

HAASE, Z.

Magnetic switches. El tech obzor:Suppl.:Zpravy 52 no.6:Z23 '63.

HAASE, Z.

Ship diesel motor with the output of 5500 k automatically regulated and controlled. El tech obzor 52 no.12:Suppl.: Zpravy 52 no.12:Z48 '63.

HAASE, Zdenek

Telephone directional network in Spain. El tech obzor 53 no.1:
Supplement: Zpravy 53 no. 1: Z3 '64.

Electrification of the Hannover-Munich railroad line. Ibid.: Z3.

VETROVEC, inz.; HAASE, Z.

Reports. El tech obzor 52 no.7:Suppl:Zpravy 52 no.7:225-227
'63.

HAASE, Zdenek

Heavy-current engineering at the Leipzig 1963 Spring Fair.
El tech obzor 52 no.8:436-437 Ag '63.

"Adviser of an electric cable fitter" by [inz.] Jaroslav Priby-
slavsky and others. Reviewed by Zdenek Haase. 443-444

HAASE, Z.

New section silicon rectifiers. El tech obzor 52 no.11:
Supplement: Zpravy 52 no.11: Z 43 N'63.

Electric fields prevent stealing. Z 43 - Z 44.

HAASE, Z.

Application of materials by surfacing. El tech obzor 53 no. 5:
Supplement: Zpravy 53 no. 5:Z19 '64.

HAASE, Zdenek; SKRIVANEK, Miroslav

Information on the study trip to the German Democratic Republic.
Elektrotechnik 20 no.4:2 of cover Ap '65.

HOMOLKA, J.; MYDLIL, V.; Technicka spoluprace: MOJZIS, J.; HAASOVA, B.

Quantitative and qualitative considerations on blood proteins
in children. Cas. lek. cesk. 95 no.5:113-118 3 Feb 56.

1. Z. I. detske kliniky v Praze, prednosta prof. Dr. J. Svejcar.
(BLOOD PROTEINS, determination,
in child., qualitative & quantitative aspects.
(Cz))

HOMOLKA, J.; NYDLIL, V.; Technicka spoluprace: MOJZIS, J.; HAASOVA, E.

Comparison of blood proteins in diarrhea and in other conditions
in children. Cas. lek. cesk. 95 no.5:118-121 3 Feb 56.

1. Z. I. detske kliniky, prednosta prof. Dr. J. Svejcar.
(DIARRHEA, in infant and child,
blood proteins in, comparison with other cond.(Cz))
(BLOOD PROTEINS, in various diseases,
diarrhea in child., comparison with other pathol.
cond. (Cz))

HAASZ, Svatopluk, inz.

New type of sectional paper machine drive. Papir a celuloza
18 no. 6. 118-120 Je '63.

1. Chemoprojekt Praha.

HAASZ, Svatopluk, inž.

Remarks on power saving in the operation of paper machines. Papir a
celulosa 19 no.8:217-218 Ag '64.

1. Chemoprojekt, Prague.

HAASZ, Svatopluk, inz.

New machines and methods for paper sorting. Papir a celulosa
20 no.3:73-77 Mr '65.

1. Chemoprojekt, Prague.

HAASZ, Svatopluk, inz.

Sources of vacuum power in modern paper machines. Papir a
celulosa 19 no. 7:184-191 J1 '64.

Haasz, V.

Refiltration of waste waters in paper and grinding plants and
cardboard factories. p. 245. PAFIR A CELULOZA. (Ministerstvo
lesu a drevarskeho prumyslu) Praha. Vol. 9, no. 11, Nov. 1954.

SOURCE: EFAL - LC Vol. 5 No. 10 Oct. 1956

Haasz, V.

A new separator for cellulose. p. 235. PAPIR A CELULOZA. (Ministerstvo lesu a drevarskeho prumyslu) Praha. Vol. 10, no. 11, Nov. 1955.

Source: EEAL LC Vol. 5, No. 10 Oct. 1956

HAASZ, Vladimir, inz.

"Yearbook of the wood, cellulose, and paper industry." Reviewed
by Vladimir Haasz. Papir a celuloza 20 no.3:95-96 Mr '65.

HAASZ, Vladimir, inz.

Technology, automation and qualification. Papir a celulosa
17 no.11:254-255 II '62.

1. Ustav pro automatizaci chemickeho prumyslu, Praha.

HAASZ, Vladimir, inz.

Legal measure units. Papir a celulosa 18 no. 6: 130
Je '63.

HAASZ, Vladimir, inz.

Seminar on paper pulp milling. Papir a celuloza 18 no.8:
170-171 Ag'63.

MACHAN, Josef; MAASZ, Vladimir, inz.

Calculation of the maximum cuts from a nomogram. Papir a
celulosa 19 no.2:2 of cover, 62, 3 of cover F'64.

HAAZ, Istvan Bela; BARTA, Gyorgy

Differences in the geomagnetic elements among the observatories in
Budakeszi, Pruhonice and Ogyalla. Geofiz kozl 3 no.1/11:157-167
'54.

HAAZ, Istvan Bela

Calculation of temperature coefficient by BMZ instruments. Geofiz
kozl 4 no.111-14 '55.

HAAZ, Istvan Bela

Determination of the dip, density and magnetizability of a stratum
with gravitational and magnetic effect. Geofiz kozl 4 no.2:45-56
'55.

HAAZ, I. B.

HAAZ, I. B. Une généralisation du théorème de Simmons.
Acta Sci. Math. Szeged 17 (1956), 41-44.

Let X be a binomial random variable with probabilities
 $P(X=k) = \binom{n}{k} p^k (1-p)^{n-k}$ and suppose that $0 < p < \frac{1}{2}$.

Denote by $P_1 = P(X \leq np - 1)$, $P_2 = P(X > np)$, then $P_1 > P_2$. The author proves this theorem which is a generalization of a result of Simmons [Proc. London Math. Soc. 26 (1895), 290-323]. This generalization is however not quite new since Feldheim [Giorn. Ist. Ital. Attuari 10 (1939), 227-243; J. Math. Pures Appl. (9) 20 (1941), 1-16; MR 1, 246; 3, 1] obtained a stronger result which includes also an estimate of $\Delta = P_1 - P_2$.

E. Lukacs (Washington, D.C.).

Math 1-F/W
2

gms
[Signature]

ALBERT, Anna, dr.; HAAZ, Istvan, dr.

Development of the principle of the small square. Pt.2. Geod kart 12
no.3:193-201 '60. (EEAI 10:3)
(Square)

HAAZ, I.B.

The temperature effect in measuring with the BMZ. Acta techn Hung
30 no.3/4:463-466 '60. (EEAI 10:4)
(Temperature)

POSGAY, Karoly; HAAZ, Istvan, dr.

