HEZ, N.

Labor productivity and wages in the merchant marine. Mor. flot. 24 no.11:37-40 N '64. (MIRA 18:8)

1. Nachal'nik sektora truda i zarabotnoy platy Tsentral'nogo nauchno-issledovatel'skogo instituta morskogo flota.

REZ, R.S., kand. yurid. nauk; SAKHAROV, S.D., inzh.

One method of computing the normal accumulated debt to the crew on leave days. Trudy TSNIIMF no.61:80-87 '64. (MIRA 19:1)

REZ, R.S., kand. yurid. nauk

Relation between the plan and the contract in organizing the process of cargo shipment. Trudy TSNIIMF no.65: 43-50 '65. (MIRA 18:12)

GURIN, L.Ye., kand. ekonom. nauk; KUTYANIN, P.I., kand. tekhn. nauk; REZ, R.S., kand. yurid. nauk

Increasing labor productivity in the merchant marine in conditions of a shorter workday. Trudy TSNIIMF no.56:3-21 '64. (MIRA 17:11)

REZABEK

CZECHOSLOVAKIA/Fitting Out of Laboratories. Instruments, H.
Their Theory, Construction and Use

Abs Jour : Referat Zhur - Khimiya, No 2, 1957, 4977

Author : Rezabek Antonin
Title : New Type of Heating of a Laboratory Reaction Vessel

Orig Pub : Chem. prumysl. 1956, 6, No 6, 231-233

Abstract : Description of a laboratory heater with minimal thermal inertia, in which the heating element is provided by the metal wall of the vessel of a cylindrical shape. The heater is supplied with current through a step-down transformer. Correlations that are needed for the calculation of such a heater, are included, and also a practical example of such a calculation.

Card 1/1 - 30 -

REZABEK, A.; VITOVEC, J.

Calculation of rotameters. p. 159. (Chemicke Listy. Vol. 51, no. 1, Jan. 1957.)

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

83842

Z/009/60/000/010/001/003
E073/E335

5.1210

AUTHORS: Vilím, Otakar and Řežábek, Antonín

TITLE: Contribution to the Simple Determination of the Temperature Dependence of the Viscosity of Fluids

PERIODICAL: Chemický průmysl, 1960, No. 10, pp. 533 - 534

TEXT: According to J.H. Perry (Ref. 3) the curves of the temperature dependence of the viscosity of various substances are very similar and therefore if, on the log η versus t, t is not in degrees Centigrade but in terms of the temperature difference, a single curve is obtained for all substances. This method was verified at the Research Institute for Synthetic Rubber, n.p. Kauchuk in conversion calculations for various temperatures of data measured by means of rotameters and a considerable variance of the values was observed for various types of substances. On the basis of evaluation of the temperature dependence for about 20 substances it was found that the method could be made considerably more accurate if the temperature difference is plotted in reduced values. If at least two viscosity values at two temperatures are known, interpolation can be carried out on the basis of the equation:

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E073/E335

Contribution to the Simple Determination of the Temperature Dependence of the Viscosity of Fluids

$$\log \eta = A + B/T \qquad (1) .$$

To enable plotting a generalised curve the constants A and B were first calculated for Eq. (1), in which T is substituted by T_r for all the 20 substances under consideration. By means of these constants, the derivations $dT_r/d\log \eta$ were determined for equal viscosity values of these substances and the values averaged. It was found that the real values of the derivations for equal viscosities, which characterise the slope of the temperature-dependence curves, are very close for the various substances. The average derivations were plotted in a graph against $\log \eta$. The generalised curve was then plotted on the basis of graphical integration of the equation:

$$T_r = \int \left(\frac{dT_r}{d\log \eta} \right)_{aver.} d\log \eta + \delta \qquad (2) .$$

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Contribution to the Simple Determination of the Temperature Dependence of the Viscosity of Fluids

The curve of this dependence is plotted in Fig. 1. To enable accurate plotting of this curve numerical data are entered in Table I for 20 substances. The method was then tested by calculating the viscosity values for temperatures about 40 °C higher than the temperature for which the viscosity was known. The thus calculated and experimentally determined results for η_2 for 20 substances are entered in Table II, which also contains the values of the constants of Eq. (1) for the reduced temperature. As an example, the viscosity of ethylbromide at 77.8 °C is calculated from the known value at 30 °C (0.348 cP). The thus calculated viscosity at 77.8 °C is 0.233 cP as compared with the measured value of 0.230 cP.

