

NOGRADIT, HUNG.

Synthesis and biological activity of diphenyl and indane derivatives. L. Vargha, T. Horvath, T. Nagy, and L. Gyermek. *Acta chim. hung.*, 1954, 8, 111-119. The synthesis of certain indane and diphenyl derivatives, with side-chains of oxycetyl and diacetylonyl groups respectively, characteristic of corticosteroid hormones, is effected by generally known methods. The compounds produced do not affect the Na-K metabolism of adrenalectomized rats. However, 4-acetoxy-4'-oxoacetylonyl-diphenyl shows weak cortisone-like activity (reduction of the no. of eosinophil blood corpuscles, thymus atrophy). Boiling 4-methoxy-4'-acetyldiphenyl with S and morpholine gives 4-methoxy-diphenyl-4'-thioacetimidophenyl, $C_{19}H_{17}O_2NS$ (80%), m.p. 144°, converted by boiling alkali into 4'-acetic acid, $C_{19}H_{17}O_3$, m.p. 134-135°, which is demethylated (HBr-AcOH) to 4-hydroxy-diphenyl-4'-acetic acid, $C_{18}H_{17}O_3$, m.p. 241-243°. This gives successively 6-acetoxydiphenyl-4'-acetic acid, $C_{19}H_{17}O_4$, m.p. 186-187°, 4'-acetyl chloride, $C_{19}H_{17}O_2Cl$, m.p. 152-153°, and 4'-diacetoxydiphenyl, m.p. 115-116°. The ketone when shaken with methyl ketone, in dioxan at 40° evolves N_2 and yields 4-acetoxy-4'-oxoacetylonyl-diphenyl, $C_{19}H_{17}O_3$, m.p. 136-137°, and when treated with AcOH at 100° gives 4-acetoxy-4'-oxoacetylonyl-diphenyl.

1/2

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Handwritten note: (5-10)

V. 117-118
C₁₁H₁₁O₂, m.p. 117-118°. Phenylsuccinic acid and PCl₅ give the acid dichloride, transformed, without purification, by AlCl₃ in PhNO₂ into indan-3-one-1-carboxylic acid (monohydrate, m.p. 83-85°) which is reduced to indane-1-carboxylic acid. This furnishes successively indane-1-carbonyl chloride, C₁₁H₉OCl, b.p. 115-116°/5 mm., carbonyl chloride, C₁₁H₉OCl, b.p. 166-167°, and indanyl-1-diazomethyl ketone, which decomposes when warmed. This is transformed by 10% H₂SO₄ in dioxan into 1-*ω*-hydroxyacetylindane, C₁₁H₁₁O₂, b.p. 99-102°/0.1 mm., which reduces cold Fehling's and Tollen's solution. It is converted by Cu₂O and C₂H₅N at room temp. into 1-*ω*-acetoxyacetylindane, C₁₁H₁₁O₃, b.p. 118-121°/0.04 mm., 125-128°/0.1 mm. Pb(OAc)₂ oxidizes the last-named in boiling thiophen-free C₆H₆ with exclusion of phosphoric moisture to 1-acetoxy-1-*ω*-acetoxyacetylindane, C₁₁H₁₁O₄, b.p. 107-110°/0.005 mm., 145-150°/0.5 mm., which could not be obtained crystalline. It is converted by NaOMe-MeOH into 1-hydroxy-1-*ω*-hydroxyacetylindane which could not be purified and is identified as the bisphenyl methane, C₁₁H₁₁O₄N₂. H. WERN.

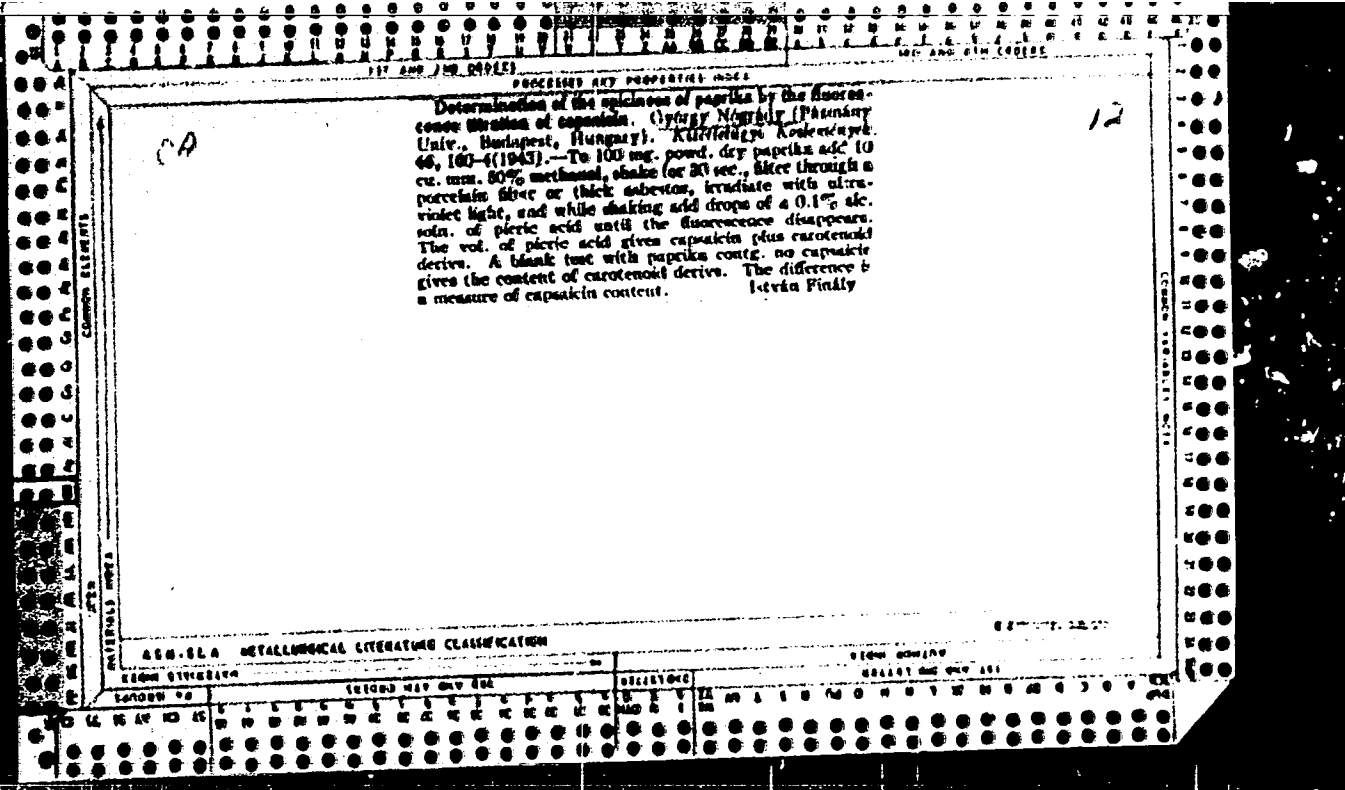
2/2

NOGRADI, Tamás, dr.

Limnological data on the alkali ponds in the vicinity of
Fulopszallas. Hidrologiai közlöny 36 no.2:130-137 Ap'56

NOGRADI, I.

