

VACKAR, Jiri, inz.

Short-circuit inductances in high-frequency circuits. Sdel tech
ll no.3:82-83 Mr '63.

VACKE, Josef, inz.; PRUSA, Vladimir, inz., C.Sc.

Hosts of the wheat striate virus. *Biologia plantarum* 3 no.4:
277-284 '61.

1. Crop Production Research Institute of the Czechoslovak Academy of Agricultural Sciences, Ruzyně near Prague, Praha - Ruzyně 507 (for Vacke). 2. Hop Research Institute of the Czechoslovak Academy of Agricultural Sciences, Zatec Zizkovo namesti (for Prusa).

KRYL, R., Dr.; JEDLICKOVA, Z., Dr.; HALLOVA, D., Dr.; MAGROVA, Fr., J.;
RIHOVA, M., Dr., a ved. krouzek posluchacu LFH; BINDAS, B;
HELCL, J.; PUR, J.; TRISKA, J.; VACKOVA, J.

Experiences with out-patient therapy of whooping cough with
chloramphenicol. Cesk. pediat. 11 no.9:652-659 Sept 56.

1. Klinika infekcnich nemocí v Praze na Bulovce Bakteriolog.-
serolog. oddelení Bulovky, prednosta doc. Vlad. Wagner.

(WHOOPING COUGH, ther.

chloramphenicol, out-patient ther. (Cz))

(CHLORAMPHENICOL, ther. use

whooping cough, out-patient ther. (Cz))

(OUT-PATIENT SERVICES

in whooping cough, chloramphenicol ther. (Cz))

POLACEK, Emil; Technicka spoluprace; KRISTAN, M.; HRADKOVA, B.; VACKOVA, L.;
KOPIDLANSKA, F.

Apropos of osmotic alteration of stomach motility in rats. Acta
Univ. Carol. [med.] (Praha) 10 no.1:65-68 '64

1. Ustav vyzkumu vyvoje ditete fakulty detskeho lekarstvi Uni-
versity Karlovy v Praze (reditel: prof. MUDr. J. Houstek, Dr.Sc)
a I. detska klinika fakulty detskeho lekarstvi University Karlovy
v Praze (prednosta: prof. MUDr. J.Svejcar, Dr Sc.)

ZAPLETALEK, M.; KOMENDA, S.; VACKOVA, M.

Effect of phenmetrazine on basal metabolism in depressive conditions.
Activ. nerv. sup. 3 no.2:206 '61.

1. Psychiatricka klinika PU Ustav lekarske fysiky PU v Olomouci.

(PHENMETRAZINE ther) (DEPRESSION ther)
(BASAL METABOLISM pharmacol)

Psychiatry

CZECHOSLOVAKIA

5

ZAPLETALEK, M.; STRNAD, M.; KOMENDA, S.; VACKOVA, M.; BARBORAKOVA, E.; STEPANOVA, M.; HRBEK, Jan; BERAN, J.; SIROKA, A.; Psychiatric Clinic, Palacky University, Olomouc; Psychiatric Hospital, Sternberk. [Original version not given].

"Alimenazine, Chlordiazepoxide, Meprobamate, and Placobo in Anxious Depression Therapy."

Prague, Activitas Nervosa Superior, Vol 8, No 4, Nov 66, pp 437 - 438

Abstract: Effect of the compounds mentioned in the treatment of 24 patients suffering from neuroses is described. The results were evaluated on the basis of the Knobloch AD questionnaire. The score of complaints before any treatment was 1385, after administration of a placebo 1104, with alimenazine 853, with chlordiazepoxide 812, and with meprobamate 779. 1 Table, 12 Western, 6 Czech, 1 Japanese reference. Submitted at the 8th Annual Psychopharmacological Meeting at Jesenik, 18 - 22 Jan 66. Article is in English.

1/1

KARPISEK, J.; NEVYJEL, P.; VACKOVA, V1.; VANECEK, R.

Contribution to the picture of renal osteodystrophy. Cas.lek.
cesk. 98 no.37:1158-1165 11 S '59.

1. Statni sanatorium v Praze XVI, reditel dr. F. Zavodny. II.
patologickoanatomicky ustav fakulty vseobecneho lekarstvi v
Praze, prednosta prof.dr. V. Jedlicka.
(RICKETS RENAL)

CZECHOSLOVAKIA

BILA, K., MD; PRINC, M; VACL, J., MD.

Faculty Transfusion Station (Fakultni transfusni stanice),
Brno (for all)

Prague, Vnitřni lékařství, no 12, 1963, pp 1183-1188

"The Use of Stored Thrombocytes for Treatment of ~~Haemorrhagic~~ Haemorrhagic
Disorders."

VACL, J.; BILA, K.; PRINC, M.; MUSIL, J.

Conversion of blood preserved in ACD solution, Preliminary
report. Cas. lek. cesk. 103 no.28:812-815 6 J1'64

1. Fakultni transfuzni stanice v Brne (vedouci: MUDr. J. Vaci)
a II. chirurgicka klinika UJEP [University J.E. Purkyně]
v Brne (prednosta: prof. dr. J. Navratil).

BILA, R.; VACL, J.; MUSIL, J.; PRINO, M.

Use of citrated preserved blood in extracorporeal circulation.
Cas. lek. cesk. 103 no.41:1143-1147 9 0 '64.

1. Transfuzni stanice lekarske fakulty University J.E. Purkyně v Brně (vedoucí MUDr. J. Vaci) a II chirurgická klinika lekarske fakulty University J.E. Purkyně v Brně (prednosta prof. dr. J. Navratil, DrSc.).

Immunology

HUNGARY

VACLAV, Bozdech; Karl University, Institute of Zoology, Department of Parasitology [original language version not given], Prague.

"Some Comments on the Technical Aspects of the Toxoplasma Complement-Fixing Reaction."

Budapest, Kiserletes Orvostudomány, Vol XVIII, No 4, Aug 66, pages 369-373.

Abstract: [Author's Hungarian summary] In order to make the complement-fixing reaction -used for diagnostic purposes in cases of toxoplasmosis- more simple and accurate, quantitative modifications were introduced by the author into the generally used procedure, for titration of the amboceptor, the complement and the serum. 5 Eastern European, 11 Western references. [Manuscript received 13 Jul 65.]

1/1

VACLAV, David, Prof., MUDr.

Life and work of Jiri Divis. Cas. lek. cesk. 95 no.31:
852-860 10 Aug 56.

(BIOGRAPHIES
Divis, Jiri (Cz))

VACLAV, E.

VACLAV, E. Effect of artificial pollination of birch on the quality of seedlings. p. 531.

Vol. 29, No. 7/8, Aug. 1956.

SBORNIK. RADA LESNICTVI

AGRICULTURE

Praha, Czechoslovakia

So: East European Accession, Vol. 6, No. 2, Feb. 1957

VACLAV, E.

Generative hybridization of alder (Alnus sp.) .

p.641 (Sbornik. Rada Lestnictvi) Vol 30 no 9 Sept 1957. Praha, Czechoslovakia.

SO: Monthly index of East European Accessions (EEAI) LC, Vol 7 no 1 Jan 1958

VACLAV, Erich, inz.

Germinating power of alder (*Alnus* sp.) seeds from young hybrid crossing. Les cas 9 no.9:811-820 S'63.

