16}E_{3.08}$; $C_{12-16}E_{3.0}$; and $C_{16}E_{3.3}$ reduced ρ_1 to $\sim 10^{15}$; whereas with $C_{12}E_{6.4}$; $C_{12-16}E_{6.27}$; $C_{12-16}E_{6.3}$; and $C_{16}E_{6.0}$ total loss of charge occurred. Products with a long carbon chain and high content of ethoxy groups gave the best effect. An addition of >0.2 $C_{nm}E$ causes migration of the oxyethylated alcohol to the film surface, thus increasing $\tan \delta$ from $0.0008 \cdot 10^{-6}$ to $0.002 \cdot 10^{-6}$. $C_{10-11}E_{3.1}$; $C_{12-16}E_{2.9}$; $C_{16-18}E_{3.6}$; $C_{17-18}E_{3.4}$; $C_{10-11}E_{6.01}$; $C_{12-16}E_{6.6}$; $C_{16-18}E_{6.5}$; and $C_{17-18}E_{6.6}$ were also tested. They had been obtained by oxyethylation

Card 2/3

Method of eliminating the ...

S/191/63/000/003/008/022-2
B101/B186

of alcohols synthesized by hydrogenation of fatty acids. An addition of 1% of these substances caused complete loss of charge. Efficiency increased with E_m , total loss thus occurring already at 0.5%. The experimental results were confirmed in industry. There are 2 figures and 3 tables.

Card 3/3

KURCHEVNIKOVA, A. I.

USSR/Chemistry-Glutaric Acid
Chemistry-Oxalic Acid

Dec 48

"Determination of Trioxoglutaric, Oxalic and Nitric Acid when They Are Present Together,"
N. V. Shelov, A. I. Kurchevnikova, All-Union Inst of Salts-Alcohol and Hydrolysis Ind,
14 pp

"Zavod Lab" Vol XXV, No 12

Describes a method for quantitative determination of nitric, oxalic and trioxoglutaric
acids with the mixture obtained after oxidizing xylene with nitric acid. Accuracy is
2-3% for oxalic and 2% for trioxoglutaric

PA 48/49T25

KURZHUNOV, I.M., uchitel'

Developing a new variety of millet. Biol v shkole no.3:83-84
My-Je '61. (MIRA 14:7)
1. Srednyaya shkola No.1 Michurinska Tambovskoy oblasti.
(Millet--Varieties)

ABRUKOV, S.A.; KUIZHUNOV, V.V.; MEZDRIKOV, V.N.

Use of Tepler's method for the quantitative investigation of
temperature waves. Izv.vys.ucheb.zav.; fiz. no.2:98-101 '61.
(MIRA 14:7)

1. Kazanskiy gosudarstvennyy universitet.
(Heat--Radiation and absorption)

L 4 7 62-66 EWI(l)/EWI(m)/EWP(i)/T WW/JW/WE/RM
ACC NR: AP6029757 (A) SOURCE CODE: UR/0414/66/000/002/0068/0071

AUTHOR: Abrukov, S. A. (Kazan'); Kurzhunov, V. V. (Kazan'); Mezdrikov, V. N. (Kazan')

ORG: none

TITLE: The effect of an electric field on the oscillatory combustion of propane

SOURCE: Fizika goreniya i vzryva, no. 2, 1966, 68-71

TOPIC TAGS: combustion, combustion instability, oscillatory combustion, gas combustion, *PROPANE, ELECTRIC FIELD*

ABSTRACT: A study was made of the effect of a-c (50 cps) and d-c electric fields on the oscillatory combustion of propane-air mixtures. The test assembly consisted of a resonator tube with a burner, an acoustic generator, flat or cylindrical electrodes, and a fuel flow meter. The potential (up to 12 kv) required to suppress acoustic oscillations was measured as a function of fuel flow rate in kinetic and diffusional combustion regimes. The potential was found to be a function of the flame length and the position of the flame in the tube. In both the diffusion and premixed flames, the potential had a maximum in the regime which was optimum for oscillatory combustion. Suppression of the oscillations occurred instantaneously when the required potential was applied. Both d-c and a-c fields were effective. In the diffusion flame, several

