

RICHTER A.F.

Intraatomic conjugation. Cas.cesk.lek.Ved.prioha 63 no.9-12:  
280-286 Dec 1950. (CML 20:9)

1. Of the Second Institute of Medical Chemistry of Charles  
University, Prague.

RICHTER, A.F.; CEJKOVA, B.; DUCHON J.

Effect of trichloroethanol on amino acids and proteins. Acta univ.  
carol. [med.] Suppl. 14:265-270 '61.

1. II. ustav pro lekarskou chemii fakulty vseobecneho lekarstvi University  
Karlovy v Praze, prednosta prof. dr. J. Sula.  
(ALCOHOL ETHYL rel cpds) (AMINO ACIDS chem)  
(PROTEINS chem)

DUCHON, J.; CEJKOVA, .B.; RIGTER, A.F.

Effect of chloroethanol on some amino acids and peptides. Acta univ. carol. [med.] Suppl. 14:257-263 '61.

1. II. ustav pro lekarsku chemii fakulty vseobecneho lekarstvi  
University Karlovy v Praze, prednosta prof. dr. J. Sula.  
(AMINO ACIDS chem) (PEPTIDES chem)  
(ALCOHOL ETHYL rel cpds)

RICHTER, A.F.,

CZECHOSLOVAKIA

Prof., MD.

Director of the Institute for Medical Chemistry of  
KU (Karlova Universita, - Charles University)

Prague, Prakticky Lekar, No 20, Oct 62, pp 875-881

"Mitochondria, Central Power Station of a Cell"

RICHTER, Antonin; VYBIRAL, Bretislav

New technique in casting pulleys for automobile engines. Slevarenstvi  
11 no.2:80 F '63.

1. Tatra Koprivnice.

S/262/62/000/019/003/006  
1007/1207

AUTHOR: Koplík Otakar, inventor Antonín, Fidrmač František.

TITLE: Four-stroke engine with crankshaft-chamber scavenging.

PERIODICAL: Referativny zhurnal, otdel'nyy vypusk. 42. Silovyye ustanovki, no.19,  
1962,57, abstract 4219323 (Czech patent, class 46 a-2, 12, no.98957,  
March 15, 1961)

TEXT: A patent has been granted for a four-stroke i.c. engine with compression (self) ignition, carburettor ignition, crankshaft-chamber scavenging and supercharging. During scavenging and supercharging the air is subject to an additional motion around the cylinder axis thereby mixing the upper layers with the lower ones. This is achieved by arranging the scavenging channels in a horizontal plane or at a small angle to the plane and by connecting them tangentially to the engine cylinder. In case of carburettor ignition, such a design makes possible a local enriching of the combustible mixture. In the author's opinion such an arrangement should increase the power-to-volume (power-per unit of displacement) ratio by 5%.

Abstractor's note: Complete translation.  
Card 1/1

СРЕДНОУЧЕБНИК

ПРИЛОЖЕНИЕ, Ч. 2, Кн. 10, Наука и Техника

Пятидесятилетие со дня рождения Академика Д.С. Козлов

Вестник, Средняя Азия Самкыч, Vol 100, No 1, 2, Jan 63, pp 110-117

Abstract: Biographic information and bibliography on Kozlov, professor emeritus of Charles University and member of the Czechoslovak Academy of Sciences. Evaluation of his work in biochemistry and medical chemistry.

RIGHTER, A. F.; OPPLT, J.; s technickou asistenci RENSKE, E. ▲ DOBIASOVE, M.

On nitrogen extraction curves as criteria of the state of the serum  
in physiological equilibrium. Cas.lek.cesk 100 no.50:1568-1577  
15 D '61.

(NITROGEN blood)



RICHTER, A. F.

Structure of  $\alpha$  and  $\beta$  protohemin and Rimington's hemin from  
plasmodia. Cas. lek. cesk. 89 no.35-36:988-989 1 Sept 1950.  
(CML 20:1)

BLEKTA, Mojmir; CEJKOVA, Bozena; OPPLT, Jan; RICHTER, A.F., technicka  
spoluprace Dobiasova, Marta

Serum examination in late gestosis. Cas.lek.cesk. 99 no.3/4:  
70-74 22 Ja '60.

1. II. ustav lecarske chemie University Karlovy v Praze. II. po-  
rodnicka klinika University Karlovy v Praze. Oddeleni klinicke  
chemie SFN v Praze 12.

(PREGNANCY TOXEMIAS blood)

Richter, A.F.  
~~Felix Antonín~~

The metabolism of homogentisic acid. I. The importance of homogentisic acid in the metabolism of tyrosine and phenylalanine. II. Polarographic estimation of homogentisic acid in alkaptonuric urine. Jiri Duchon, Milan Jirka, Eduard Krejci, and Antonin Felix Richter (II. Ústav lékařské chem., Prag). *Časopis Lékařů Českých* 93, 691-692 (1954).—A comprehensive review on the biochemistry and pathology of tyrosine, phenylalanine, adrenaline, melanin, thyroxine, and homogentisic acid (I). The importance of I as the normal intermediate in tyrosine metabolism is emphasized. Methods for the estn. of I are discussed. Polarographic behavior of pure I is described and compared with that of hydroquinone. Both yield an anodic diffusion wave; sensitivity  $4 \times 10^{-4} M$ ; the difference of  $\tau_{1/2}$  by 45 mv. (0.1M acetate pH 4.7) does not allow their separate estn. in mixts. I can be estd. in 0.2 cc. urine after paper chromatographic sepn. (BuOH, AcOH, water 4:1:5 or benzene, BuOH, water 9:1:10), detection by ammoniacal  $AgNO_3$  or o-phenanthroline-Fe(III); polarography is performed at pH 5.0 under N. The scatter of a single estn. corresponds to  $\pm 5.2\%$ . Cathodic wave of I reported by Neuberger, *et al.* (C.A. 42, 3067g) could not be detected. 118 references. Iva M. Hlat

3

RICHTER, A.F.

Effective charge in isoelectronic series. A. F. Richter  
(Inst. Phys. Ed. Med., Prague). *Biol. Liby* 31, 23-27  
(1951)(English summary).—Formulas are given for the  
calcn. of ionization potentials  $I$ , screening const.  $S$ , and  
effective charges  $Z^*$ , for series with  $r =$  the no. of electrons,  
and with the at. no.  $Z$  increasing from 1 to 100. The for-  
mulae involve the quantum const.  $B$ , related to the prin-  
cipal quantum no.  $n$ , the series const.  $A$ , and a correction  
const.  $D$ . It was found that  $S$  reaches a limiting value  
when  $Z$  in a given series becomes large enough. Calcns. for  
 $K$  and  $L$  isoelectronic series are given. A relation between  
the coeffs. of the equation makes possible a calcn. of  $Z^*$  for  $M$   
series, where few data are known. H. Newcombe

RICHTER, A. F.

Chemical Abst.  
Vol. 48 No. 6  
Mar. 25, 1954  
General and Physical Chemistry

2  
3  
~~Seventy-five years of Professor A. Hamsik, A. F.  
Richter (Charles Univ., Prague, Czech.). Chem. Listy 47,  
161-7 (1953).—Biography with bibliography.~~  
M. Hudlický

9/16/54  
LM

RICHTER, A. F.

CH ✓ Polarographic determination of homocentric acid.  
M. Jirka, B. Krejčí, J. Duchoň, and A. F. Richter. Collec-  
tion Czechoslov. Chem. Commun. 20, 1131-6 (1955).—See  
C.A. 48, 11528c; 49, 743e. R.H.

(3)

178

RICHTER, A.F.; OPPLT, Jan J.

Dermographic pigment. Cas.lék. cesk. 93 no.22-23:623-626 4 June 54.

1. Z II. ustavu pro chemii lekárskou Karlovy university v Praze.  
Prednosta prof. A.F.Richter. 2. Z oddelení pro klinickou biochemii  
st. fakultní nemocnice v Praze XII. Prednosta MUDr Jan.J.Opplt.

(DERMOGRAPHIA,

dermographic pigment)

(PIGMENTS,

dermographic pigment)

Category: Czechoslovakia / Physical Chemistry-Molecule. Chemical bond. B-4

Abs Jour: Referat Zhur-Khimiya, No 9, 1957, 29550

Author : Richter Antonin F.

Inst : not given

Title : Linear Relationships Between Values of Ionization Potentials in Homoisoelectronic Systems.

