

S/276/63/000/001/014/028
A006/A101

AUTHOR: Hrazdil, František

TITLE: A method for the pressure working of metals

PERIODICAL: Referativnyy zhurnal, Tekhnologiya mashinostroyeniya, no. 1, 1963, 16, abstract IV68P (Czechosl. patent cl. 491, v. 16, no. 101180, of October 15, 1961)

TEXT: The methods for pressure working of metals known until the present (extrusion, rolling, etc) are characterized by the equal orientation of deforming forces and reduction of the blank section. These methods require great forces, which increase non-linearly during the process. When a plane blank is deformed over 75% the durability of the tool is very low, due to very high specific pressures. The proposed method is distinguished by the application of additional pulling loads which increase deformation and somewhat reduce the resultant effect of contact friction. The scheme of stresses σ and deformation under conventional loading is shown in figure 1. Figure 2 shows the loading scheme by the proposed method. The unit operating according to the new method is a combination of rolls 1

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(figure 3) and movable clamps 2, where the material to be worked is clamped (3). Loading by pulling forces is performed with the aid of a hydraulic cylinder. (figure 4). The device can be placed upon rolls 6. Both types of applied load have a different drive and do not depend upon each other. During the operational cycle the pulling forces can be regulated depending on the varying resistance of the material. ✓

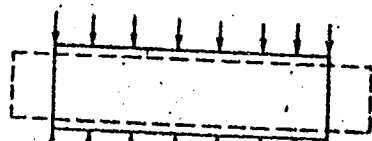
V. Kovalenko

[Abstracter's note: Complete translation]

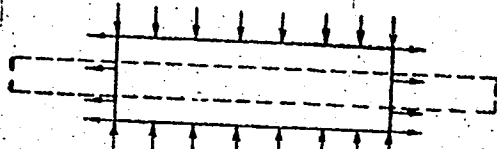
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A method for the pressure working of metals

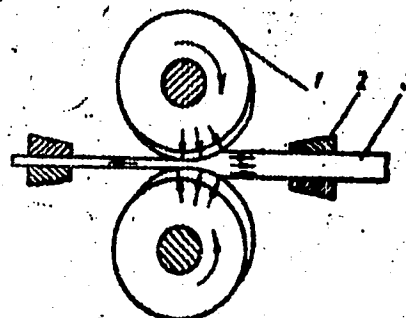
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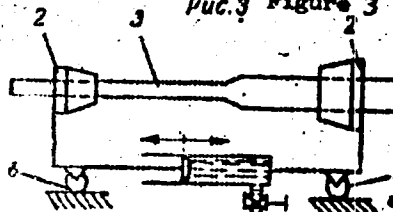
Puc. 1 Figure 1



Puc. 2 Figure 2



Puc. 3 Figure 3



Puc. 4 Figure 4

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HRDZ DIL

36

PHASE I BOOK EXPLOITATION

904/5799

Unkov, Ye.P., Doctor of Technical Sciences, Professor, Ed.

Sovremennoye sostoyaniye kuznechno-shtampovogochnogo proizvodstva (Present State of the Pressworking of Metals) [Moscow] Mashgiz, 1961. 434 p. 5000 copies printed.

Ed. of Publishing House: A.I. Sirotin; Tech. Ed.: B.I. Model'; Managing Ed. for Literature on the Hot Working of Metals: S.Ya. Golovin, Engineer.

Title: Kuznechno-shtampovoychnoye proizvodstvo v SSSR (The Pressworking of Metals in the USSR) by: A.V. Altykis, D.I. Berezhkovskiy, V.F. Volkovitskiy, I.I. Girsh (deceased), L.D. Gol'man, S.P. Granovskiy, N.S. Dobrinskiy, A.I. Zimin, S. L. Zlotnikov, A.I. Kagalovskiy, P.V. Lobachev, V.N. Martynov, Ye.N. Moshnin, G.A. Navrotskiy, Ya.M. Okhrimenko, G.H. Rovinskiy, Ye.A. Stosha, Yu.L. Rozhdestvenskiy, N.V. Tikhmirov, Ye.P. Unkov, V.F. Shcheglov, and L.A. Shofman; Eds: Ye.P. Unkov, Doctor of Technical Sciences, Professor, and B.V. Rozanov.

Title: Kuznechno-shtampovoychnoye proizvodstvo v ChSSR (The Pressworking of Metals in the Czechoslovak SR) by: S. Burda, F. Brazdil, F. Drastik, F. Zlatohlavak

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Present State of the (Cont.)

SGV/5799

Z. Kejval, V. Krauz, F. Kupka, F. Majer, K. Marvan, J. Novák, J. Odchnal, K. Paul, B. Sommer, M. Honez, J. Částečka, V. Šindler, and J. Šolc; Eds.: A. Neješpa and M. Vlk.

PURPOSE: This book is intended for engineers and scientific personnel concerned with the pressworking of metals.

COVERAGE: Published jointly by Mashgiz and SNTL, the book discusses the present state of the pressworking of metals in the USSR and the Czechoslovak Socialist Republic. Chapters were written by both Soviet and Czechoslovak writers. No personalities are mentioned. There are 129 references: 98 Soviet, 16 English, 8 German, 5 Czech, and 2 French.

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Present State of the (Cont.)

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Z/034/61/000/005/010/010
E073/E535

AUTHORS: Hrazdil, F., Engineer and Novotný, J., Engineer
TITLE: Die for manufacturing hollow bodies from sheet or
tube blanks by using a pressure wave.
Patent granted. No.98 994, Class 7c, 14, 19c, 19,
valid from February 6, 1960 (PV 799-60)
PERIODICAL: Hutnické listy, 1961, No.5, p.366
TEXT: [Abstractor's Note: This is a complete translation
of the title of the patent. No further details are given.]

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EW/JC/EW/JC

ACCESSION NR: APS005417

At 100 kHz, the rate of propagation of elastic deformation is constant and equal to $2.27 \cdot 10^6$ cm/sec. The corresponding modulus of elasticity is $2.27 \cdot 10^6$ dyne/cm². Capacitance of 20 pF with frequency signal modulation were used to make contactless measurements. This art. has 1 figure, 3 tables, and 9 formulas.

ASSOCIATION: Smeralovy zavody, Brno (Smeralovy Works)

SUBMITTED: 27Apr68

ENCL: 00

SUB CODE: MM

NO. REF SOV: 001

OTHER: 005

Card 2/2 *pub*

L 21414-66 EWP(t)/EWP(k) ID/EW
 ACC NR: AP6008687 (N) SOURCE CODE: CZ/0031/66/014/003/0178/0185
 AUTHOR: Hrazdil, Frantisek (Engineer; Candidate of sciences) 3/
 ORG: Research Institute of Forming Machines and Technology (Vyzkumny ustav
 tvarecech stroju a technologie tvareni) B
 TITLE: Explosive forming in shipbuilding 16
 SOURCE: Strojirenska vyroba, v. 14, no. 3, 1966, 178-185
 TOPIC TAGS: steel plate, plate forming, explosive forming, ship hull, hull element,
 hull element forming
 ABSTRACT: Research and development work in the field of explosive forming in
 Czechoslovakia is coordinated by the Research Institute of Forming Machines and
 Technology. This Institute developed a process for explosive forming large (up
 to 8—10 m²) ship-hull elements made of steel plates 8 mm thick. The process has
 been successfully used by a Slovak shipyard in Komarno which specializes in building
 river and coastal vessels. After an extensive series of experiments, sand was
 found to be the most suitable pressure transferring medium. The mold is built of
 reinforced concrete slightly below the ground level and is provided with several
 venting holes for air trapped between the mold and the formed plate. The mold
 surface is covered with a heavy (1.5 mm thick) rubber foil which prevents direct
 contact between the formed plate and mold and damage to the latter. The plate to
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~~I 21414-66~~
ACC NR: AP6008687

be formed is placed on the mold and covered with a layer of sand about 200 mm deep. Explosive charges are placed on this first sand layer and covered with a second sand layer 300—350 mm deep. Plate 8 mm thick, 1080 mm wide, and 2750 mm long requires a total of about 2.5 kg of explosives. The first marks of damage appear on the surface of the concrete mold after 15—20 explosions. This damage is not serious and can be easily repaired. Orig. art. has: 12 figures. [DV]

SUB CODE: 13/ SUBM DATE: none/ ATD PRESS: 4221

Card 2/2 VLR

HRAZDIL, Karel, MUDr.