Card 1/2

UIC: 536.468

1. 23150 42
ACC NR: AP6029757

stable regions (with respect to the flow rate) were found to exist. Orig. art. has:
1 table and 1 figure. [TV]

SUB CODE: 21/ SUBM DATE: 13Oct65/ ORIG REF: 003/ OTH REF: 004/ ATD PRESS:
5074

Card 2/2 JS

ACCESSION NR: AP4012799

S/0170/64/000/002/0103/0107

AUTHOR: Kurzhunov, V. V.

TITLE: The influence of pressure on oscillating flame propagation in tubes

SOURCE: Inzhenerno-fizicheskiy zhurnal, no. 2, 1964, 103-107

TOPIC TAGS: flame, flame propagation, flame front, self-oscillation, acoustic energy

ABSTRACT: The present work approaches from an energetic point of view the problem of establishing the limits of oscillating flame propagation. This approach permits correlating to a certain extent the available experimental material and predicting the existence of laws to which oscillating combustion must be subject. This method was used in this work to examine the influence of pressure on oscillating flame propagation for the case of longitudinal acoustic vibrations in a column of gas in a tube. Expressions were derived which permitted analysis of the vibration amplitude as a function of the physicochemical properties of the combustible mixture and the tube parameters, and a formula which defines the pressure above which oscillating flame propagation in a tube is possible. Orig. art. has 10 formulas and 2 figures.

Card 1/2

ACCESSION NR: AP4012799

ASSOCIATION: Gosudarstvennyy universitet im. V. I. Ul'yanova-Lenina (State University) Kazan

SUBMITTED: 13Feb63

DATE ACQ: 26Feb64

ENCL: 00

SUB CODE: PH

NO REF SOV: 004

OTHER: 000

Card 2/2

KIRICHENOV, V.V.

Some experimental data regarding the effect of pressure on the vibrational propagation of a fluid in tubes. Tech. file. abstr. no. 7:91-95 J1 1964. (MIRA 12:110)

1. Gosudarstvennyy universitet im. V.I. Ul'yanova-Leninina, Kazan'.

L 8818-65 EPA/EPA(s)-2/ENT(m)/EPF(c)/EPR Paa-4/Pr-4/Ps-4/Pt-10 AFTR/
AEDC(b)/AFTC(p) WH/JW/RM/JXT(CZ)
ACCESSION NR: AP4044420 S/0170/61/000/008/0124/0127

AUTHOR: Aslanov, S. K.; Kurzhumov, V. V.

TITLE: Mechanism of oscillatory combustion of gas mixtures

SOURCE: Inzhenerno-fizicheskii zhurnal, no. 8, 1964, 124-127

TOPIC TAGS: combustion, combustion stability, oscillatory combustion

ABSTRACT: Oscillatory combustion of homogeneous gas mixtures in tubes was studied experimentally and theoretically. According to the theory proposed, oscillatory combustion is induced when the harmonics of the natural frequency of the gas column (Z_{n0}) are in resonance with the oscillations caused by hydrodynamic instability

$\frac{2\pi}{\lambda} v_1$ which condition is expressed by the formula: $w_n = v_1 \lambda_r = v_1 \cos \alpha / \lambda_r$

where v_1 is the fresh gas velocity and α is the angle between the tangent at a point of the curved flame surface and the tube axis. High-speed motion picture and schlieren photography of the combustion of CO, C₃H₈, and C₂H₂ mixtures

Card 1/2

L 8818-65
ACCESSION NR: AP4044420

with air in semiclosed tubes of different length showed that the calculated wavelength λ_r was several times shorter than the experimental wavelength λ_e . This is attributed to the fact that in the calculations mean velocities were used which are much smaller than actual velocities. However, the ratios $\lambda_{exp}/\lambda_{cal}$ were almost identical at different frequencies, which fact is considered to be evidence of the correctness of the proposed mechanism. It was also found that with decreasing pressure the wavelength increases and the frequency decreases. Orig. art. has: 2 figures and 2 formulas.