'Synoptic chart of magnetic components of Hungary and their interpretation. Geofiz kozl 11 no.1/4:78-99 '62.

1. Lorand Eotvos Hungarian State Institute of Geophysics.

HAAZ, I.B.

Determination of the magnetic properties of rocks in the
geomagnetic research performed by the Hungarian State Roland
Eotvos Geophysical Institute. Geofiz kozl 12 no.3/4:79-84
'64.

HAAZ, Istvan

Determination of vertical and oblique layers with gravitational and magnetic effects on the ground of measured anomalies. Geofiz kozl 13 no.1 83-121 '64.

HAAZ, Istvan

Eotvos and paleomagnetism. Fiz szemle 14 no. 2: 50-55 F '64.

1. Eotvos Lorand Geofizikai Intezet, Budapest.

S/058/62/000/011/018/061
A062/A101

AUTHORS: Mihul, C., Pop, V., Haba, M.

TITLE: Displacement of the fluorescence spectra of solutions of anthracene and 9, 10-dibromoanthracene as a function of the properties of the solvent

PERIODICAL: Referativnyy zhurnal, Fizika, no. 11, 1962, 72, abstract 11V488
("Studii și cercetări științ. Acad. RPR Fil. Iași. Fiz. și științe tehn.", 1960, v. 11, no. 2, 175 - 181, Rumanian; summaries in Russian and French)

TEXT: An investigation was effected on the fluorescence spectra of solutions of anthracene (I) and 9, 10-dibromoanthracene (II) in a large set of different organic solvents at room temperature. As solvents use was made of methyl, ethyl, butyl and n-propyl alcohols, ethyl ether, acetone, acetic acid, chloroform, CCl₄, benzol, pyridine, chlorobenzol, bromobenzol, quinoline and α -bromonaphthalene. It was found that the fluorescence spectra of the two investigated substances shift in a monotonous way to the long wavelength region as the refraction index n of the solvent increases. A quantitative treatment of the

Card 1/2

Comitetul de redacție "Studii și Cercetări științifice"

Displacement of the...

S/058/62/000/011/018/061
A062/A101

obtained data has shown that the positions of the fluorescence bands I and II are in a linear dependence on the function $(n^2-1)/(2n^2+1)$. The authors discuss this experimental fact, which is in agreement with the results obtained by a number of authors for other compounds, and express the opinion that it is due to the influence exerted on the spectra positions by intermolecular interactions of an induction-polarization character.

N. Bakhshiyev

[Abstracter's note: Complete translation]

Card 2/2

HABADA, M. 11-3

BC

Preparation of diethyltetradecane. S. LANDA and M. HABADA (Coll. Czech. Chem. Comm., 1961, 8, 473-476). — Et_2Sebaco and MgEt_2Be give γ -diethyltetradecane- γ -diol, m.p. 59°, slowly dehydrated by ZnCl_2 at 115° to γ -diethyl- Δ^8 -tetradecadiene, b.p. 168°/16 mm., which with KMnO_4 gives α -tetradecanediols, m.p. 79°, and with H_2 -Ni at >100°/112 atm. yields γ -diethyltetradecane, b.p. 151°/2 mm.; m.p. about -30°. H. N. C.

ASB-51A METALLURGICAL LITERATURE CLASSIFICATION

GROUP	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
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HABADA, M. A-3

BC

Influence of structure of chlorine on the iodine values. S. LARBA and M. HABADA (Chem. Listy, 1937, 34, 4-10).—The I val. obtained for Δ^5 -hexadecene (I), β -methyl- Δ^5 -heptadecene (II), and γ -ethyl- Δ^5 -octadecene (III) are compared by varying the duration of reaction from 0.5 to 24 hr. In presence of excess of reagent normal I val. are obtained for (I) and (II) (methods of IVAL and of IVAL), and abnormally high val. for (III). β -propyl- Δ^5 -nonadecene, i -butyl- Δ^5 -docosene, m -decyl- Δ^5 -heneicosene, and β -diethylheptadecene- Δ^5 -chlorine. The I val. are at a max. for the freshly prepared chlorine, and fall more rapidly with time for dienes than for mono-chlorine. It is concluded that the I val. is not of great val. in the analysis of mineral oils. R. T.

A.S.T.M. METALLURGICAL LITERATURE CLASSIFICATION

FROM DIVISION FROM DIVISION

101000 42 101000 42 101000 42 101000 42

20 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100

HAFADA, MILOS

HAFADA, MILOS. Katalyticka hydrogenace Vyd. 1. Praha, Statni nakl.
technicke literatury, 1953. 138 p. Catalytic hydrogenation. 1st ed.
illus., bibl., index, tables

SCIENCE
Czechoslovakia

So: East European Accessions, Vol. 5, no. 5, May 1956

HABAD, MILOS

Chemical Abst.
Vol. 48
Apr. 10, 1954
General and Physical Chemistry

(1)

Compressibility of hydrogen. Milos Habada and Jiri Maida. *Chem. Průmysl* 3, 68-72 (1953).—Progress of hydrogenation in an autoclave is established by checking the decrease of pressure of H. The method is superior to the one that requires analyses of many samples of the liquid from the autoclave. However, accurate compressibility factors of H are important for exact calcns. Published values of these factors vary. New tables of the factors were calculated from: $\log Z = (BP/Z + CP^2/Z^2) \log e + \log T - \log 1.000618 - \log 273.16$, where Z is the compressibility factor, $B = 0.0055478 T^{-1/2} - 0.030377 T^{-3/2} - 0.22004 T^{-5/2}$, $C = 0.004788 T^{-1/2} - 0.04058 T^{-3/2}$, and $P =$ pressure in atm. V. J. Hendel.

11-5-54

H. Suda, 1/1/50

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HABADA, M.

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Z The calculation of thermodynamic equilibrium in the synthesis of the methylamines. M. Habada and Z. Seha (Výskumný ústav org. syntesy, Praha; Habada, M., Seha, Z. Chem. Zvesti 16, 22-30 (1961) (Czechian summary). Thermodynamic functions of methylamines were calcd. from the spectroscopic and mol. data. On the basis of the values of free reaction enthalpies thus calcd. as well as the values for the other components formed by the reaction of MeOH and NH₃, a composite equil. of the synthesis of methylamines was calcd. A method of Kaudiner and Brinkley (C.A. 45, 2294a) was applied for calcs. and found to be very rapid and satisfactory. Jan Mielca

2
Prof.
Chem.

AD
P
1952

HABAJ, B.

6316. Globulin content and fat oxidability of milk obtained from cows differing in their milk yields. E. Pijanowski, B. Habaj, and B. Hyzaj. *Bull. Acad. Polon. Sci.* 1954, 4, 383-384 (D). *Div. of Agric. and Food Industries, Central Coll. of Agric., Warszawa, Poland.*—Milk obtained from cows of high milk yields contains more globulins than milk from lower milk-producing animals. During February–April the butter fats from low milk-producing cows is more resistant to heating than those obtained from higher-producing cows. E. M. BATESMAN.