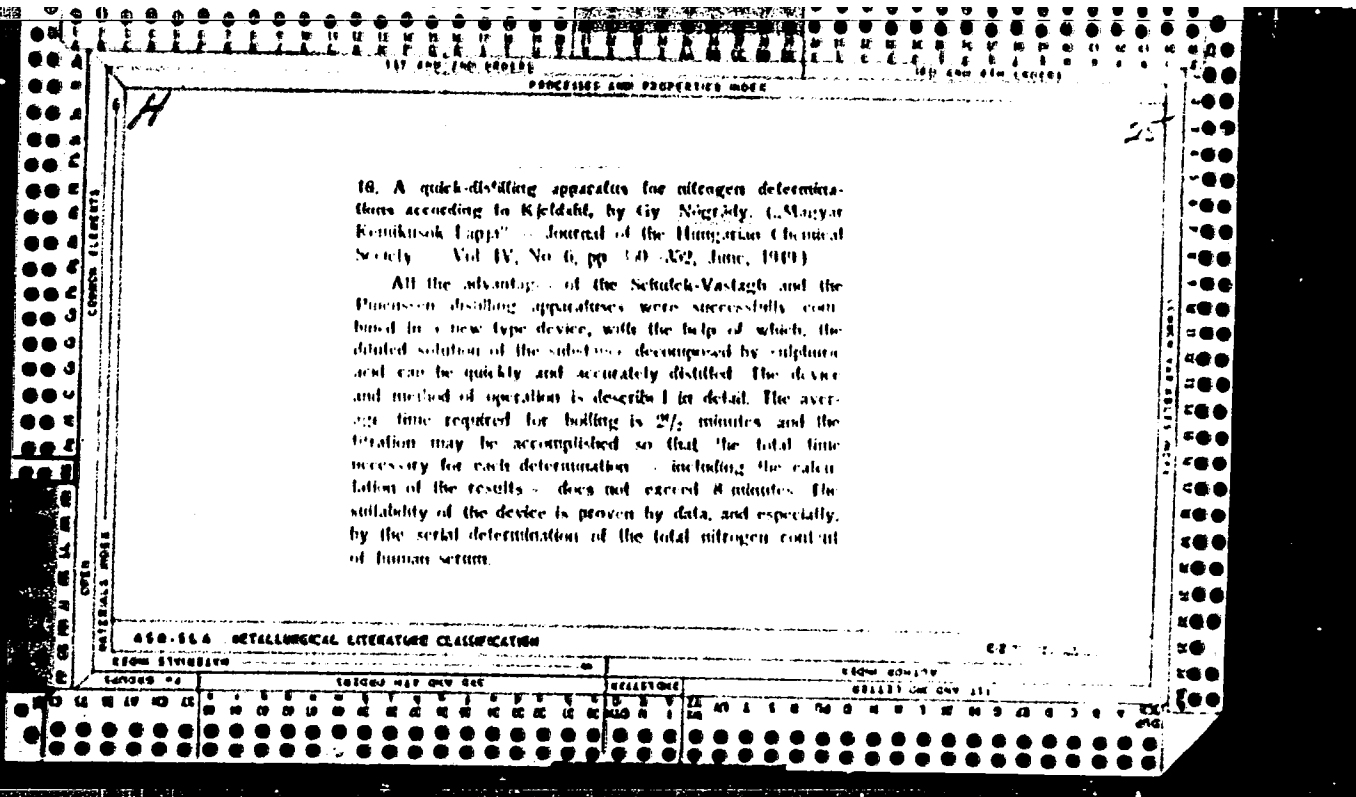
COUNTRY : HUNGARY
CATEGORY : pharmacology, toxicology. 5-Hydroxytryptamin.
RES. JOURN. : RZSiol., No. 12 1958, No. 56681
AUTHOR : Maz, L., Gyermek, L., Borra i, T.
INDEX : -
TITLE : Adrenolytic effects of tryptamine and its derivatives on isolated organs
ORIG. PUB. : Absent. Orvostud., 1958, Vol.9, No.12, 380-387
ABSTRACT : In experiments on the isolated rabbit uterus, tryptamine (1) exerted an adrenolytic action in doses of 15.1 ± 9.6 gamma/ml (50 times weaker than the action of ergotamine). On the isolated rat and rabbit intestine, 1 in amounts of 20-1000 gamma/ml did not suppress contractions induced by acetylcholine or barium chloride, which test first to the specific adrenolytic action of 1. Intravenous administration of tryptamine to narcotized cats (even repeated injections) following adrenalin did not alter the effects of the latter on the blood pressure. Serotonin also possesses an
CARD: 1/2



CA

118

Microdetermination of vitamin A by means of trichloroacetic acid reagent. C. Nogrady. *Magnus (Trans) Arch.* 45, 133-46 (1944).--The micro method described is based on the Carr-Price reaction (C.A. 20, 323). Trichloroacetic acid is used in place of SbCl₅. This reaction is more specific, less sensitive to water, and its blue color shows only a slow decrease of intensity. Vitamin detns. can be carried out on 2.0 cc. of body fluid. B. A.



CA

113

An automatic pipet of new design György. Nagyaly
(Univ. Pécs, Hung.). *Kísérleti Orvostudomány* 2, 301-2
(1950).—For the consecutive measurement of given amounts
of liquids an app. was constructed. A normal medical
syringe serves as a measuring instrument, sucking up the re-
quired amt. of liquid from a glass container. Two figures
give the design of the app. which is suitable for ophthalmic
examns. István Finsly

SOMFAI, J.; NOGRADY, G.

Investigations on the effect of climate on the miners. Orv. hetil.
91 no.28:871-875 9 July 50. (CIAL 20:7)

1. Institute of Public Hygiene (Director--Dr. Karoly Rauss), Pecs
University.

HOGRADY, G.; UJVARY, G.; MRAZ, T.

The effect of aureomycin on various bacteria and on the bacterial flora of normal and trachomatous conjunctiva. Szemészet 88 no.1:16-22 1951.

(CML 23:2)

1. Doctors. 2. Institute of Public Hygiene (Director -- Prof. Dr. Karoly Raus), Pecs University.

NOGRADY, GY.

"Application of potassium nitrate in corroding organic materials" p. 186.
"Treatment of industrial cyanide poisoning." p. 186. (Magyar Kémikusok Lapja,
Vol. 8, no. 6, Jun 53, Budapest)

SO: Monthly List of East European Accessions, Vol 3 No 2 Library of Congress Feb 54 Uncl

NOGRADY, G.; RÖDLER, M.

A double layered polytropic medium in the diagnostics of enteric bacteria. Acta microb. hung. 1 no.4:437-443 1954.

1. Institute for Microbiology, Medical University, Pecs.

(CULTURE MEDIA

double-layer polytropic medium for intestinal bact.)

(BACTERIA

intestinal, double-layer polytropic culture medium)

NOGRADY, Gyorgy; ADAM, Jozsef; RODLER, Miklos

Experiences in mass culture of Shigella strains. Kiserletes
orvostud. 6 no.5:398-402 Sept 54.

1. Pecséi Orvostudományi Egyetem Mikrobiológiai Intézete
(SHIGELLA, culture
mass culture)

L 08102-67 EWT(m)/EWP(f) FDN/DJ

ACC NR: AP6029989

(A, N)

SOURCE CODE: UR/0413/66/000/015/0195/0195

INVENTOR: Zhdanov, K. I.; Nogtev, L. M.; Alekseyev, I. L.; Korsakov, Ye. P.
Kan'shin, I. P.; Solomko, S. R.

61
13

ORG: none

TITLE: Variable-pitch propeller. Class 62, No. 184147

SOURCE: Izobret prom obraz tov zn, no. 15, 1966, 195

TOPIC TAGS: aircraft propeller, propeller blade, propeller pitch control, *hydraulic device, servomechanism, servosystem*

ABSTRACT: An Author Certificate has been issued for a variable-pitch propeller consisting of a hub (with blades mobilely attached) and a cylinder containing a variable-pitch mechanism and a control unit. The propeller is equipped with a hydraulic control unit, connected with the aircraft's hydraulic system, for the automatic control of propeller pitch and the engine's gas while assuring constant rpm and a minimal fuel expenditure. The control unit includes main and emergency regulators with control valves and servomechanisms consisting of servopistons with racks and pinions connected by a flexible coupling, one with the propeller's variable-pitch mechanism and the other with the engine's fuel-supply system. In order to remotely control propeller pitch and simultaneously adjust the propeller pitch for thrust, it can be equipped with a servosystem consisting of a spring-supported control valve and a tracking bushing for changing the propeller's pitch. To assure the

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UDC: 629.13.01/06

L 08102-67

ACC NR: AP6029989

delayed change of the propeller blades to the angle ϕ° in case of the decompression of the large-pitch channel, the propeller contains a throttle system consisting of a spring-supported plunger with a throttle opening. [SA]

SUB CODE:01,09,13/ SUBM DATE: 08Aug62

Card

2/2/70

NOGTEV, N.N., inzh.; RAGOZIN, Yu.M., inzh.