Orig Pub: Chem. listy, 1956, 50, No 4, 510-515

Abstract: By means of a graphic method (Price W. C. et al., Proc. Roy. Soc. (London), 1950, A201, 600; J. Chem. Phys., 1951, 19, 1070); a study has been made of the relationships between values of ionization potentials in isoelectronic systems. By an analysis of the curves thus obtained, which the author has conducted on the basis of semi-empirical equations, for isoelectronic series, it was ascertained that the relationship is not entirely linear, and that approximation to a linear nature differs in individual instances. Therefore the opinion is expressed that the reported relationships found by the British authors in homoisoelectronic systems ( $H_2O$ ,  $H_2S$ ..., further

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Category: Czechoslovakia / Physical Chemistry-Molecule. Chemical bond. B-4

Abs Jour: Referat Zhur-Khimiya, No 9, 1957, 29550.

HF, HCl..., further He, Ne...) also cannot be linear and that not even a possible extrapolation does not yield reliable values. In the graphic analysis of the British authors the values of ionization potentials of isoelectronic systems form a smooth curve; the author contends that these values represent, with a satisfactory degree of accuracy, an arithmetical progression of 2-nd order. Hence, the correlation between the ionization potentials of isoelectronic systems, which the British authors seek to determine, is in fact the correlation, previously ascertained by the present author,  $I = a; x^2 + b; x + c$  (Richter A. F., Chem. obzor, 1946, 20, 1; Philos. Mag., 1948, 39, [7], 303).

Card : 2/2

-4-

*RICHTER, A. F.*

Category: Czechoslovakia / Physical Chemistry - Atom

B-3

Abs Jour: Referat Zhur-Khimiya, No 9, 1957, 29510

Author : Richter Antonin F.

Inst : not given

Title : Linear Relationships of A.A. Dibrove in Isoelectric Systems

Orig Pub: Chem. listy, 1956, 50, No 4, 516-519

Abstract: A discussion and interpretation of the linear relationships of A. A. Dibrove (RZhKhim, 1955, 5141) between the so-called mean potentials of isoelectronic series. A quantitative interpretation is given of deviations from rectilinear, observed in particularly for the first terms of the series, and the geometric characteristics of the curves. The conclusion is reached that dependencies between ionization potentials can be of assistance in ascertaining the regularities for other iso-electronic series and in the systematics of elements of the system of Mendeleev.

Card : 1/1

-3-

RICHTER, A. F.

DUCHON, Jiri; JIRKA, Milan; KREJCI, Eduard; RICHTER, A.F.

Studies on the metabolism of homogentisic acid. Cas. lek. cesk. 93  
no.22-23:591-602 4 June 54.

1. Z II. ustavu pro lekářskou chemii K.U. Přednosta prof. A.F.Richter.  
(GENTISATES, metabolism,  
homogentisic acid)

PROPERTIES AND PROPERTIES INDEX

113

Deproteinization [of blood] with reference to peptide nitrogen. M. Hofman and A. F. Richter. *Coopos. Ceskoslov. Lekárnicka* 19, 51-60(1939). The N in trichloroacetic acid filtrates of ox-blood serum varied from 0.0 to 0.6; the upper limit for whole blood was 1.4 mg per 100 g. Deproteinization at a final diln. 1:10 and with a final concn. of 2.5% trichloroacetic acid is unsatisfactory for serum and defibrinated blood. On deproteinization at high diln. (1:100) peptide N is obtained in the filtrate. Deproteinization by pouring the soln. of peptides into the trichloroacetic acid gives higher values. Colloidal Fe(OH)<sub>3</sub> (Steppun and Naumova) is not suitable for this purpose. Treatment of defibrinated blood with phosphomolybdic acid gives practically the same value for N content in the filtrate as does that with trichloroacetic acid. The Steppun and Naumova method gives lower values. NaCl and NaF have little effect on deproteinization. LiCl and BeCl<sub>2</sub> give a higher N content in the filtrate.

B. C. P. A.

ASAC: 51.4 - METAL: 10.0 - LITERATURE: 11.0

RICHTER, A.F.

Electronation of oxygen in biological oxidation. Cas. lek. cesk.  
103 no.15:415-419 10 Ap'64.

1. II. ustav lekarske chemie fakulty vseobecneho lekarstvi  
KU v Praze; prednosta: prof.dr. J.Sula, DrSc.

\*

RICHTER A.F.

181T14

CZECHOSLOVAKIA/Chemistry - Porphyrines  
Medicine - Production of Diph-  
theria Toxin  
Dec 50

"Porphyrines as By-Products in Diphtheria Toxin  
Manufacture," M. Jirka, A. F. Richter, II Inst  
Phar Chem, Charles U, Prague

"Casopis Ceskeho Lekarnictva" Vol LXIII, No 9-12,  
pp 213-219

Toxic filtrate of Corynebacterium Diphtheriae con-  
tains small quantity of coproporphyrin, uroporphyrin  
and minute amts of porphyrin of unknown structure.

Extraction by pyridine and 2% acetic acid of the  
4th brown zone of chromatogram, followed by shaking  
181T14

CZECHOSLOVAKIA/Chemistry - Porphyrines  
(Contd) Dec 50

With CH<sub>3</sub>Cl, showed presence of cytoflavin and  
porphyrin. Gray and Holt method of isolating  
porphyrins from diphtheria filtrates, used on  
papain diphtheria nutrient medium, supplies con-  
siderable quantities of coproporphyrin and uro-  
porphyrin from waste filtrates of toxin production.  
These porphyrins can be used as standards for fluor-  
imetric and photometric detn of porphyrins in body  
fluids.

181T14

RICHTER, A.F.; HELCIOVA, D.

Limits of ultrachemical radiation energy. Cas. lek. cesk. 92 no.8:207-  
208 20 Feb 1953. (GLML 24:3)

1. Of the Second Institute of Medical Chemistry of Charles University,  
Prague.

RICHTER, A. F.; DUCHON, Jiri; S technickou asistenci M. Dobiasova

On the esterification of amino acids with chloroethanol. Cas.lek.  
cesk 100 no.14:425-428 7 Ap '61.

1. II. ustav pro lekarskou chemii KU, prednosta prof. dr. A. F.  
Richter, doktor lekarskych ved.

(ALCOHOL ETHYL rel cpds) (AMINO ACIDS chem)



Richter, Antonin F

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✓ Linear relation of ionization energies in isoelectronic series. Antonin F. Richter (Ústav pro fyzikální chemii, Charles Univ., Prague). *Chem. Listy* 50: 510-15 (1958).  
 — The linear relations of ionization energies in isoelectronic series described by Price, *et al.* (*C.A.* 45: 446) can be explained in terms of the relation given previously (*C.A.* 43, 4131d), namely that the values of these energies form arithmetic series of 2nd order. The linear relations described are approx. only. The linear relations proposed by A. A. Dibrova in isoelectronic series. *Ibid.* 510-19. — The linear relations proposed by Dibrova (*C.A.* 40: 7055d) in isoelectronic series are treated similarly as above. P. Erdős

Chem

1

PM 22

*Richter Antonin F.*

H-7

CZECHOSLOVAKIA/Electronics - Gas Discharge and Gas Discharge Instruments.

Abs Jour : Referat Zhur - Fizika, No 5, 1957, 12348

Author : Richter Antonin F.

Inst : Karlovy University, Prague, Czechoslovakia

Title : Linear Dependence Between the Magnitudes of the Ionization Potentials in Homo-Isoelectronic Systems.

Orig Pub : Chem. listy, 1956, 50, No 4, 510-515

Abstract : The author explains the graphically-established dependence between the values of the potential of the ionization of neutral atoms in molecules having an equal number of electrons, and in addition, the valence electrons, which are in single interaction with the remaining portion of the ion (Price, W.C., Teegan, J.P., Walsh, A.D., Proceedings Royal Society, 1950, A201. 600, Teegan, J.P. Walsh, A.D.,

Card 1/3

RICHTER, A.F.; DUCHON, Jiri

Effect of chloroethanol (ethylenechlorhydrine) on proteins. Cas. lek.  
cesk. 97 no.6-7:229-232 14 Feb 58.

1. II Ustav pro lekarskou chemii KU, prednosta prof. A. F. Richter.  
(ALCOHOL, ETHYL, related cpds  
2-chloroethanol, eff. on proteins (Cz))  
(PROTEINS, metab.  
eff. of 2-chloroethanol (Cz))

1958  
RICHTER, A.F.; VEPREK, L.

Physicochemical processes in deproteinization of blood by copper hydroxide.  
Cas. lek. cesk. 97 no.6-7:234-237 14 Feb 58.