HABAL, Jaroslav; KLUMPAR, Ivan

Pilot plant measurement of the reaction heat. Chem
prum 14 no. 3: 124-128 Mr '64.

1. Zavody prumyslove automatizace National Enterprise
Prague, Pecky Branch (for Habal).
2. Zavody Vitezneho unora National Enterprise Hradec
Kralove, Project Department, Prague (for Klumpar).

HABAN, J.

SURNAME, Given Names

2

Country: Czechoslovakia

Academic Degrees: /not given/

Department of Dermato-Venereology, Slovak Postgraduate
Affiliation: Medical Institute (Dermatovenerologicke katedra Slovenskeho
ustavu pre doskolovanie lekarov) Trencin. Head (Prednosta)
Dr L. EMANUEL

Source: Bratislava, Lekarsky Obzor, Vol X, No 9, 1961; pp 547-551.

Data: "Importance of Group Examinations to Detect Dermatophytoses
of the Feet"

No academic degree indicated

Slovak Institute for Postgraduate Medical Training, Department of
Dermatology and Venereology (Slovensky ustav pre doskolovanie
lekarov, dermato-venereologiccka katedra);
Head of the Department: L. EMANUEL, MD

Bratislava, Lekarsky Obzor, No 10, Oct 1962, pp 563-570

"Problems Related to Pityriasis Rosea."

HABAN, J.

Congenital familial alopecia. Cesk. dermat. 39 no.4:240-243
Jl '64

1. Dermato-venerologicka katedra SUDL v Trencine; veduci:
MUDr. L. Emanuel.

HABAN, J.

Incontinentia pigmenti (Bloch-Sulzberger). Cesk. dermat. 40
no.4:253-255 Ag '65.

1. Dermato-venerologicka katedra Ustavu pre dalsie vzdelavanie
lekarov a farmaceutov v Trencine (veduci MUDr. L. Emanuel).

KANTNER, Adalbert, dr.; HABAN, Jan, dr.

Rare primary scleroma in the palatine tonsil. Orv.Het.11,105
no.22:1035-1035 My 31 '64.

1. Allami Korhaz, Piestany (CSSR), Dermatologiai Osztaly es
Orvosi Tovabbkepzo Intezet, Trencin (CSSR), Dermatologiai
Osztaly.

CZECHOSLOVAKIA

HABAN, J

Institute for the Further Education of Physicians
and Pharmacists (Ustav pre dalsie vzdelavanie a
farmaceutov), Bratislava; 2. Department of Dermato-
venereology (Katedra dermatovenerologie), Trencin

Bratislava, Lekarsky obzor, No 5, May 1966, pp 305-310

"Treatment of alopecia areata with Kromayer lamp."

HABAN, Michal, ins.

Evaluation of the Danube navigation in the years 1961 and 1962.
Vodni hosp 13 no.5:186-187 '63.

1. Dunaj-Vah, Bratislava.

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

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

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

*

HABANEK, B.; SCHEJBAL, V.; DLUHOS, M.

Tumors of neuroectodermal tissue in childhood . I. Central nervous system tumors. Bratisl. lek. listy 44 no.11:684-687 D 15 '64

1. II. patologicko-anatomicka katedra lekarske fakulty University J.E.Purkyne v Brne (vedouci - prof. MUDr. M. Dluhos, DrSc.).

SCHEJBAL, V.; DLUHOS, M.; HABANEK, B.

Tumors of neuroectodermal tissue in childhood. II. Tumors of
the peripheral nerves. Bratisl. lek. listy 44 no.12:725-727
D 31 '64

1. II. patologicke-anatomicka katedra lekarske fakulty Univer-
sity J.E. Purkyne v Brne (vedouci - prof. MUDr. M. Dluhos, DrSc.).

HABANEC, J. - Vol. 14, no. 5, May 1953. SLABOPROUDY OBZOR

Thirty years of the Czechoslovak broadcasting studios. p. 238.

SO: Monthly list of East European Accessions, (EEAL), LC, Vol. 4, No. 9, Sept. 1955
Uncl.

HABAN, J.; SLAVKA, J.

A case of Sturge-Weber disease. Cesk. dermat. 37 no.2:92-95 Ap '62.
Cesk. dermat. 37 no.2:92-95 Ap '62.

1. Slovensky ustav pre doskolovanie lekarov, dermatovenorologicka
katedra, prednosta MUDr. L. Emanuel Ocne oddelenie OUNZ v Trencine,
prednosta MUDr. J. Slavka.
(ANGIOMATOSIS case reports)

HABANEC, Josef, RNDr.

Cyclotron for the Nuclear Physics Institute of the Czechoslovak
Academy of Sciences. JADERNA ENERGIE 3 no.5:133-135 My '57.

VITEK, Bohumil; HABANEK, Boris

Cor trileculare biventriculare with aortic coarctation of the infantile type and Patent ductus arteriosus with unusual electrocardiographic findings in a newborn infant. Cesk. pediat. 17 no.4:350-353 Ap '62.

1. II detska klinika University J. Ev. P. v Brne, prednosta akademik O. Toyschl. II patologickoanatomicky ustav University J. Ev. P. v Brne, prednosta prof. MUDr. M. Bluhos.

(HEART DEFECTS CONGENITAL compl)
(DUCTUS ARTERIOSUS compl)
(AORTIC COARCTATION compl)
(ELECTROCARDIOGRAPHY in inf & child)

HUNKA, R.; FINTAJSLOVA, O.; HABANEC, B.; KOTULEK, M.

Cytomegaly in newborn infants. Cesk. pediat. 18 no.8:683-689
Ag '63.

1. II detska klinika lekarske fakulty UJEvP v Brne, prednosta
prof. dr. M. Toman II patologickoanatomicky ustav lekarske
fakulty UJEvP v Brne, prednosta prof. dr. M. Dluhos Kojenecky
ustav v Kyjove, vedouci MUDr. M. Kotulek.

(CYTOMEGALIC INCLUSION DISEASE)

(MATERNAL-FETAL EXCHANGE)

(BLOOD SEDIMENTATION)

(BRAIN DAMAGE, CHRONIC)

(FETAL DISEASES)

DLUHOS, M.; HABANEC, B.; SCHEJBAL, V.

Tumors of childhood in our practice. A statistical analysis of the necropsy material of the Second Institute of Pathological Anatomy, Medical Faculty, J.E. Purkyne University, Brno, autopsied in the years 1955-1961. Neoplasma 10 no.1:75-82 '63.

1. IInd Institute of Pathological Anatomy, Medical Faculty, J.E.Purkyne University, Brno, CSSR.
(NEOPLASMS) (PATHOLOGY) (STATISTICS)

HABANEC, B.; LAXOVA, R.