ASSOCIATION: Gosudarstvennyy universitet imeni V. I. Ul'yanova-Lenina, Kazan
(State University)

SUBMITTED: 26Mar64

ATD PRESS: 3107

ENCL: 00

SUB CODE: FP

NO REF SOV: 002

OTHER: 003

Card 2/2

ASLANOV, S.K.; KURZHUNOV, V.V.

Mechanism of the vibration mode of burning of gaseous mixtures. Inzh.-
fiz. zhur. 7 no.8:124-127 Ag '64. (MIRA 17:10)

1. Gosudarstvennyy universitet im. V.I. Ul'yanova-Lenina, Kazan'.

LE, B.; URMANCHEYEV, F.A.; BARANENKO, S.Ye.; NOVIKOVA, Ye.F.; BUKHARAYEVA, R.G.;
LAMANOVA, I.A.; KURZHUNOVA, Z.Z.

Determination of the individual hydrocarbon composition of gas :
condensate fields of the Ukrainian SSR. Report No.1: Averaged gas-
condensate of the Shebelinka field. Izv. AN SSSR Ser.khim. no.10:
1809-1816 0 '63. (MIRA 17:3)

1. Institut organicheskoy khimii AN SSSR, Kazan' i Vsesoyuznyy
nauchno-issledovatel'skiy institut gaza, Khar'kov.

ZHIDOVICH, A.I., kand.tekhn.nauk; VARGA, R.Sh., kand.tekhn.nauk; KONKIN, O.N.,
inzh.; KURZIN, B.A., inzh.

Automatic regulator for controlling the drying of the wood of hardwood
species. Der. prom. 12 no.11:6-7 N '63. (MIRA 17:1)

S/0179/64/000/002/0165/0167

ACCESSION NR: AP4035066

AUTHOR: Kurzin, V. B. (Novosibirsk)

TITLE: On calculating forces for arbitrary small oscillations of
files in a cascade

SOURCE: AN SSSR. Izvestiya. Mekhanika i mashinostroyeniye, no. 2, 1964,
165-167

TOPIC TAGS: aerodynamics, aerodynamic effect, cascade, vane, profile,
perturbation oscillation, superposition

ABSTRACT: It is shown that earlier solutions for the synchronous
oscillations of profiles with a constant phase shift caused by the
introduction of aerodynamic effect functions can be generalized to the
case of arbitrary small oscillations. A necessary condition for obtaining
the solution is the linearity of the problem. The principle of
superposition can thus be used and any perturbation in the flow can be
considered as the sum of perturbations induced by each profile individually.
The equations for the profile are set up and solved numerically. The

Card 1/2

ACCESSION NR.: AP4035066

question of flutter in a cascade with a finite number of blades is discussed.

ASSOCIATION: none

SUMITTED: 23Oct63

DATE ACQ: 20May64

ENCL: 00

SUB CODE: AC, ME

NO REF SOV: 003

OTHER: 003

Card 2/2

KURZIN, V.B. (Novosibirsk)

Use of the method of integral equations in calculating an
unsteady subsonic gas flow past an oscillating lattice. PMTF
no.2:112-119 Mr-Apr '64. (MIRA 17:8)

KURZIN, I. T.

"The Effects of Higher Nervous Activity Disturbances on Cardiovascular Functions."
Paper presented at the 21st Intl. Congress of Physiological Sciences, 9-15 Aug 1959,
Buenos Aires.

Pavlov Institute of Physiology, Leningrad, USSR.