1. II ustav pro lekarskou chemii KU prednosta prof. A.F Richter.  
(BLOOD PROTEINS, eff. of drugs on  
copper hydroxide, deproteinization (Cz))  
(COPPER, eff.  
copper hydroxide depreteinization of blood (Cz))

RICHTER, ANTONLIN FELIX

5000

Limits of the radiant ultrachemical energy. Antonin Felix Richter and Dobromila Helciová (Karl's Univ., Praha, Czech.). *Casopis Lékařů Cechůch* 92, 207-8(1953).—A theory is suggested concerning an isoelectronic series, according to which a very hard photon radiation is emitted from the very heavy nuclei (Ra and higher). The  $h\nu$  liberated at such an ionization can be calcd. according to the formula  $\nu = 2.4179 \times 10^{14}$  e.v. Values are presented in a table. The term "ultrachemical energy" is used for this kind of radiation, to distinguish it clearly from chem. and nuclear energies.  
Werner Jacobson

SMW

RICHTER, ANTONIN, FELIX

✓ Rimington's hemins from the point of view of  $\alpha$ - and  $\beta$ -  
structures of protohemins. Antonin Felix Richter. *Casopis*  
*Litva Ceskych* 89, 988-9 (1950); cf. *C.A.* 42, 3023f.—It  
was detd. by Hamsik's test (cf. *C.A.* 18, 2742) that hemin  
from the pigment of *Plasmodium gallinaceum* corresponds  
to the  $\alpha$ -structure and that from *P. knowlesi* to the  $\beta$ -struc-  
ture. The corresponding  $\lambda$  values are different. A. Z.

RICHARDS, ANTHONY...

A dermographic pigment. Antonín Felix Richter and Jan J. Oppl (II, Ústav chem. lékařskón and Státní fakultní nemocnice v Praze XII, Prague, Czech.). *Časopis Lékařů Českých* 93, 623-6 (1954).—Black pigment was formed in a female surgical patient when her skin was rubbed with Au or Pt objects. Previous sweating or verbal suggestion did not change the intensity of the coloration. The pigment could be wiped off and dissolved by 2-chloroethanol-dioxane 1:1 (I) or Me<sub>2</sub>CO-CHCl<sub>3</sub> 1:2 (II). Al<sub>2</sub>O<sub>3</sub> chromatography in II gave the following zones (from top to bottom): black, brown, yellow, reddish, brown-black, and brown-black. The first 2 and last 2 of them showed yellow fluorescence, their eluates exhibited a flat max. at 310 mμ. The residue of an ext. in I gave 4.76% N and 2.44 S and could be sepd. by paper electrophoresis (barbital-citrate buffer pH 8.6) between two layers of mineral oil in a brown, pink, blue, yellow, and brown zone, most of them fluorescent. By paper chromatography no amino acids were found in an acid or alkaline hydrolyzate although the alk. digest showed some ninhydrin-reacting spots.

Ivo M. Hais

Handwritten initials and a circled number 1.

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*Richter, A.F.*

CZECHOSLOVAKIA/Atomic and Molecular Physics - Atomic Physics

D-1

Abs Jour : Ref Zhur - Fizika, No 4, 1957, 8934

Author : Richter, A.F.

Title : Concerning the Laws in Isoelectronic Systems.

Orig Pub : Prazska univ. Moskevske univ. Sb. vyrosi 1755-1955 Praha,  
1955, 388-407

Abstract : On the basis of the latest data, the author calculates the constants used to determine the ionization energy of all terms of various isoelectronic series. The resultant general laws are evaluated. Bibliography, 20 titles.

Card : 1/1



SIMITCH, Tch.; RICHTER, B.; PETROVITCH, Zl.; LEPES, T.

Parasitic fauna in man in Yugoslavia. VI. Intestinal parasites in school children in Bosnia and Hercegovina. Bull. Acad. serbe sc., classe med. 15 no.3:55-56 1956.

1. De l'Academie yugoslave des Sciences et des Arts de Zagreb et de l'Academie serbe des Sciences de Belgrade.

(HELMINTH INFECTIONS, statistics,  
in Yugosl. (Fr))

RICHTAR, B.

RICHTAR, B. Elm breeding. p. 555.

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

SBORNÍK. RADA LESNICTVÍ

AGRICULTURE

Praha, Czechoslovakia

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

SIMITCH, Tch.; RICHTER, B.; PETROVIC, Z.; LEPES, T.

Parasitic fauna of the intestines in man in Yugoslavia. VII.  
Intestinal parasites in school children in Serbia. Bull. Acad.  
serbe sc., classe med. 15 no.3:57 1956.

1. De l'Academie yougoslave des Sciences et des Arts de Zagreb  
et de l'Academie serbe des Sciences de Belgrade.

(HELMINTH INFECTIONS, statistics,  
in Yugosl. (Fr))

YUGOSLAVIA

MADJARIC, Dr. Drago; RICHTER, Dr. Branko and KRSNJAVI, Dr. Bogdan;  
School of Public Health, Medical College, and Institute for  
National Health of the Republic (Skola narodnog zdravlja Andrija Stampar  
Medicinskog fakulteta i Republickog zavoda za zastitu zdravlja), Zagreb.

"Endemic Hookworm Disease in Hrvatsko Zagorje."

Zagreb, Lijecnicki Vjesnik, Vol 87, No 10, Oct 1965; pp 1073-1078.

Abstract [English summary modified]: Study in the village of Mala Erpenja in Croatia in 1958: out of 1066 persons, 63 were excreting *Ancylostoma duodenale* eggs in the stool. Another 7 sporadic cases were found among 2,484 school children in that general region. Geologic, meteorologic, dietary, socioeconomic and other data on the environment and epidemiology of ancylostomiasis in Yugoslavia in general are given. Table, 11 Yugoslav references including personal communication, 4 Western references. Manuscript received 14 Oct 65.

RICHTER, Belane, dr., okleveles mezogazdasagi mernok

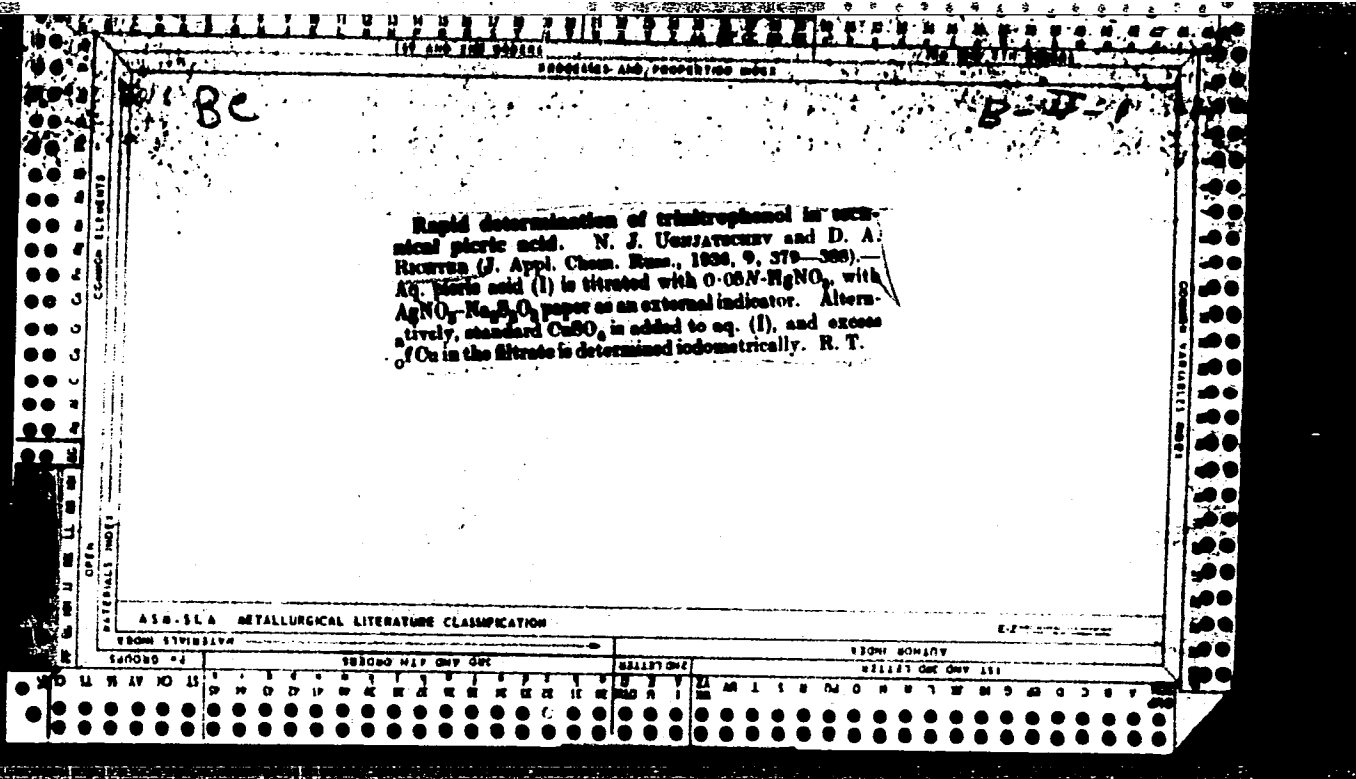
Standardization of industrial plants. Szabvany kozl 16 no.9:  
154-156 S '64.