4

Card 3/4

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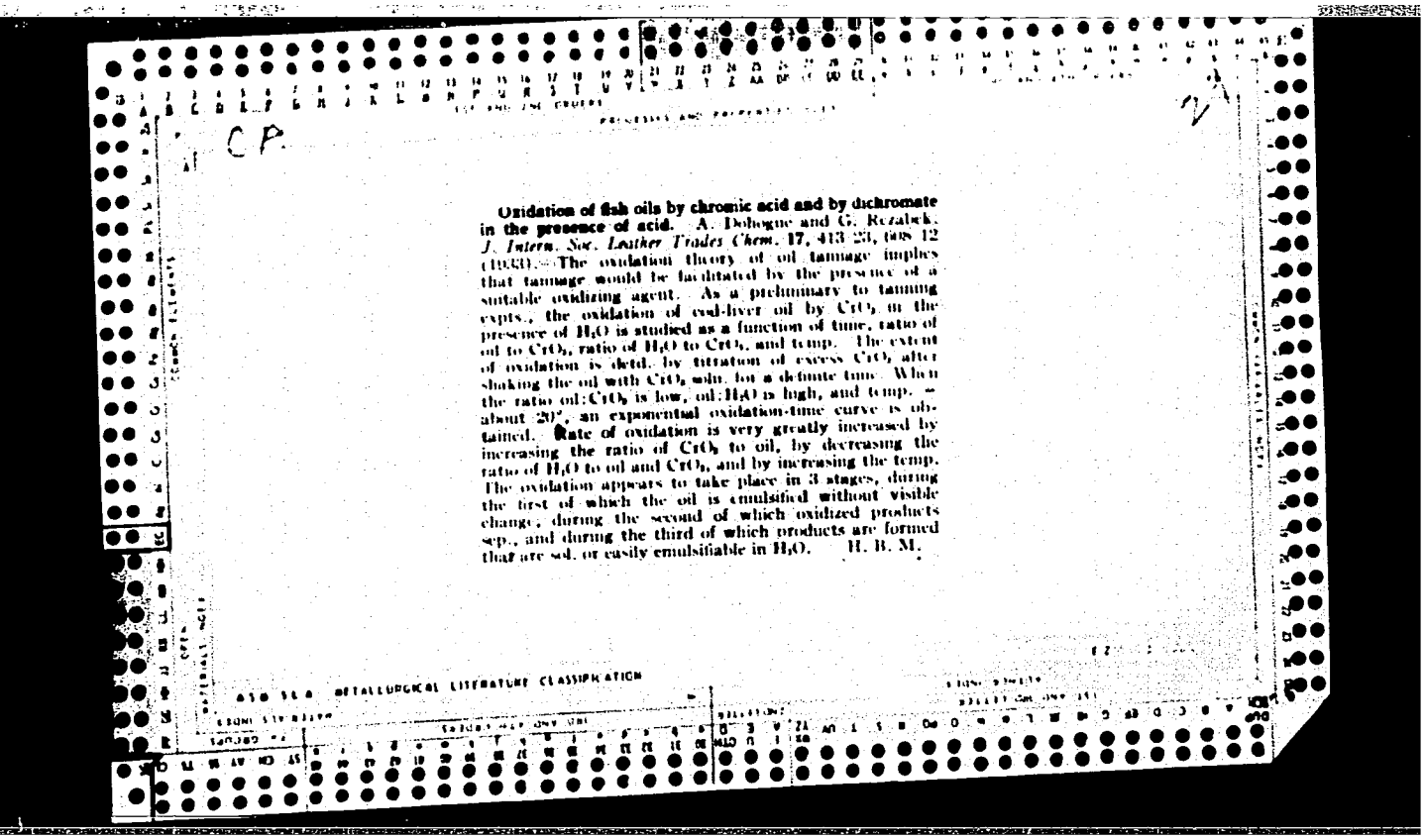
Z/009/60/000/010/001/003
E073/E335

Contribution to the Simple Determination of the Temperature Dependence of the Viscosity of Fluids

There are 1 figure, 2 tables and 4 English references.