1. Lesnicka fakulta Vysoke skoly zemedelske, Praha.

VACLAV KNEZ

CZECHOSLOVAKIA / Chemical Technology, Chemical Products and
Their Applications, Part 3 - Food Industry.

H-27

Abs Jour : Ref. Zhur. Khimiya, No 4, 1958, 12902.

Author : Vaclav Knez.

Inst : Not given

Title : Cheese Production in Czechoslovakia.

Orig Pub : Vyziva lidu, 1956, 11, No 6, 89 - 91.

Abstract : Hints concerning cheese preparation for consumption and
its storage in the commercial circuit and in homes. See the
beginning in RZhKhim., 1957, 21456.

Card 1/1

9.3150

AUTHOR: Václav Krejčí

67019
CZECH/37-59-4-6/16

TITLE: Negative Resistance of Glow Discharge¹

PERIODICAL: Československý Časopis Pro Fysiku, 1959, Nr 4,
pp 377-383

ABSTRACT: An important characteristic of the glow discharge in gases is the electrical d.c. resistance. A certain range usually exists in which the potential drop in the discharge is independent of the current. This can be explained by a simple theory (Ref 1). On the other hand, the increase of the potential drop in a discharge during the transformation to a dark discharge is theoretically not well understood. It has been found that the density of electrons in the positive column decreases more rapidly than the current. Allis and Rose (Ref 2) give an explanation of this effect but do not go into many details. Some further factors that might explain the negative resistance of the glow discharge have been mentioned in Ref 1. The purpose of this present paper is a detailed investigation of this problem. It has been experimentally found that the main change in resistivity during the transformation from a glow discharge to a dark discharge, occurs in the positive column (Ref 3)

Card 1/4

67019

CZECH/37-59-4-6/16

Negative Resistance of Glow Discharge

We shall, therefore, consider this region only. We shall use the approximation (Ref 2) of assuming a constant ratio between the densities of ions and electrons in the plasma. The basic assumptions and formulae of this approximation are recapitulated in detail. Most of the equations used are taken from the theory of ambipolar diffusion. Further relations are introduced in order to establish the static character of the transformation between free and ambipolar diffusion. The characteristic is given by Eq (15), where

$$D_{-} = b_{-}U_e , \tag{16}.$$

If the intensity of the electric field E_x for the ambipolar diffusion is known, we can find the relation between U_e and E_x from Ref 4. U_e is the temperature of the electrons. As a consequence of step-wise ionisation, the number of ions formed by each electron per unit-time increases with the current. The ratio of step-wise ionisation to the total ionisation varies from gas to gas and is usually approximately proportionate to the square of the current. We shall consider a steady

Card 2/4

67019

CZECH/37-59-4-6/16

Negative Resistance of Glow Discharge

state of ambipolar diffusion where step-wise ionisation is almost negligible. Under these conditions, Eq (22) will hold. Here, z^* is the number of ions formed by step-wise ionisation per unit-time, i.e. by collision with an atom in an excited or metastable state. According to our assumption, z_1 is much larger than z^* , while z^* is a function of the current, and the other components of Eq (22) are approximately proportional to the field E_x . Eq (22), therefore, describes the relation between the current and the intensity of the field at the moment when stepwise ionisation sets in. Eqs (24) - (26) describe the situation arising if the current increases by ΔI . From all that has been said, it can be seen that the step-wise ionisation can only rarely affect the field intensity in the positive column of a discharge. It cannot explain the negative gradient of the static characteristic of a glow discharge at small current densities, because this is not compatible with the dependence of the step-wise ionisation on the current. The characteristic curve can, therefore, be explained only with the aid of the space-charge occurring during the change from free to ambipolar diffusion.

Card
3/4

Negative Resistance of Glow Discharge

67019

CZECH/37-59-4-6/16

The characteristic curve calculated from the simplified theory of this change is in fairly good agreement with experimental curves, but only over a very limited range of currents. This discrepancy can only be explained by considering further parameters. The ratio of densities of positive and negative current carriers is not independent of the distance from the axis of the discharge, so that assumption 5 is not fully justified. The diffusion coefficient D_k as calculated by Eq (6), is smaller than the real diffusion coefficient (Ref 2). There are 1 figure and 6 references, of which 1 is Soviet, 1 Czech, 2 German and 2 English.

ASSOCIATION: Fysikální ústav ČSAV, Praha
Card 4/4 (Institute of Physics, Czechoslovakian Academy of Science, Prague) ✓

SUBMITTED: December 22, 1958

"APPROVED FOR RELEASE: 08/31/2001

CIA-RDP86-00513R001858320012-1

APPROVED FOR RELEASE: 08/31/2001

CIA-RDP86-00513R001858320012-1"

VACLAV. 1/2/11. *[Handwritten signature]*

~~PETRZILKA~~ VACLAV, PETRZILKA

Czechoslovakia/ Physical Chemistry - Photochemistry. Radiation chemistry.
Theory of the photographic process

E-10

Abs Jour : Referat Zhur - Khimiya, No 4, 1957, 11318

Author : Rozkos Miroslav, Petrzilka Vaclav.

Title : Correlation between Blackening of Photographic Emulsion and Energy
of Beta-Radiation

Orig Pub : Zavislost cernani fotograficke emulse na energii zarenii β .
Ceskosl. casop. fys., 1956, 6, No 3, 287-295 (Czech);
Chekosl. fiz. zh., 1956, 6, No 3, 237-245 (English summary)

Abstract : No abstract

LANGER, C. (Varnsdorf); VACLAV, E. (Varnsdorf)

Method for mathematical interpretation of experimental curves.
Chem prun 14 no.8:406-408 4g '64.

Václav Sedláček

50005

✓ The color reaction of 1-chloro-2,4-dinitrobenzene with pyridine. A photometric study. Václav Sedláček (Ústav byk. práce, Prague). *Chem. Listy* ~~50~~ 743-51 (1967).

The reaction between 1-chloro-2,4-dinitrobenzene (I) and pyridine (II) suitable for colorimetric detn. of I requires a min. temp. of 78° and time of heating 20 min. H₂O was found more suitable than EtOH for dilg. the soln. to be analyzed (cf. Graboviez, W., *Medycyna pracy* 5, 247 (1954)) since C₆H₅(NO₂) and C₆H₃Me(NO₂)₂ did not interfere. The color depends on the concn. of II in the soln. In solns. contg. 2% II absorption max. was at 530 mμ, in soln. contg. 20-50% II the absorption max. was at 550 mμ. Large concns. of II are recommended. The method is suitable for the detn. of PhCl in mixed acid. M. Hudlický

AM

27
3-
Determination of uranyl nitrate in the presence of nitric acid by acidimetric titration. Josef Čepelák, Jaromír Malý, and Václav Veselý (Čsl. akad. věd, Prague). *Chem. listy* 52, 647-9 (1958). — Detn. of $UO_2(NO_3)_2$ (I) in the presence of excessive HNO_3 is based on acidimetric titration with $NaOH$ of an original sample and of a sample treated with H_2O_2 which transforms I to UO_3 and 2 HNO_3 . Treat a sample contg. 1-2.5 g. I in 100 ml. soln. with 5 ml. 30% H_2O_2 , add 10 drops Tashiro indicator, and titrate with 0.1 N $NaOH$ until the violet color changes to yellow-green. Free HNO_3 is detd. in an equal vol. of the sample by titration with N $NaOH$ to the change of color of a mixt. of dimethyl yellow and methylene blue from wine-red to green. Both titra-

735
% titations can be carried out potentiometrically. The av. error of the method is $\pm 2\%$. M. Hudlický

VACLAV, Vladimir, inz. CSc.