1. Hungarian Bureau of Standards, Budapest.

RICHTER, Cestmir

Transmissions for servomechanisms. Automatizace 6 no.8:198-199  
Ag '63.

1. Moravskoslezské elektrotechnické závody Hachod.



BULGARIA

RICHTER, J., PENCHEV, P.; Institute of Biology and Medicine (Director Prof. H. Gummel /?/), German Academy of Science; Scientific Research Oncology Institute (Director Prof. N. Anchev)

"Application of Computers in the Determination of the Dose in Radiotherapy"

Sofia, Tentgenologiya i Radiologiya, Vol 5, No 3, 1966, pp 212-217

Abstract: Procedures for the determination by means of computers of doses from linear radioactive sources of  $\gamma$  -rays are described. The procedures in question were developed in the GDR\* and at the Computer Center of the Bulgarian Academy of Sciences. Programming of the computer by the procedure proposed makes it possible to determine the dose 1) without considering absorption and scattering by the filter and tissues, 2) by considering the interaction of the radiation with either the filter or tissues, 3) by considering the effect of both the filter and tissues. The program is applicable for any radiation source and at any activity of the source, energy of radiation, active length of radioactive preparations, and thickness of filters. Examples of calculation of the distribution of the dose in connection with application

1/2

\*East Germany



L 22407-66 EWT(1)/T JK  
ACC NR: AP5021556 (A) SOURCE CODE: CZ/0067/65/014/004/0215/0220

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AUTHOR: Vitekova, V.; Richter, J.

ORG: Regional Public Health-Epidemiological Station KUNZ of the North Czech KVV  
(Krajska hygienicko-epidemiologicka stanice KUNZ Severoceskeho KVV, Usti nad Labem)

TITLE: The <sup>6,44,55</sup>tularemia epidemic in the northern region of Czechoslovakia (North Bohemia Region) in the Year 1961-1962

SOURCE: Ceskoslovenska epidemiologie, mikrobiologie, imunologie, v. 14, no. 4, 1965, 215-220

TOPIC TAGS: epidemiology, medical science, preventive medicine, disease incidence, tularemia, bacterial disease, infective disease

ABSTRACT: The territorial reorganization of 1960 added to the region of northern Czechoslovakia (North Bohemia) the Kadan (Kadan) and Podborany (Podborany) districts as marked by the appearance of endemic tularemia. This article reports on the epidemic of tularemia in North Bohemia in 1961 and 1962 during which 269 people, for the most part agricultural and farm workers occupied in crop raising, fell ill with the disease. The first cases of the disease, which appeared in November, 1961, did not lead to the initiation of any extraordinary hygienic measures. The active search for cases of tularemia only began after information was proffered by the Ustav epidemiologie a mikrobiologie in Prague (The Institute of Epidemiology and Microbiology) on

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L 22407-66

ACC NR: AP5021556

the increased incidence of tularemia. This search uncovered many other cases and also the territorial extent of the disease. The epidemic<sup>6</sup> reached its maximum in January, 1962, and died out around April of the same year. It is assumed that the actual number of cases of tularemia in humans was greater because a large percentage of the cases was diagnosed as grippe. There actually was a grippe epidemic from January, to February, 1962. It is pointed out that from the first cases of tularemia actively searched out by the public health and epidemic services, not even one patient was treated as a tularemia case. The statistics on the epidemic bring out the difficulties faced by doctors in the countryside and in individual hospitals in the problem of correct diagnosis. Meteorological conditions in 1961 in the north Czech region were very favorable to the multiplication of small rodents which subsequently proved to be the principal source of infection of humans. For the most part infection was through the respiratory organ exposed in the preparation of infected feed and fodder for domestic animals, cattle, etc. Of all the tularemia patients, 52.7% were afflicted with the pulmonary form of the disease. In 24.2% of the cases the disease was marked only by fever, high temperature from 39 - 40°C, lack of appetite, headache, aching of the limbs. Tularemia was identified by the agglutination reaction<sup>6</sup> with antigen of the Institute of Epidemiology and Microbiology in Prague and with antigen of the Vyzkumny ustav veterinarneho in Brno (Research Veterinary Institute). In all, 1,182 tests were made of which 587 proved positive in the case of 269 patients sick with tularemia. The most effective measure against the spread of tularemia is considered to be vaccination<sup>6</sup> of the people most exposed to this infection. It is conclud-

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L 22407-66  
ACC NR: AP5021556

ed that diagnostic methods shall have to be improved in the hospitals and in the countryside, in particular in those regions where new outbreaks of tularemia can be expected. The task of veterinarians and the public health and epidemic control services is to maintain those conditions most likely to discourage the transmission and spread of this infection. Orig. art. has: 2 graphs and 5 tables.

SUB CODE: 06      SUBM DATE: none      ORIG REF: 009      OTH REF: 010

Card 3/3 *ELW*

L 22406-66 EWT(1)/T JK  
ACC NR: AP5021657 (A) SOURCE CODE: CZ/0067/65/014/004/0221/0224

AUTHOR: Richter, J.; Vitkova, V.; Stehlik, J.; Minarikova, H.

ORG: Regional Public Health Epidemiological Station KUNZ of the North Czech KNV  
(Krayska hygienicko-epidemiologicka stanice KUNZ Severoceskeho KNV, Usti nad Labem);  
District Public Health Epidemiological Station OUNZ (Okresni hygienicko-epidemiolo-  
gicka stanice OUNZ, Teplice)

TITLE: The dynamics of <sup>6,4455</sup> tularemia <sup>b</sup> antibodies following vaccination <sup>b</sup> with live tularemia vaccine

SOURCE: Ceskoslovenska epidemiologie, mikrobiologie, imunologie, v. 14, no. 4, 1965, 221-224

TOPIC TAGS: hygiene, health, health service, disease incidence, epidemiology, diagnostic instrument, preventive medicine

ABSTRACT: The article reports on the vaccination of the most exposed groups of the population to the tularemia epidemic in the northern region of Czechoslovakia (North Bohemia) and the determination of those inhabitants most subject to infection. Because of lack of experience with vaccines and vaccination technique it was decided to carry out the "control" of vaccination by following up the formation of tularemia antibodies in the vaccinated groups at specific time intervals. Sixty-eight (68)

Card 1/3

L 22406-66

ACC NR: AP5021657

people in whom tularemia antibodies had not been detected before vaccination were included in the control group. These were subsequently vaccinated and a record kept of the positive, negative and weak post-vaccination reactions. Dry, live tularemia vaccine prepared at the Odesky Institut epidemiologie a mikrobiologie I.I. Mecnikova (The I.I. Mechnikov Odessa Institute of Epidemiology and Microbiology) in the USSR and the vaccinations and recording of the reactions were carried out in accordance with a vaccination handbook also of Soviet origin. Serum was taken from those who had been vaccinated at intervals of 30, 90, and 360 days after vaccination and stored at -20°C until laboratory evaluation time. The presence of *P. tularensis* antibodies (by the agglutination and the indirect haemagglutination reactions) and of *Br. abortus* agglutination antibodies was determined. The serum in the determination of agglutination antibodies was diluted in geometric series from 1:10 to 1:1280 and the reaction proceeded over 18 hrs. of incubation at 37°C. Dr. Hauser of KHES in Ceske Budejovice supplied the raw, unprocessed polysaccharide antigen prepared from the *P. tularensis* strain 645/62 Ref. Of the 68 samples of serum investigated, tularemia antibodies were found by the agglutination method or the indirect agglutination method in 53 of them, and of these latter, 51 samples of serum were from patients designated as positive after vaccination, and two samples of serum from patients designated as slightly positive. Antibodies against *Br. abortus* were not detected in a single case. Success in the vaccination operation must be attributed to perfect mastery of the vaccination technique, but also to the correct interpretation of the vaccination reaction. In comparison with other researchers in the field, the authors feel that the

Card 2/3

I. 22406-66

ACC NR: AP5021657

number of antibodies detected by the methods used appears relatively low. P. Cizek did the statistical evaluation. Orig. art. has: 2 tables.