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

Card 4/4



Oxidation of fish oils by chromic acid and by dichromate in the presence of acid. A. Dubogne and G. Rezalski. *J. Intern. Soc. Leather Trades Chem.* **17**, 413-23, 608-12 (1933).—The oxidation theory of oil tannage implies that tannage would be facilitated by the presence of a suitable oxidizing agent. As a preliminary to tanning expts., the oxidation of cod-liver oil by CrO_3 in the presence of H_2O is studied as a function of time, ratio of oil to CrO_3, ratio of H_2O to CrO_3, and temp. The extent of oxidation is detd. by titration of excess CrO_3 after shaking the oil with CrO_3 soln. for a definite time. When the ratio oil:CrO_3 is low, oil:H_2O is high, and temp. = about 20°, an exponential oxidation-time curve is obtained. Rate of oxidation is very greatly increased by increasing the ratio of CrO_3 to oil, by decreasing the ratio of H_2O to oil and CrO_3, and by increasing the temp. The oxidation appears to take place in 3 stages, during the first of which the oil is emulsified without visible change; during the second of which oxidized products sep., and during the third of which products are formed that are sol. or easily emulsifiable in H_2O. H. B. M.

KELNER, J.

A meeting on the use of radioisotopes. p. 210 (Sbornik Rada Lesnictvi Vol. 4, no. 4, 1957 Praha)

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

REZABEK, J.

Dialectics in offices. p. 92.
ZELEZNICE. Vol. 4, no. 4, Apr. 1954. Prague.

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

REZABEK, J.

The Metro through the eyes of a Czechoslovak railroad man. p. 151.
ZELEZNICE, Prague, Vol. 4, no. 6, June 1954.

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

REZAB.K, J.

The timetable, iron law of transportation; telling the truth. p. 66. (Zeleznice, Praha, Vol. 4, no. 3, Mar. 1954)

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

REZABEK, J., dr.

Albania and its railroad transportation. Doprava no.11:372 '60.

REZABEK, J.

"In the railroad technical museum in Moscow." (p. 290). ZELEZNICE (Zeleznicni vydavaterstvi) Praha, Vol 3, No 11, 1953.

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

REZAREK, Jaromir, dr.

Czechoslovak foreign policy in the field of transportation. Doprava 7 no.1:4-8 '65.

REZABEK, Jaromir, dr.

Permanent Czechoslovak-Polish Transportation Commission and its activity. Doprava no.3:231 '63.

REZABEK, Jaromir, dr.

Agreement on railroad transportation with Austria. Zel dop tech 10 no.11:350 '62.

TOMAN, Josef; FRYDRYCH, Miroslav, promovany ekonom; REZABEK, Jindrich

Discussing the new management system. Letecky obzor 9 no.4: 85-87 Ap '65.

1. Head of the Commercial Policy Department of the Czechoslovak Airlines (for Toman). 2. Deputy Director of the Administration of Commercial Airports (for Frydrych). 3. Head of Repair Services (for Rezabek).

REZABEK,K.; RABOCH,J.; Technicka spoluprace: NOVA,V.; MALCOVA,H.; PIKDAKOVA,L.

Role of the androgens in normal human ejaculate on uterotropic activity. Cesk. gynek. 28 no.9:610-612 N'63.

1. Vyzkumny ustav pro farmacii a biochemii v Praze (reditel dr. inz. O,Nemecek) a Sexuologicky ustav fak. vseob. lek. KU v Praze (prednosta prof.dr.J.Hynie).

REZABEK, K.

Determination of the time of action of corticotropic preparations by means of the estimation of ascorbic acid in the adrenals in rats. Cesk.fysiol. 9 no.3:261 My '60.

1. Vyzkumny ustav pro farmacii A biochemii, Praha.
(VITAMIN C metab)
(ADRENAL CORTEX pharmacol)
(CORTICOTROPIN pharmacol)

KOZLIK, V.; REZABEK, K.; ROTH, Z.

Compensation in hypophysectomy by ACTH titration. Cesk. fysiol. 8 no.5:451-452 S '59

1. Vyzkumny ustav lecivych rostlin, Vyzkumny ustav pro farmacii a biochemii, Praha.
(CORTICOTROPIN, pharmacol.)
(HYPOPHYSECTOMY, exper.)

REZABEK, K.

SCIENCE

REZABEK, K. Effect of ethyl alcohol on the secretion of the adrenocorticotropic hormone of the pituitary gland in rats; contribution to the regulatory mechanism of the adrenocorticotropic hormone. p. 501.

Vol. 6, no. 4, 1957.

Monthly Index of East European Accessions (EEAI) LC, Vol. 7, No. 12, Dec. '58

CZECHOSLOVAKIA

REZABEK, K.; KYNCL, J.; Research Institute of Pharmacy and Biochemistry (Vyzkumny Ustav pro Farmacii a Biochemii), Prague.