Expression of the maturity of forest stands. Les cas 10
no.6:559-566 Je '64.

1. Research Institute of Forestry, Banska Stiavnica Research
Station, Bratislava.

96526

15.9210
5.3831

Z/009/60/010/02/021/026
E142/E235

AUTHOR: Václavek, V

TITLE: Determination of the Molecular Weight During the Emulsion Copolymerisation of Butadiene and Styrene¹- Loss of Xanthogen Disulphides During Polymerisation

PERIODICAL: Chemický Průmysl, 1960, Vol 10, Nr 2, pp 103-108

ABSTRACT: The author investigated the effect of xanthogen disulphides as regulators during the emulsion copolymerisation of butadiene and styrene at 50°C when potassium persulphate was used as initiator. The composition of the purified, stabilised butadiene and stabilised styrene, as well as of the other reagents, is given. The degree of conversion was calculated and the xanthogen disulphides analysed by using May and Kolthoff's polarographic method of estimation (Ref 10). Results obtained during the determination of the apparent transfer constants and the rate of polymerisation are compared in Table 1 and their dependence on the number of carbon atoms in the alkyl group of the xanthogen disulphides shown in Figs 1 and 2. It can be seen that the apparent transfer constant decreases logarithmically with lengths of the alkyl group; this phenomenon is

Card 1/3

96526

Z/009/60/010/02/021/026
E142/E235

Determination of the Molecular Weight During the Emulsion
Copolymerisation of Butadiene and Styrene - Loss of Xanthogen
Disulphides During Polymerisation

discussed in detail. Data on the solubility in water of some xanthogen disulphides at 25°C are given in Table 2, and these values plotted against the number of carbon atoms in the alkyl group of the regulator (Fig 3). Side reactions of the xanthogen disulphides were also investigated (Table 4) and it was proved that these compounds do not react with any components of the emulsion system under the given conditions of polymerisation; the loss of regulators is only due to chain transfer. Further experiments on the dependence of the apparent transfer constants on the polymerisation temperature showed that this is governed by the law of Arrhenius. Calculated values for the activation energy of the apparent transfer constants increase linearly with the lengths of the alkyl group of the xanthogen disulphides (Table 5, Fig 4). The n-heptyl derivative was the most satisfactory regulator. Equations are given expressing the dependence of the apparent transfer

Card 2/3

96526

Z/009/60/010/02/021/026
E142/E235

Determination of the Molecular Weight During the Emulsion
Copolymerisation of Butadiene and Styrene - Loss of Xanthogen
Disulphides During Polymerisation

constants on the number of carbon atoms in the alkyl
group for straight chain compounds and iso-derivatives.
All tested xanthogen disulphides inhibited the
polymerisation to a certain degree; this was most
noticeable in the case of the lowest members of this
series and it is suggested that this is due to stabilisa-
tion of the xanthogen radicals. The xanthogen disulphides
do not enter into any side reactions under the given
conditions of polymerisation and it is, therefore,
possible to define the values of the apparent transfer
constants from their loss in relation to the degree of
conversion. There are 4 figures, 5 tables and 23
references, 3 of which are Soviet, 14 English, 1 German
and 5 Czech. X

ASSOCIATION: Kaučuk, n.p., Výzkumný ústav syntetického kaučuku,
Gottwaldov (Research Institute for Synthetic Rubber,
Gottwaldov)

SUBMITTED: October 1, 1959

Card 3/3

3

CSSR

LANDAU, J.; PROCHAZKA, J.; VACLAVEK, V.; FORT, I.

Institute of Chemical Technology, Prague, and Institute of Chemical
Process Fundamentals, Czechoslovak Academy of Sciences, Prague
(for all)

Prague, Collection of Czechoslovak Chemical Communications, No 2, 1963,
pp 279-292

"Studies of Mixing. XIV. Homogenation of Miscible Liquids in the
Viscous Region"

(4)

LANDAU, J.; PROCHAZKA, J.; VACLAVEK, V.; FORT, I.

Studies on mixing. Pt.14. Coll Cz Chem 28 no.2:279-292
F '63.

1. Institute of Chemical Technology, Prague and Institute
of Chemical Process Fundamentals, Czechoslovak Academy of
Sciences, Prague.

VACLAVIK, A

The seventieth birthday of Professor Kazimierz Koszynski.

p. 292 (Czechoslovakia Ethnografie) Vol. 5, No. 3 1957. Praha, Czechoslovakia

SO: Monthly Index of East European Accessions (MEEA) IC, Vol. 7, no. 1, Jan 1958

TABLET, A.

"Vaclav Machek's Etymologický slovník jazyka českého a slovenského (Etymological Dictionary of the Czech and Slovak Languages); a book review."

CESKOSLOVENSKÁ ETNOLOGIE, Praha, Czechoslovakia, Vol. 7, No. 2, 1959.

Monthly list of EAST EUROPEAN ACQUISITIONS INDEX (EEAI), Library of Congress,
Vol. 8, No. 8, August, 1959.

Unclassified.

VAGIAVIK, E.

"Millet, feed for grown carp yearling.", p. 29, (ROBNIK, Vol. 20, #1/2,
Feb. 1953, Czechoslovakia)

SO: Monthly List of East European Accessions, Vol. 2, #3, Library of
Congress, August 1953, Uncl.

VACLAVIK, E.

"Decaying of young salmonoid fish caused by oversaturation of water with gases.", p. 89, (SEBORNÍK, Vol. 26, #1/2, Feb. 1953, Czechoslovakia)

SO: Monthly List of East European Accessions, Vol. 2, #3, Library of Congress, August 1953, Uncl.

VACLAVIK, B.

"Mechanization in Fisheries." p. 1229 (ZA SOCIALISTICKE ZEMEDLSTVI, Vol. 3, No. 11,
Nov. 1953) Praha, Czechoslovakia

SO: Monthly List of East European Accessions, Library of Congress, Vol. 3, No. 4,
April 1954. Unclassified.

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

Abs Jour: Ref Zhur-Khimiya, No 1, 1959, 1736.

Author : Vaclavik, B.

Inst : Not given.

Title : A Station for Purifying Sewage Waters in the City of Brna.

Orig Pub: Ceskosl. rybarstvi, 1958, No 1, 7-8.

Abstract: No abstract.

Card 1/1

HANUS, Milan; VACLAVIK, Frantisek

Ensuring the winter operation of the Czechoslovak Airlines.
Letecky obzor 6 no.11:350-351 '62.

L 23109-66 EWT(1)/ETC(f)/EPF(n)-2/ENG(m) IJP(c) AT
ACC NR: AP6009367 SOURCE CCDE: CZ/0055/65/015/011/0832/0837

AUTHOR: Vaclavik, J.