SUB CODE: 06

S /BM DATE: none

ORIG REF: 004

OTH REF: 013

Card 3/3 *ش*

VITTOVA, V.: LICHTER, J.

An epidemic of tularemia in the North Bohemian region in  
1961-1962. *Cesk. epidem.* 14 no.4:215-220 Ji '65.

1. Krajska hygienicko-epidemiologicka stanice Krajskeho ustavu  
narodniho zdravi Severoceskeho Krajskeho narodniho vyboru, Usti  
nad Labem.

ACHE, 1.

The Science and Technology Fund, a tool for the advancement of technological progress. Sroajirenstvi 14 no.4:241-242 Ap 1964

1. State Commission for Development and Coordination of Science and Technology, Prague.



RICHTER, M., inz. CSc.

Calibrated building elements from Ytong material in Sweden.  
Stavivo 42 no.4:155-157 Ap '64

I. 22406-66  
ACC NR: AP5021657

number of antibodies detected by the methods used appears relatively low. P. Cizek did the statistical evaluation. Orig. art. has: 2 tables.

SUB CODE: 06

SUBM DATE: none

ORIG REF: 004

OTH REF: 013

Card 3/3 *SW*

VITKVA, V.; FICHTER, J.

An epidemic of tularemia in the North Bohemian region in  
1961-1962. Cesk. epidem. 14 no.4:215-220 Ji '65.

1. Krajska hygienicko-epidemiologicka stanice Krajskeho ustavu  
narodniho zdravi Severoceskeho Krajskeho narodniho vyboru, Usti  
nad Labem.

RIGHTER, Jiri

Production of force-lasted shoes. Kozarstvi 14 no. 5:135-137  
My '64.

1. Svit National Enterprise, Gottwaldov.

1978, 11.

the Science and Technology Fund, a tool for the advancement of technological progress. Strojiřrenstvi 14 no.4:241-242 Apr 1978.

1. State Commission for Development and Coordination of Science and Technology, Prague.

RIGHTER, M., inz. CSc.

Calibrated building elements from Ytong material in Sweden.  
Strvivo 42 no.43155-157 Ap '64

ACCESSION NR: AT4040504

P/2521/64/000/020/0101/0112

AUTHOR: Richter, Henryk (Gdansk)

TITLE: Algebraic method of state assignments for logic circuits

SOURCE: Polska Akademia Nauk. Instytut Maszyn Przeplywowych. Prace, no.20, 1964, 101-112

TOPIC TAGS: state assignment problem, state assignment, algebraic state assignment, logic circuit; information processing machine, data processing machine, sequential machine, variable assignment

ABSTRACT: One of the more important problems in the synthesis of a logic circuit is the problem of a suitable selection of binary words of appropriate length and making them conform to the circuit state. This article presents a method which leads to an optimal state assignment for logic circuits containing the smallest possible number of elements. The logic circuit is examined as a universal algebra with a system of one-component algebraic operations. The concept of a partition pair is then an expanded concept of congruency in algebra. A method for determining the set of the circuit's Km-pairs is proven. The inequality of information flow in the circuit, indicating the existence of a determination with

Card 1 1/2

RICHTER, Richard, dr., okleveles bányamernok, a muszaki tudományok  
kandidátusa, egyetemi docens

Measurement of soil subsidences caused by mining. Bany lap  
96 no.9:595-596 S '63.

1. Nehezipari Muszaki Egyetem Banyamernoki Kar, Miskolc.



EXCERPTA MEDICA Sec 10 Vol 13/4 Obstetrics Apr 60  
794. ACTINOMYCOSIS OF THE INTERNAL FEMALE GENITALS - Aktinomykosa  
vnitřních ženských rodidel - Řišínek O., Ženíšek L. and Mar-  
šálek E. Porodn. - Gynekol. Klin. Lék. Fak. Palackého Univ., Olomouc -  
ACTA UNIV. PALAK. OLOMUCENSIS 1958, 15/14 (283-286)  
A 26-year-old woman, the second case in this hospital for the past 10 yr.,  
showed the symptoms of pelveoperitonitis. Only on second cultivation of the dis-  
charge from the drain from a parametrial abscess were actinomyces found. The pa-  
tient was cured in 26 days by massive doses of antibiotics (penicillin, streptomycin,  
chloramphenicol) combined with sulphonamide and incision and drainage of the  
abscess.

Veselý - Prague

YUGOSLAVIA

Prof Dr B. RICHTER [Affiliation not stated]

"A Significant Contribution to the Symptomatology of Visceral  
Leishmaniasis."

Zagreb. Liječnički Vjesnik, Vol 84, No 12, Dec 62: p 1257.

Abstract: A laudatory comment on the article by KACIC and MIOVIC in  
the same issue, pp. 1217-1224: the question of the pulmonary changes  
in leishmaniasis has heretofore been neglected by everyone but can  
contribute much to early diagnosis and exact observation of response  
to drugs. Two Yugoslav and 3 Western references.

1/1

RICHTER, Belane

Developing a long-range seed standardization plan. Szabvany  
kozl 15 no.4:85-87 Ap '63.

HRGOVCIC, Martin, dr.; RICHTER, Branko, dr.; SKRABALO, Zdenko, dr.

Distomiasis. Liječn. vjesn. 85 no.6:627-636 '63.

1. Iz Internog odjela Bolnice "Dr O. Novosel" Suradna ustanova  
Medicinskog Fakulteta i Skole narodnog zdravlja "Andrija Stampar"  
u Zagrebu.

(TREMATODE INFECTIONS)

S

RICHTER, Branko, dr.

Intestinal parasites and their laboratory diagnosis. Lijec. vjes.  
81 no.7-8:507-512 '59.

1. Iz Odjela za parazitologiju Skole narodnog zdravlja "Andrija  
Stampar" u Zagrebu.  
(HELMINTHIC DISEASES diag.)

YUGOSLAVIA

HRGOVCIC, Dr Martin, Dr Branko RICHTER, and Dr Zdenko SKRABALO, Department of Internal Medicine (Interni Odjel), Dr. O. Novosel Hospital (Bolnica), in collaboration with the Faculty of Medicine (Medicinski Fakultet) and Andrija Stampar School of Public Health (Skola Narodnog Zdravlja) in Zagreb.

"Distomiasis."

Zagreb, Liječnicki Vjesnik, Vol 85, No 6, 1963, pp 627-636.

Abstract: [Authors' English summary modified] An introduction devoted to the biology and epidemiology of fascioliasis is followed by a survey of the geographical diffusion of the infection in humans, with particular reference to Yugoslavia. The clinical symptoms and therapeutical results are described as observed in six cases over a period of three years. The clinical picture, positive skin tests, and effective emetine therapy were the basis of diagnosis, which was suggested by a high proportion of eosinophile cells in the peripheral blood. The infection is mainly incidental and mild in Yugoslavia. Tables, 32 references, mainly Western.

Richter, E.

Ten years of the German Democratic Republic, the years of building up the socialist chemical industry. p.351

MAGYAR KEMIKUSOK LAPJA. (Magyar Kemikusok Egyesulete)  
Budapest, Hungary. Vol.14, no.9, September 1959

Monthly List of East European Accessions (EEAI) LC, Vol.8, no.11  
November 1959  
Uncl.

RICHTER, E.

"The chemical industry, center of gravity in the Seven-Year Plan of the German Democratic Republic, Tr. from the German."  
"Development of the chemical industry in the Chinese People's Republic. Tr. From the Russian."

TEZHKA PRON SHLENOST, Sofia, Bulgaria, Vol. 6, no. 5, Mar. 1959

Monthly list of East Europe Accessions (EEAI), LC, Vol. 8, No. 6, Jun 59,  
Unclas



Richter, E.