Electrolytic boron saturation in boron anhydride. Metalloved.
1 term. obr. met. no.12:49-50 D '62. (MIRA 16:1)

1. Permskiy politekhnicheskiy institut.
(Steel—Electrometallurgy) (Case hardening)

AUTHOR: Nogtev, P. Ya.

136-4-3/23

TITLE: Increasing labour productivity at beneficiation plants.
(Povyshenie proizvoditelnosti truda na obogatitelnykh
fabrikakh.)

PERIODICAL: "Tsvetnye Metally"(Non-ferrous Metals) 1957, No.4,
pp. 10 - 14 (U.S.S.R.)

ABSTRACT: In this article the author discusses reasons for low labour productivity at some Soviet beneficiation plants and suggests improvements. The greatest possibilities of improvement exist at comparatively old works where mechanisation is at a low level; for example at the Kansayskoy Plant (Kansayskoy Fabrike) mechanisation of concentrate transport freed eight men. Unsatisfactory equipment sometimes limits the degree to which automation can be introduced and this is suggested as a useful field for research. Complex automation of the whole de-watering process is being effected at the Kansayskoy plant, where additions and replacements of equipment have already raised the productivity: e.g., the replacement of flotation machines made by the imeni Kotlyakova factory by "Mekhanobr" machines and the introduction of an additional mill has doubled the capacity of the plant and greatly improved labour productivity there. The beneficiation plant of the Altyn-Topkanskiy combine

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Increasing labour productivity at beneficiation plants. (Cont.)
(Altyn-Topkanskiy Kombinat) is an example of the newly-^{136-4-3/23}built plant, which, through bad design, has very low labour productivity. The lack of standardised norms, indicated by Krupitsa and Faynshteyn ("Tsvetnye Metally" 1956, No.5) must not be allowed to impede progress and each plant should effect what improvement it can: the Ministry and Central Boards should make useful information thus obtained widely available. An example is the electric press for the hot vulcanisation of conveyor belts developed at the Leninogorskiy Polymetallic Combine (Leninogorskiy Polimetallicheskiy Kombinat); among urgently required improvements is a mill-lining with a life of 1.5 to 2 years and over. Besides technical measures organisational improvements are also necessary, for example, the combination of duty-electrician and duty-fitter in a single worker. In the field of wages policy the author agrees with M.I. Gorodetskiy, ("Tsvetnye Metally", 1956, No.10) in doubting the correctness of basing all wages on the production of the final concentrate, as proposed by Krupitska and Faynshtein ("Tsvetnye Metally" 1956, No.5). A better system is the one already adopted at several lead-zinc and copper plants in which the basis is the amount of ore treated and an incentive payment on the extraction of metal. A quantitative example of the opera-

Card 2/3

NOGTEV, V. P.

"A Complex Geobotanical Theory of River Alluvial Bottom Land,"
Dokl. Ak. Nauk SSSR, 47, No. 1, 1945.

Botanic Lab., Gor'kiy Agric. Inst.

CA

11D

A protective glucose buffer in bacterial root nodules of

bean-type plants and its transformation into storage starch of the plant. V. P. Nogtev. *Doklady Akad. Nauk S.S.S.R.* 57, 637-40 (1947); cf. *ibid.* 25, No. 2 (1939).—The results of microscopic examinations of the behavior of the nodules are described in detail. It was observed that with ample glucose supply arriving from the body of the plant, a glucose reserve (or buffer) is built up which prevents the attack of the nodule bacteria against the root-cell walls and the excess glucose is gradually converted to starch. G. M. K.

OTBPL, No. 45

Nogtev, V.P. (Gorki Institute of Agriculture). The rate of osmotic entry of water and aqueous solutions into the vegetative cell and the magnitudes determining it, 145.8

Academiya Nauk, S.S.S.R., Doklady, vol. 79, no. 2, 1951

171

CA

Rate of osmotic intake of solutions into a plant cell and the effect of cell shape on this rate. V. P. Neglov (Dokl. Akad. Nauk S.S.S.R. 82, 1008-10 (1962)).—According to the principles discussed earlier (ibid. 79, 246-48 (1951)), the rate of endosmosis can be given by: $dm/dt = -K [(c_1/c_2) \delta] (1/Q) dc/dx$. If the coeff. δ is unity, the equation expresses the endosmosis with utilization of entire specific cell surface. The factors possibly affecting the fluid transfer in relatively closely packed cells are discussed in general. Any deviation from spherical or pseudospherical shape increases the specific surface area and preserves the area necessary for fluid exchange. O. M. Kozlov

1. NOGTEV, V. F.
2. USSR (600)
4. Botany - Physiology
7. Speeds of cell absorption or "absorption speeds" of plant cells as internal cellular impellant of the water flow in plant organism. Dokl. AN SSSR 87, No. 3, 1952.

P3/6250

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

Nogtey, V. P.

Effect of biophysical properties of cells on the turgor mechanism, intensity of gas metabolism, and intensity of photosynthesis of plant leaves. V. P. Nogtey (Agr. Inst., Gorki). *Doklady Akad. Nauk S.S.S.R.* 108: 551-3(1956); cf. *ibid.* 74, No. 1, 143(1950); 87, No. 3, 497(1952).—The effect of phys. properties of plant cells on biochem. re-

actions are discussed theoretically, by using the previously defined terminology. A cell loses its turgor, during loss of H₂O, only when the specific reserve of elastic contractibility is totally exhausted; this reserve has a larger magnitude in small cells than in large cells. The latter fact can be used to explain the more rapid wilting of shade-growing plants in comparison with sunflower or potatoes which can stand a considerable loss of H₂O without loss of turgor. Peas and *Carthamus tinctorius* were grown under conditions of either 60% or 30% moisture capacity of the soil, which technique resulted in a differentiation of their leaf structures (xeromorphic in the drier cultures, mesomorphic in the moist cultures). At flowering, both sets were subjected to normal 60% irrigation and detus. of photosynthetic activity and cell sizes were measured. The plants cultivated with 30% irrigation exceeded the controls by 200-300% in respect to intensity of photosynthesis. This supports the theoretical expectation that a decrease in size of parenchymal cells and their departure from spherical shape should increase the intensity of gas metabolism and penetration of gases into the intercellular spaces. G. M. K.

КОГТЕВ, В.Р., проф., доктор биол.наук

A foxtail-alfalfa mixture is the earliest forage crop.
Zhivotnovodstvo 21 no.3:36-40 Nr '59. (MIRA 12:4)
(Forage plants)

10-12-57
FEDOROVA, V.P.; NOGTEVA, N.Ya.

Sodium alginate sizing. Tekst.prom. 17 no.2:51 F '57. (KLEA 10:2)

1. Zaveduyushchiy laboratoriyey fabriki BIM (for Fedorova). 2. Na-
chal'nik prigotovitel'nogo otdela fabriki BIM (for Nogteva).
(Sizing (Textile))

НОГТЕВА, Н. Я.

LISITSIN, Ye.A.; FEDOTOVA, V.P.; НОГТЕВА, Н. Я.