K

COUNTRY: USSR
CLASSIFICATION: Forestry . Forest Management.
AID. SOURCE: Ref Zhur-Biologiya, No.1, 1958, No. 1471
AUTHOR: Kurzin, N.I.
INSTR.:
TITLE: Determination of the Age of Technical Maturity
of a Forest.
ORIG. PUB.: Lesn. Kh-vo, 1958, No.5, 16-19
ABSTRACT: No abstract

CARD: 1/1

S/207/62/000/001/007/018
B104/B108

20.2120
10.1230

AUTHOR: Kurzin, V. B. (Novosibirsk)

TITLE: Vibrations of a net of thin profiles in a compressible subsonic flow

PERIODICAL: Zhurnal prikladnoy mekhaniki i tekhnicheskoy fiziki, no. 1, 1962, 44 - 50

TEXT: The non-steady flow of a compressible gas through a net of thin profiles was investigated. All profiles oscillate with the same frequency and amplitude. The phase shift of the oscillations be arbitrary but not equal. The profiles be thin and slightly curved, the angle of attack be small. The alternating pressure component is determined by the expressions

$$(1 - M^2) \frac{\partial^2 \psi}{\partial x^2} + \frac{\partial^2 \psi}{\partial y^2} - 2kMi \frac{\partial \psi}{\partial x} + k^2 \psi = 0$$

$$\psi = \frac{P_\infty - P}{P_\infty} = \frac{\Delta P}{P_\infty}, \quad M = \frac{u}{a_\infty}, \quad k = \frac{\omega b}{a_\infty} \quad (1.1)$$

Card (1/2)

Vibrations of a net of thin...

S/207/62/000/001/007/018
B104/B108

x and y are the dimensionless coordinates along and perpendicular to the chord, ψ is the acceleration potential; U, ρ , ρ_0 , P_0 denote flow rate, sound velocity, density and pressure of the undisturbed flow; k denotes the relative frequency, ω is the angular frequency of the profile oscillations. An integral equation similar to Possiot's equation with the same singularities is set up. The singularities are eliminated according to Schwartz (R. L. Bisplinghoff et al., Aerouprugost', IIL, 1958). After extensive calculations the function for the acceleration potential is determined which corresponds to the oscillations of the profile net for a case in which the front edges of the profiles do not have singularities. There are 5 references: 3 Soviet and 2 non-Soviet. The reference to the English-language publication reads as follows: Woolston D. S. and Runyan, H. L. Some Considerations on the Air Forces on a Wing Oscillating Between Two Walls for Subsonic Compressible Flow. IAS, 1955, v. 22, no. 1.

SUBMITTED: November 21, 1961

Card 2/2

L 32646-66 EWP(m)/EWT(1)

ACC NR: AP6010848

SOURCE CODE: UR/0421/66/000/001/0117/0120

AUTHOR: Kurzin, V. B. (Novosibirsk)

51
B

ORG: none

TITLE: Aerodynamic interference of profiles in a subsonic nonstationary stream

SOURCE: AN SSSR. Izvestiya. Mekhanika zhidkosti i gaza, no. 1, 1966, 117-120

TOPIC TAGS: subsonic flow, acoustic resonance, nonsteady flow, compressible flow, flow profile, *AERODYNAMIC FORCE*

ABSTRACT: A system of several thin, moderately curved, wing profiles with a small angle of attack relative to the stream is considered for the case of plane subsonic flow. Using the method of integral equations developed by the author (Kurzin, V. B., PMTF, 1964, No. 2), the aerodynamic forces are computed. Attention is paid to the appearance of acoustic resonance. In many cases, the resonance conditions can be obtained analytically and these are discussed for the case of two profiles. Also considered is the nonstationary flow around two profiles which oscillate synchronously with the same amplitude and waveform. The analysis of the results shows that the main characteristic of aerodynamic interference is the appearance of resonance. In the resonance regime, the aerodynamic forces are different from those in incompressible flow and also differ from those of a single profile case. The resonant effect is most pronounced at higher frequencies. Orig. art. has: 7 figures, 10 formulas.