New types of tractors for agriculture. p.5.  
GJITOK LAPJA (Crszagcs Talalmanyi Hivatal) Budapest. Vol 7, no. 11, June 1955.

SOURCE: EFAL, Vol 5, no. 7, July 1956.

RICHTER, E.

Ten years of existence of the German Democratic Republic, ten years of building a socialist chemical industry. p. 553

REVISTA DE CHIMIE. (Ministerul Industrii Petrolului si Chimiei si Asociatia Stiintifica a Inginerilor si Tehnicienilor din Romania) Bucuresti. Rumania, Vol. 10, no. 10, Oct. 1959

Monthly list of East European Accessions (EEAI) LC., Vol. 9, no. 2, August, 1959

Uncl.

BOGNAR, Imre; PAPP, Karoly; TOLGYES, Lajos; BERKE, Bela; RICHTER, Ervin

Appearance of professional standards. Szabvany kozl 14 no.9:202-204 S '62.

1. Kozlekedesi- es Postaugyi Miniszterium, Tervgazdasagi es Muszaki Fejlesztési szakosztaly vezetője (for Bognar). 2. Kozlekedes- es Postaugyi Miniszterium Epitesi es Palyafenntartasi szakosztaly vezetője (for Papp). 3. Kozlekedes- es Postaugyi Miniszterium Gepeszeti Szakosztaly vezetője (for Tolgyes). 4. Kozlekedes- es Postaugyi Miniszterium Forgalmi es Kereskedelmi szakosztaly vezetője (for Berke). 5. Kohaszati es Gepipari Miniszterium 3. sz. Erosaramu Szabvanyositasi Dozpont vezetője (for Richter).

RICHTER, Ervin

Guiding principles for coordinating insulation levels of  
electric installations to be used in severe weather. Villamossag  
8 no.7:204-208 J1 '60.

RICHTER, E.

"Unexamined innovations in the vehicle industry." (p.5) "The innovators overcome scarcity of spare automobile parts." (p.6) "Results of innovators in the trucking industry." (p.7) "Rewarding important innovations." (p.7) Prevention of traffic accidents without innovations." (p.8) UJITOK LAPJA (Orszagos Talalmanyi Hivata) Budapest. Vol. 6, no. 8, Apr. 1954.

SO: EAT European Accessions List, Vol 3, No 8, Aug 1954.

METALLOGICAL LITERATURE CLASSIFICATION

PROCEDURES AND PROPERTIES INDEX

TEST AND ANALYSIS INDEX

AND OTHER TABLES

F

9

450. EJECTORS FOR SAMPLING AIR FOR DETERMINATION OF DUST AND GASES IN IT. Richter, E. V. (Hyg. i. Sanit. (Moscow) 1944, 9, No.10-11, 30-4; Brit. Abstr., C, Mar. 1946, 45).

Suction by a stream of compress air is used instead of that by an electric fan.

METALLOGICAL LITERATURE CLASSIFICATION

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TEST AND ANALYSIS INDEX

AND OTHER TABLES

1ST AND 2ND ORDERS		3RD AND 4TH ORDERS	
PROCESSES AND PROPERTIES INDEX			
COMMON ELEMENTS		COMMON VARIABLES INDEX	
OPEN MATERIALS INDEX		MATERIALS INDEX	
A.S.T.M. S.L.A. METALLURGICAL LITERATURE CLASSIFICATION			
1ST AND 2ND ORDERS		3RD AND 4TH ORDERS	
1ST AND 2ND ORDERS		3RD AND 4TH ORDERS	
1ST AND 2ND ORDERS		3RD AND 4TH ORDERS	

1958, 1.

1958, 1. p. 200.

1958, 1. (Stowarzyszenie Inżynierów i Techników Politycznych i Technicznych) Warszawa, Poland. Vol. 11, no. 10/11, Oct./Nov. 1958.

1958, 1. (East European Admissions (EUA) 11, Vol. 9, no. 2, Feb. 1958.

1958.



HÖRNER, H.

Investigation of zones under tensile stress in the elastic surroundings  
of cross sections.

p. 29h (Magyar Fanyaszati es Kohaszati Egyesulet) Budapest  
Vol. 12, No. 6, June 1957,

cc: Monthly Index of East European Accessions (MEMI) Vol. 6, No. 11 November 1957,

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ROZMAN, S., HELCIOVA, B.

"Limits of the energy of ultrachemical radiation. p. 207. (CASOPIS LEKARU CESKYCH,  
Vol. 92, #8, Feb. 1953, Czechoslovakia)

East European Vol. 2, #8  
SO: Monthly List of ~~Russian~~ Accessions,/Library of Congress, August 1953, Uncl.

KEYZLAR, Theodor, inz., RICHTER, Frantisek

Manufacture of selenium-cadmium ruby glass for special purposes. Sklar a keramik 13 no. 12: 327-328 D '63.

1. Duchcovske sklarny, n.p., Duchcov.

PHASE I BOOK EXPLOITATION

CZECH/5641

Richter, František

Chemigrafie (Chemigraphy) Prague, SNTL, 1960. 310 p. 900 copies printed.

Reviewers: K. Pařízek, Engineer, and F. Jarušek, Engineer; Chief Ed. for Chemical Literature: Adolf Balada, Doctor; Resp. Ed.: Vladimír Drbohlav, Engineer.

PURPOSE: This book is intended for workers and technicians in polygraphy and for the general reader interested in present-day polygraphic technique, especially chemigraphy.

COVERAGE: The book discusses polygraphic technology in all its phases and reviews the process steps in reproduction photography, pen reproduction of single-color and multicolor pictures, retouching, and masking. Photomechanical transfer on metal, the etching of pen and autopen single-color and multicolor engraving plates (including express etching methods and automatic printing machines),

Card ~~1~~/8

Chemigraphy

CZECH/5641

engraving correction, the repair of engraving plates, printing, and finishing operations in making engraving plates are treated in detail. Although the Introduction states that the book is intended to fill the need for a thorough treatment of technological processes in reproduction photography and its applications in typography, offset, phototype, etc., the process is discussed only in relation to its applications in making engraving plates for printing. Modern chemigraphy in foreign countries is reviewed, and details on individual processes, measurement methods, and new instruments and other equipment are discussed. No personalities are mentioned. There are 20 references: 16 German and 4 English.

TABLE OF CONTENTS:

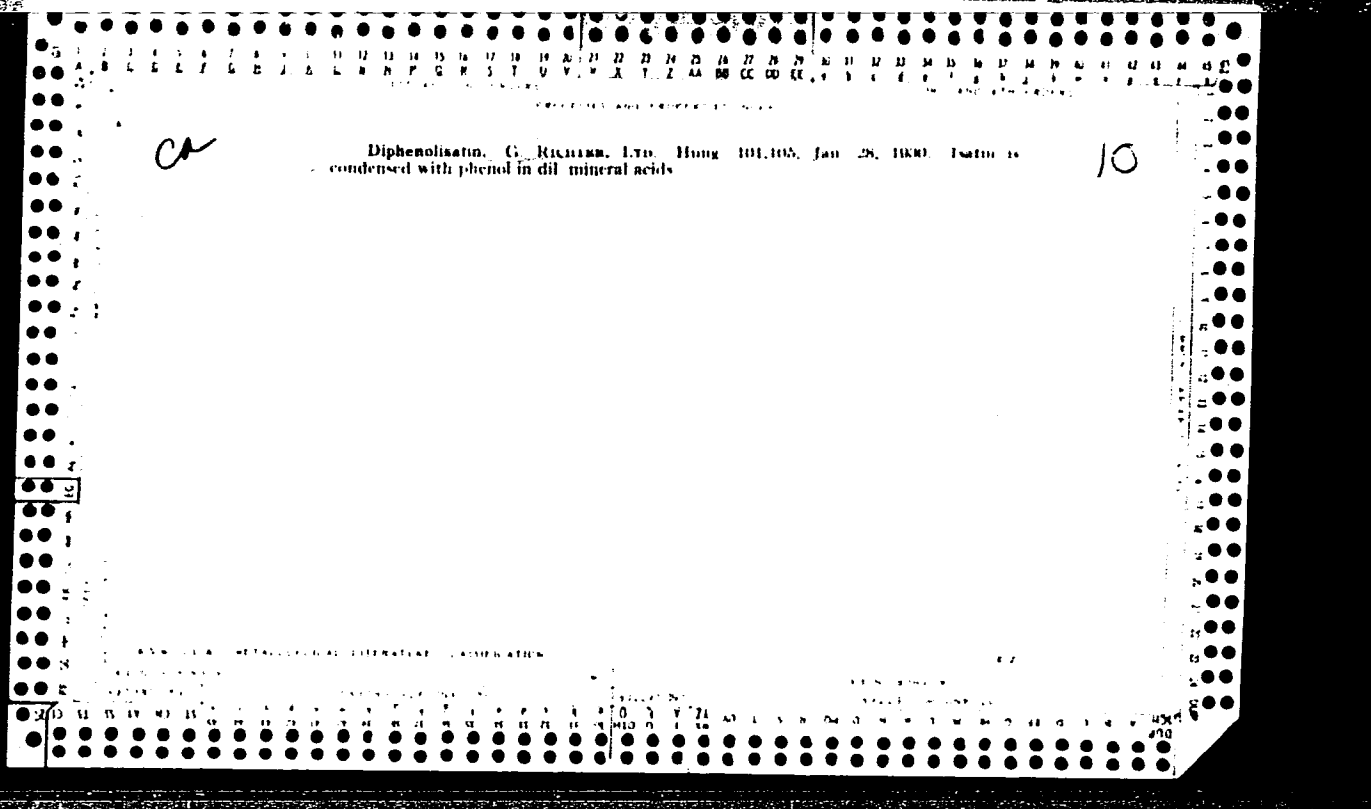
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Ch. I. Reproduction Photography	9
1. Development	10
Card <del>2/8</del>	