Experience in the production of no.1310 unbleached poplin. Tekst.
prom. 17 no.9:56-57 S '57. (MIRA 10:11)

1. Zaveduyushchiy tkatskim proizvodstvom fabriki Bol'shaya Ivanovskaya Manufaktura (BIM) (for Lisitsyn).
 2. Zaveduyushchiy laboratoriyey fabriki Bol'shaya Ivanovskaya Manufaktura (for Fedotova).
 3. Nachal'nik prigotovitel'nogo otdela fabriki Bol'shaya Ivanovskaya Manufaktura (for Nogteva).
- (Cotton fabrics)

SREDNEV, V.A.; FEDOTOVA, V.P.; NOGTEVA, P.Ya., master

Use of xylitol in sizing. Tekst.prom. 25 no.11:41-42 N '65.
(MIRA 18:12)

1. Nachal'nik tkatskogo proizvodstva fabriki "Bol'shaya Ivanovskaya manufaktura" (for Srednev). 2. Nachal'nik tkatskoy laboratorii fabriki "Bol'shaya Ivanovskaya manufaktura" (for Fedotova). 3. Prigotovitel'nyy otcel fabriki "Bol'shaya Ivanovskaya manufaktura" (for Nogteva).

L 1640-66 EWT(d)/EWT(1)/EWT(m)/EPF(c)/EEC(k)-2/EPF(n)-2/T/EWP(t)/EWP(b)/ETC(m)
ISP(c) JD/WW

ACCESSION NR: AP5014850

UR/0020/65/162/003/0543/0545

AUTHORS: ^{44.55} Paukov, I. Ye.; ^{44.55} Strelkov, P. G. (corresponding member
AN SSSR); ^{44.55} Nogteva, V. V.; Belyy, V. I. ^{44.55}

65
62
B

TITLE: Specific heat of black phosphorus at low temperatures

21, 44.55

SOURCE: AN SSSR. Doklady, v. 162, no. 3, 1965, 543-545

TOPIC TAGS: entropy, enthalpy, phosphorus, specific heat, low temperature research

ABSTRACT: The purpose of this investigation was to determine the true specific heat of the crystalline modification of black phosphorus, and also to calculate the values of the absolute entropy and enthalpy under standard conditions. The sample investigated was obtained by means of a high pressure bomb, capable of operating up to 13,000 -- 14,000 kg/cm² at temperatures up to approximately 3000. The apparatus and the test procedure were essentially similar to those described earlier (P. G. Strelkov et al., ZhFkh v. 28, No. 3, 459, 1954). The results are tabulated. A plot of the specific heat at constant pres-

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L 1640-66

ACCESSION NR: AP5014850

3

sure against the temperature showed no anomalies. At low temperatures (14 -- 40K) the specific heat is proportional to the temperature raised to the 2.7 power. At higher temperatures the power is lower, and at temperatures 13 -- 20K it is equal to 2.7, increasing to the third power as called for by the Debye law. It is pointed out in the conclusion that there are no published data on the specific heat of black phosphorus. Orig. art. has: 1 table and 1 figure.

ASSOCIATION: Institut teplofiziki Sibirskogo otdeleniya Akademii nauk SSSR (Institute of Thermophysics, Siberian Department, Academy of Sciences, SSSR)

SUBMITTED: 17Feb65

ENCL: 00

SUB CODE: TD, GP

NR REF SOV: 002

OTHER: 005

Card 2/2 *SP*

L 4873-66 EWT(d)/EWT(l)/EWT(m)/EPF(c)/EEC(k)-2/EPF(n)-2/T/EHP(t)/EHP(b)/EHA(h)
ACCESSION NR: AP5019844 ETC(m) IJP(c) JD/HH/JH UR/01B1/65/007/008/2330/2332

AUTHOR: ^{44.85} Nogteva, V. V.; ^{44.85} Paukov, I. Ye.; ^{44.85} Strelkov, P. G.

TITLE: Specific heat of metallic arsenic at low temperatures

SOURCE: Fizika tverdogo tela, v. 7, no. 8, 1965, 2330-2332

TOPIC TAGS: arsenic, specific heat, temperature dependence, entropy, enthalpy

ABSTRACT: The purpose of the investigation was to study the temperature dependence of the true specific heat of metallic arsenic in the temperature interval 13--60K, and to obtain more accurate values of the absolute entropy at room temperature (298.15K) and the difference between the enthalpies at 0 and 298.15K. The low-temperature measurements were made with apparatus and a procedure similar to that developed by one of the authors (P. G. Strelkov et al. ZhFKh v. 28, 459, 1954). The results are illustrated in Fig. 1 of the enclosure. A certain anomaly in the temperature dependence of the specific heat, probably connected with the prior history of the sample, was observed in one arsenic sample but not in the others. The results indicate that at temperatures 13.9--17K the specific heat is proportional to the temperature raised to the 3.4 power, and at 17--27K the exponent drops to ~2.8. The reason for this change is not yet clear and calls for more measurements at lower temperatures. Orig. art. has: 2 figures and 1 table. 21.4.53

Card 1/3

L 4873-66

ACCESSION NR: AP5019844

ASSOCIATION: Institut teplofiziki SO AN SSSR, Novosibirsk (Institute of Thermo-
physics, SO AN SSSR) 44.55

SUBMITTED: 15Feb65

ENCL: 01

SUB CODE: TD, MM

NR REF SOV: 002

OTHER: 001

Card 2/3

L 4873-66

ACCESSION NR: AP5019844

Specific heats and entropy and enthalpy differences

T, K	C_p (cal/°)(g/at)	$S_T^0 - S_{13.9}^0$ entr. un.	$H_T^0 - H_{13.9}^0$ cal.g.at ⁻¹
13.9	0.0851	0	0
15.0	0.1145	0.00758	0.1097
17.0	0.1710	0.0253	0.3943
20.0	0.2711	0.0607	1.051
25.0	0.4992	0.1444	2.947
30.0	0.7783	0.2598	6.133
35.0	1.059	0.4007	10.73
45.0	1.614	0.7335	24.09
60.0	2.435	1.312	54.56
80.0	3.312	1.976	112.6
100.0	3.968	2.789	185.7
150.0	4.928	4.602	410.9
200.0	5.360	6.087	669.4
250.0	5.638	7.313	944.4
298.15	5.899	8.328	1221.9

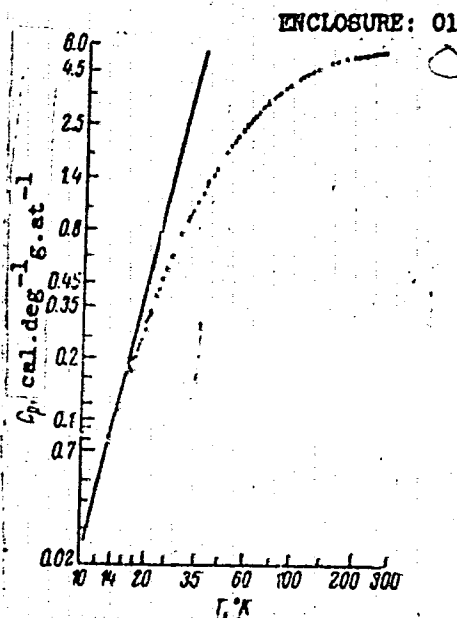


Fig. 1. Temperature dependence of specific heat and other thermodynamic characteristics of metallic arsenic

Card 3/3 *SC*

ACC NR: AP7003337

SOURCE CODE: UR/0076/66/040/012/3094/3097

AUTHOR: Paukov, I. Ye.; Nogtova, V. V.; Yarambash, Ye. I.