Cholangiocellular carcinoma with cirrhosis in a boy of
eight years. Neoplasma 10 no.4:419-426 '63.

1. Internal Department of the Faculty Children's Hospital,
IInd Pathologic-Anatomical Institute Purkyne's University,
Brno, CSSR.

(LIVER CIRRHOSIS, POSTNECROTIC)
(LIVER NEOPLASMS) (PATHOLOGY)

GAMRA, J., inz.; HABANEC, I., promovany ekonom

- Soviet conference of leading departments. Podn org 13
no.12:570-571 D '64.

HABANEK, Ivan

Scientific conference on the theme: Director in the enterprise management operations. Podn org 19 no.4:171-172 Ap '65.

1. Research Institute of Mechanical Engineering and Economics, Prague.

HADANEC, Josef

CZECH

13533. Resonant absorption elements employed in the acoustic equipment of broadcasting studios. J. HADANEC. *Slaboproudý Obsor*, 15, No. 11, 508-19 (1954) in Czech.

The natural frequencies and the conditions of maximum absorption (optimum matching), for a normal incidence of sound waves, are calculated for the following types of sound absorbers: (1) flat vibrating plates, (2) cylindrical resonators, (3) absorbing membranes, and (4) Helmholtz resonators with round and square apertures, with slots or filled with absorption materials. The theory is supplemented by experimental results, the measurements being carried out under the conditions of normal and diffuse incidence. Absorption curves for the plate and Helmholtz resonators as a function of the position of the absorption materials are reported; effect of the apertures on the absorption of Helmholtz resonators is examined. The vibrating plates, cylindrical reso-

nators and membranes are found to be satisfactory at low acoustic frequencies, while Helmholtz resonators are efficient absorbers in the medium frequency range.

A. S. SIDOROVICZ

HABANEK Josef

CZECHOSLOVAKIA/Nuclear Physics - Installations and Instruments. C-2
Methods of Measurement and Research

Abs Jour : Ref Zhur - Fizika, No 3, 1958, No 5262

Author : Habanec Josef
Inst : Not Given
Title : A Cyclotron for the Institute of Nuclear Physics of the Czecho-
slovak Academy of Sciences

Orig Pub : JADERNA energie, 1957, 3, No 5, 133-135

Abstract : No abstract

Card : 1/1

CZECHOSLOVAKIA/Electronics - Electron Discharge of Gas and Gas H-7
Discharge Apparatus

Abs Jour : Ref Zhur - Fizika, No 5, 1959, No 11123

Author : Habanec Josef
Inst : Institute for Nuclear Physics, Czechoslovak Academy of
Sciences, Prague, Czechoslovakia
Title : Effect of Oscillations on the Formation of Ions

Orig Pub : Slaboproudý obzor, 1958, 19, No 3, 140-143

Abstract : The author investigates theoretically and experimentally the effect of oscillations on the formation of ions in a discharge gap without a magnetic field. Under fixed values of the ratio of the time of flight of the electrons between electrodes and the period of the high frequency oscillations, the degree of ionization increases. -- Author's resume

Card : 1/1

HABANEK, J.

The first Czechoslovak cyclotron. Jaderna energie 6 no.4:109
Ap '60.

23038

SLOV/001/60/000/007/002/004
D219/D305

21.2100

AUTHOR:

Habanec, Josef, Doctor of Natural Sciences

TITLE:

The Czechoslovak cyclotron

PERIODICAL:

Technika práce, no. 7, 1960, 566 - 571

TEXT: The article describes the cyclotron which was installed at the Ústav jaderného výzkumu (Nuclear Research Institute) in Rež near Prague. The equipment was delivered by the USSR and was assembled under the supervision of Soviet experts. The magnet weighs 120 tons and has pole shoes 120 cm in diameter. The total power input is 1 Mw. The required electric energy is produced by an attached power plant which has large generators supplying the stabilized feed current for the magnet (precision $3 \cdot 10^{-4}$), and the rf oscillator (adjustable output up to 120 kw); smaller generators supply the current for filament heating of the ion source (a-c of 5,000 cps), for focusing coils, for the deflector, for the arc of the ion source, and for charging the storage batteries. These batteries supply the signaling and

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Card 1/4

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D219/D305

The Czechoslovak cyclotron

remote-control equipment, i.e. target shifting, adjustment of magnetic-field azimuth, gas admission into the ion source, etc. The equipment is cooled with distilled water in a closed circuit with a heat exchanger. All sections exposed to radiation are kept under lower pressure to avoid contamination of the environment. The accelerator chamber, the rf section and the beam-extraction tube are evacuated by five diffusion pumps with a total capacity of 3,000 l/sec. The pressure inside the accelerator chamber during operation is 10^{-5} mm Hg. The self-excited rf oscillator has a frequency range of 8.3 - 16.6 Mc and can be operated either continuously with a frequency stability of 10^{-5} , or in pulses with a repetition frequency of 0.2 - 300 cps and a pulse duration of 100 μ sec - 60 sec. The remote control room has a table with the controls for the magnetic field, the rf oscillator, the ion source, beam extraction and target manipulation. The controls for water cooling and the vacuum system are installed on stands. The arc-type ion source has a heated tungsten or tantalum cathode and is installed in the center of the

Card 2/4

The Czechoslovak cyclotron

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SLOV/001/60/000/007/002/004
D219/D305

chamber. From the ion source, the ions are extracted by special electrodes connected to one of the dees, and enter the chamber for acceleration. Protons can be accelerated to an energy of 7 mev, deuterons to 12.5 mev, and alpha-particles to 25 mev. The accelerated beam is extracted from the chamber by the deflection plate which has a charge of -70 kv. Particles remaining in the chamber are shielded from the negative charge by a deflector blade which is made of a molybdenum foil; the extraction channel itself is lined with graphite. The high extraction efficiency of 30 - 50% is achieved by electrostatic focusing of the beam in the deflector channel. The system allows selective extraction of particles with a certain energy level. The concrete walls surrounding the cyclotron are 2.5 m thick, the doors are actually containers of a borax solution and are made of thick iron plates to intercept γ radiation. The cyclotron will be used for nuclear research, production of radioisotopes, etc. It is capable of producing radioactive Na, Cu, Mg, etc., through 1 hour exposure to an irradiation of several curie. It is advisable to produce only radioisotopes with short radioactive

Card 3/4

23038

The Czechoslovak cyclotron

SLOV/001/60/000/007/002/004
D219/D305

half-lives, since the target can be exposed to radiation for a maximum period of 8 hrs. It is expected that the cyclotron will be put into test operation in the near future. There are 6 figures.

ASSOCIATION: Ústav jaderného výzkumu, Praha-Řež (Nuclear Research Institute, Prague-Rež).