SUB CODE: 20/

SUBM DATE: 25Jul65/

ORIG REF: 004/

OTH PEF: 002

Card 1/1 *BLG*

ACC NR: AP6034551 SOURCE CODE: UR/0421/66/000/005/0144/0144

AUTHOR: Kurzin, V. B. (Novosibirsk)

ORG: none

TITLE: Dynamic stability of blades in a cascade with small differences in the natural frequencies

SOURCE: AN SSSR. Izvestiya. Mekhanika zhidkosti i gaza, no. 5, 1966, 142-144

TOPIC TAGS: axial flow turbomachine, blade vibration, blade cascade, dynamic stability, ~~annular~~ blade cascade

ABSTRACT: ^{structure} Theoretical investigations of axial turbomachine blade flutter are usually limited to the study of identical blades. However, in reality, the natural frequencies of blade vibration are different, due to variations in blade manufacturing. The object of this paper was to investigate how this frequency difference will affect the dynamic stability of a blade cascade subjected to a flow. The flutter of an annular cascade was analyzed under the following assumptions: 1) there is no mechanical linkage between the blades; 2) the inertial and elastic forces considerably exceed the aerodynamic forces; 3) each blade vibrates with one degree of freedom and the cascade has n number of

Card 1/2

ACC NR: AP6034551

degrees of freedom equal to the number of blades. The obtained results show that an annular blade cascade with small differences in natural frequency of individual blades is not more dynamically unstable than a cascade with no frequency variations. This fact was also observed in practice. Orig. art. has: 8 formulas.

[WA-76]

SUB CODE: 21²⁰/ SUBM DATE: 16Mar66/ ORIG REF: 001/ OTH REF: 003

Card 2/2

KURZIN, V.B.

Unsteady efflux in a converging channel in case of a maximum
discharge. Izv.vys.ucheb.zav.; av.tekh. 6 no.3:113-117 '63.
(MIRA 16:10)

ACCESSION NR: AP4034277

S/0207/64/000/002/0112/0119

AUTHOR: Kurzin, V. B. (Novosibirsk)

TITLE: Calculation of unsteady flow over thin grid profiles in subsonic flow by the method of integral equations

SOURCE: Zhurnal prikladnoy mekhaniki i tekhnicheskoy fiziki, no. 2, 1964, 112-119

TOPIC TAGS: harmonic oscillation, subsonic gas flow, pressure field, doublet, acceleration potential, chord length, sound velocity, singularity, wing theory, acoustic interaction

ABSTRACT: The problem of determining the forces acting on a grid profile with arbitrary stagger (under harmonic oscillations in subsonic gas flow) was solved analytically. In the analysis the pressure field discontinuity on the grid profile is represented by the continuous distribution of doublets along the chord, or

$$\psi(x, y, t) = B(x_0, y_0) \sin \theta H_1^{(1)}(kr) \exp \left\{ i\omega \left[t + \frac{U}{a\beta^2} (x - x_0) \right] \right\}$$

$$\beta^2 = 1 - M^2, \quad M = \frac{U}{a}, \quad \theta = \arctg \frac{\beta(y - y_0)}{x - x_0}, \quad r = \frac{\sqrt{(x - x_0)^2 + \beta^2(y - y_0)^2}}{\beta^2}$$

Card 1/3

ACCESSION NR: AP4034277

where $B(x_0, y_0)$ - doublet strength, ψ - acceleration potential, ω - oscillation frequency, $k = \omega b/a$, b - semichord length, U, a - flow velocity and sound velocity of the unperturbed stream. For an acceleration potential $\psi(x, y, t) = \psi(x, y) e^{i\omega t}$, the vertical velocity component V_y is represented in the integral form

$$V_y(x, 0) = \frac{\omega b}{\rho U a} \int L(x_0, 0) K(x - x_0) dx_0,$$

where the kernel K is given by:

$$K(x - x_0) = \frac{iM}{4\beta k} \exp\left[-\frac{ik(x - x_0)}{M}\right] \sum_{n=-\infty}^{\infty} \exp\left[in\left(\alpha - \frac{kh \operatorname{th} \gamma}{M}\right)\right]$$

$$\lim_{y \rightarrow 0} \int_{-\infty}^x \exp\left[\frac{ik\xi}{M\beta^2} \frac{\partial^2}{\partial y^2} \left[H_0^{(2)}\left(\frac{k\sqrt{\xi^2 + \beta^2(y - nh)^2}}{\beta}\right)\right] d\xi\right.$$

$$(x = x - x_0 + nh \operatorname{th} \gamma).$$

Analysis of the above integral indicates the presence of singularities as in wing theory, and the very complicated representation of K precludes a closed form solution. This difficulty is overcome by transforming the kernel to yield a more tractable expression for numerical computation purposes by using the relationship