ORG: Institute of General and Inorganic Chemistry, AN SSSR (Institut obshchey i neorg-
ganicheskoy khimii AN SSSR); Solid State Physics Section, Siberian Branch, VNIIFTRI
(Otdel fiziki tverdogo tela Sibirskogo filiala VNIIFTRI)TITLE: Study of the true heat capacity of rare earth chalcogenides at low tempera-
tures. Part 1: True heat capacity at low temperatures, entropy and enthalpy of
 La_2Se_3

SOURCE: Zhurnal fizicheskoy khimii, v. 40, no. 12, 1966, 3094-3097

TOPIC TAGS: heat capacity, entropy, enthalpy, lanthanum compound, selenide

ABSTRACT: The article initiates a cycle of studies of the thermodynamic properties of rare earth chalcogenides, aimed at obtaining reliable values of heat capacity and entropy and establishing the rules governing their variation over the entire series of rare earth chalcogenides. The true heat capacity of finely crystalline La_2Se_3 was measured in the 13.4-296°K range with the aid of an adiabatic vacuum calorimeter. Values of absolute entropy $S^{\circ}_{298.15}$ and difference of enthalpies $H^{\circ}_{298.15} - H^{\circ}_0$ under standard conditions were calculated. A systematic deviation of the experimental points from the curve of c_p vs. T°K was observed. The nature of this anomaly has not been elucidated. Orig. art. has: 1 figure and 2 tables.

Card 1/2

UDC: 541.11

ACC NR: AP7003337

SUB CODE: 07/ SUBM DATE: 04Jan66/ ORIG REF: 006

Card 2/2

NOGULA, K.

Planning concrete mixture by using the method of representation. p.424.
MELYEPITESTUDOMANYI SZEMLE. Budapest. Vol. 6, no. 9, Sept. 1956.

SOURCE: East European Accessions List (EEAL), library of Congress
Vol. 5, No. 12, December 1956.

NOGYNA, N.

"Route Centralization," Young People's Technology USSR, No. 4, 1950.

NOHAVICA, L.

"Some methods and results of the operational control of coal preparation in coke plants." P. 123.

PALIVA. (Ministerstvo paliv a Ceskoslovenska vedecka technicka spolecnost pro byuziti paliv pri Ceskoslovenske akademii ved). Praha, Czechoslovakia, Vol. 39, No. 4, Apr. 1959.

Monthly list of East European Accessions (EEAI), LC, Vol. 8, No. 8, August 1959.
Uncla.

NOHAVICA, Lubomir, inz.

Reducing the steel loss in block shears cutting, Hut listy 18
no.2:136-138 F '63.

1. Nova hut Klementa Gottwalda, Kuncice.

NOHAVICA, Vladimír

Technický rozvoj v československém průmyslu. (Development of Technology in the Czechoslovak Industry. 1st ed. bibl.) Authors: Vladimír Nohavica, Václav Kves. Prague SNPL, 1957. 56 p.

Conditions and tasks of the Czechoslovak industry in the field of mechanization, automation, electrification, chemical engineering, and the application of nuclear power; crucial importance of the machinery industry; creative initiative of workers.

Bibliografický katalog, CSR, České knihy, No. 37. 22 Oct 57. p. 799.

NOHEJL, V.

Some ways for further increase in the economic effectiveness of
bakeries. p. 93.

TECHNIKA VYKUPU, MLYNARSTVI A PEKARSTVI. (Ministerstvo potravinarskeho
prumyslu a vykupu zemedelskych vyrobku a Sdruzeni mlynu a pekaren)
Praha, Czechoslovakia, Vol. 5, no. 2, Feb. 1959.

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

Uncl.

CZECHOSLOVAKIA

MATYS, ZD., NOHEL, B., VOJTISEK, VI., KUDRMANN, J., and STARKA, L., Research Institute for Endocrinology (Vyzkumny ustav endokrinologicky), Prague, Docent Dr K. SILINK, director; First Department of Internal Medicine (I. interni oddeleni), Hospital at Bulovka, L. SYMON, MD, director; Surgical Clinic (Chirurgicka klinika), Faculty of Medicine (Lekarska fakulta) Charles University, Prague, Prof. Dr. E. POLAK, director; Institute of Pathological Anatomy (Patologickoanatomicky ustav), Faculty of Medical Hygiene (Lekarska fakulta hygienicka), Charles University, Prague, Docent Dr J. STOLZ, director, [individual affiliations cannot be determined]

"Benign Adenoma of the Left Adrenal With Tuberculosis of the Right Adrenal in a Patient Suffering from Cushing's syndrome and Adenocarcinoma of the Large Intestine"

Prague, Casopis Lekaru Ceskych, Vol CII, No 23, 31 May 63, pp 636-640.

Abstract [Authors English summary, modified]: Object of

1/2

MATYS, ZD.; NOHEL, B.; VOJTISEK, V.; KUDRMANN, J.; STARKA, L.

Benign adenoma of the left adrenal gland with tuberculosis of the right adrenal in a patient with Cushing's syndrome and adenocarcinoma of the large intestine. Cas. lek. cesk. 102 no.23: 636-640 & Je '63.

1. Vyzkumny ustav endokrinologicky v Praze, reditel doc. dr. K. Silink I interni oddeleni nemocnice na Bulovce, vedouce MUDr. L. Symon Chirurgicka klinika lekarske fakulty hygienicke KU v Praze, prednosta prof. dr. E. Polak Patologickoanatomicky ustav lekarske fakulty hygienicke KU v Praze, prednosta doc. dr. J. Stolz.

SADEK J.;HOHEL, L.

Tissue reactions to plastics and to vitallium; test in the anterior chamber of tye eye. Lek. listy, Brno 8 no.22:509-512 15 Nov 1953.

(GLML 25:4)

1. Of the Surgical Department (Head--Docent C. Vohnout, M.D.) and of the Eye Department (Head--E. Stastnik, M.D.), GUNZ hospital in Os-trava.

NOHELSKA, H.
PEKAREK, J.; NOHELSKA, H.

Tests of different methods of preparing pertussis vaccines. J. hyg. epidem., Praha 5 no.3:330-340 '61.

1. Institute of Sera and Vaccines, Tuberculosis Research Institute, Prague.

(WHOOPING COUGH immunol)

HORN, Dezso; TEMESSZENTANDRASI, Guido; NOHRER, Arpad; VARGA, Gyorgy; BERES, Sandor, dr., buntetobiro; TOTH, Anna, SIMONOVITS, Istvan; KOMAR, Andras; PAL, Ferenc, dr.; SOMOGYI, Miklos; SOMOSKOI, Gabor

The 10th Plenary Session of the National Council of Trade Unions.
Munka 11 no.6:1-12,29-30 Je '61.

1. Szakszervezetek Orszagos Tanacsanak titkara, es "Munka" szerkesztobizottsagi tag (for Horn, Varga). 2. Fomernok, Ozdi Kohaszati Muvek (for Temesszentandras). 3. Elelmezesisipari Dolgozok Szakszervezete elnoke. (for Nohrer). 4. Textilszakszervezet fotikara (for Toth). 5. Egeszsegugyi Miniszter elso helyettese, Budapest. (for Simonovits). 6. Banyaipari Dolgozok Szakszervezetenek titkara (for Komar). 7. Orvos-Egeszsegugyi Dolgozok Szakszervezetenek fotikara (for Pal). 8. Szakszervezetek Orszagos Tanacsanak elnoke es Magyar Szocialista Munkaspart Politikai Bizottsaganak Tagja (for Somogyi). 9. Epito-,Fa- es pitoanyagipari Dolgozok Szakszervezete fotikara (for Somoskoi).

L 1717-66 EWP(v)/T/EWP(t)/EWP(k)/EWP(b)/EWA(c) JD/HM

ACCESSION NR: AP5024085

CZ/0039/64/025/01; 6667/0672

AUTHOR: Huttel, Ivan (Engineer); Nohynek, Jindrich (Engineer)

TITLE: Mechanism of ultrasonic welding

44.55

44.57

43
B

SOURCE: Slaboproudy obzor, v. 25, no. 11, 1964, 667-672

TOPIC TAGS: ultrasonic welding, welding equipment, electric engineering

ABSTRACT: A brief description is presented of principles of ultrasonic welding and the design of an ultrasonic welder developed at the Institute for Communications Technology. Discussed is the application of ultrasonic welding in various fields of electrical engineering. Results are given on tests conducted with the welder. Orig. art. has: 8 figures, 3 formulas, 2 graphs and 1 table.