ORG: Institute of Plasma Physics, Czechoslovak Academy of Sciences, Prague

TITLE: The theory of plasma instability in an "oscillating discharge"

SOURCE: Chekhoslovatskiy fizicheskiy zhurnal, v. 15, no. 11, 1965, 832-837

TOPIC TAGS: plasma instability, plasma discharge, plasma structure, plasma stability, plasma oscillation, electron density

ABSTRACT: ²¹¹ ~~211~~ The stability of plasma in an oscillating discharge (M. V. Nezhin, ZETF 46, 1946, 36) has been investigated. Within the framework of the linear theory, an analysis is given of several types of instabilities in a mixture of hot electrons and cold plasma, caused by the radial inhomogeneity of the density of the hot electrons. Instabilities of a similar type may exist even if the fast electrons move in opposite directions so that the total electron current is zero. The author thanks A. B. Mikhailovski for his valuable discussion. Orig. art. has: 33 formulas. [MT]

SUB CODE: 20/ SUBM DATE: 16Apr65/ ORIG REF: 004/ OTH REF: 001

Card 1/1 *028*

ACCESSION NR: AP4040789

Z/0055/64/014/006/0423/0429

AUTHOR: Vaclavik, J.

TITLE: Effect of neutral particles on high-frequency conductivity of plasma

SOURCE: Chekhoslovatskiy fizicheskii zhurnal, v. 14, no. 6, 1964, 423-429

TOPIC TAGS: plasma physics, high-temperature plasma, neutral particles, born approximation, high-frequency conductivity

ABSTRACT: A diagram technique (developed by Konstantinov and Peral) of the temperature-dependent Green's function is used to study the effect of neutral particles on the high-frequency conductivity of high-temperature plasma in the Born approximation. It was assumed that collisions between electrons and neutral particles in a plasma-neutral particle system are only elastic and that the frequency of the electric field is much larger than the frequency of collision of the electrons with neutral particles. Expressions for the real part of the electron-neutral particle interaction were derived for two

Card 1/2

ACCESSION NR: AP4040789

cases: 1) neutral particles and electrons are regarded as hard, elastic spheres; 2) the neutral particles are hydrogen atoms in the ground state. The ratio of this interaction in the second case to that of the first case is approximately 10 to 10^5 for kT ranging from 10^2 ev to 10 kev, where k is Boltzmann's constant and T is the temperature. The author thanked J. Teichmann, CSc., for suggesting the work and for discussions. Orig. art. has: 1 figure.

ASSOCIATION: Institute of Plasma Physics, Czechoslovak Academy of Sciences, Prague

SUBMITTED: 14Oct63

PAGE AC

ENCL: 0b

SUB CODE: GP

NO REF SOV: 004

OTHER: 001

Card 2/2

Z/055/62/012/006/001/007
1045/1245

AUTHOR: Václavík, J.

TITLE: The coherent radiation of synchrotron electron clusters in a closed resonator

PERIODICAL: Chekhoslovatskiy fizicheskiiy zhurnal, v. 12, no. 6, 1962, 432-438

TEXT: Recent work on coherent radiation of relativistic electron clusters assumes that the clusters are moving in a free space between two parallel conducting planes. The article discusses the case of electron clusters in a closed cylindrical resonator with conducting walls and that all the electrons are moving in concentric circles with velocity $v \sim c$. Maxwells' equations are solved and the magnitude and form of the tangential component of the force acting on an isolated electron of a cluster of electrons is expressed. The graphs show that in the case of non-resonance the electrons in the front-part of the cluster are braked, whilst electrons in the back part of the cluster are accelerated. In the case of resonance the electrons in the center of the cluster are maximally braked. The results are useful for investigating the dynamics of electrons in a synchrotron. There are 2 figures.

ASSOCIATION: Institut vakuumnoy elektroniki ChSAN (Institute of Vacuum Electronics ChSAS) Prague

SUBMITTED: September 16, 1961

Card 1/1

VADIVY I.

The central inventory; system of classification of industrial machinery and the technical code. p. 257. TEXTIL. (Ministerstvo lehkeho prumyslu) Praha. Vol. 9, no. 12, Dec. 1954.

COMERC: East European Accessions List, Vol. 5, no. 9, September 1956

WASLANY, J.

To improve work of mending brigades. p. 241. TEXTIL. (Ministerst lehkého
prumyslu) Praha. Vol. 9, no. 8, Aug. 1954.

SOURCE: East European Accessions List, Vol. 5, no. 9, September 1956

ACC NR: AP7004526

SOURCE CODE: CZ/0055/66/016/010/0821/0827

AUTHOR: Vaclavik, J.

ORG: Institute of Plasma Physics, Czechoslovak Academy of Sciences, Prague

TITLE: The nonlinear theory of plasma instability in an oscillating discharge

SOURCE: Chekhoslovatskiy fizicheskiy zhurnal, v. 16, no. 10, 1966, 821-827

TOPIC TAGS: plasma instability, nonlinear theory, oscillating discharge,
nonlinear effect, turbulent plasma diffusion, plasma physics

ABSTRACT: An analysis is presented of the nonlinear effects caused by plasma instability in an oscillating discharge. An estimate is made of the energy of unstable oscillations and of the coefficient of turbulent diffusion of plasma using equations of the theory of weak turbulence. The author thanks V. Kopecky and J. Preinhaelter for their valuable discussions of the problem. Orig. art. has: 28 formulas. [Author's abstract] [KS]

SUB CODE: 20/SUBM DATE: 15Dec65/ORIG REF: 001/SOV REF: 003/
OTH REF: 002/

Card 1/1

VACLAVIK, Miroslav

New solution of a shorter car circulation. Uhl 5 no.8:287-
288 Ag '63.

1. Projektant, Ceskomoravska-Kolben-Danek Praha, Svermovy
zavody, Slany.

VACLAVIK, Miloslav, inz., ScG.; SVOBODA, Otakar, inz.

Use of the model technique for determining the smoke gas dispersion
in the free atmosphere. Energetika Cs 13 no.6:297-300 Je '63.

1. Vyzkumny ustav vzduchotechniky, Praha.

VACLAVIK, Vladimir, inz.

Thin web beams. Zpravodja VZLU no.1:25-31 '62.

VACLAVIK, Vladimir, inz.

Checking strength of girders with a thin web. Zpravcdaj VZLU 4:21-
26 '62.

L 16589-63

EWP(r)/EWT(m)/BDS AFFTC

51
Z/059/62/000/004/003/007

AUTHOR: Václavík, Vladimír, Engineer

TITLE: Strength checks of girders with thin webs

SOURCE: Letňany, Výzkumny a Zkušební Letecký Ústav. Zpravodaj VZLÚ,
no. 4, 1962, 31-34

TEXT: This article is a continuation of the study entitled "Girders with thin webs" that was published in this periodical, no. 1, 1962, p. 25. There the Wagner theory of girders with thin webs that corrugate when loaded was described. From this theory a practically applicable engineering theory was derived to solve problems dealing with shear-stiff webs and the limiting cases of thin webs. The present article should facilitate computations of aircraft static analysis by giving a method that is practically applicable. An equation for the critical shear stress of the web is given. Nominal shear stress in the flanges, diagonal stress coefficient, "L" and "H" shaped beams, and maximum shear stress in the web are discussed. A method for check calculations of bolts is given. Orig. art. has 17 figures, and 5 references (2 Czech, 1 Soviet, 2 Western)

Card 1/1

L 8507-65 ENT(d)/ENT(m)/ENA(s)/ENP(z)/ENP(x) PI-4 A- (1)/AFIC(p) EX
Z/0059/63/000/006/0017/0025

ACCESSION NR: AF4041966

AUTHOR: Vaclavik, vladimir (Engineer)

TITLE: Contribution to the design for strength of stiffened circular cylinders under torsion

SOURCE: Letnyy. Vyskonnv a zkusebn(letacky ustav. Zpravodaj vzlu, no. 6(42), 1963, 17-25

TOPIC TAGS: thin walled cylinder, stiffened cylinder, cylindrical shell, torsion, cylindrical

ABSTRACT: A method of checking the design for the strength of stiffened thin walled cylinders has been developed by using an "engineer-engineered" method. The method is derived from the theory of plates. The method is based on the assumption that the stiffeners are represented by a series of plates. The method is applicable to cylinders with stiffeners in the form of plates, ribs, or rings. The method is simple and can be used for preliminary design.