"Characteristics of Long-Lasting Effects of Drugs "

Prague, Ceskoslovenska Fysiologie, Vol 15, No 5, Sep 66, p 399

Abstract: The characteristics of resonance of the effects of a drug may be calculated using its elimination constant calculated on the basis of the course of its effect. The long-lasting effect may be expressed by the coefficient of persistency. This is the ratio of the elimination constant of the investigated drug to that of the basic substance. Formula for the calculation of the elimination constant is presented. It is expressed as 2.303 (log D - log d) / t, where t is the time of the experiment duration, and D and d are the two investigated doses. The persistency coefficient is specific for a given kind of animal tested. 1 Figure, 2 Western references. Submitted at 14 Days of Pharmacology at Smolenice, 15 Feb 66.

1/1

USSR/Human and Animal Physiology (Normal and Pathological).
Internal Secretion. Hypophysis.

Abs Jour: Ref Zhur-Biol., No 17, 1958, 79718.

Author : Rezabek, K.
Inst :
Title : Influence of Ethyl Alcohol on the Secretion of ACTH by the Pituitary Gland in Rats. On the Mechanism of Regulation ofSecretion of ACTH.

Orig Pub: Physiol. bohemosl., 1957, 6, No 4, 516-522.

Abstract: No abstract.

Card : 1/1

REZABEK, K.

Assay of long-acting corticotropin preparations by the adrenal ascorbic acid depletion test in rats. Physiol. Bohemoslov. 11 no.2:163-199 '62.

1. Research Institute of Pharmacy and Biochemistry, Prague.

(CORTICOTROPIN chemistry) (HYPOPHYSECTOMY exper)
(ADRENAL GLANDS chemistry) (VITAMIN C chemistry)

REZABEK, K.; SOUCEK, J.; HONDLIK, J.

Assay of secretin in guinea-pigs. Physiol. bohemoslov. 12 no.2: 156-160 '63.

1. Research Institute of Pharmacy and Biochemistry, Prague.
(SECRETIN) (BIOASSAY) (BILE) (BIOLOGICAL ASSAY)

REZABEK, K.; HABOCH, J.

Androgenic activity of human ejaculate. Physiol. bohemoslov. 12 no.1: 15-17 '63.

1. Research Institute of Pharmacy and Biochemistry and Institute of Sexology, Charles University, Prague.
(SEMEN) (ANDROGENS) (SEMINAL VESICLES)

REZABEK, K.; SOUCEK, J.

A float arrangement for recording small changes in volume and pressure. Physiol. Bohemoslov. 11 no.6:557-563 '62.

1. Research Institute of Pharmacy a Biochemistry, Prague.
(EQUIPMENT AND SUPPLIES)

REZABEK, K.

Regulation of the adrenocorticotropic function of the adenohypophysis. Cesk. fysiol. 11 no.5:420-428 O '62.

1. Vyzkumny ustav pro farmacii a biochemii, Praha.
(CORTICOTROPIN)

REZABEK, K.

Assay of long-acting corticotropin preparations by the liver glycogen gest in rats. Physiol. Bohemoslov. 11 no.2:170-179 '62.

1. Research Institute of Pharmacy and Biochemistry, Prague.

(CORTICOTROPIN chemistry) (HYPOPHYSECTOMY experimental)
(LIVER chemistry) (GLYCOGEN chemistry)

REZABEK, K.; JELINEK, V.; Technical collaboration: SOUCEK, J.; NOVA, V.; MALCOVA, M.

The effect of some drugs used in the therapy of malignant tumours on the genital cycle of the rat. Neoplasma 9 no.2:151-158 '62.

1. Research Institute for Pharmacy and Biochemistry, Prague, CSSR.

(ANTINEOPLASTIC AGENTS pharmacol)
(GENITALIA, FEMALE pharmacol)
(GONADOTROPINS physiol)
(ESTRUS pharmacol)

CZECHOSLOVAKIA

RABOCH, J., Institute of Sexuology (Sexuologicky ustav), Faculty of General Medicine (Fakulta vseobecneho lekarstvi), Charles University, Prague, Prof. Dr J. HYNIE, director; GREGOROVA, I., Laboratory for Endocrinology and Metabolism (Laborator pro endokrinologii a metabolismus), Faculty of General Medicine, Charles University, Prague, Academician J. CHARVAT, director; and PERLABEK, K., Research Institute for Pharmacy and Biochemistry (Vyzkumny ustav pro farmacii a biochemii), Prague-Vinohrady, Dr, Engr O. NEMECEK, director.