ACCESSION NR: A44034277

$$2\pi \sum_{m=1}^{\infty} \cos(2\pi km) H_0^{(2)}(2\pi s \sqrt{m^2 + \xi^2}) = -\pi H_0^{(2)}(2\pi |\xi| s) +$$

$$+ i \frac{\exp(-2\pi |\xi| \sqrt{k^2 - s^2})}{\sqrt{k^2 - s^2}} + \sum_{n=1}^{\infty} \left[\frac{\exp(-2\pi |\xi| \sqrt{(n+k)^2 - s^2})}{\sqrt{(n+k)^2 - s^2}} + \right.$$

$$\left. + \frac{\exp(-2\pi |\xi| \sqrt{(n-k)^2 - s^2})}{\sqrt{(n-k)^2 - s^2}} \right]$$

In addition to this transformation, a collocation technique is also introduced where $L(\theta)$ is represented by the summation

$$L(\theta) = a_0 \operatorname{tg} \frac{\theta}{2} + \sum_{l=1}^N a_l \sin l\theta$$

A numerical example is given for $\gamma = 0$ and $h/2 = 1$. The results show that the acoustic interactions with the oscillating grid play a significant role on the damping coefficient. "The author expresses his gratitude to G. Yu. Stepanov for his influence on this work." Orig. art. has: 23 equations and 5 figures.

ASSOCIATION: none

SUBMITTED: 27Feb63

SUB CODE: ME, GP

NO REF SOV: 002

ENCL: 00

OTHER: 005

Card 3/3

KHAVKIN, L.S., dotsent; KURZINA, A.I.

Remote results of treating epiphysiolysis of the distal part
of the radius. Ortop., travm. i protez. no.1:30-34'63.

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Otechestvennoy voyny (nachal'nik - V.K.Shilov).

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RYADNOVA, Irina Mikhaylovna, doktor sel'khoz. nauk; YEREMIN,
Gennadiy Viktorovich, kand. sel'khoz. nauk; KURZINA,
I.A., red.

[Winter hardiness of fruit trees in the southern U.S.S.R.]
Zimostoikost' plodovykh derev'ev na iuge SSSR. Moskva,
Kolos, 1964. 206 p. (MIRA 17:12)

IL'INSKIY, A.A., doktor sel'khoz. nauk; TATARINTSEV, A.S., doktor
biol. nauk; KURZINA, I.A., red.; KOPNINA, N.N., tekhn. red.

[Varietal study and breeding of fruit plants] Sortovedenie
i selektsiia plodovykh rastenii; posobie dlia prakticheskikh
zaniatii. Moskva, Sel'khozizdat, 1963. 245 p.
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TKACHENKO, N.N.; CHIZHOV, S.T.; MESHCHEROV, E.T.; TKACHEV, R.Ya.;
DANILOV, V.P.; KURZINA, I.A., red.; PROKOF'YEVA, L.M.,
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[Cucumbers] Ogurtsy. [B]N.N.Tkachenko i dr. Moskva, Sel'-
khozizdat, 1963. 205 p. (MIRA 16:5)
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TKACHENKO, F.A., kand. sel'khoz. nauk; KURZINA, I.A., red.;
KOBYAKOVA, G.N., tekhn. red.

[Hybrid seed production of vegetable crops] Gibridnoe se-
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GONCHARUK, N.S., kand. sel'khoz. nauk; KURZINA, I.A., red.