ASSOCIATION: Vyzkumny ustav pro sdlovaci techniku A.S. Popova, Prague (Institute for Communications Technology)

SUBMITTED: 02Apr64

ENCL: 00

SUB CODE: IE, EE

NR REF SOV: 002

OTHER: 004

JPRS

Card 1/1

DP

PROCHAZKA, P.; HAHN, P.; KOLDOVSKY, O.; NOHYNEK, M.; ROKOS, J.

The activity of α -amylase in homogenates of the pancreas of rats during early postnatal development. *Physiol. Bohemoslov.* 13 no. 3:288-291 '64

1. Institute of Microbiology and Institute of Physiology, Czechoslovak Academy of Sciences, Prague.

KUBAT, Z.; ROKOS, J.; PROCHAZKA, P.; LIEBL, V.; NOHYNEK, M.

A contribution to the problem of electrostatic bonds of the macromolecules of the corneal stroma. Sborn. lek. 67 no.6: 196-198 Je'65.

I. I. očni klinika fakulty všeobecného lékařství University Karlovy v Praze (prednosta: prof. dr. E. Deinstbier, DrSc.); a Mikrobiologický ústav Československé akademie věd v Praze (reditel: akademik: I. Malek).

MROZINSKI, Stanislaw; NOISZEWSKI, Tadeusz

Development of electrocardiographic changes in a case of stab wound of the heart. Polski tygod. lek. 11 no.15:653-655
9 Apr 56.

1. Z Kliniki Chorob Wewn. Pomorskiej Akad. Med. Szczecinie;
kier. doc. dr. Edward Gorzkowski, Szczecin 3, ul. Czorsztynska
12.

(HEART, wounds and injuries,
stab wound in suicide, ECG (Pol))

(WOUNDS AND INJURIES,
heart, stab wound in suicide, ECG (Pol))

(SUICIDE,
stab wound of heart, ECG (Pol))

MROZINSKI, Stanislaw; NOISZEWSKI, Tadeusz

Electrocardiographic changes in experimental cardiac wounds.
Polskie arch. med. wewn. 26 no.6:927-940 1956.

1. Z II Klin. Chorob Wewn. Pomorskiej AM w Szczecinie
Kier.: doc. dr. med. E. Gorzkowski, Szczecin, ul. Czortreztynska
12.

(HEART, wounds and injuries,
exper., ECG changes (Pol))

(ELECTROCARDIOGRAPHY, in various diseases,
exper. heart wds. (Pol))

JOVIC, Mihailo, inz.; NOJKOVIC, Dusan, inz.; TOLIC, Natalija, tehn.

Electronic track circuits. Zeleznice Jug 19 no.5:38-47 Ky'63.

NOJMI, E.

Harmful evaporation from radio apparatus. p. 538. VOJNO-TEHNIČKI GLASNIK.
Beograd.

Vol. 3, No. 7, July 1955

SOURCE: East European Accessions List, (EEAL) Library of
Congress, Vol. 4, No. 12, December 1955

NOJMAN, F.

Care of the base and plugs of radio tubes. p. 631.

VJUNO-TEHNIKI GLASNIK. Beograd, Yugoslavia. Vol. 3, no. 11, Nov. 1955.

Monthly List of East European Accessions (LEAI) LC, Vol. 5, no. 9, Sept. 1959.

Uncl.

NOJMAN, Eric, ing. (Beograd)

Concerning the definition of the types of polarized aluminum electrolytic condensers. Elektroprivreda 14 no.11/12:647-650 N-D '61.

NOJMAN, Eric (Beograd)

Basic properties and use of tantalum electrolytic capacitors.
Avtomatika 3 no.5:356-360 0 '62.

NOJMAN, Eric

Problems of setting the standards for permanent and wound resistors.
Automatika 3 no.144-48 F '62.

NOJMAN, F.

Definition of the general characteristics and concepts for the standards of component parts. Elektroprivreda 15 no.1:53-55 Ja '62.

NOJMAN, Eric, inz.

Approach to the elaboration of standards and specifications
for component parts. Telekomunikacije 13 no.1/2:30-36
Ja-Ap '64.

L. 22401-66 ENT(1)/ENA(h) D
ACC NR: AP6009888 SOURCE CODE: UR/0413/66/000/004/0080/0081

INVENTOR: Gerasimov, A. Ya.; Khrushchev, V. V.; Lur'ye, L. Z.; Shtamm, Yu. P.;
Ivanov, V. V.; Nokaln, E. A.

ORG: none

TITLE: Device for the display of voltage curves on the screen of a cathode-ray oscilloscope. Class 42, No. 179019 [announced by the Special Design Office, AN Estonian SSR (Spetsial'noye Konstruktorskoye byuro AN Estonskoy SSR)]

SOURCE: Izobreteniya, promyshlennyye borazttsy, tovarnyye znaki, no. 4, 1966, 80-81

TOPIC TAGS: oscilloscope, data display, visual signal, display device

ABSTRACT: The Author Certificate introduces a device for displaying voltage curves on an oscilloscope screen. For enhanced speed and accuracy, the electronic switches are fitted with elements which correct the characteristics of the pickups and the tubes. A contactless ring distributor of rectangular pulses is included; it is synchronized by the voltage of the generator which feeds the pickups. In order to move the cali-

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UDC: 681.14

L 22401-66
ACC NR: AP6009888

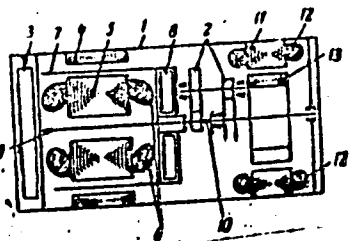


Fig. 1. Display device

1 - Electronic switches; 2 - pickups;
3 - oscilloscope; 4 - calibration
pickup; 5 - delay unit.

bration pickup is connected to the electronic switch through a controlled delay unit
(see Fig. 1). Orig. art. has: 1 figure. [DW]

SUB CODE: 09/ SUBM DATE: 12Aug64/

Card 2/2 *llw*

NOKHINA, YU. I.

Ivanov, A. S. and Nokhina, Yu. I. - "Minoga parasitic virus", Trudy. Astran'd.
gos. med. in-ta, Vol. IX, 1942, p. 84-85.

SO: U-3042, 11 March 53, (Letopis 'Zhurnal 'nykh Statey, No. 3, 1949).

NOKHOTOVICH, A., kand. tekhn. nauk

Using enriched seedlings in milling high-grade rye flour.
Muk. elev. prom. 24 no.11:21-23 W '58. (MIRA 11:12)

1.Odasskiy tekhnologicheskii institut im. I.V. Stalina
(Rye milling)

DEMIDOV, P.G.; BARER, G.O.; NOKHOTOVICH, A.Ya.; KALYUZHNAJA, A.M.

Milling properties of some wheat varieties of the Ukraine. Izv.
vys.ucheb.zav.zhishch.tekh. no.5:12-16 '60. (MIRA 13:12)

1. Odesskiy tekhnologicheskii institut imeni I.V. Stalina. Kafedra
mukomol'nogo i kombikormovogo proizvodstv.
(Ukraine--Wheat--Varieties)

BOEHOTOVICH, A., kand.tekhn.nauk

Strength of rye kernels. Muk.-elev. prom. 26 no.9:27-28 S '60.
(MIRA 13:9)

1. Odesskiy tekhnologicheskii institut im. I.V. Stalina.
(Rye)

DEMIDOV, P.G.; BARER, G.O.; NOKHOTOVICH, A.Ya.; KALYUZHNYAYA, A.M.

Technological properties of promising Ukrainian wheat varieties.
Izv. vys. ucheb. zav.: pishch. tekhn. no.4:13-17 '61. (MIRA 14:8)

1. Odesskiy tekhnologicheskiy institut imeni I.V.Stalina, kafedra
tekhnologii mukomol'no-krupyanogo i kombikormovogo proizvodstva.
(Ukraine--Wheat--Varieties)

DEMIDOV, P.G.; BARER, G.O.; KALYUZHNAJA, A.M.; NOKHOTOVICH, A.Ye.