RICHTER, Fritz, inz.

An austenitic electrode with controlled ferrite for welding the fully austenitic steel for temperatures up to 650o centigrade.

Zvar sbor 9 no.4:424-431 '60

1. Elektrodovna, Berlin.





L 41755-65 EWP(k)/EWP(z)/EWA(c)/EWT(d)/EWT(m)/EWP(h)/EWP(b)/EWA(d)/EWP(l)/EWP(v)/  
EWP(t) Pf-4 JD/HW

ACCESSION NR: AP4047429

28  
27 UR/0182/64/000/010/0004/0008  
B (G)

AUTHORS: Turetzek, G. (German Democratic Republic); Richter, G. (German Democratic Republic)

TITLE: An investigation of the process of drawing heavy forgings with and without preliminary upsetting

SOURCE: Kuznechno-shtampovoychnoye proizvodstvo, no. 10, 1964, 4-8

TOPIC TAGS: metalworking, metal forging, metal mechanical property, metal ductility, metal deformation, metal forming press/ SK35 steel

ABSTRACT: To fill the gaps in the pertinent literature the authors have investigated the influence of preliminary upsetting on the quality of drawn products. They also determined the degree of upsetting deformations that correspond to the optimal mechanical properties of the products, the best metal structure, and the minimal internal friability. Two 25-ton identically treated ingots from a single melt of SK35 steel were tested, one simply forged and the other forged after a preliminary upsetting. The disappearance of internal defects was studied during the experiments. The difference in the type of working was found to exert no influence on the range of strength and flow, but preliminary upsetting increased the amount of elongation

Card 1/2

L 41755-65

ACCESSION NR: AP4047429

and necking. At larger forging reductions (3-5), mechanical properties of the central part of the metal (measured in the longitudinal direction) and the ductility (in transverse and radial directions) were better after upsetting. Slag and liquation inclusions were shorter in the upset specimens (see Fig. 1 on the Enclosure). Ultrasound and other studies of the artificially made radial and longitudinal openings in the specimens showed their greater diminution after upsetting. Three similar specimens subjected to various amounts of upsetting were investigated chemically, mechanically, and structurally. The flow of metal was found most intensive at the center where the segregation of materials was least noticeable and the structural changes the greatest. All these characteristics, as well as the ductility and the diminution of openings, increased with a higher degree of upsetting. The authors include a survey of power requirements for presses to be used with various weights and sizes of ingots, and they recommend the upsetting degree of 2.25 for the sealing of openings. In conclusion they thank Prof. Dr. Ye Maurer for his advice and directions. Orig. art. has: 2 figures, 8 graphs, and 1 table.

ASSOCIATION: none

SUBMITTED: 00

ENCL: 01

SUB CODE: MM

NO REF SOV: 000

OTHER: 009

Card 2/3

L 41755-65 EWP(k)/EWP(z)/EWA(c)/EWT(d)/EWT(m)/EWP(h)/EWP(b)/EWA(d)/EWP(l)/EWP(v)/  
EWP(t) Pf-4 JD/HW

ACCESSION NR: AP4047429

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27 UR/0182/64/000/010/0004/0008  
B (G)

AUTHORS: Iuretzek, G. (German Democratic Republic); Richter, G. (German Democratic Republic)

TITLE: An investigation of the process of drawing heavy forgings with and without preliminary upsetting

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TOPIC TAGS: metalworking, metal forging, metal mechanical property, metal ductility, metal deformation, metal forming press/ SK35 steel

ABSTRACT: To fill the gaps in the pertinent literature the authors have investigated the influence of preliminary upsetting on the quality of drawn products. They also determined the degree of upsetting deformations that correspond to the optimal mechanical properties of the products, the best metal structure, and the minimal internal friability. Two 25-ton identically treated ingots from a single melt of SK35 steel were tested, one simply forged and the other forged after a preliminary upsetting. The disappearance of internal defects was studied during the experiments. The difference in the type of working was found to exert no influence on the range of strength and flow, but preliminary upsetting increased the amount of elongation

Card 1/1

L 41755-65

ACCESSION NR: AP4047429

and necking. At larger forging reductions (3-5), mechanical properties of the central part of the metal (measured in the longitudinal direction) and the ductility (in transverse and radial directions) were better after upsetting. Slag and liquation inclusions were shorter in the upset specimens (see Fig. 1 on the Enclosure). Ultrasound and other studies of the artificially made radial and longitudinal openings in the specimens showed their greater diminution after upsetting. Three similar specimens subjected to various amounts of upsetting were investigated chemically, mechanically, and structurally. The flow of metal was found most intensive at the center where the segregation of materials was least noticeable and the structural changes the greatest. All these characteristics, as well as the ductility and the diminution of openings, increased with a higher degree of upsetting. The authors include a survey of power requirements for presses to be used with various weights and sizes of ingots, and they recommend the upsetting degree of 2.25 for the sealing of openings. In conclusion they thank Prof. Dr. Ye Maurer for his advice and directions. Orig. art. has: 2 figures, 8 graphs, and 1 table.

ASSOCIATION: none

SUBMITTED: 00

ENCL: 01

SUB CODE: MM

NO REF SOV: 000

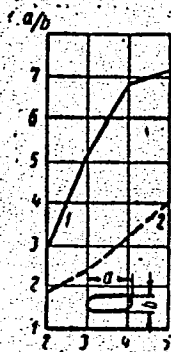
OTHER: 009

Card 2/3

L 41755-65

ACCESSION NR: AP4047429

ENCLOSURE: 01



Degree of reduction

Fig. 1. Deforming of nonmetallic inclusions at varying amounts of deformation and with different types of forging processes: 1- without upsetting; 2- with preliminary upsetting

CC  
Card 3/3

CA

10

Esters of 4,4'-dihydroxy- $\alpha,\beta$ -diethylstilbene with organic acids. Richter, Gedeon, Vegyészeti Gyár R. T. Hung. 129-238, Mar. 2, 1942. ( $p$ -HOC<sub>2</sub>H<sub>4</sub>CEt)<sub>2</sub> (I) 2.0 g. in 20 cc. glacial HOAc and POCl<sub>3</sub> 1 g. refluxed 1 hr., then poured into 2 vols. water give crystals of 4,4'-diacetoxy- $\alpha,\beta$ -diethylstilbene, m. 123°. In another expt. 1 2.0 g. in 20 cc. EtCO<sub>2</sub>H and P<sub>2</sub>O<sub>5</sub> 1 g. are refluxed 1 hr., the EtCO<sub>2</sub>H distl. off *in vacuo*, the residue stirred with water, the crystals filtered, and the dipropionoyloxy product recrystd. from EtOH to obtain a compl., m. 104-6°. István Finály