Card 4/4

26850

Z/038/61/000/004/005/005

D238/D305

213100

also 2406, 2606

AUTHORS:

Petukhov, V.A., Habanec, J., Zhuravlev, A.A., Karmasin, M., Kotov, V.J., Myae, E.A., Obukhov, J.L., Sochor, V., Cirák, J., Benda, F., Dobiáš, J., Marek, M., Fukátko, T., Svetov, L. V.

TITLE:

A model of an annular cyclotron

PERIODICAL:

Jaderná energie, no. 4, 1961, 136 - 137

TEXT:

This is a translation of an Russian article entitled "Model' kol'tsevogo fazotrona" (Model of an Annular Cyclotron) originally published in the Soviet periodical "Atomnaya energiya", 9, (1960), no. 12, pp 491-493. It deals with the model of an annular cyclotron which is a fixed-field, alternating-gradient accelerator, built by Soviet and Czechoslovak physicists at the United Institute of Nuclear Research in Dubna. The proposal for an annular cyclotron was made for the first time in 1953 by A.A. Kolomenskiy, V.A. Petukhov and M.S. Rabinovich (Ref 1: Nekotoryye voprosy teorii tsikli-cheskikh uskoriteley (Some Problems of the Theory of Cyclic Accelerators), AN SSSR, 1955; Pribory i tehnika experimenta (1956), no. 2, p. 26). The elec-

Card 1/2

22450

24.6000

Z/038/61/000/010/002/008
D/291/D301

AUTHORS: Habanec, Josef; Šafrata, Stanislav; Nový, František;
Franc, Pavel, and Némec, Jan

TITLE: Tasks of nuclear physics and some major equipment
of the Nuclear Research Institute

PERIODICAL: Jaderná energie, No. 10, 1961, 330-337

TEXT: The article describes certain equipment of the Czechoslovak Nuclear Research Institute, namely the Soviet-procured cyclotron, a small electrostatic accelerator, the Czech GS-2 hydrogen and helium liquefier and the Soviet HCAK-80 (ZhAK-80) liquefier, and lists some research fields of the institute. The cyclotron can accelerate deuterium ions to 13 mev and alpha-particles to 26 mev. The ion source is a discharge tube for deuterium or helium ionization. The voltage on the dees reaches up to -150 kv. the voltage of the deflector is -70 kv. The 120 cm gap between the pole shoes is made with an accuracy of ± 0.2 mm. A quarter-wave coaxial line for the 10 Mc voltage on the dees eliminates the need for insulators. The rf generator supplying the dees has
Card 1/6

Tasks of nuclear physics ...

27450
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D291/D301

an output of 120 kW; the frequency and the intensity of the magnetic field are maintained with an accuracy of 10^{-4} . The cyclotron has an input of 1 Mw, approximately 500,000 kcal/hr are dissipated by the water-cooling system. The accelerator operates in a vacuum of 10^{-5} mm Hg, the total pumped volume is 5 m³ and the pumps have a capacity of 3,000 l/sec (at 10^{-5} mm Hg). The accelerated beam is vertically and horizontally focused by two quadrupole lenses and is deflected to weaken the cyclotron background. The target chamber at the end of the beam-extraction tube has a separate vacuum system and remotely controlled manipulators. The cyclotron can also be used to produce some radio-isotopes, especially short-lived and pure isotopes without carriers. Tests are being made to obtain polarized beams directly from the cyclotron. A small electrostatic van de Graaff accelerator (1 mev) was designed and built by the institute, under the supervision of Engineer Simán, for research purposes and as a test model for constructing a larger accelerator (4-5 mev). The small accelerator for electrons and ions is situated in a pressure container 850 mm in diameter and 2,500 mm high, filled with a mixture of

Card 2/6

20450

Tasks of nuclear physics ...

Z/038/61/000/010/002/008
D291/D301

nitrogen and carbon dioxide under a pressure of 15-25 atm. The 48 cm wide conveyor moves with a speed of 21 m/sec. The accelerator tube is 84 cm long and the tension achieved at a pressure of 15 atm. is 1 mv. The larger accelerator was developed and is being produced by the ZVIL National Enterprise in Plzeň. The generator is also situated in a pressure container 200 cm inner diameter and 800 cm high. The space between the hv electrode (820 mm in diameter) and the wall is separated by two jackets, 1,140 and 1,500 mm in diameter, for better utilization of the dielectric. The entire column is 4,500 cm high. The conveyor, made of laminated, rubber-coated silk, is 50 cm wide and moves with a speed of 12 - 20 m/sec. Preliminary verification tests produced a tension of 3.5 mv. The cryogenic laboratory of the Czechoslovak Nuclear Research Institute is equipped with liquefiers for hydrogen, helium and nitrogen, strong magnets, and magnets with high magnetic-field homogeneity. The GS-2 helium and hydrogen liquefier was produced by the Kralovopolská strojirna, n.p.; závod Děčín (Kralovopole Machine Plant, National Enterprise, subsidiary in Děčín), according to documentation supplied by the Institute

Card 3/6

Tasks of nuclear physics ...

2450
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D291/D301

X

for Physical Problems of the AS USSR in Moscow, and was put into test operation on April 13, 1960. It applies the Joule-Thomson effect and has a capacity of 11 l/hr. The output of the hydrogen compressor is 50 Nm³/hr, that of the helium compressor 80 Nm³/hr. Individual parts (i.e. the liquefier itself, compressors and pumps, gas containers, etc.) are installed in separate rooms which are ventilated and equipped with electro-conducting rubber floors. The Soviet ZhAK-80 nitrogen liquefier has a capacity of approximately 15 l/hr. An 80-kW magnet for very low temperatures produced by adiabatic demagnetization has pole shoes 220 mm in diameter and develops a magnetic field of 24 kG in the 55 mm gap. The magnet can be lowered 550 mm and turned 180°. Resonance experiments can be performed with a 2.5 kW magnet which has pole shoes 300 mm in diameter and develops a magnetic field of 18 kG in the 25 mm gap. For very strong magnetic fields (up to 50 kG), special iron-coreless, water-cooled coils are being developed which will be fed from a 1 Mw d-c generator. The cryogenic section is expected to become one of the most modern equipped laboratories in Europe. The article lists now some of the research

Card 4/6

20450

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D291/D301

Tasks of nuclear physics ...

tasks of the Czechoslovak Nuclear Research Institute. Studies will concentrate mainly on the characteristics of the nucleus, nuclear spectroscopy, the mechanism of nuclear reactions, the construction of fission products, and the behavior of aligned nuclei. For these purposes, new equipment is being developed and/or installed at the Institute. A Litvinov magnetic analyzer is being built for measuring the energy spectra and angle distribution of fission products. The instrument is basically a 12-channel spectrograph. A special apparatus prepared at the Institute measures the p- γ correlation during nonelastic proton scattering. The γ -detector consists of a NaI crystal and a FEU-33 photomultiplier; the proton detector consists of a thin Cs crystal and a FEU-33 photomultiplier. The discrimination for γ is 10%, for 6.5 mev protons 4%; the discrimination period for rapid coincidence is $4 \cdot 10^{-9}$ sec. The polarization of protons during scattering on nuclei with zero spin is measured by the standard method of double scattering. Studies on aligned nuclei will be performed in the cryogenic laboratory and are still in the preparatory stage. It is expected that experiments at the

Card 5/6

28450

Tasks of nuclear physics ...