Technological characteristics of wheat of the 1961 crop in the southern part of the Ukraine. *Izv. vys. ucheb. zav.; pishch. tekhn.* no.3:18-20 '63. (MIRA 16:8)

1. Odesskiy tekhnologicheskii institut imeni Lomonosova, kafedra tekhnologii zerna.

(Ukraine--Wheat)

1. NOKHOV, I.M.
2. USSR (600)
4. Founding
7. Expand the production of cast iron and steel shot, Za ekon.mat. no. 3, 1953.

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

SOV/136-59-5-5/21

AUTHOR: Nokhov, I.M.
TITLE: The Industry Needs Good Ore-Grinding Balls (Promyshlennosti nuzhny kachestvennyye rudorazmol'nyye shary)
PERIODICAL: Tsvetnyye metally, 1959, Nr 5, pp 24-26 (USSR)
ABSTRACT: The author states that it was decided in 1954 to concentrate grinding ball production at three iron and steel works, using screw rolling. He complains that only at the "Azovstal'" works is work proceeding to install the necessary equipment, and that two mills for 40-80 mm and one for 80-125 mm diameter balls built in 1956 have still not been installed. The ball-making situation is unsatisfactory, with 53 iron and steel, non-ferrous metal, heavy machine construction and armament works producing an unbalanced output. The non-ferrous metals industry obtains 40-60 mm balls from two iron and steel works which cannot fulfil requirements. Experience in 1958 showed that some Sovnarkhoz (economic councils) substitute off-grade materials for the high quality ball-making steel received or, if they do use the proper materials, fail to effect the necessary heat treatment. There is a shortage of smaller diameter balls in view of the tendency (as in the USA) to reduce ball size, and the author

Card 1/2

SOV/136-59-5-5/21

The Industry Needs Good Ore-Grinding Balls

recommends the provision of the necessary rod to the manufacturers. The author draws attention to the research being carried out by TsNIIOMASH on the behaviour of balls of various materials and the favourable results obtained at the Noril'skiy kombinat (Noril'sk combine) with type ShKh15 chrome steel balls. An editorial note draws attention to the possibility of using larger lumps of the ore as the grinding medium.

Card 2/2

NOKHATYAN, K. A.

DECEASED
c. '62

1963/4
/4

Structural ceramics

(A.N) L 8484-66

ACC NR: AP5028532

SOURCE CODE: UR/0286/65/000/020/0125/0125

AUTHORS: Kostylev, V. G.; Nokhratyan-Torosyan, G. K.

ORG: none

TITLE: A lifting and transporting device. Class 62, No. 175827 [announced by Enterprise of the State Committee on Aviation Technology, SSSR (Predpriyatiye gosudarstvennogo komiteta po aviatsionnoy tekhnike SSSR)]

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 20, 1965, 125

TOPIC TAGS: hoisting equipment, transportation equipment, hospital equipment, non-military safety equipment

ABSTRACT: This Author Certificate presents a lifting and transporting device following Author Certificate No. 130785. To provide for safety in lifting and lowering stretcher patients and loads in case of a breakage of the power-driven cable system, the load-bearing carriage is provided with a catcher and extendable stoppers, while the lower frame of the carriage contains an extension bar (see Fig.1). The power driven cable system is attached to one end of this bar, the other end of which supports a spring acting through a system of levers on the extendable stoppers. In the case of stopping, the latter enter oval openings in the rails.

Card 1/2

UDC: 621.868.258.2-595

NOKHRIN, G.A., rea.

[Samples of fish recordings by hydroacoustic devices;
the Atlantic Ocean] Obraztsy zapisei ryby gidroakusti-
cheskimi priborami; Atlanticheskii okean. Kaliningrad,
Kaliningradskoe knizhnoe izd-vo, 1962. 203 p.
(MIRA 18:1)

1. Kaliningrad. Baltiyskiy nauchno-issledovatel'skiy
institut morskogo rybnogo khozyaystva i okeanografi.

NOKHREIN, M. D.

NOKHREIN, M.D., frezerovshchik.

How I overfulfill my rate of output by 200 %/o. Mashinostroitel'
no.10:31-33 0 '57. (MIRA 10:11)

(Milling machines)

NOKITINA, YU. P.
NOKITINA,
USSR/Geology
Tectonics

Mar/Apr 1948

"Some Regularities in the Distribution of Salt Domes in the South Emba Region,"
Yu. A. Kosygin, N. A. Shvamberger, Yu. P. Nokitina, 4 pp

"Byul Mosk Obsh Ispy Prirod, Otdel Geolog" Vol XXIII, No 2

Authors, taking as examples the distribution of domes in the periphery of the Baychunasskiy depression, show that the localization and orientation of salt domes in the western Transkazakhstan is closely connected to the formation of the contemporary depressions in the pre-Caspian syncline.

Pa 66457

SHUR, A.; NOKKERT, E.

Intercommunication system using transistor amplifiers. Radio
no.2:50-51 F '60. (MIRA 13:5)
(Transistor amplifiers)
(Intercommunication systems)

NOL', Ya.A. [deceased]; PRUNIS, N.M.; BEREZIN, I.P., kand.med.nauk;
LITVINOV, L.D.

Rare case of reticulosarcoma of the stomach. Nov.khir.arkh.
no.11:84-85 '61. (MIRA 14:12)

1. Khirurgicheskoye otdeleniye Moskovskoy gorodskoy bol'nitsy
No.53.
(STOMACH-TUMORS) (RETICULO-ENDOTHELIAL SYSTEM-TUMORS)

HOLANDT, O.N.; KHLISTUNOV, V.N.

Digital computers as a new milestone in instrument industry.
Inform.-tekh. sber. MEK no.8:3-4 '58. (MIRA 12:1)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut elektromekhaniki.
(Instrument industry)

28(1)
AUTHORS: Kovalevskaya, V. V., Candidate of Technical Sciences,
Nolandt, O. N., Engineer, Khlistunov, V. N., Engineer
SOV/119-58-11-7/15

TITLE: Building Principles for Digital Computers (Printsipy
postroyeniya tsifrovyykh priborov)

PERIODICAL: Priborostroyeniye, 1958, Nr 11, pp 19-23 (USSR)

ABSTRACT: If the attempt is made to systemize digital computers the
following result is obtained:
I. Voltage- or resistance measurement is referred to a standard.
A) Electromechanical group.
a) Voltmeter
b) Ammeter
c) Ohmmeter
B) Group equipped with tubes.
a) Voltmeter
II. Measurement of time is referred to a standard
A) Tube line-up group.
a) Frequency meter
b) Phasemeter

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Building Principles for Digital Computers

SOV/119-58-1'-7/15

c) Voltmeter

The basic mode of operation of the devices belonging to groups I.Aa), II.Aa), II.Ab) and II.Ac) is described in short. The work of developing digital computers in the USSR began in 1935. F. Ye. Tem'kov developed a two-digit compensator with digital report (sifrovym otschetom). 14 foreign and Soviet devices are tabularized together with their most important data. The following originated from the Eastern Block:

a) Voltmeters

Producer: Penza Industrial Institute
Measuring order: Direct-current voltage
Measuring sensitivity: 0.001 V
Measuring errors in %: ± 0.1
Measuring time: 1.5 s
Electromagnetic device with static compensation (steep selector). Determination of polarity is automatized.

b) Producer: NII. Autocompensator AK-4D connected with a strain gauge (tenzodatchik)
Sensitivity: $9 \cdot 10^{-6}$
Measuring errors: ± 0.02 %
Measuring time: 70 s

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Building Principles for Digital Computers

SOV/119-58-11-7/15

Electromagnetic device with static compensation. The device consists of a decade-magazine resistance, an amplifier for a two-phase tachogenerator, a balanced indicator, and a recording device.