Milk fistula following incision of infantile swelling of the breast.
Cesk. gyn. 21 no.5:356-357 Sept 56.

1. III. porodnicka a gynaekol. klinika KU - pediatricka fakulta,
prednosta prof. Dr. R. Peter.

(BREAST, fistula

milk fistula, late result of incision of swelling of
breast in infancy (Cz))

(MASTITIS, in infant and child

misdiag. of infantile swelling of breast, with incision,
causing develop. of milk fistula in adult (Cz))

CHMELIK, V., C.Se.; ZALOUEK, M.; FUCHS, Vl.; HRAZDIL, K.

Surgical therapy of the cervix uteri in discharges. Cesk. gyn.
26[40] no.4:271-274 '61.

(CERVICITIS surg) (LEUKORRHEA surg)

HRAZDIRA, A.; PIVETZ, B.

AGRICULTURE

Periodical VESTNIK. Vol. 5, no. 11, 1958.

HRAZDIRA, A.; PIVETZ, B. A national conference on poplars. p. 620.

Monthly List of East European Accessions (EEA) LC, Vol. 8, no. 3, March, 1959. Uncl.

HRAZDINA, B.

Technological part of the design of an industrial plant, p. 29,
ZA SOCIALISTICKOU VEDU A TECHNIKU (Pripravny vybor vedeckych
technickych spolecnosti pri eskoslovske akademii ved) Praha,
Vol. 5, No. 1, Jan. 1955

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

HAMBACH, R., MUDr.; HRAZDIRA, C. L., MUDr., RNDr.; ZAK, R., MUDr.

Facial actinomycosis with cerebral complications and actinomycotic
bronchopneumonia. Cas. lek. cesk. 93 no.7:175-179 12 Feb 54.

1. Z pathol. anat. odd. KUNZ v Jihlave: pred. prof. Dr. Pavlica.

Z neurol odd. OUNZ v Trebici: pred. Dr. B. Chytka. Z Chir. odd.

OUNZ v Trebici: pred. doc. Dr. K. Holubec.

(ACTINOMYCOSIS,

facial, with cerebral & bronchopulm. involvements.)

EXCERPTA MEDICA Sec. 7 Vol. 9/11 Nov. 55

HRAZDIRA, C. L.

2431. HRAZDIRA Č. L. Neurol. Odd. OÚNZ-nemocnice v Trébsčí. *Nemoc kočičího
skrābnutí s encefalitickou komplikací. An illness due to cat's
scratching with an encephalitic complication VNITR. LÉK.
1955, 1/2 (81-86)

An acute case caused by a cat's scratching showed skin reaction in the face, tonsillitis, eosinophilia and an encephalitic condition. In the first phase the bulbar nucleus and the grey matter of the cortex were affected. Administration of chlor-tetracycline had a good therapeutic effect. The second phase appeared to be a late allergic encephalitis.

Pospíšil - Brno (XX, 6, 7, 8)

EXCERPTA MEDICA Sec 4 Vol 12/6 Med. Micro. June 59
 1737. ELECTROPHORETIC INVESTIGATIONS OF THE CEREBROSPINAL
 FLUID IN THE DIAGNOSIS OF TUBERCULOUS MENINGITIS - Elektro-
 phoretische Untersuchung des Liquors bei tuberkulösen Meningitiden zum
 Nachweis von Tuberkuloseerregern - Hrazdira C. L. Neurol. Klin.,
 Masaryk-Univ., Brno (Brünn), CSR - TUBERK.-ARZT 1958, 12/6 (355-361)
 Tables 1 illus. 1

Electrophoretic methods were used to detect *M. tuberculosis* in the CSF of 12 patients. Thirty-two specimens were examined and all were found positive. In 2 patients the tuberculous process was complicated by a coccal infection. Electrophoresis succeeded in establishing the presence of both types of microbes. During the early stages of the disease the tubercle bacilli migrated to the cathode, while specimens taken during treatment showed migration in both directions, or exclusively to the anode. This reversal of direction was associated with changes in the structure of the bacilli. It is suggested that antituberculosis drugs, by interfering with the bacterial metabolism, are responsible for this behaviour in the electric field and for the morphological changes. This view is supported by the results of experiments with a suspension of *M. tuberculosis* H37Rv: electrophoresis caused neither structural changes nor the appearance of negatively-charged bacilli. This technique can also be employed to demonstrate other microorganisms in the CSF.
 Lorber - Sheffield (L, 4, 7, 8, 15)

CZECHOSLOVAKIA/Acoustics - Ultrasonics.

J

Abs Jour : Ref Zhur Fizika, No 8, 1959, 18803

Author : Hrazdira, Ivo

Inst : -

Title : Effect of Ultrasound on the Speed of Settling of Erythrocytes.

Orig Pub : Scripta med., 1958, 31, No 7-8, 303-306

Abstract : The author has investigated the influence of ultrasound on the human blood with normal speed of settling of erythrocytes and with pathologically increased speed. The action of the ultrasound was judged by the change in the speed of settling of the erythrocytes and from microscopic pictures of blood smears. Continuous exposure reduces the speed of settling of erythrocytes substantially, and the erythrocytes, judging from the microscopic picture, shown clear symptoms of damage. The author believes that the slowing down of the speed

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CZECHOSLOVAKIA/Acoustics - Ultrasonics.

J

Abs Jour : Ref Zhur Fizika, No 8, 1959, 18803

of settling of the erythrocytes is a result of morphological changes in the erythrocytes and that it is due essentially to heating under the influence of ultrasound.

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BRACH, PA, C. L.

Viewpoints on qualitative sedimentation cytology in evaluation
of cerebrospinal fluid with a normal cell count. Czech. neuror.
27 no.1:35-39 Jan 1965

1. Neurologická klinika, lékařské fakulty University J. E.
Šteky v Brně (prezentováno - prof. dr. K. Šteky).

SEVCIF, M.; CHALUPA, B.; KLHUVKOVA, K.; HRAZDIRA, C. L.

Survey of health conditions in electric-welders. Pracovní lek.
12 no.5:229-235 Je '60.

1. Klinika chorob z povolani v Brne, prednosta doc. MUDr. K. Kadlec;
Oddeleni hygieny prace ~~KHS~~ v Brne, reditel MUDr. A. Svoboda; Neuro-
logicka klinika v Brne, prednosta prof. MUDr. K. Popek.
(INDUSTRIAL MEDICINE)

SEVCIK, M.; CHALUPA, B.; HRAZDIRA, C.L.; KLHUKOVA, E.; SYNKOVA, J.