Z/038/61/000/010/002/008
D291/D301

temperature of liquid helium can be started late in 1961. There are 14 figures and 15 Soviet-bloc references.

ASSOCIATION: Ústav jaderného výzkumu ČSAV, Řež (Nuclear Research Institute Czechoslovak AS, Řež)

Card 6/6

06 2312

33190

S/058/62/000/004/141/160
A061/A101

AUTHOR: Habanec, J.

TITLE: A new type of ion source

PERIODICAL: Referativnyy zhurnal, Fizika, no. 4, 1962, 50, abstract 4Zh333
("Chekhosl. fiz. zh.", 1961, v. B11, no. 3, 223 - 224, English)

TEXT: A new ion source with improved ionizing efficiency is proposed. Its operation is based on the fact that ionization in the space of discharge is increased at a given ratio between the period, τ , of h-f voltage applied to the electrodes and the time, ϑ , of electron travel through the interelectrode gap, namely, $\vartheta/\tau = 0.5$ to 0.9 (Habanec, J. "Czech. J. Phys.", 1952, v. 2, 19). Ionization in this system is about 20 times higher than in the case of a constant potential difference of the same magnitude.

D. Orliński

[Abstracter's note: Complete translation]

Card 1/1

Z/038/62/000/006/002/004
D409/D301

AUTHOR: Habanec, Josef
TITLE: Polarized proton beam from a cyclotron
PERIODICAL: Jaderná energie, no. 6, 1962, 185 - 188

TEXT: The article, a reprint of a report presented at the Krakow Conference on Cyclotron Problems in June 1961, is based on various publications mostly of Western origin, and lists well-known methods to obtain a polarized proton beam from a cyclotron and possibilities of obtaining an intense atom beam which is efficiently ionized. A favorable method of obtaining a polarized beam where an atomary hydrogen beam is first polarized, then ionized, and finally accelerated, originally suggested by G. Clausnitzer (Ref. 3: Zeitschrift für Physik 114 (1956, p. 336) has gradually been improved till beam intensities of 10^{16} atoms/sec and a polarization of $P = 0.62$ were reached. Considerably higher beam intensities (up to 10^{19} deuterons/sec) can be reached by magnetic separation as described by Rudin (Ref. 7: Helvetica Physica Acta 34 (1961), p. 58) and by adiabatic change of particle state as described by A. Abragam and J.M. Winter (Ref. 8: Card 1/2

Polarized proton beam from a cyclotron

Z/038/62/000/006/002/004
D409/D301

Rev. Let. 1 (1958), p. 374). Several tests have been made to ionize an atom beam. The paper lists three methods for solving this problem (1) The density of ionizing electrons can be increased by a method described by J. Habanec (Ref. 10: Czech. Journ. f. Physic, printing) where the frequency of the r-f voltage applied to the electrodes of the ion source is in a certain ratio to the electron transit time; (2) Ionization of the atom beam in rare-gas or metal-vapor medium; (3) Reducing the velocity of the atom beam which increases the likelihood of atom ionization. An additional ionization increase may be achieved when the beam, instead of passing between the dees, enters the chamber vertically from the direction of the upper pole shoe. (Technical Editor: M. Uhlíř). There are 4 figures. The most important English-language publications are: N.F. Mott, H.S.W. Masey: Theory of Atomic Collisions (1949) Schlier Ch. CERN 58-3; J. Flinta: Nuclear Instruments 2 (1958), p.219.

ASSOCIATION: Ústav jaderného výzkumu ČSAV, Řež (Nuclear Research Institute Czechoslovak AS, Řež)

Card 2/2

BEM, Pavel; HABANEC, Josef; KARBAN, Oldrich; NEMEC, Jan

Measurement of proton polarization in elastic scattering on carbon.
Jaderna energie 8 no.3:96-97 Mr '62.

24.6600

Z/055/62/012/009/002/003
I046/I246

AUTHORS Bém, P., Habaneč, J. J., Karban, O. and Němec, J.

TITLE Polarization of protons scattered elastically on carbon

PERIODICAL Chekhoslovatskiy fizicheskiy zhurnal, v 12, no. 9, 1962, 660-664

TEXT The polarization of protons scattered elastically on two carbon targets was measured for a cyclotron proton beam accelerated to 6.5 MeV. The angular distribution in the energy interval from 3.60 to 4.52 MeV was as follows: $P(40^\circ_{lab}) = 0.30 \pm 0.05$; $P(45^\circ_{lab}) = 0.36 \pm 0.07$; $P(50^\circ_{lab}) = 0.33 \pm 0.06$; $P(60^\circ_{lab}) = 0.20 \pm 0.05$. The results after scattering on one target are in good agreement with those given by Warner, R E and Alford W P (Ref. 6: Phys. Rev., 114 (1959), 1338). There are 4 figures and 1 table

✓A

ASSOCIATION Institut yadernykh issledovaniy ChSAN (Institute of Nuclear Research Czechoslovak AS, Rzheshh)

SUBMITTED October 20, 1961

Card 1/1

ACCESSION NR: AP4040787

Z/0055/64/014/006/0404/0410

AUTHOR: Bem, P.; Habaneo, J.; Karban, O.; Nemeo, J.; Presperin, V.