Card 1/2

L 8507-65

ACCESSION NR: AP4043966

buckling of stringers and frames, wave forming on frames, shear strains in the skin) facilitate the practical use of the method. The validity ranges of diagrams and derived equations are given and comments are made on their reliability. The author is a candidate for a Ph.D. degree in 1967, engineer, candidate for a Ph.D. degree in 1968, has 25 figures and 10 tables.

ASSOCIATION: none

SUBMITTED: 00

NO REF SOV: 001

OTHER: 010

SUB CODE: AS

NO REF SOV: 001

OTHER: 010

Card 2/2

S/137/62/000/011/035/045
A006/A101

AUTHORS: Bieber, Boleslav, Klaban, Jiří, Václavínek, Jiří, Večeřa, Zdeněk

TITLE: A method of protecting the surfaces of molten iron alloys against oxidation

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 11, 1962, 120, abstract 111787 P (Czechosl. Patent no. 99138 of March 15, 1961)

TEXT: The method of protecting molten Fe-alloy surfaces against oxidation consists in that low-melting B and (or) P compounds are introduced into the melt, and form on its surface a protective cover in which air-O₂ is dissolved. Chemically neutral, low-melting substances, such as NaCl or CaCl₂, may be added to the compounds to be introduced in amounts assuring a > 4% content of B or P compounds in the mixture. An approximate composition of the mixture is (in %) B₂O₃ 20, NaCl or CaCl 80. ✓

V. Levinson

[Abstracter's note: Complete translation]

Card 1/1

VACLAVINEK, Jiri, RNDr.

Determination of the hydrogen evolving from steel. Hut listy
16 no.4:280-281 Ap '61.

1. Statni vyzkumny ustav materialu a technologie, Brno.

VACLAVINEK, Vri, RNDr.

Arrangement of the sampler of the apparatus for vacuum
determination of the gas content in metals. Hut listy 16
no.5:361-362 My '64.

1. Státní výzkumný ústav materialu a technologie, Brno.

VACLAVINEK, Jiri, RDNr.

Determining the gas content in powder materials by the vacuum extraction method. Hut listy 16 no.7:509-512 JI '61.

1. Statni vyakumny ustav materialu a technologie, Praha.

VACLAVINEK, Jiri, RNDr.

Temperature measurement by spectral pyrometer in determining the gas content in metals. Hut listy 16 no.12:896-898 D '61.

1. Statni vyzkumny ustav materialu a technologie, Brno.

(Metallurgy) (Pyrometers and pyrometry)

VACLAVINEK, Jiri, RNDr.

Spectral determination of hydrogen in metals. Hut listy
18 no.11: 794-797 N163.

I. Statni vyzkumny ustav materialu a technologie, Brno.

VACLAVINEK, Jiri

Fast determining of the carbon equivalent of gray cast iron by cooling curves. Slovarenství 12 no.8:293-299 Ag '64

1. State Research Institute of Material and Technology, Research on Founding, Brno.

UHMANNOVA, Vera; VACLAVINKOVA, Vlasta; KONECNA, Drahomira

On the cooperation between the obstetrician and the psychologist
in psychoprophylactic preparation for labor. *Cesk. gyn.* 27[41]
no.5:357-360 Je '62.

1. II. gyn. por. klin. University J.Ev.Purkyne v Brne, prednosta
doc. dr. Miloslav Uher. (LABOR)

JANICEK, M.: VACLAVSKY, J.: VEJMEJKOVA, D.

Incidence of hypertension in school children. Vnitř.lék.Brno 1
no.8:611-619 Aug '55.

1. I.vnitřní klinika FU v Olomouci, přednosta prof. MUDr. P.Lukl
Oddelení zdravotní péče o tělesnou výchovu a sport, Olomouc.
přednosta MUDr. M. Janicek. Olomouc 7, Hodolanská ul.41
(HYPERTENSION, in infant and child
incidence in school child. in Czech., clin.aspects)

JANICEK, M.; SEKANINOVA, H.; VAGLAVSKY, J.

Relation of smoking to the incidence of hypertension. Cas. lek.
cesk. 103 no.24:659-662 12 Ja'64

1. I. vnitřní klinika lékařské fakulty PU [Palackého university]
v Olomouci; přednosta: prof. dr. P. Lukl.

NYVIT, Jaroslav; VACLAVU, Vladimir

Determining the parameters for ammonium sulfate crystallization. Chem prum 12 no.2:63-66 F '62.

1. Vyzkumny ustav anorganicke chemie, Usti nad Labem.

NYVLT, Jaroslav; VACLAVU, Vladimir

Cooling rate in a discontinuous crystallizer. Pt.9. Chem
prum 14 no.2:79-81 F'64

1. Vyzkumny ustav anorganicke chemie, Usti nad Labem.

COUNTRY : Czechoslovakia E
CATEGORY : Forestry. Forest Cultures.

ABS. JOUR : Zet Zhar-Biologiya, No. 5, 1959, No. 20172

AUTHOR : Vaclav, Erich

INST. :

TITLE : Selection of High Quality Trees in Czechoslovakia.

ORIG. PUB : Lesn. praco, 1958, 37, No.4, 147-151

ABSTRACT : Attention is turned to the need of extensive developmental work in forest selection and a brief description is given of the morphological characteristics of elite individuals of the leading forest species.

ORIG. PUB : 1/5

SHRBENY, Silvestr; VACLIK, Jan

Effect of mechanical stress on the magnetic qualities of
oriented transformer steel. Sdel tech 10 no.1:2-3 Ja '62

VACLIK, V.; SKODA, J.

"New Automatic Machines For Treatment of Furs", P. 8, (TECHNICKE NOVINY,
Vol. 2, No. 8, Apr. 1954, Praha, Czechoslovakia)

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 3, No. 12,
Dec. 1954, Uncl.

SVENLA, Andrej, inz.; VACOKOVA, Margita, inz.

Titration determining aluminum in some ferro-alloys, complex
deoxidizers and chrome ore. Hut listy 17 no.11:811-813 N '62.

1. Kovohuty Istebne, n.p.

FURDIK, M.; HRNCIAR, P.; VACOKOVA, V.

Phthalides and indandiones - (1,3). IV. Acta r nat Univ Com 3
no. 2/3: 117-122 '59. (KEAI 10:5)
(Phthalide) (Indandione) (Naphthylindandione)

FURDIK, Mikulas, prof., inz.; VACOKOVA, Vlasta, promovany chemik;
HRNČIAR, Pavel, promovany chemik, C.Sc.