Acute group poisoning with active organic phosphates. Prac. lek. 14
no.7:317-321 S '62.

1. Klinika nemoci z povolani v Brne, prednosta doc. cr. J. Vyskocil.
(PHOSPHORUS POISONS ORGANIC) (NEUROLOGY)

HRAZDIRA, C. L.

Clinical picture on functional disorders of the diencephalon. Cesk. neurol. 25 no.4:284-291 J1 '62.

1. Neurologická klinika University J. E. Purkyne v Brně, přednosta prof. dr. K. Popek.

(DIENCEPHALON dis)

CZECHOSLOVAKIA

C. L. HRAZDIRA, Neurologic Clinic of the Medical Faculty of the University of J. E. Purkyne (Neurologická klinika lékařské fakulty UJEP) [Universita Jana Ev. Purkyne], Head (prednosta) Prof Dr K. POPEK, Brno.

"Corticotropin Treatment of Myasthenia."

Prague, Ceskoslovenska Neurologie, Vol 26, No 2, 1963; pp 141-143.

Abstract [English summary modified]: Four female patients were treated with infusions of corticotropin Spofa; courses starting with 6.25 IU, 12.5 the next day, then 18.75, then 10 X 25 IU, then gradually decrease daily dose again. Best results were obtained in recent patients without lymphorrhage into the involved muscles as evidenced by biopsy and microscopy; in others improvement was always of short duration if present. Excellent results in some of the patients. Mode of action is quite unclear but obviously myasthenia is a disease of very complex etiology. Seven Western and 1 Soviet reference.

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L 33494-66

APPROVED FOR RELEASE: 09/21/2001 SOURCE CODE 86/0082/66/000/002/0107/0110 CIA-RDP86-00513R000618220009-3

AUTHOR: Hrazdira, C. L.

ORG: Neurological Clinic, Medical Faculty, J. Ev. Purkyne University /headed by Professor, Doctor K. Popok/, Brno (Neurologická klinika lékařské fakulty UJEP)

TITLE: Sedimentation apparatus for the preparation of cytological specimens of the cerebrospinal fluid or other oligocellular biological fluids

SOURCE: Ceskoslovenska neurologie, no. 2, 1966, 107-110

TOPIC TAGS: cytology, central nervous system, sedimentation separation, chemical laboratory apparatus

ABSTRACT: The author describes an apparatus which he designed for the preparation of cytological specimens from the cerebrospinal fluid and other biological fluids with a low cell content. The apparatus operates on the principle of Sayk's sedimentation chamber. The apparatus offers substantial improvements over Sayk's original arrangement. Orig. art. has: 3 figures. [Based on author's Eng. abst.] [JPRS]

SUB CODE: 06, 07 / SUBM DATE: 02Nov64 / ORIG REF: 001 / OTH REF: 005

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CZECHOSLOVAKIA

HRAZDIRA, C.L.; HANAK, L.; SKALNIK, J.; VAGNER, B.; Neurological
Clinic, Medical Faculty, J.E. Purkyne University (Neurologická
Klinika Lek. Fak. UJEP), Brno, Chief (Prednosta) Prof Dr K. POPEK.

"ACTH in the Treatment of Multiple Sclerosis."

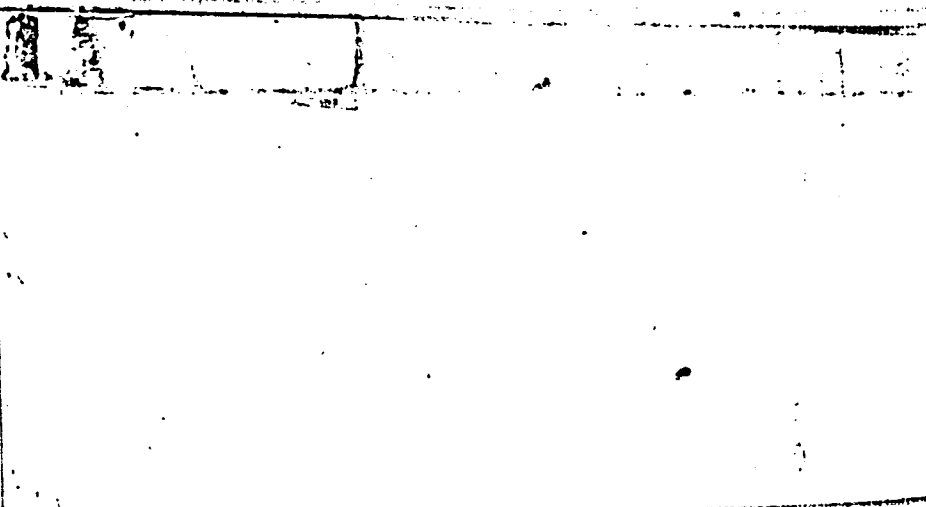
Prague, Ceskoslovenska Neurologie, Vol 30, No 1, Jan 67, pp
48 - 51

Abstract /Authors' English summary modified 7: Results obtained
in treating 60 patients with ACTH are described. Best results
were obtained with the disease in the acute form particularly
in the initial stages of the disease. Autonomic and met-
abolic tests proved that ACTH treatment reacts on the general
mechanism of adaptation. Close supervision of patients who re-
ceive ACTH is necessary. 1 Table, 10 Western, 1 Czech reference.
(Manuscript received 25 Jan 66).

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EXCERPTA MEDICA Sec 2 Vol 12/9 Physiology Sept 59

3842. EFFECT OF SUPERSONICS ON THE ESR - Vliv ultrazvuku na sedimentační rychlost erythrocytů - Hrazdina I. Úst. Lék., Fys. Lék. Fak. MU, Brno - SCR. MED. FAC. MED. BRUNENSIS 1958, 31/7-8 (303-306) Graphs 1
Effects of supersonic exposure on blood were judged from changes in the ESR and in the microscopic picture of blood films. Prolonged exposure considerably reduces the ESR, and microscopically the erythrocytes show distinct signs of damage. Since a similar effect can be brought about by simple heating it is concluded that the retardation of the ESR is a result of morphological changes in the erythrocytes caused primarily by the thermal effects of supersonics.



HRAZDIRA, Ivo

Morphological changes in the leukocytes after ultrasonic waves.
Scr. med. fac. med. Brunen. 34 no.7/8:315-322 '61.

1. Katedry lekarske fysiky lekarske fakulty university J.E. Purkyno
v Brne Vedouci katedry: MUDr. Jaroslav Stanek CS.
(LEUKOCYTES pathol) (ULTRASONICS)

BILKOVA, Bohumira; HRAZDIRA, Ivo

Changes in the coagulation activity of the blood plasma produced by
ultrasonics. Scr. med. fac. med. Brunensis 35 no.5:181-187 '62.

1. Institut für medizinische Physik der medizinischen Fakultät, Brno.
Vorstand: MUDr. Jaroslav Stanek CSc.
(FIBROGEN) (PROTHROMBIN) (ULTRASONICS)

HRAZDIRA, I.; BILKOVA, Bohumira

Effect of ultrasound on bone marrow cell suspensions in vitro.
Folia biol. (Praha) 9 no.5:398-401 '63.