[Greenhouses made of plastic films; from the experience on Latvian farms] Plenochrye teplitsy; opyt raboty khoziaistv Latvii. Moskva, Kolos, 1965. 77 p.

(MIRA 18:7)

GOL'TSOV, A.A.; DUDOROV, I.T.; KOLOMIYETS, A.A.; RAZLUKINA,
M.L.; KURZINA, I.A., red.; CHICHEV, Yu.I., red.

[Vegetable farming in a mechanized vegetable-gardening
brigade; experience with A.L.Karputtseva's brigade
("Bolshevik" State Farm in Moscow Province)] Vozdelyvanie
ovoshchei v mekhanizirovannoi ovoshchevodcheskoi brigade;
opyt brigady A.L.Karputtsevoi (sovkhoz "Bol'shevik" Mo-
skovskoi oblasti) Moskva, Kolos, 1965. 134 p.
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KURZINA, T.P.; FILIPPOV, S.I.

Kinetics of iron oxide reduction by mixtures of carbon oxide
and hydrogen. Izv. vys. ucheb. zav.; chern. met. 6 no.9:5-10
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1. Moskovskiy institut stali i splavov.

KURZINA, T.P.; FILIPPOV, S.I.

Regularities of iron reduction from ore under the simultaneous influence of hydrogen and carbon monoxide. Izv. vys. ucheb. zav.; chern. met. 6 no.7:21-26 '63. (MIRA 16:9)

1. Moskovskiy institut stali i splavov.
(Iron--Metallurgy) (Reducing agents)

18.140°
S/021/62/000/004/010/012
D299/D302

AUTHORS:

Hladyshevs'kyi, Ye.I., Markiv, V.Ya., and Kurz'ma, Yu.B.

TITLE:

New ternary compounds with $Mg_6Cu_{16}Si_7$ -type structure

PERIODICAL: Akademiya nauk UkrRSR. Dopovidi, no. 4, 1962, 481-483

TEXT: A number of ternary systems of transition metals with Si and Ge, as well as the systems Li-Ni-Si and Li-Cu-Si, were investigated by the method of X-ray structural analysis. The existence of 16 new ternary compounds with $Mg_6Cu_{16}Si_7$ structure, was established. The alloys were prepared by melting pure metals in crucibles of aluminum oxide, in a Tammann furnace (hydrogen- or argon atmosphere). The X-ray structural analysis was carried out in Debye- and Preston chambers. The $Mg_6Cu_{16}Si_7$ type structure (the space group $Fm\bar{3}M-0_5$) belongs to a class of structures with large coordination-number. The lattice constant of the alloy $Sc_6Ni_{16}Si_7$ (of face-centered cubic structure) was found to be 11.46 Å. The symmetry of the lattice, the
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New ternary compounds with ...

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composition of the alloy, and the lattice constant, are characteristic of structures of $Mg_6Cu_{16}Si_7$ -type. This shows that a ternary compound of such structure is formed in the system Sc-Ni-Si. Isostructural ternary compounds were also found in the systems R-Ni-Ge (R = Sc, Ti, Zr, Nb, Hf, Ta), R-Co-Si (R = Ti, Zr, Nb, Hf, Ta), R-Co-Ge (R = Zr, Nb, Hf, Ta), with the composition $R_6X'_{16}X''_7$ (where X' = Ni, Co; X'' = Si, Ge). The composition and the lattice constants of the compounds are listed in a table. Investigation of these compounds is still continuing. In view of the composition of the compounds, it can be assumed that the atoms of the R-component (R = Sc, Ti, Zr, Nb, Hf, Ta) occupy the position of Mg in structures of $Mg_6Cu_{16}Si_7$ -type, (coordination number 7). If the atomic radius of the R-component is larger than 1.64 Å, no compounds of $Mg_6Cu_{16}Si_7$ -structure, are formed. In the systems R-Ni-Si (R = Y, La, Ce), R-Ni-Ge (R = V, Cr, Y, Mo, La, W, Re), Sc-Co-Si, Sc-Co-Ge, Ti-Co-Ge, Li-Ni-Si and Li-Cu-Si, no ternary compounds of $Mg_6Cu_{16}Si_7$ -type were found. There are 1 table and 5 references: 3 Soviet-bloc and 2 non-Soviet-bloc. ✓

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New ternary compounds with ...