On phthalides and indandiones-(1,3). Part 13: Examination of
the reaction of 2-phenylindandione-(1,3) and of 2-(α -naphthyl)
-indandione-(1,3) with esters of monohalogen acetic acids
dihalogen acetic acids. Chem zvesti 16 no.7:532-541
Jl '62.

1. Katedra organickej chemie a biochemie, Prirodovedecka
fakulta university Komenskeho, Bratislava, Smeralova 2.

VAVRECKA, M.; VOKAC, V.; PETRASEK, R.; VAGRINKOVA, H.; BROWN, T.

Effect of chlortetracycline on fat metabolism. *Cesk. fysiол.* 9
no.1:95 Ja 60.

1. Ustav pro vyzkum vyzivy lidu, Praha.
(CHLORTETRACYCLINE pharmacol.)
(FATS metab.)

MM/JI/General Problems of Pathology. /Allergy

U-2

The Jour : Ref Zhur - Mol., No 14, 1958, No 69911

Author : Constantinescu N., Micu, I., Munteanu G., Chercobu M.,
Mirza, N., Elindu F., Vacs L.

Inst : Rumanian Academy

Title : Preliminary Data on the Vladimirov's Intradermal Test in Epi-
demio Hepatitis

Orig Pub : Comm. Acad. SSR, 1957, 7, No 8, 873-877

Abstract : By means of the Vladimirov's intradermal test (Clinic. med.,
1951, 7), the authors detected the presence of an auto-
allergen (AA) in a filtrate of gastric juice from a patient
with epidemic hepatitis throughout the course of the disease.
The AA reaction was negative in well persons and in patients
with gastric and hepatic diseases.

Card : 1/1

VADGÉ, L: MÁTÁ, E.

Investigation of the copolymerization of unsaturated polyesters and styrol of ethyl methacrylate by means of shrinkage measurement. p. 115.

VEZDÉTSÉGTUDOMÁNYOK. Magyar Tudományos Akadémia. Kémiai Tudományok Osztálya. Budapest, Hungary. Vol. 11, no. 4, 1959.

Monthly List of East European Accession (EEA) LI, Vol. ~~XXXXXXXXXXXXXXXXXX~~
9, no. 2, Feb. 1960

Uncl.

E 55171-55

EWP(t)/EWP(b) JD

13 B

ACCESSION NR: AP5017637

RU/0017/64/000/008/0355/0360

AUTHOR: Rau, Al. (Professor, Engineer, Candidate of technical sciences); Vacu, S. (Engineer); Vircolacu, I. (Engineer); Rusu, E. (Engineer)

TITLE: Contribution to the study of the influence of the manufacturing technology on the content and nature of non-metallic inclusions in steel

SOURCE: Metalurgia, no. 8, 1964, 355-360

TOPIC TAGS: alloy steel, metal test

ABSTRACT: The authors analyze the effect of technological factors during the preparation of poorly alloyed steels containing Cr, Ni, Mo in electric arc furnaces on the content and composition of non-metallic inclusions in the finished steels, and describe some steel treatment tests under vacuum conditions. The importance of following proper technology is emphasized. Orig. art. has: 3 tables, 14 figures.

ASSOCIATION: Institutul Politehnic, Bucharest (Polytechnical Institute)

SUBMITTED: 00

ENCL: 00

SUB CODE: MM

NR REF SOV: 000

OTHER: 000

JPRS

Card 1/1

ZBUZEK, V.; BARTOSOVA, D.; VACULA, J.; SPRYNAROVA, S.

Studies on the value of adaptation changes to specific sprint
and stamina training. *Cesk. fysiolog.* 9 no.1:69-70 Ja 60.

1. Vyzkumny ustav telovychovny a fakulta ITVS VSP, Praha.
(PHYSICAL EDUCATION AND TRAINING)
(ADAPTATION PHYSIOLOGICAL)

VACULA, V.; PODOLA, R.

Advice of the Slupi Collective Farm; cost of corn cultivation is decreased by the most intensive mechanization. p. 17 (Rolnicke Hlasy Vol. 11, no. 1, Jan. 1957 Praha)

SO: Monthly List of East European Accession (MEAL) IC, Vol. 6, no. 7, July 1957. Uncl.

VACULIK, Antonin

Shaping of shoe upper backs. Kozarstvi 14 no. 6:178-180
Je '64.

1. Research Institute of Leather, Gottwaldov.

VACULIK, Antonin

Development of shoe sewing machines. Kozarevi M. no.9:
269-271 Ag '64.

1. Research Institute of Leather, Gottwaldov.

VACULIK, F.

Spike heels ; a problem of shoe specialist.

P. 279 (Kozaratvi. Vol. 7, no. 10, Oct. 1957, Praha Czechoslovakia)

Monthly Index of East European Accessions (EFAI) LC. Vol. 7, no. 2,
February 1958

VACUUM J

Vaculik J.

18
Theory of Gating System Design for Metal Molds
General principles of gating design, particularly applicable to
gravity casting into metal molds, are derived on the basis
of physical considerations.

VACUUM, JESSE

4

1977

VACULIK, K.

New works of Peter Matejka. p. 19.

PREDVOJ. (Komunisticka strana Slovenska. Ustredni vybor)
Vol. 3, no. 46, Nov. 1959.

Monthly List of East European Accessions (EEAI), LC, Vol. 9, No. 2, Feb. 1960.
Uncl.

VACULIK, K.

- 61
1. "Metode of Investigation of the Slovak National Academy of Sciences (Slovak Academy of Sciences) Bratislava, 1962.
 2. "Patriotic Pan in Slovakia." Dr. Jozef BACSA, C. Sc. (Candidate of Sciences) of the Slovak Academy of Sciences (Slovak Academy of Sciences), Bratislava, pp. 129-133.
 3. "Geophysical Research in Slovakia." Prof. G. I. SIKOROVICZ and P. J. ZIKOVICZ of the Alpine Geophysical Institute, Bratislava, pp. 142-148.
 4. "Small Ve become Successful in the Therapy of High Blood Pressure." Dr. Peter (Jozef) KAVKA, C. Sc. and Vlasta DUBOVA, Ph.D. (Candidate of Sciences) of the Chemical Institute of SAV (Chemistry Institute SAV), Bratislava, pp. 149-150.
 5. "Vitamins B 12 in Agriculture." Eng. Peter HARTVA of the Central Research Institute of the Food Industry (Central Research Institute of the Food Industry) (Výskumný ústav potravinárstva) (VÚP) Bratislava, pp. 152-153.
 6. "Solar Corona," Jozef JAZA, Graduate Physician (Pracovník) (Fields) of the Astrophysical Observatory SAV (Astronomická observatória SAV), Skalnaté Pleso, pp. 154-157.
 7. "Photoeffect and Bioluminescence." Eng. Jozef HUBER of the Physics Laboratory SAV (Laboratorium fyziky SAV) Bratislava, pp. 158-161.
 8. "Application of Antibiotics in the Protection of Plants Against Diseases." Dr. Stan VALASKA, C. Sc. of the Research Institute for Garden Plants (Výskumný ústav ošivársky) (VÚO), Bratislava, pp. 162-164.
 9. "Headwaters of the Danube River and Sink of Targu-Mare." Academician (Candidatus) Director of the Institute of Hydrology and Hydraulics (Ústav hydrologie a hydrauliky) SAV, Bratislava, pp. 165-175.
 10. "Hydrology in the Twentieth Century." Dr. Jolana JAROVA, Ph.D. (Candidate of Sciences) of the Agricultural Institute SAV (Výskumný ústav poľnohospodársky) (VÚP) Bratislava, pp. 176-180.