1. Institute of Medical Physics, Medical Faculty, Purkyne
University, Brno.

(BONE MARROW) (ULTRASONICS)
(POLYVINYLPIRROLIDONE)

NEZVAL, Jaroslav; HRAZDIRA, Ivo; KOCIAN, Jozef

Changes in the permeability of isolated frog skin caused by
Septonex and chemicals influencing its bactericidal action.
Scr. med. fac. med. Brunensis 36 no.7:323-328 '63.

1. Katedra hyg. epid. lekarske fakulty University J.E.
Purkyne v Brne (Vedouci katedry: prof. MUDr. et RNDr. K.
Halacka); Katedra lekarske fysiky lek. fakulty University
J.E.Purkyne v Brne (Vedouci katedry: zast. doc. MUDr.J.
Stanek, CSc.) a Katedra farmakologie lekarske fakulty Uni-
versity J.E.Purkyne v Brne (Vedouci katedry: MUDr. J.Sajner,
CSc.).

*

KOČIAN, Jozef,; HRAZDÍRA, Ivo

Trials on the conductometric determination of changes in the permeability of isolated frog skin. Scr.med.fac. med. Brunensis 36 no.7:329-337 '63.

1. Katedra farmokologie lékařské fakulty University J.E. Purkyně v Brně (Vedoucí katedry: MUDr. J. Sajner, CSc.), a Katedra lékařské fyziky lékař. fakulty University J.E. Purkyně v Brně (Vedoucí katedry: zast. doc. MUDr. J. Staněk, CSc.)

*

HRAZDIRA, Ivo; ZELNICEK, Eman

Physical-chemical effects of ultrasonics. Scr.med.fac.med.
Brunensis 37 no.1:1-9 '64

1. Katedra lekarske fyziky lekarske fakulty J.E.Purkyne v Brne
(vedouci: doc. MUDr. Jaroslav Stanek, CSc.) a Katedra lekarske
chemie lekarske fakulty university J.E.Purkyne v Brne (vedouci:
prof. MUDr. Oktavian Wagner).

*

DOHNÁLEK, J.; HRAZDÍRA, I.; ČEČAVA, J.; STANEK, F.; SVOBODA, J.

Penetration of radiiodine through the skin enhanced by ultrasonics. Cesk. dermat. 40 no.3:173-176 My '65.

I. Katedra radiologie a nukleární medicíny (ved. : prof. dr. J. Holý, DrSc), katedra lékařské fyziky (vedoucí zast. doc. dr. J. Stanek, CSc.), II. stomatologická klinika (prednostai : prof. dr. J. Svejda) lékařské fakulty University J.E. Purkyně v Brně.

L 3637-66 EWT(1)/FS(v)-3 DD

ACCESSION NR: AP5023705

CZ/0063/65/011/004/0330/0333

AUTHOR: Hrazdira, I. (Grazdira, I.)

TITLE: The direct and indirect effect of ultrasound on bone-marrow cell suspensions

SOURCE: Folia biologica, v. 11, no. 4, 1965, 330-333

TOPIC TAGS: radiation biological effect, animal physiology, ultrasonic effect, bone marrow

ABSTRACT: The direct and indirect effect of ultrasound (frequency 800 kc, intensity 0.8 and 1.5 w/cm²) on rat bone-marrow cells suspended in saline solution and in saline solution containing 5% and 10% Subtosan (3.5% polyvinylpyrrolidone) was studied. The number of surviving cells, the pH change, and the amount of free HNO₂ formed as a result of exposure to ultrasound were determined in every experimental sample. The experiments conclusively demonstrated the indirect effect of ultrasound on suspended bone-marrow cells, manifested in a decrease in the number of surviving cells, and showed that it increased with the length of exposure of the suspension solutions. A connection between this effect and physicochemical changes in the suspension medium was also demonstrated. The presence of a small amount of colloidal substance limited the formation of chemically active substances and the indirect effect of ultrasound on the suspended bone-marrow cells. The direct

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L 3637-66

ACCESSION NR: AP5023705

effect of ultrasound on a cell suspension is a function of mechanical factors of the ultrasonic field and the properties of the suspension medium. Comparison with the indirect effect shows that the average participation of physicochemical changes in the final result is only 2—3%. In the case of the indirect effect, the course of survival after exposure of the medium to ultrasound is far more dependent on the hydrogen ion concentration than on the nitrite ion concentration, but is not completely explained by either. In conclusion, this study demonstrated the indirect effect of ultrasound on surviving isolated bone-marrow cells and its close connection with the formation of chemically active substances. However, the detailed mechanism of this effect requires further study. Orig. art. has: 2 figures and 1 table. [JS]

ASSOCIATION: Department of Medical Physics, Faculty of Medicine, Purkyne University, Brno

SUBMITTED: 02Dec64

ENCL: 00

SUB CODE: LS

NO REF SOV: 002

OTHER: 010

ATD PRESS: 4116

BVK.

Card 2/2

L 13310-00

ACC NR: AP6006013

SOURCE CODE: CZ/0053/65/014/004/0277/0278

AUTHOR: Hrazdira, I.

14

ORG: Institute of Medical Physics, Medical Faculty, UJEP, Brno (Ustav lekarske fysiky lek. fak. UJEP) B

TITLE: Biophysical effect of ultrasound [This paper was presented during Biophysical Days, Brno, 12 Jun 64.]

SOURCE: Ceskoslovenska fysiologie, v. 14, no. 4, 1965, 277-278

TOPIC TAGS: ultrasonic irradiation, cell physiology, blood plasma, blood, animal physiology

ABSTRACT: Study of effect of ultrasound on blood cells, blood plasma, biological membrane permeability and on models indicates very unique effects, complex and related to properties of irradiated media. The primary factories mechanical, but functional changes are often effected by thermal and physical chemical components.
[JPRS]

SUB CODE: 06 / SUBM DATE: none

Card 1/1

HRAZDIRA, J.

TECHNOLOGY

Periodical AUTOMOBIL. Vol. 2, no. 12, 1958.

HRAZDIRA, J. Use of automatic machining lines in our automobile industry. p. 394.

Concluding the year. p. 393.

Monthly List of East European Accessions (EEAI) LC, Vol. 8, no. 3, March, 1959. Uncl.

HRAZDIRA, L.

MAMBACH, R.; HRAZDIRA, L.; ZAK, R. "Actinomycosis of the Face with a Cerebral
Complication and Actinomycotic Bronchopneumonia." p. 175.
(Casopis Lekaru Ceskych. Vol. 93, no. 7, Feb. 1954. Praha/

SO: Monthly List of East European Vol.3, No. 6
Accessions / Library of Congress, June ⁴ 1957, Uncl.

HRAZDIRA, R.

Establishment of the Research Institute of Building and Ceramic Materials. p. 76.

Vol. 3, no. 3, Mar. 1954 (Mechanisace)
INZENYRSKE STAVEY
Praha, Czechoslovakia

So: Eastern European Accession Vol. 5 No. 4 April 1956

HRAZDRA, S.; CVRZAL, E.; PRECEK, J.

The AD automatic lathe with a spindle of large turning length. p. 499.
(STROJIRENSKA VYROBA, Vol. 4, No. 11, Nov 1956, Praha, Czechoslovakia)

SO: Monthly List of East European Accessions (EEAL) LC, Vol. 6, No. 12, Dec 1957, Uncl.

HRAZDIRA, Zdenek, inz. CSc.