- c) Voltmeter: **ETsVP-1**
Produced at Penza
Measuring order: direct current voltage
Measuring range: 0.5 to 100 V
Measuring errors: $\pm 0.5\%$
Measuring time: 1 s
- d) Frequency meter
Producer: Akademiya nauk Rumynskoy nar.respubliki (Romanian Academy of Sciences)
Measuring range: 10, 100 kilocycles
Measuring errors: $\pm 10^{-6}$
Measuring time: 1 and 10 s. respectively
- e) Phase-frequency meter **PF-2**
Produced at Penza
Measuring orders: Frequency, phase shift and number of pulses
Measuring range: 0.01 - 50 cycles, 0.02 - 100 s. (up to

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Building Principles for Digital Computers

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200 kilocycles)

Measuring errors: 0.5 %

There are 5 figures, 1 table, and 7 references, 2 of which are Soviet.

Card 4/4

NOLC, F.

250 km. a day and the productive capacity of tracks. p. 224.
ZELEZNICE, Prague, Vol. 4, no. 9, Sept. 1954.

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 5, No. 6,
June 1956, Uncl.

NOEC, M.

Organization of work on a thousand-hectare collective farm; local conditions on the Velim Collective Farm, which owns 943 hectares.

p. 7
Vol. 10, no. 5, May 1956
ROLNICKE HLASY
Praha

SO: Monthly List of East European Accessions (EFAL), LC, Vol. 5, no. 12
December 1956

PETUKHOV, B.S., kandidat tekhnicheskikh nauk, dotsent; KRASNOSHCHENKOV, Ye.A.,
kandidat tekhnicheskikh nauk, assistent; MOL'DE, L.D., kandidat tekhnicheskikh nauk.

Investigation of local heat transfer during viscous flow of a liquid
in a round tube. Trudy MFI no.25:27-50 '55. (MLRA 9:7)
(Heat--Transmission) (Fluids)

PETUKHOV, B.S., doktor tekhnicheskikh nauk; MOL'DE, L.D., kandidat tekhnicheskikh nauk; KRASHNOSHCHENKOV, I.S., kandidat tekhnicheskikh nauk.

Heat transfer during viscous flow of fluids in tubes and channels. Teploenergetika 3 no.12:41-47 D '56. (MLRA 9:12)

1. Moskovskiy energeticheskiy institut.
(Fluid dynamics) (Heat--Transmission)

69208

S/096/59/000/01/016/023
E194/E484

24,5200

AUTHORS: Petukhov, B.S., Doctor of Technical Sciences and
Nol'de, L.D., Candidate of Technical Sciences

TITLE: Heat Exchange / During Viscous-Gravitational Flow of
Fluids in Pipes

PERIODICAL: Teploenergetika, 1959, Nr 1, pp 72-80 (USSR)

ABSTRACT: Viscous-gravitational flow conditions are defined as those in which forces acting on the liquid because of differences in density are commensurate with the forces of viscosity and pressure whilst inertia forces are small enough to have little effect. Under these conditions on the forced flow of the liquid, there is superimposed natural convection, the intensity of which is governed by the value of the complex Gr.Pr. Viscous-gravitational flow conditions are observed in pipes at Reynolds numbers below the critical value and for Gr.Pr values above a certain limit. At lower values of Gr.Pr the flow becomes viscous and there is no natural circulation. There is general agreement in published work that the value of Gr.Pr influences the process of heat exchange but there is no agreement about the extent

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E194/E484

Heat Exchange During Viscous-Gravitational Flow of Fluids in Pipes

of this influence. The present article describes a study of heat exchange processes during viscous-gravitational flow of fluids in pipes. Heat transfer was studied during the motion of water in a round pipe within the Reynolds number range approximately 200 to 25000. Heating and cooling tests were made with water outlet temperatures ranging from 30 to 90°C and with wall temperatures ranging from 3 to 95°C and with the tube vertical (flow both up and down) and horizontal. The experimental heat exchanger is illustrated diagrammatically in Fig 1; it consists of a copper tube of 16 mm internal diameter, 2100 mm long placed inside a larger tube. The experimental arrangements and instrumentation are described. Particular attention was paid to reaching steady thermal states during tests. The maximum possible error in determining heat transfer coefficients did not exceed 4.5% and was generally less. Test results are plotted in Fig 2 and 4. The first results considered are those during downward motion in a vertical tube on cooling and upward motion

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Heat Exchange During Viscous-Gravitational Flow of Fluids in Pipes

on heating, see Fig 2. In both cases, the forced flow is in the same direction as convective forces. The graphs show three typical regions of laminar, transitional and turbulent flow. In Fig 3, the same results are plotted as function of the Reynolds number referred to the mean temperature of the liquid and it will be noted that the critical value of the Reynolds number increases with the increase of Gr.Pr. An explanation of this behaviour is offered. When the Reynolds number reaches a critical value there is a marked increase in the heat transfer. Heat transfer test results for heating and cooling a horizontal tube are plotted in Fig 4a. In this case, convection causes transverse circulation of the fluid in the tube which is combined with forced motion of the fluid along the tubes. The results of Fig 4b relate to heat transfer in a vertical tube with upward motion during cooling and downward motion when heating. In both cases convection opposes the forced flow. It will be seen that the curves are smooth and of approximately constant slope

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Heat Exchange During Viscous-Gravitational Flow of Fluids in Pipes

without any critical value of Reynolds number. An explanation of this behaviour is offered. Graphs of heat transfer during various conditions of interaction between forced and natural circulation are plotted in Fig 5; curve (1) corresponds to forced flow in the same direction as convection in a vertical pipe; curve (2) to forced flow in the opposite direction to convection in a vertical pipe; curve (3) to a horizontal pipe. It will be seen that for a given value of Gr.Pr the Nusselt values may differ by 100%. The results of a few tests with various angles of slope are given in Fig 6. It will be evident from the results that there is complicated interaction between natural and forced flow, and the angle of slope and the Gr.Pr number both have considerable influence on the process of heat exchange. Data from the works of a number of authors were combined in order to derive generalized relationships. The data were divided into three groups, in vertical pipes with convective flow with and against the forced flow and in horizontal pipes. Heat exchange

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Heat Exchange During Viscous-Gravitational Flow of Fluids in Pipes

during viscous-gravitational flow is determined by the criterial Eq (2). The selection of temperature for use in the equations is considered and Eq (3) is derived which is the equation that was used in generalizing the experimental data. Table 1 gives the source of the data used and the principal results. The data are also plotted in Fig 7 in convenient coordinates, the left hand group of points corresponding to viscous conditions and the right hand group to viscous-gravitational conditions. Eq (3) may be rewritten in the form of Eq (3a) and with this method of treatment the results are plotted in Fig 8 which clearly demonstrates the transition to asymptotic values of Nusselt's number. Data corresponding to heat exchange in horizontal tubes are plotted in Fig 9, the source of the results being indicated in Table 2. Curves of experimental data obtained with convection in opposition to forced flow are plotted in Fig 10 and the source of the data indicated in Table 2. Table 3 gives values of the

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GURTOVOY, G.K.; NOLEDE, Ye.V.

Curves of color summation in trichromat obtained by direct determination of radiation power. Biofizika, 4 no.3:336-344 '59. (MIRA 12:7)

1. Institut biologicheskoy fiziki AN SSSR, Moskva.

(COLOR VISION, physiol.

color summation curves in trichromates by direct power
determ. (Rus))

HUNYA, Istvan; AJTAY, Zoltan; SZILAGYI, Andras; NOLEPA, Ferenc; KOMAROMI, Lajos, szocialiste munka hose; RADNAI, Janos; HEVESI, Gyula

Remarks delivered at the 2d National Conference of Innovators, Inventors and Outstanding Workers, December 6-7, 1958. Munka 9 no.1:6 Ja '59.

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