12

VACULIK, L.; FREMEL, K.

Effect of the form, diameter, and surface of the tube (bobbin) on development of weft tension during unwinding from the shuttle. p. 303. (Textil, Praha, Vol. 9, no. 10, Oct. 1954)

SO: Monthly list of East European Accessions (EEAL), LC Vol. 4, NO. 6, June 1955, Uncl

VACULIK, LADISLAV

TECHNOLOGY

VACULIK, LADISLAV. Organizace prace sukarky ve vinarskem prumyslu. Praha, Statni nakl. technicke literatury, 1957. 84 p. (Nove metody prace v textilnim prumyslu, 15)

Monthly List of East European Accessions (EEAI), LC, Vol. 8, no. 5,
May 1959, Unclass.

CZECHOSLOVAKIA
20 Sep 63

VACULIK, Martin

Leading secretary of the South Moravian Kraj committee
of the Party, approved as member of the presidium
of the KSC Central Committee.

Rude Pravo, Prague, 22 Sep 63, p 1.

(1)

CZECH

Compounds of pyridine homologs with aromatic halo-nitro derivatives. II. Rudolf Lukes and Pavel Vysoký (Tech. Univ., Prague, Czech). *Chem. Listy* 45, 501-5 (1951); *C. C.A.* 42, 569g. The reaction of C_5H_5N and its homologs with 2,4-(O₂N)₂C₆H₃Cl (I) and 2,4-(O₂N)₂C₆H₃Br (II) was tested on addnl. homologs and deriva. of C_5H_5N . Cryst. compds. were isolated only with β -deriv. or homologs and with those α - and γ -deriv. which have no acidic H. Otherwise only uncrystallizable products in low yields were obtained. Steric influence is apparent in the decreasing reactivity of phenylpyridines in the series $\gamma > \beta > \alpha$. Carbonyl derivs. of C_5H_5N give only small amts. of the addn. products. The prepn. of the quaternary salts was carried out in 3 ways: (A) The pyridine compd. (1 mole) was heated with 1.1 moles I or II in PhMe 30 hrs. at 60-70°, the salt filtered, washed with 15 ml. anhyd. Me₂CO, redissolved in 20 ml. abs. EtOH, filtered with C, washed with 10 ml. Me₂CO, and the filtered product washed with 10 ml. Me₂CO. Some of the salts were crystd. (B) A mixt. of equal vols. of Me₂CO and PhMe was used as solvent in the reaction, the other conditions being the same as in (A); the products were crystd. from abs. EtOH. (C) Same as (A) except for 30 hrs. addnl. heating at 70-80°. The following compds. were prepd. (the pyridine deriv., dinitrohalobenzene, procedure, m.p., % yield, addn. compd. with HgX₂): 3-ethylpyridine: I, A, 185.5-8° (decompn.), 62.5; II, A, 213.5-14° (decompn.). 63, 2-methyl-5-ethylpyridine: I, A, no compd. 3-Isopropylpyridine: I, A, 134.5-8° (decompn.) (from EtOH: PhMe 1:1), 83, addn. compd. with 1 HgCl₂, m. 163°; II, A, 104-5° (from EtOH: PhMe 1:1) 61, addn. compd. with 1 HgBr₂, m. 154.5-5.5°. Dimethyl-3-pyridylcarbinol: I, A, only the addn. compd. with 3 HgCl₂, m. 144°, was isolated. 4-Isopropylpyridine: I, A, no cryst. compd. Dimethyl-4-pyridylcarbinol: I, A,

154-1.5° (decompn.), 76.7; II, A, 206-0.5° (decompn.), 61.6. 3,5-Diisopropylpyridine: I, A, 187-8° (decompn.), 62.5; II, A, 232.5-3° (decompn.), 64.2. 3,5-Bis(1-hydroxyisopropyl)pyridine: I, B, 227.5° (decompn.) (from EtOH), 67; II, B, 237.5-8° (decompn.) (from EtOH), 84. 2-Phenylpyridine: I, C, no cryst. compd.; II, C, no cryst. compd. 3-Phenylpyridine: I, C, 158-9° (decompn.) (from EtOH), 30.6. 4-Phenylpyridine (III): I, A, 170.5-80° (from H₂O, 71.1% (addn. compd. with HgCl₂, m. 176-7.5°; II, A, 204-5°, 64.8, addn. compd. with HgBr₂, m. with decompn. The Et esters of 2-, 3-, and 4-pyridinecarboxylic acids gave by procedure C no cryst. compds., and only a rose to pink coloration with N NaOH. The prepn. of intermediate 5-ethyl-2-pyridinecarboxylic acid (IV) is given: 84. 8 g. 2-methyl-5-ethylpyridine (V) was refluxed with excess 35% aq. CH₃O 250 hrs. at a slightly superatm. pressure, the mixt. treated with 150 ml. concd. HCl and 100 ml. MeOH, refluxed 2 addnl. hrs., evapd. *in vacuo*, made alk., the unreacted V (33.8 g.) steam distd., the residue satd. with K₂CO₃, extd. with BuOH, the ext., essentially 5-ethyl-2-(1-hydroxyethyl)pyridine, evapd., the residue treated with CHCl₃, the undissolved salts filtered off, the filtrate evapd., the residue redissolved in H₂O, evapd., oxidized by repeated evapn. with concd. HNO₃, the residue dissolved in an equal vol. of H₂O, treated with hot satd. soln. of 50 g. CuSO₄·5H₂O, and the bluish violet Cu salt of IV filtered, washed with cold H₂O, and recrystd. from dil. HNO₃; yield 23.6 g. (37.4%). From 23 g. Cu salt of IV dissolved in 900 ml. boiling H₂O was obtained by treatment with H₂S, 21.9 g. (94.1%) IV, m. 103.5-9.5° (from H₂O, or by sublimation at 150°/1 mm.). Oxidation of IV with 5% KMnO₄ gave 2,5-pyridinedicarboxylic acid, m. 255-6° (from H₂O) (decompn.). M. Hudlický

VACULIK, PAVEL

Chemie monoveru. (1. vyd.) Praha, Nakl. Ceskoslovenske akademie ved. (Ceskoslovenska akademie ved. Sekce chemicka. Studie a prameny, sv. 19) (Chemistry of monomers. 1st ed. bibl., indexes tables)
Vol. 1. 1956. 696 P.

SO: Monthly List of East European Accessions (EEAL) LC, Vol. 6, no. 6, June 1957. Uncl.

CZECHOSLOVAKIA/Organic Chemistry. Synthetic Organic Chemistry. G-2

Abs Jour: Ref Zhur-Khim., No 13, 1958, 43375.

Author : Lukes Rudolf, Vaculik Pavel.

Inst :

Title : Synthesis of 3,5-Diethylpyridine.

Orig Pub: Chem. listy, 1957, 51, No 8, 1510-1516.