Fertilization of meadow soils by rapid renovation of grass stands. Rost výroba 10 no. 3:291-304 Mr '64.

1. Research Institute of Irrigation, Bratislava, Research Station Jevicko.

POKORNY, J., VACHA, K.; VITAK, B.; HRAZDIRA, Z.

Maternal mortality in 1963 according to new criteria. Cesk. gynek. 29 no.9:686-691 N '64

1. I gyn. - por. klin. lek. fak. University J.E. Purkyne v Brne (prednosta prof. dr. L.Havlassek [deceased]); Gyn. klin. lek. fak. Karlovy University v Hradci Kralove (prednosta doc. dr. K.Vacha, DrSc.) a Odbor pece o zenu a dite min. zdravotnictvi Ustredi cs. advokacie v Praze.

CZECHOSLOVAKIA

HRAZDIRA, C.L.; SKALNIK, J.; HAMAK, L.; HEZVAL, J.; VESSELSKY, K.;
HRAZDIROVA, V.; Neurological Clinic, Medical Faculty, Palacky
University (Neurologická Klinika Lek. Fak. PU), Olomouc.

"Some Results of Epidemiological Investigation in Multiple Sclerosis."

Prague, Ceskoslovenska Neurologie, Vol 30, No 1, Jan 67, p 71

Abstract: It was found that among the patients suffering from multiple sclerosis there were 10 times as many who were affected by tuberculosis in the past than the average of the total population. The same results were found in respect to streptococcal infection. In very few cases pregnancy could be blamed for the onset of the disease; however, in 1/3 of cases or pregnancies in women suffering from the disease there was a definite deterioration of the condition. Lumbar puncture had no immediate adverse effect, but in 12% of the cases extended difficulties appearing at a later period were detected. No references. Submitted at the Meeting of the Neurological Section, Slovak Branch, at Kosice 16 - 18 Jun 66.

1/1

HRAZDIROVA-POKORNA, V.

Contribution to the regulatory mechanism of carbohydrate metabolism in some stress reactions in children. Cesk. neurol. 25 no.3:209-214 My '62.

1. Neurologická klinika University J. Ev. Purkyně v Brně, predn. prof. dr. K. Popek.

(CARBOHYDRATES metabolism)
(STRESS in inf & child)
(CENTRAL NERVOUS SYSTEM physiol)
(BLOOD SUGAR in inf & child)
(NEUROLOGY in inf & child)

CZECHOSLOVAKIA

PACOVSKY, V.; KOMARKOVA, A.; DUBOVSKY, J.; HRBA, J.; BROULIK, P.; 3rd Internal Clinic, Faculty of General Medicine, Charles University (III. Interni Klinika Fakulty Vseobecneho Lekarstvi KU), Prague, Head (Prednosta) Member of Academy J. CHARVAT; Central Biochemical Laboratories, Faculty Hospital Krajsky Institute of National Health (Ustredni Biochemicke Laboratore Fakultni Nemocnice KUNZ), Prague, Head (Prednosta) Dr A. KOMARKOVA.

"Pseudohypoparathyroidism - A Primary Defect of the Renal Tubule."

Prague, Casopis Lekaru Ceskych, Vol 105, No 34, 26 Aug 66, pp 922 - 924

Abstract [Authors' English summary modified]: Influence of exogenous parathormone on the renal clearance of phosphates and on the urinary excretion of hydroxyproline and citric acid in pseudohypoparathyroidism, post-operative hypoparathyroidism, and in healthy controls was investigated. Direct evidence was found proving that the primary defect in pseudohypoparathyroidism is the isolated lack of sensitivity of the tubule to parathormone, while the other target organ - the bone - responds normally. The use of this test in diagnosis is discussed. 1 Figure, 1 Table, 4 Western, 5 Czech references.

1/1

CZECHOSLOVAKIA

PACOVSKY, V.; KOMARKOVA, A.; BROULIK, P.; HRBA, J.; 3rd Internal Clinic, Faculty of General Medicine, Charles University (III. Interni Klinika Fak. Vseob. Lek. KU), Prague, Head (Prednosta) Member of Academy J. CHARVAT; Central Biochemical Laboratories, Faculty Hospital, Krajsky Institute of National Health (Ustredni Biochemicke Laboratore Fakultni Nemocnice KUNZ), Prague, Head (Vedouci) Dr A. KOMARKOVA.

"Acquired Insensitivity of Renal Tubulus to the Exogenous Parahormone in Primary Hyperparathyroidism. A New Test in Differential Diagnosis of the Hyperfunction of the Accessible Corpuscles."

Prague, Casopis Lekaru Ceskych, Vol 105, No 26, 24 Jun 66, pp 704 - 706

Abstract: Renal tubulus in primary hyperparathyroidism is constantly subjected to increased amounts of parahormone. Tubular phosphate resorption (TPR) and Tm of phosphates is reduced, and there is no response to administration of exogenous parahormone. In chronic pyelonephritis response to exogenous parathormone reduces the TPR and Tm % of phosphates; the response in hypercalcemia is reduction of TPR%. 2 Tables, 2 Western, 4 Czech references.

1/1

HRBA, J.

HRBA, J. Balance sheets and budgets on a collective farm.. p. 21.
Improving the quality of milk and milk products. p. 24. Evaluating experiences
with the organization of work in a cow stable. p. 26.
Vol. 10, no. 12, Dec. 1956
ROLNICKE HLASY
AGRICULTURE
Czechoslovakia

So: East European Accession, Vol. 6, No. 5, May 1957

HRDA, J.

Notes on calculations concerning construction and adaptation on collective farms;
new rules on amortization resulting from investment credits. p. 19 (Holnicke
Hlasý Vol. 11, no. 1, Jan. 1957 Praha)

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

HRBAC, B.

Boris Nikolaevich Iurev; an obituary. p. 303. (Kridla Vlasti, No. 10, May 1957.
Praha, Czechoslovakia)

SO: Monthly List of East European Accessions (EEAL) LC, Vol. 6, No. 8, Aug 1957. Uncl.

HRBAC, Jan, inz.

Research on ventilation, air conditioning and dust suppression
in mines. Uhlí 5 no.2:43 F '63.

1. Hornický ústav, Československá akademie věd, Praha.

HRBAC, Jan, inz.

Effect of the extinguishing of mine fires by water on mine ventilation. Rudy 11 no.5:147-151 My '63.

1. Hornicky ustav, Ceskoslovenska akademie ved, Praha.

CA HKBAC/ER, J.

Flight reaction of tadpoles of the common toad caused by chemical substances. [Russian] Likhachev, V. *Experiencia* 6, 195-2, (1950). Toad (*Bufo bufo*) larvae showed flight reaction when exposed to fluid from crushed tadpoles (*Bufo bufo*, *Bufo viridis*, *Rana esculenta*), as well as exts. from the skin of adult *Bufo bufo*, *B. viridis*, and *B. calamita*. The substance is resistant to boiling (15 min.) and is sol. in EtOH and ether. Digitalin produces a similar flight reaction. D. S. Farner

"Uneasiness of toad tadpoles and of spawning roaches in water containing dissolved stuffs from their skin, and their general exit from such waters.", p. 149, (SPORNÍK, Vol. 26, #1/2, Feb. 1953, Czechoslovakia)

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

HRBACEK, JAROSLAV.