S/021/62/000/004/010/012
D299/D302

ASSOCIATION: L'vivs'kyy derzhavnyy universytet (L'viv State Uni-
versity)

PRESENTED: by Academician I.M. Frantsevych, AS UkrRSR

SUBMITTED: August 12, 1961

Card 3/3

X

KIRYUKHIN, B.V.; KURZNER, A.B.

Determining the critical size of water droplets and solutions
of surface-active agents when sputtered. Probl. fiz. atm.
no.2:163-171 '63. (MIRA 17:5)

PA 30782

USSR/Ships - Engines
Engines, Steam

Aug/Sep 1945

"Determining the Consumption of Shipboard Steam Engines, When a Regenerative Separator Is Present,"
A. Kurzon, 8 pp

"Morskoy Flot" No 8/5

During the planning of a ship it is necessary to determine the steam consumption of the main steam engine of the ship. Even when a regenerative separator is to be installed, it is necessary to determine the weight, capacity and dimensions of such a separator. This article gives practicable application for methods to determine the consumption of steam in the main steam

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USSR/Ships - Engines (Contd)

Aug/Sep 1945

engine of a ship when a regenerative separator is present, and the latter part of the article is reserved for static data which entered into the formulation of the formulas.

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KURZON, A.

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SO: U-3264, 10 April 53 (Letopis 'Zhurnal 'nykh Statey, No. 4, 1949).

KURZON, A. G.

Kurzon, A. G. "Differential method of determining the discharge of steam and fuel in ship steam power plants," Trudy Vses. nauch. inzh.-tekhn. o-va sudostroyeniya, Vol. V, Issue 4, 1948, pp. 189-200 - Bibliog: 5 items

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419 p. Diagra., tables.
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KURZON, A.G., kandidat tekhnicheskikh nauk, dotsent.

Investigation of single-stage diagrams of regenerative feed-water preheating in marine steam-turbine plants. Trudy VNITOSS
6 no.1:136-167 '53. (MLBA 9:11)

(Steam turbines) (Feed-water heaters)

1. ABRAMOVICH, S. F.; KURZON, A. G.; MOYSEYEV, A. A.
2. USSR (600)
4. Kurzon, A. G.
7. Marine steam turbines. S. F. Abramovich, A. G. Kurzon, A. A. Moyseyev.
Reviewed by A. Khoze. Mor. flot, 13, no. 4, 1953.

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KURZON, Ananiy Grigor'yevich; VASIL'YEV, V.K., redaktor; OSVENSKAYA, A.A.,
redaktor; PRUMIN, P.S., tekhnicheskii redaktor

[Steam turbine installations for ships; heating layout] Sudovye
paroturbinnye ustanovki; teplovye skhemy. Leningrad, Gos. soiuznoe
izd-vo sudostroit. promyshl., 1955. 399 p. (MLRA 9:3)
(Steam turbines)

KURZON, A.G., doktor tekhnicheskikh nauk.

Investigating heat diagrams for plants with power take-off from
main turbines. Trudy VNITOSS 6 no.3:90-112 '55. (MLRA 10:4)
(Heat regenerators) (Steam turbines)

KURZON, A.G., doktor tekhnicheskikh nauk.

Development of British marine gas turbines. Sudostroenie 22 no.2:
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KURZON, A.G., doktor tekhnicheskikh nauk.

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22 no.10:38-43 0 '56. (MLRA 10:2)

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IUDITSKIY, Finyaye Leybevich; KURZON, A.G., otvetstvennyy redaktor; SANDLER, N.V., redaktor izdatel'stva; KOTLYAKOVA, O.I., tekhnicheskiy redaktor.

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stv. red.; OSVENSKAYA, A.A., red.; KONTOROVICH, A.I., tekhn. red.

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