Abstract: To study the formation of quaternary pyridinium salts, the hitherto not described 3,5-diethylpyridine (I) was synthesized. The ethyl ester of dinicotinic acid (3,5-dicarbethoxypyridine) (II) forms (contrary to expectation) on Claisen's condensation with ethyl acetate only a single reaction product -- the ethyl ester of 5-carbethoxy-nicotinylacetic acid (III). The latter was converted by ketonic cleavage and reduction according to

Card : 1/6

CZECHOSLOVAKIA/Organic Chemistry. Synthetic Organic Chemistry.

G-2

Abs Jour: Ref Zhur-Khim., No 13, 1958, 43375.

Kizhner-Wolf to the ethyl ester of 5-ethyl-nicotinic acid (IV). The bifunctional reaction product could not be isolated but its occurrence was demonstrated by isolation, after the cleavage of the crude product, of a small amount of 3,5-diacetylpyridine (V). The required I was obtained with a good yield from IV by carrying out the above-described reactions. A solution of II in ethyl acetate is shaken for 1 hour with a suspension of C_6H_5ONa (free from traces of the alcohol) in toluene, and after 48 hours III is isolated, yield 87.2%, MP 67.5-68.5° (from alcohol); picrate, MP 76-78° (from alcohol). The latter gives on boiling (2 hours) with phenyl-hydrazine in C_6H_6 the 1-phenyl-3-(5'-carbethoxypyridyl-3')-pyrazolone-(5) MP 196.5-197°

Card : 2/6

CZECHOSLOVAKIA/Organic Chemistry. Synthetic Organic Chemistry. G-2

Abs Jour: Ref Zhur-Khim., No 13, 1958, 43375.

(decomposes); by heating (about 100° , 75 minutes) of III with $2N.H_2SO_4$ is obtained the ethyl ester of 5-acetylnicotinic acid (VI) yield 77.9%, MP 69.5-70.5 $^{\circ}$; picrate, MP 124-125 $^{\circ}$ (from alcohol); oxime MP 149.5-150.5 $^{\circ}$ (from alcohol); semicarbazone, MP 238-238.5 $^{\circ}$ (from alcohol); hydrazone-hydrazide of the acid, MP 179-179.5 $^{\circ}$ (decomposes; from alcohol). Evaporation of mother-liquors and boiling of residue with a mixture of petroleum ether-alcohol (100:2) yields difficultly soluble V, MP 71-72 $^{\circ}$ (from alcohol) picrate, 147-147.5 $^{\circ}$ (from alcohol); dioxime, MP 194-195 $^{\circ}$ (from alcohol). VI heated (about 100° , 15 minutes) with hydrazine hydrate, then with excess KOH ($105-110^{\circ}$, 30 minutes), and for a short time at 155° . The product is diluted with water and steam-distilled,

Card : 3/6

14

CZECHOSLOVAKIA/Organic Chemistry. Synthetic Organic Chemistry. G-2

Abs Jour: Ref Zhur-Khim., No 13, 1958, 43375.

the residue is neutralized, evaporated, saturated in alcohol, while cooling, with HCl (gas), after which the solution is boiled. After evaporation of solvent the residue is dissolved in water, neutralized with bicarbonate, made alkaline with potash, and ether is used to extract IV, yield 88.2%, MP 130.5-132°/14 mm, n_D^{20} 1.5010, d_4^{20} 0.9871; picrate, MP 121-122 (from alcohol). The free acid, MP 170-171°, is obtained from the alkaline reaction product by neutralization, precipitation as Cu-salt, and liberation by action of H_2S . From IV and ethyl acetate (C_2H_5ONa in xylene, 80-85°, 8 hours) is obtained the ethyl ester of 5-ethyl-nicotinylacetic acid (VII), yield 56%, BP

Card : 4/6

CZECHOSLOVAKIA/Organic Chemistry. Synthetic Organic Chemistry. G-2

Abs Jour: Ref Zhur-Khim., No 13, 1958, 43375.

129-130^o/0.5 mm, n_D^{20} 1.5275, d_4^{20} 0.9766; picrate, MP 135-136^o (from alcohol); 1-phenyl-3-(5'-ethyl-pyridyl-3')-pyrazolone-(5) MP 190-190.5^o (from alcohol). By heating (about 100^o, 1.5 hours) VII with 2 N H₂SO₄ is obtained 5-acetyl-3-ethyl-pyridine, yield 98.7%, BP 63-64^o/0.3 mm, n_D^{20} 1.5211, d_4^{20} 0.9879; oxime, MP 147.5-148^o (from alcohol); semicarbazone, MP 218-219^o (from alcohol). Reduction (as is stated above) is used to synthesize I, yield 85.6%, BP 84-84.5^o/12 mm, 204.5-205^o/741 mm, n_D^{20} 1.4991, d_4^{20} 0.9227, which is isolated by steam distilling and is freed from unreacted hydrazine by the action of a solution of CuSO₄ and NaOH (about 100^o); picrate, MP 159.5-160.5^o; with 2,4-dinitrochlorobenzene in C₂H₆ (about 20^o, 14 days) it gives the hydrochloride

Card : 5/6

15

CZECHOSLOVAKIA/Organic Chemistry. Synthetic Organic Chemistry. G-2

Abs Jour: Ref Zhur-Khim., No 13, 1958, 43375.

of 2', 4'-dinitrophenyl-3,5-diethyl-pyridinium
(VIII), yield 68.2%, MP 159-160°; the hydrobromide
is obtained analogously, yield 72.3%, MP 180-181°.
From VIII and KI in alcohol was synthesized the
hydriodide, yield 82.6%, MP 198-198.5°.

Card : 6/6

CZECHOSLOVAKIA/Organic Chemistry. Synthetic Organic Chemistry. G-2

Abs Jour: Ref Zhur-Khim , No 24, 1958, 81665.

Author : Lukes R., Vaculik P

Inst :

Title : The Synthesis of 3,5-Diethylpyridine

Orig Pub: Collect czechosl. chem commun., 1958, 23, No 5, 954-961.

Abstract: See R. Zh. Khim , 1958, 43375.

Card : 1/1

VACULIK, P.; KUTRAN, J.

"Homologues of pyridine" III. Synthesis of 4-alkyl-3,5-dimethylpyridine.
In German. p. 147

COLLECTION OF CZECHOSLOVAK CHEMICAL COMMUNICATIONS, Praha, Czech.,
Vol. 24, No. 1, Jan. 1959.

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

Unclassified

VATSULIK I.

VATSULIK, Pavel [Vaculik, Pavel], inzh.dr.; ARTEM'YEV, A.A., kand.tekhn.
nauk [translator]; VOL'FSON, B.M. [translator]; KNUNYANTS, I.L.,
akademik, red.; ZAKHAR'YEVSKIY, V.A., red.; PRIDANIYEVA, S.V.,
tekhn.red.

[Chemistry of monomers] Khimiia monomerov. Pod red. I.L.
Knuniantsa. Moskva, Izd-vo inostr.lit-ry. Vol.1. 1960. 738 p.
(MIRA 14:3)

(Polymers)

(Chemistry, Organic)

VACULIK, Pavel; KUTHAN, Josef

Contribution to the cyanoethylation of benzylamine. Sbor chem tech
4 no.2:513-517 '60. (EEAI 10:9/10)

1. Katedra organické chemie, Vysoká škola chemicko-technologická,
Praha.

(Cyanoethylation) (Amines)