Hrbacek, Jaroslav. Hydrobiologie. (Vyd. 1.) Praha, Statni pedagogicke nakl., 1954. 152 p. (Ucetni texty vysokych skol) (Hydrobiology; a textbook. 1st ed. bibl., index)

SO: Monthly List of East European Accessions, (MEAL), LC, Vol. 4, No. 11, Nov. 1955, Uncl.

HRBACEK, Jaroslav

Species compositions and the amount of zooplankton in relation to the fish stock. Rozpravy mat CSAV 72 no.10:3-114 '62.

Hrbál, Pavel

✓6498* Railway Cars for Transporting Oxygen. *Zelezničné vozne na dopravu kyslíka. (Slovak.)* Pavel Hrbál. *Zedranie*, v. 4, no. 11, Nov. 1955, p. 329-334.

(1) Describes types of cars and tanks, and connections between tanks; carrying and delivery capacity. Advantages, safety, and economy of these special cars are compared to truck transport. Diagrams, photograph, table.

HRBAL, P.

Technology of welding of locomotive wheel spokes in repair shops. p. 82.

ZVARACSKY SBORNIK. (Slovenska akademie vied) Bratislava, Czechoslovakia. Vol. 8, no. 1, 1959.

Monthly list of East European Accessions (EEAI) LC, Vol. 8, no. 10, Oct. 1959. Uncl.

HRBAT, P.

Coating of running wheel blades of Kaplan turbines. p. 475.

ZVARACSKY SBORNIK. (Slovenska acadmic vied) Bratislava, Czechoslovakia.
Vol. 8, no. 4, 1959

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

Uncl.

HRBAL, Pavel

Welding on site. Zvaranie 10 no.11:339-340 N '61.

1. Vyskumny ustav svaracsky, Bratislava.

S/137/62/000/011/037/045
A006/A101

AUTHOR: Hrbál, Pavel

TITLE: Investigating the weldability of grade 15320.6 steel

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 11, 1962, 9, abstract 11E52
("Zváranie", 1962, v. 11, no. 4, 106 - 109, Slovak.; summaries in
Russian, German and English)

TEXT: The author investigated the weldability of grade 15320.6 steel plates, 100 mm thick, containing in %: C 0.24, Mn 0.56, Si 0.30, P 0.011, S 0.020, Cu 0.14, Mo 0.69, Cr 1.15, V 0.19, the rest Fe. The steel is intended for the manufacture of gas turbine runners. Welding tests on a VUS-25 machine, tension and bending tests, and metallographical analysis proved the satisfactory weldability of the steel plates, up to 100 mm thick. The preheating temperature in welding should be strictly maintained at 400°C; after welding the joint is held for 1 hour at the same temperature. Annealing is performed at 680°C, cooling is conducted with the furnace. "V-hof spel. extra" electrodes with basic coating are recommended. The electrode diameter for a root fillet is 3.15 mm

Card 1/2

Investigating the weldability of grade 15320.6 steel

S/137/62/000/011/037/045
A006/A101

and for the subsequent fillets 4 and 5 mm. Prior to the use the electrodes are dried at $\geq 250^{\circ}\text{C}$ for ≥ 3 hours.

M. T.

[Abstracter's note: Complete translation]

Card 2/2

HRBAL, Pavel, inz.

Repair of blast furnace shells by welding. Zvaranie ll no.11:298-300
N '62.

1. Vyskumny ustav zvaracsky, Bratislava.

HKD AFV M, J.

BLUMBERG, J.; CERNA, J.; HRBATOVA, J.

42

Conteben therapy of pulmonary tuberculosis. Cas. lek. cesk.
90 no.26:813-815. (CJML 21:1)

1. Of the International Student Sanatorium imienia Zd.
Nejedleho in Trebotove.

HRBEK, A.

A new type of small furnaces for laboratories. Slevarenstvi
10 no.3:114 Mr '62.

HREEK, Antonin

Use of basic steel slag as smelting material for cupola furnaces. Slevarenstvi 10 no.5:186-187 My '62.

1. Ceskomoravska-Kolben-Danek Praha, zavod Slevarny.

KRAUS, Jaroslav; HRBEK, Antonin

Preliminary comparison of mechanical properties of the acid electric steel and basic electric steel and their economical production. Slevarenstvi 10 no.7:259-261 J1 '62.

1. Ceskomoravska-Kolben-Danek Praha, Slevarny.

SVOBODA, Jaroslav; HREBK, Antonin; KADLEC, Jiri; DVORAK, Jiri

Preparatory precision casting of metallic molds into a prehardened mixture. Slevarenstvi 10 no.8:308-311 Ag '62.

1. Ceskomoravska-Kalben-Dansk Praha, Slevarny.

HRBEK, A.

"Phase rule" by V.P.Droving, J.A.Kalashnikov. Reviewed by A.Hrbek.
Hut listy 20 no.1:25 Ja '65.

HRBEK, A., Dr.

Febrile convulsions in children. Cesk. pediat. 11 no.11:
801-811 Nov 56.

1. II. detska klinika fakulty detskeho lekarstvi v Praze,
prednosta prof. Dr. J. Houstek.
(CONVULSIONS, in inf. & child
febrile (Cz))

HRBEK, A., Dr.; PROCHAZKA, V., Dr.

Seizures in children. Cesk. pediat. 11 no.11:811-813 Nov 56.

1. II. detska klinika fakulty detskeho lekarstvi v Praze,
prednosta prof. Dr. J. Houstek Detske oddeleni OUNZ v Kutne
Hore, primar Dr. V. Prochazka.

(EPILEPSY, in inf. & child

incidence of seizures & unconsciousness, statist. (Cz))

HRBEK, A.

Effect of some antipyretics and the hyperthermia on convulsions. p.137.
(Ceskoslovenska Fysiologie, Vol. 6, No. 2, 1957, Praha, Czechoslovakia)

SO: Monthly List of East European Accessions (EEAL) LC. Vol. 6, No. 9, Sept. 1957. Uncl.

EXCERPTA MEDICA Sec 2 Vol 12/6 Physiology June 59

2544. THE INFLUENCE OF BACTERIAL TOXINS ON SEIZURE SUSCEPTIBILITY - Hrbek A. II. Child. Clin., Fac. of Pediat., Prague - PHYSIOL. BOHEM. 1958, 7/3 (300-305) Tables 1

The effects of *Shigella shigae* toxin, streptolysin O and staphylolysin on seizure susceptibility was studied in mice. After injection of *Sh. shigae* toxin (dilution: 1:100) 60 mg./kg. of pentetrazole caused seizures in 46.6% of intoxicated mice, while only 16.6% of control animals showed signs of convulsive activity. Audiogenic seizures also occurred more frequently after injection of this toxin. The same held for seizures due to electroshock. Streptolysin O increased seizure susceptibility to pentetrazole and aminopyrine but not to electroshock and audiogenic stimuli. Staphylolysin was without effect on seizure susceptibility.

Hahn - Prague

HRBEK, A.; NOVAKOVA, L.; PAPEZOVA, J.

Examination of the vegetative nervous system in children. Acta univ. carol. [Med] no.2:203-218 '61.

1. Neurofysiologicke oddeleni Ustavu vyzkumu vyvoje ditete fakulty detskeho lekarstvi University Karlovy, reditel prof. MUDr. J. Houstek.

(AUTONOMIC NERVOUS SYSTEM in inf & child)

HRBEK, Antonin; Technicka spoluprace: GIRSOVA, Michaela; TROJANOVA, Hana

Electroencephalographic studies on the reactivity of the cerebral cortex in children by the method of induced rhythms. Acta univ. carol. [Med] no.2:251-262 '61.