TITLE: Measurement of the polarization of 6.7 MeV protons during scattering on carbon

SOURCE: Chekhoslovatskiy fizicheskiy zhurnal, v. 14, no. 6, 1964, 404-410

TOPIC TAGS: polarimeter, carbon polarimeter, proton polarization, proton scattering

ABSTRACT: One of the problems in measuring the polarization of scattered particles on the basis of left-right asymmetry is the necessity of trading off rapid counting for precision. The authors have designed a polarimeter of simple design in which the use of a thick target (carbon 12) makes it possible to increase the counting rate without loss of accuracy, provided the effective polarization P_{eff} can be determined with satisfactory exactness. C^{12} was chosen because, of the three particles H^3 , H^4 , and C^{12} with a high degree of polarization at energies of 6.7 MeV or less, only the last retains this feature at small scattering angles (about 50 deg). Proton recording is accomplished in the device by silicon surface-barrier detectors with an effective surface diameter of 10 mm; these detectors were

Card 1/3

ACCESSION NR: AP4040787

selected because of their low sensitivity to gamma and neutron photons. To guarantee reliable operation over a period of several days the detectors were cooled to -10 to -30 C. A diagram of the polarimeter is shown in Enclosure 1. In view of the few data available for scattering on a carbon target, the authors checked the polarimeter in a triple calibration test which is outlined in detail. P_{eff} varied from -0.45 at 4.5 MeV to -0.85 at 6.0 MeV. They then employed the polarimeter to measure angular distribution at energies of 6.0 , 6.3 , and 6.7 MeV; for the last energy the distribution showed minima of $P(40_{lab} \text{ deg}) = 0.56 \pm 0.03$ and $P(100_{lab} \text{ deg}) = -0.88 \pm 0.06$ and a maximum of $P(70_{lab} \text{ deg}) = +1.03 \pm 0.04$. The angular distribution for all three energies at the limiting scattering angles is shown in a diagram. "In conclusion the authors express their thanks to Dr. Z. Trousil for graciously making the semiconductor detectors available; also, to the cyclotron staff for maintaining its operation under difficult conditions; finally, to comrades F. Benda and K. Puts for solving certain technical problems." Orig. art. has: 3 formulas, 7 figures, and 1 table.

ASSOCIATION: Institute of Nuclear Research, Czechosl. Acad. Sci., Rez

SUBMITTED: 19Oct63

DATE ACQ: 00Jun64

ENCL: 01

SUB CODE: NP

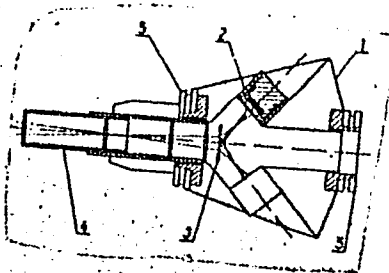
NO REF SOV: 000

OTHER: 012

Card 2/3

ACCESSION NR: AP4040787

ENCLOSURE: 01



Card 3/3

ROK, P.; HADAL, J.; KALICKI, O.; HAVRAN, J.; PRASAD, V.

Measurement of angle distribution of proton polarization in the C^{12}
(pp) C^{12} reaction in ± 0.30 MeV range energy. *Cheská fyzika*
14 no.10:898-900 164.

1. Institute of Nuclear Research of the Czechoslovak Academy of Sciences,
Rez.

L 18527-66 EWT(m)/EWA(h)

ACC NR: AP6010229

SOURCE CODE: CZ/0038/65/000/004/0144/0144

AUTHOR: Bem, Pavel; Habanec, Josef--Gabanets, Y.; Karban, Oldrich; Nemeč, Jan--- 46
Nemets, Y.; Presperin, Vlastislav 3

ORG: Institute of Nuclear Research, CSAV, Rez (Ustav jaderneho vyzkumu CSAV)

TITLE: Measurement of the angular distribution of the polarization of protons in the reaction C-12 (p, p) C-12 in the energy region of 6.0 - 6.8 Mev

SOURCE: ^{18,94.35}Jaderna energie, no. 4, 1965, 144

TOPIC TAGS: proton polarization, elastic scattering, angular distribution, cyclotron, silicon, carbon, particle detector, particle accelerator target

ABSTRACT: INR Report No. 1064/64, published in Jaderna Energie only as Czech and Russian summaries (modified): The angular distribution of the proton polarization during elastic scattering was measured at six values of the energy in the region of 6.0-6.8 Mev. The energy source was the INR 120-cm cyclotron at Rez. The energy of the protons was reduced by means of aluminum and carbon films. The degree of polarization of the scattered protons was determined by the right-left asymmetry of the secondary scattering on the carbon target of the analyzer. The particles were registered by silicon detectors with a surface barrier. The results of the
Card 1/2

L 18527-66
ACC NR: AP6010229

work substantially supplement the individual data of other authors. At the present time the obtained data are being analyzed on the basis of the characteristics of the levels of the N-13 nuclei. [JPRS]

SUB CODE: 20 / SUBM DATE: none

Card 1/2

UDC: 539.171.018: 539.172.12: 546.26.02

✓C

21(3,4)

PHASE I BOOK EXPLOITATION

CZECH/2404

Habanec, V., Doctor; J. Havelka, Engineer; Zd. Hlasivec, Doctor of Medicine; Zb. Hrdlička, Engineer; I. Chudáček (Graduate in Physics); V. Kouřim, Engineer; J. Kuba, Doctor of Natural Sciences; V. Myslivec, Professor; Jan Tůma, Engineer; and M. Voříšek (Graduate in Physics)

Atom a jaderná technika (The Atom and Nuclear Engineering)
Praha, Naše vojsko, 1957. 290 p. (Series: Universita vojáka) 4,000 copies printed.

Reviewers: Bittner, Engineer; Drška, Engineer; Hrdlička, Engineer; Kulka, Engineer; Spurný, Doctor; and Šimáně, Engineer; Ed.: Stanislav Vobořil.

PURPOSE: The book is intended for the general reader.

COVERAGE: The book outlines the principles and operation of nuclear power plants and the use of radioisotopes. The introductory chapters cover the fundamentals of nuclear physics and radioactivity. Several subsequent chapters deal with reactor physics, types of reactors, their engineering, control and

Card 1/12

The Atom and Nuclear Engineering

CZECH/2404

Instrumentation. Operating and planned nuclear power installations are described. A short chapter is devoted to the possibility of using nuclear power in transportation. The remaining chapters report on radioisotopes for industry, and on radiology, radiation hazards and safety measures. No personalities are mentioned. There are 25 references, all Czech.

TABLE OF CONTENTS:

Introduction	5
I. Studying the Structure of matter (Ivo Chudáček, Graduate in Physics)	7
The world of atoms and molecules	7
Atom "sounding" by alpha particles	16
The hydrogen atom	18
Wave properties of the basic constituents of an atom	20
Quantization of physical values	22

Card 2/ 12

The Atom and Nuclear Engineering

CZECH/2404

What spin means	23
Electron shell structure	24
Matter and energy	
Interaction of substances	27
Corpuscular properties of light	28
Interrelation of energy and mass	29
Atomic nucleus	
Structure of nucleus	33
Bond energy	34
Bombardment of atomic nucleus	36
Emmissions from the atomic nucleus	38
Alpha radioactivity	38
Beta radioactivity	39
Gamma radiation	39
Models of atomic nuclei	39
Elementary atomic particles	
"Classical" elementary particles	40
New elementary particles	42
Discovery of the antiproton and antineutron	45
Fundamental measuring instruments	