RIEHTER, Gedeon

Sulfanilamide derivatives with therapeutic effects. Richter, Gedeon, Vegyészeti Gyár R. T. Hung. 135,373, Feb. 15, 1949. Compds. are prepd. in which the H atom of the p-NH<sub>2</sub> group of sulfanilamide (I) is substituted by a 2-phenyl-1-quinolinecarbonyl group. E.g., 172 g. I in 400 cc. abs. C<sub>6</sub>H<sub>5</sub>N is treated with 267 g. 2-phenyl-1-quinolinecarbonyl chloride (II) in 250 cc. CHCl<sub>3</sub> with cooling, filtered after 12 hrs., washed with dil. HCl, water and EtOH, dried, dissolved in hot PhOH or C<sub>6</sub>H<sub>5</sub>N and the soln. poured into EtOH to yield 290-300 g. 4'-sulfamoyl-2-phenylcinchoninamide (III), m. 292°. III is also prepd. by several different modifications of this procedure and from I and 2-phenylcinchonine anhydride. The chloride or anhydride of 2-phenyl-6-methylcinchonine acid and I treated in a similar manner yield 1'-sulfamoyl-2-phenyl-6-methylcinchoninamide (IV). PhNH<sub>2</sub> (9.3 g.) in 30 cc. C<sub>6</sub>H<sub>5</sub>N treated with 26.7 g. I and the product recrystd. from 80% EtOH yields 2-phenylcinchoninamide (V), m. 198°. V (5 g.) is dissolved at 25-30° in 25 g. CISO<sub>2</sub>H and the soln. poured on ice, filtered and the solid washed repeatedly with water, and dissolved in 25% NH<sub>4</sub>OH. A ppt. appears soon which is filtered and purified to yield III. 2-Phenyl-6-methylcinchoninamide treated similarly yields IV.

István Finály

ca

10

**Halo aliphatic esters of 2-methyl-1,4-naphthalenediol.**  
 Richter Gezeon Vegyészeti Gyár R. T. Hung. 131,203,  
 Feb. 15, 1943. 2-Methyl-1,4-naphthalenediol (10 g.) in  
 50 cc. dry CHCl<sub>3</sub> and 15 cc. pyridine treated, with ice cool-  
 ing, with 20 g. MeCHBrCOCl in 30 cc. CHCl<sub>3</sub>, shaken  
 with dil. H<sub>2</sub>SO<sub>4</sub>, then with a soln. of NaHCO<sub>3</sub>, dried with  
 ignited CuSO<sub>4</sub>, the CHCl<sub>3</sub> distd. off, and the slurry residue  
 rubbed with 20-30 cc. EtOH gives the bis( $\alpha$ -bromopropi-  
 onate), m. 97°, in 90-5% yield. I (8.6 g.) in 50 cc.  
 CHCl<sub>3</sub> and 12 cc. pyridine, treated with 23.0 g. MeCH-  
 CHBrCOCl in 25 cc. CHCl<sub>3</sub>, with ice cooling, and then as  
 above, gives the bis( $\alpha$ -bromoisovalerate), m. 90-1°. The  
 Br can be replaced by iodine by treating the Br esters with  
 NaI.

István Finály

ASAC/ACIA INTERNATIONAL LITERATURE CLASSIFICATION



RICHTER, Gertraud

A short account of the polarization investigations of transverse insertions. Geofiz kozl 9 no.1/2:51-53 '60.

RICHTER, G.D., doktor geogr. nauk, otv. red.; VELICHKO, A.A., red.;  
LILYENBERG, D.A., red.; SEREBRYANNYY, L.R., red.;  
CHIKISHEV, A.G., red.

[Geographical reports; materials of the Sixth Conference of  
the Young Scientists of the Institute of Geography of the  
Academy of Sciences of the U.S.S.R.] Geograficheskie so-  
obshcheniia; materialy VI konferentsii molodykh ucherykh In-  
stitutu geografii AN SSSR. Moskva, Akad.nauk SSSR, 110 p.  
(MIRA 15:8)

1. Akademiya nauk SSSR. Institut geografii.  
(Geography---Congresses)

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

PROCESSES AND PROPERTIES INDEX

CA 14

Boiler sediment, a neglected enemy of steam boilers. H. Richter. *Tržby*  
*(ukrovir. 50, 515 8; Z. Zuckerkind technoslovk Rep 37, 92 6(1032), of C 71 26,*

2807 The sediments in boilers exert a chem. and a mech. effect on the boiler wall. After the formation of the sediment, the structure was loose and flaky, only after the lapse of a crit. period, does it become dense and adhesive. For a remedy, R. recom- mends a periodic discharge of water laden with sediments from the boiler every 1 to 2 hrs. (Czech. Maxvstn)

ASB 51.4 METALLURGICAL LITERATURE CLASSIFICATION

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AUTHOR: Muesel, Fritz (Engineer), Richter, Hans-Joachim

TITLE: Fuel cells and biochemical elements

SOURCE: Radio and Fernsehen, no. 6, 1964, 178-180

TOPIC TAGS: Fuel cell, biochemical cell, oxidizer, reducer, electrolyte

ABSTRACT: For most application electrochemical batteries are used. They have limited life because the electrodes decay due to the chemical reaction with the electrolyte. Recent advancements led to the development of fuel cells and biochemical elements which do not have the above disadvantage. The first fuel cell was demonstrated more than a century ago. Only recently the research on fuel cells was taken up again triggered mostly by military and space requirements. The main advantage is the high efficiency of 70% as compared to 40% as the maximum efficiency of the heat engine. It has no movable parts, does not produce any vapors, can be built-at least theoretically-to any size and capacity. The cost is low because no close tolerances are needed. They are insensitive and require a minimum of maintenance. There is no optimum size, the efficiency is the same for all sizes. No energy is consumed if no load is connected. The disadvantages are the low energy

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at the present time, the high cost of some systems and the fact, that only dc can be produced requiring converters for ac. In the fuel cell chemical energy is converted directly into electrical energy. It is a primary element where fuel and oxidizer are stored externally and fed to the element only when needed. The fuel cell is not subject to the Carnot process because the heat cycle is excluded. In addition to the fuel and the oxidizer there are two electrodes (silver, nickel, palladium, mercury, platinum, carbon, rhodium) and an electrolyte (potassium hydroxide, seawater, and others). A catalyst is used to start the reaction. The anode supplies electrons to the external circuit while the cathode feeds electrons to the oxidizer. The electrolyte transports ions and prevents fuel gas from escaping. The following oxidizers are used: oxygen, air, chlorine and bromine. Reducers are: hydrogen, carbon monoxide, natural gas, methane, ethane, carbon, formaldehyde, alcohol, zinc, magnesium, sodium, lithium and ammonia. Several fuel cells have to be connected in series or in parallel. The simplest fuel cell uses oxygen and hydrogen, a concentrated alkali solution as electrolyte and nickel and carbon electrodes. In 1958 a fuel cell with 30 W was built having an energy density of 11 W/dm<sup>3</sup>. Because of the danger associated with a oxygen-hydrogen mixture other fuel cells have been developed. In 1959 a tractor was equipped with 1008 fuel cells, 9 each in parallel providing 15 kW. Another fuel cell was used in a rocket test.

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Heat can be transformed directly into electricity with an efficiency of 50%. First the chemical reaction takes place producing electrical energy during cooling. The heat regenerates the chemicals and thus keeps the process going. Biochemical elements also have important advantages over conventional electrochemical elements. Here organic substances are used. So far only experimental models have been built. Current densities of a few milliamperes per  $\text{cm}^2$  have been achieved. Micro-organisms on the electrodes increase the current densities. The organic substances are hydrocarbons, sebacic acids, alcohols and ureas. Oxidizers are nitrates, sulfates and carbonates. The biological contributions are bacteria and ferments. There are two groups of biochemical elements, indirect and direct elements. In the indirect elements the bacteria produce an electroactive intermediate material which then reacts with the electrolyte. In the direct element the biochemical and the electrochemical reactions take place simultaneously. The bacteria are in two compartments and start the reactions. Some experts hypothesize that the bacteria consume charge. The two compartments are separated by a porous wall. Each compartment has an electrode. A weak sulphurous acid is used as electrolyte. Hydrated ferrous sulphate reacts with the electrolyte freeing electrons and hydrogen. The bacteria consume electrons converting oxygen and hydrogen ions into water. Connecting the two electrodes a current is measured. So far the information is incomplete. Breakthroughs are expected in the near future in both the fuel cell and the biochemical element. Orig. art has: 7 figures.

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