1. Neurofysiologicke oddeleni Ustavu vyzkumu vyvoje ditete fakulty detskeho lekarstvi University Karlovy, reditel prof. MUDr. J. Houstek.

(ELECTROENCEPHALOGRAPHY in inf & child)
(CEREBRAL CORTEX physiol)

HRBEK, A.

Electrophysiological investigations of the optic system of newborn infants. Physiol. bohemoslov. 12 no.2:106-111 '63.

1. Department of Neurophysiology, Institute for Research of Child Development, Faculty of Paediatrics, Charles University, Prague.
(ELECTROPHYSIOLOGY) (VISION) (CEREBRAL CORTEX)
(LIGHT)

L 13770-66

ACC NR: AP6005627

SOURCE CODE: CZ/0079/65/007/002/0123/0124

AUTHOR: Hrbek, A.; Vitova, Z.; Mares, P.

ORG: Department of Neurophysiology, Research Institute for Child Development, Prague

TITLE: Evolution of visual evoked potentials in man [This paper was presented at the Third Interdisciplinary Conference on Experimental and Clinical Study of Higher Nervous Functions held in Mariánské Lázně from 19 to 23 October 1964.]

SOURCE: Activitas nervosa superior, v. 7, no. 2, 1965, 123-124

TOPIC TAGS: neurophysiology, man

ABSTRACT: 362 children aged between 7 months of intrauterine life and 15 years were examined. Light flashes with frequencies of 0.1 cps and 50 cps were used. The evoked potentials (EP) can be classified into 4 groups. 1. Fetal type in immature infants has a long latency and starts with a negative wave. 2. Newborn type in slightly immature infants starts with a sharp positive wave, latency is 187 msec. 3. Transitory type usually in the 2nd year of life. Begins with a negative wave, does not disappear with accelerated stimulation, but passes gradually into photic driving. 4. Mature type developing progressively from type 3. Latency is about 60 msec. Rhythmic afterdischarges follow. Evolution of optic EP in humans is substantially more complicated than in animals. [JPRS]

SUB CODE: C6 / SUM DATE: none / ORIG REF: 004 / OTH REF: 007
SOV REF: 002
Card 1/1 AW

CZECHOSLOVAKIA

HRBEK, A.; VITOVA, Z.; MARES, P.; Department of Neurophysiology,
Institute for Research of Development of Children, Faculty of Pediatrics
(Neurofysiologicke oddeleni Ustavu vyzkumu vyvoje ditete, fak. detsek, lek.)
Prague.

"Changes of Cortical Responses to Increased Frequency of Flash Stimuli."

Prague, Ceskoslovenska Fysiologie, Vol 14, No 5, Oct 1965; p 349-350.

Abstract: Study in 372 children from the 7 fetal month to age 15, 0.1 HZ.
to 50 HZ. Changes were closely correlated with age and are described in
detail. Graph, 1 Czech and 1 Western reference. Paper presented at the
15th Physiology Days, Olomouc, 28 May 65.

1/1

HRBEK, A.

"Physical chemistry of pyrometallurgic processes" by O.A.Jesin
[Esin, O.A.], P.V.Geld [Gel'd, P.V.]. Pt. 1. Reviewed by
A.Hrbek. Hut listy 18 no.10:758 0 '63.

"Physical principles of metal plastic deformation" by V.A.
Pavlov. Reviewed by A.Hrbek. 758

HRBEK, A.

44210
The Activation Energies of Viscous Flow and Self-Diffusion in Molten Metals. A. Hrbeek. *Physica Scripta*, 1968, 11, (3), 164-167. (In Czech). Experimental data and theories relating to self-diffusion and viscosity in liquid metals are surveyed. The activation energies for both processes are evaluated from data giving the temperature dependence of the viscosity in the case of Na, Al, K, Fe, Cu, Zn, Ag, Cd, Sn.

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CZECHOSLOVAKIA / Liquids.

D-8

Abs Jour : Ref Zhur - Fizika, No 4, 1957, No 9085

Author : Hrbek, Antonin

Title : Energy of Activation of Viscosity and Self-Diffusion of Molten Metals.

Orig Pub : Hutnicke listy, 1956, 11, No 3, 164-168

Abstract : Report on the investigation of the properties of metal in the molten state. The results obtained make it possible to calculate the viscosity and self-diffusion of molten metals at various temperatures. The results can be used in the future for binary systems, which makes it possible to calculate the energy relationships when the alloys are obtained. Bibliography, 44 titles.

Card : 1/1

HORNY, A.

Effect of certain antipyretics and of hyperthermia on resistance to convulsions. Cesk. fysiolo. 6 no.2:137-143 1957.

1. II. detska klinika fakulty detskeho lekarstvi Praha.

(HEAT, effects,

on exper. convulsions (Gz))

(ANALGESICS AND ANTIPYRETICS, effects,

antipyretics on exper. convulsions (Gz))

(CONVULSIONS, experimental,

eff. of antipyretics & heat (Gz))

H. H. H. H.

CZECHOSLOVAKIA/Electronics - Electron and Ion Emission

H-2

Abs Jour : Ref Zhur - Fizika, No 10, 1958, No 23270

Author : Hrbek Antonin, Vlasckove Libuse

Inst : Higher Institute for Conservation of Materials, Prague,
Czechoslovakia

Title : Change in the Surface of Metal in Accordance with the Data
of Observation on the Emission of Electrons under Atmospheric
Conditions.

Orig Pub : Goskosl. casop. fys., 1957, 7, No 5, 599-600, Praha, Czechoslovakia
(Czechoslovakian Academy of Sciences)

Abstract : Using the Bohun method (Referat Zhur Fizika, 1957, No 4,
10394), a study was made of the electron emission of thin
aluminum films, coated on glass by evaporation in vacuum.
The specimens were first kept for about three months under
normal atmospheric conditions. The initial thickness of
the Al_2O_3 film was 27 Å. Illumination of the specimen with
an incandescent lamp through a water filter has led to an in-
crease in emission by a factor of 10^4 and more. This increase
continues in light for several hours, and the thickness of

Card : 1/2

CZECHOSLOVAKIA/Electronics - Electron and Ion Emission

Abs Jour : Ref Zhur - Fizika, No 10, 1958, No 23270

the oxide layer is increased (to 73 Å after eight hours).
This process is particularly intense when the specimen is
illuminated with light having $\lambda = 3900$ Å. The authors give
a qualitative explanation for the discovered laws on the
bases of ideas concerning photoionization of the color cen-
ters. The electron that leave the latter can ionize the
adsorbed oxygen atoms. The negative ions O^- oxidize in-
tensely the aluminum atoms, which diffuse through the oxide
layer to the surface. The authors propose to use the above
phenomenon in the study of the process of oxidation of metals.
Bibliography, 8 titles.

Card : 2/2

Hybe K, Antonn

Alteration of a metal surface according to electron emission on exposure to the atmosphere. Antonn Tichok and Talmir Vlasakova (Inst. Protection Materials, Prague). Czechoslov. J. Phys. 7, 826-7 (1957) (in German). Al is vacuum-vapor deposited on glass and exposed to air for about 3 months. The Al₂O₃ layer thickness is then 27 Å. The photoelectric emission with visible light is studied by using a point counter (Hohun, C.I. 49, 15108c). The luminescent layers are photographed, and the microstructures of the illuminated and the dark part are shown at 1200X magnification. The oxide layer grows from certain centers and is optically active. Strong emission and oxidation occurs on illumination at 3000 Å. A theory of the phenomena is proposed. Manfred Mandelmann

HRBEK, ANT.