Card 3/12

The Atom and Nuclear Engineering

CZECH/2404

used in nuclear physics	
Use of ionization for physical measurements	46
Cloud chamber	48
Ionization chamber	49
Geiger-Müller counters	49
Scintillation counters	50
Nuclear emulsion	51
II. Accelerators of Charged Particles (J. Habanec, Doctor)	52
Main Types of Accelerators and Their Characteristics	58
Linear accelerators	58
Circular accelerators	59
First Czechoslovakian cyclotron	62
Synchrocyclotrons	63
III. Liberation of the Energy of Atomic Nucleus (M. Voříšek, Graduate in Physics)	69
Energy of Chemical Reactions	69

Card 4/12

The Atom and Nuclear Engineering

CZECH/2404

Nuclear Reactions	72
Discovery of nuclear fission	74
Physical explanation of fission	76
Delayed neutrons	80
Energy released by fission	81
Passage of neutrons through a medium	83
Fast-neutron reactions	83
Medium-energy neutrons	84
Slow neutrons	85
Resonance neutrons	86
Thermal neutrons	87
Chain reaction and critical size	88
Reactor start-up and regulating system	94
IV. Preparation and Regeneration of Nuclear Fuel (Václav Kourim, Engineer)	97
Natural uranium	98
Separation of uranium from ore	99
Production of U^{235}	101
Uranium 233	102

Card 5/12

The Atom and Nuclear Engineering

CZECH/2404

Plutonium 239	102
Regeneration of Nuclear Fuel [by using an organic solvent]	104
Other methods of regeneration	107
V. Nuclear Reactors (Zbyněk Hrdlička, Engineer)	108
Principles of Nuclear Reactors	108
Thermal reactor	108
Fast reactor	110
Classification of types of reactors	111
Classification of reactors according to purpose	111
Research reactor	111
Reactors aiding the solution of certain basic problems	112
Reactors aiding the solution of certain special problems	118
Reactors for the production of fissionable material	125
Reactors for the generation of energy	126
Reactors for the production of both energy and fissionable material	126
VI. Nuclear Engineering (Jiří Havelka, Engineer)	130

Card 6/12

The Atom and Nuclear Engineering

CZECH/2404

Granite and sand - the fuel of the future	131
Conversion of heat into energy	
Use of compressed gas	133
Use of water or deuterium under pressure	134
Use of melted metallic elements	134
Steam-power reactors	138
Use of gas turbines	139
Power-industry requirements of reactor designs	139
Fuel supply for atomic power stations	141
Waste removal from atomic power stations	142
Protection against radiation	
Safety devices in atomic power stations	144
Cost of atomic power production	146
VII. World Progress in Atomic-Power Development (Jan Tůma, Engineer)	149
First Experimental Atomic Power Stations	153
First Soviet atomic power station	153
Large Soviet atomic power projects	155
Nuclear power generation in Great Britain	159

Card 7/12

The Atom and Nuclear Engineering

CZECH/2404

Harwell-- world -- famous atomic university	160
Calder Hall -- first British atomic power station	160
Other atomic power projects in Britain including gas-cooled plants	163
From Calder Hall to Dounreay	163
Use of nuclear energy in the United States	165
First industrial atomic power station in the United States	166
The PDP nuclear power project	167
The Package-type and the pocket-type nuclear power plants	169
"Baby reactor"	170
Atomic batteries	171
Technological advances in atomic power generation	172
VIII. Atomic Power in Transportation (Jan Tuma, Engineer)	183
Use of Nuclear Propulsion in Transportation	184
Selection of nuclear-power systems for transportation vehicles	185
Nuclear propulsion in marine transportation	189

Card 8/12

The Atom and Nuclear Engineering

CZECH/2404

Atomic submarine "Nautilus"	189
Submarines for Arctic regions	193
Atomic icebreaker	194
Atomic cargo vessels	194
Atomic locomotive	196
Nuclear propulsion for automobiles	199
Atomic-powered engines for aircraft	200
From jets to interplanetary rockets	203
IX. Radioisotopes and Their Use in Industry (J. Kuba, Doctor of Natural Sciences, Winner of State Prize)	
Production of Radioisotopes	204
Radiation Properties Applicable to Technology	206
Energy of radiation	208
Specific activity	211
Use of radioisotopes in technology	212
Flaw detection by radioisotopes	213
Radioisotopes in measurement	218
Checking of metalworking tools by radioisotopes	220
Checking wear of machine parts	221

Card 9/12

The Atom and Nuclear Engineering

CZECH/2404

Study of metal diffusion, alloy structure and disintegration of elements	223
Control of metallurgical processes	225
Other uses of radioisotopes	226
Prospects for the Use of Radioisotopes in the Czechoslovak Republic	227
X. Use of Artificial Radioisotopes in Medicine (Zdeněk Hlavisek, Doctor of Medicine)	229
Significance of the chemical properties of radioisotopes in internal therapy	229
Radioisotopes for internal therapy	231
Effect of radioisotopes applied externally	235
Radioisotopes for external application	237
Radioisotopes for infiltrating roentgenoscopy	240
XI. Biological Effects of Ionization: Radiation Injuries (Zdeněk Hlavisek, Doctor of Medicine)	242
Basic effects of radiation on the biochemical processes in living organisms	242

Card 10/12

The Atom and Nuclear Engineering

CZECH/2404

Effect of radiation on cells	243
Effect of radiation on tissues	244
Genetic effects of radiation	245
Permissible doses of irradiation	246
Lethal doses of irradiation	247
Safety measures	247
Radiation injuries in man	248
Development of radiation sickness	250
Sources of radiation injuries in man and protective measures	252
XII. Use of Isotopes in Agrobiological and Forestry Research (Václav Myslivec, Doctor, Professor, Member of the Czechoslovak Academy of Sciences)	
Use of the radioisotope P 32	255
Radioisotopes for uncovering the secret of photosyntheses	259
Radioactive carbon in agrobiology	262
XIII. Thermonuclear Reactions (M. Kulka, Engineer)	
Heat as a promoter of reactions	267
	272
Card 11/12	273

The Atom and Nuclear Engineering

CZECH/2404

Tunnel effect	275
Speed of thermonuclear reactions	275
Hydrogen bomb	276
Electric discharge in gas	278
Effects of discharge	279
Accelerators as possible boosters of thermonuclear re- actions	279
Hydrogen [electric] power plants	280

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Card 12/12

TM/ec
10-12-59

HABARDA, Dusan, inz.

Use of the rectilinear diagram in local transportation. Doprava no.11:
385-387 '60.

HABARDA, Milan, inz.

Electric current flow through axial bearings of the T II street cars for 100 mm rail gauge. Doprava no.1:57-62 '63.

HABARDA, Dusan, inz.

Series--parallel direction of the T II streetcars. Doprava no.4:
289-290 '63.

HABART, Karel

Are the rates of bonuses and penalties for loading of freight cars,
applied by the Czechoslovak Railways, fair? Zel dop tech 9 no.12:
374-375 '61.