Czechoslovakia /Chemical Technology. Chemical Products H-4
and Their Application
Corrosion. Protection from Corrosion.

Abs Jour: Referat Zhur - Khimiya, No 1, 1958, 1620

Author : Teindl Josef, Hrbek Ant.

Title : Corrosion of the Inside Surfaces of Tin Cans

Orig Pub: Prumysl potravin, 1957, 8, No 2, 68-73

Abstract: Description of the corrosion of the inside surface of tin cans, and of studies of the sulfide layer that is formed. It is proposed to treat the cans with a passivating solution of the following composition (in grams per liter):
 Na_3PO_4 9, $\text{Na}_2\text{Cr}_2\text{O}_7 \cdot 2\text{H}_2\text{O}$ 8, NaOH 20, wetting agent (for example, alkyl sulfonate) 3.

Card 1/1

HRBEK, A.; TEINDL, J.

Metallurgical surface treatment of the tin plate produced in Liskovec. p. 329.
(Hutnicke Listy, Vol. 12, No. 4, Apr. 1957, Brno, Czechoslovakia)

SO: Monthly List of East European Accessions (EEAL) LC, Vol. 6, No. 8, Aug 1957. Uncl.

HRBEK, ANTONIN
CZECHOSLOVAKIA/Atomic and Molecular Physics - Liquids

D-8

Aos Jour : Ref Zhur - Fizika, No 2, 1958, No 3277

Author : Hrbek Antonin

Inst : Not Given

Title : Activation Energy of the Viscosity of Molten Alloys

Orig Pub : Hutnicke listy, 1957, 12, No 7, 593-597

Abstract : In this article the author develops a previously expounded theory (Referat Zhur Fizika, 1957, No 4, 9085) on the viscosity of molten metals and on the calculation of the activation energy of viscosity. The author emphasizes the great significance of the new concept he introduced of the "reduced energy of activation of viscosity." Depending on the temperature, the values of this reduced activation viscosity energy is calculated for the metals listed below: sodium, aluminum, iron, copper, zinc, silver, cadmium, tin, antimony, gold, mercury, lead, and bismuth. This new quantity was found to be linearly dependent on the overheating of the metal above the molting point. On the basis of the results obtained, the author derives an equation for the

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CZECHOSLOVAKIA/Atomic and Molecular Physics - Liquids

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Abs Jour : Ref Zhur - Fizika, No 2, 1958, No 3277

dependence between the viscosity of molten metals and their temperature. By way of proof the calculation is checked for mercury, lead and tin.

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HRBEK, A.; HELLEBRAND, L.

Discussion on L. Hellebrand's article "Irregular Deformation and Tafel's Law of Natural Lengths." p. 613. (HUTNICKE LISTY, Vol. 12, No. 7, July 1957, Brno, Czechoslovakia)

SO: Monthly List of East European Accessions (BEAL) LC, Vol. 6, No. 12, Dec 1957, Uncl.

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1. The first part of the document is a list of the names of the individuals who were involved in the project. The names are listed in alphabetical order. The names are: [illegible]

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AUTHOR: Antonín Hrbek

TITLE: Letter to the Editor: The Effect of Vapours on a Geiger Counter¹⁴

PERIODICAL: Československý Časopis Pro Fysiku, 1959, Nr 1, pp 114-114

ABSTRACT: Experiments have been made with a probe-type Geiger counter (Refs 1, 2). Distilled water, methanol, benzene, or mercury were placed underneath the measuring probe of the counter. The temperature was kept at 25 °C.

1. For small electric fields ($E = 1800$ to 2200 V), a sufficiently large diameter of the sphere at the end of the probe ($D = 1.22$ mm) and a large distance from the liquid to the probe ($H = 5$ to 10 mm), the vapour does not influence the operation of the counter.
2. For high electric fields, small D and small H , water vapour and methanol cause discharges in the counter.
3. Benzene or mercury vapour do not cause such discharges.
4. The pulses due to vapours are far larger and broader than those due to electrons.
5. The height of the pulses is characteristic of the liquid.

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Influence of liquid vapors on the Geiger (needle point with sphere) counter. Antonin Hirbek (Govt. Research Inst. Material Protection, Prague). *Z. Physik*, 9, 127-8(1959)(in German).—H. reports on exploratory qual. expts. with vapors of distd. water, MeOH, benzene, and Hg. The nonpolar mols. of benzene and Hg do not affect the counter. The explanation of the results is based on the action of the elec. field on polar mols. (deformation, disocn.).
A. Kreinheller

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HRBEK, A. AND OTHERS

"Effect of artificial protective layers on the exoemission of electrons from zinc and aluminum and its connection with the corrosion resistance."

HUTNICKE LISTY. Brno, Czechoslovakia, Vol. 14, March 1959.

Monthly List of East European Accessions (EEAI), LC, Vol. 8, No 8, September 1959.
Unclas.

SVOBODA, Jaroslav; HRBEK, Antonin

Pre-hardened mixtures. Slevarenství 9 no.11:396-398 N '61.

1. Ceskomoravska-Kolben-Danek Praha, zavod Slevarny.

(Founding)

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S/123/62/000/009/015/017
A052/A101

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AUTHOR:Hrbek, A.

TITLE: Copper alloy castings possessing a high electric conductivity

PERIODICAL: Referativnyy zhurnal, Mashinostroyeniye, no. 9, 1962, 13, abstract
9G75 ("Slvarenstvi", 9, no. 11, 1961, 449-451, Czech)

TEXT: At the CKD plant (Prague, ChSSR) has been developed and introduced for casting complicated elements a copper alloy E60 with electric conductivity equal to 60% of that of pure copper. The approximate composition of the alloy (in %): 0.15 - 0.25 Sn (0.5% lower than in the previously applied BrI alloy), 0.20 - 0.40 Zn, max. 0.10 Ni, max. 0.05 Fe, max. 0.15 Pb, max. 0.015 Al. When melting the smelt is refined with "medik" salt in order to eliminate the excess of hydrogen in the metal, and then a gradual reduction is performed by a successive adding of 0.3 - 0.5% Zn and 0.05 - 0.07% P. The composition of the "medik" salt (in %): chalk 15, soda 10, T2S sand 40, commercial pyrolusite 35. Machine elements with electric conductivity equal to 70 - 75% of that of pure copper are successfully cast of this alloy. To obtain higher electric conductivities (over 85%) P addition for reduction is decreased to 0.015% thereby decreasing the

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degassing degree of the smelt. Compared with BrI alloy (40% of pure copper electric conductivity) the new alloy cuts casting rejects by 1% and reduces tin consumption. Owing to high electric conductivity of the alloy, the weight of a number of castings can be cut down by 25%. The total saving due to the introduction of E60 alloy makes up 4,700 kronas per one ton of casting. There are 5 figures.

V. Palestin

[Abstracter's note: Complete translation]

Card 2/2

PUNCOCHAR, Z., inz.; KRUMNIK, F., inz.; HRBEK, A.; VETISKA, A.

Informations on metallurgy. Hut listy 16 no.1:68-72 Ja '61.