"Chromographic Investigation of Androgens in Human Ejaculate."

Prague, Casopis Lekaru Ceskych, Vol CII, No 39, 27 September 63, pp 1068-1070.

Abstract [Authors' English summary]: Examined were extracts of normal ejaculates and azoospermic semina from chromatin-positive patients and men with a bioptic finding of Sertoli cells only in the tubules. The following androgens were not present: testosterone, andosterone, dehydroepiandrosterone, androstendione, 11-β-hydroxyetiocholanolone, and 11-keto-etiocholanolone. The findings are consistent with biological investigations in which it was impossible to detect androgenic activity in ether extracts from normal human ejaculates. Nine references, including 3 Czech and 1 Hungarian.

1/1

ZAORAL, M.; PLISKA, V.; REZABEK, K.; SORM, F.

Synthesis of a highly effective analog of lysine-vasopressin.
Coll Cz Chem 28 no.3:746-747 Mr '63.

1. Institute of Organic Chemistry and Biochemistry, Czechoslovak Academy of Sciences, Prague, and Research Institute for Pharmacy and Biochemistry, Prague.

RABOCH, J.; GREGOROVA, I.; REZABEK, K.

Chromatographic study of androgens in human ejaculate. Cas. lek. cesk. 102 no.39:1068-1070 27 S '63.

1. Sexuologicky ustav fakulty vseobecneho lekarstvi KU v Praze, prednosta prof. dr. J. Hynie Laborator pro endokrinologii a metabolismus fakulty vseobecneho lekarstvi KU v Praze, prednosta akademik J. Charvat Vyzkumny ustav pro farmacii a biochemii, Praha-Vinohrady, reditel dr. inz. O. Nemecek.
(ANDROGENS) (EJACULATION)
(SPERMATOZOA) (CHROMATOGRAPHY)

ZAORAL, M.; PLISKA, V.; REZABEK, K.; SORM, F.

Synthesis of two lysine-vasopressin analog with protracted hormonal activity. Coll Cs Chem 28 no.3:747-749 Mr '63.

1. Institute of Organic Chemistry and Biochemistry, Czechoslovak Academy of Sciences, Prague, and Research Institute for Pharmacy and Biochemistry, Prague.

REZABEK, Karel

CZECHOSLOVAKIA

RABOCH, Jan

no academic degree indicated

Sexuological Institute of Charles University (Sexuologicky ustav University Karlovy) Prague, director: prof. Dr. Josef HYNIE. Research Institute for Pharmacy and Biochemistry (Vyzkumny ustav pro farmacii a biochemii), Prague-Vinohrady; director: engineer Dr. O. HEJHECEK

Prague, Vnitrni Lekarstvi, No 11, Nov 62, pp 1156-1159.

"Oestrogenic Activity in Male Seminal Fluid Exhibiting Female Type Nuclear Structure"

Co-author:

REZABEK, Karel same as above

RABOCH, J., CSc.; REZABEK, K., CSc.

Estrogenic activity of human ejaculate. Cesk. gyn. 27 [41] no.6/7: 544-549 Ag '62.

1. Sexuol. ustav KU v Praze, prednosta prof. dr. J. Hynie Vyzk. ustav pro farm. a biochem. v Praze, reditel dr. inz. O. Nemecek.
(SEMEN) (ESTROGENS) (KLINEFELTER'S SYNDROME)
(CRYPTORCHISM)

REZABEK, Karel; technicka spoluprace SOUCEK, J.; MALCOVA, H.

Favorable effect of chlorothiazide on diabetes insipidus in hypophysectomized rats. Cas.lek.cesk 100 no.46:1454-1456 17 N '61.

1. Vyzkumny ustav pro farmacil a biochemii, Praha, prednosta dr. inz. O. Nemecek.

(CHLOROTHIAZIDE pharmacol)
(DIABETES INSIPIDUS exper)
(HYPOPHYSECTOMY exper)

RABOCH, J.; REZABEK, K.

Contribution to the study of hormone activity in human ejaculate. Acta Univ. Carol. [med.] (Praha) 10:suppl.17:183-188 '63

1. Sexuologicky ustav University Karlovy v Praze (prednosta: prof.dr. Jos. Hynie) a Vyzkumny ustav pro farmacii a biochemii (reditel: dr. inz. O.Nemecek).

CZECHOSLOVAKIA/Human and Animal Physiology. Internal Secretion. Hypophysis. T

Abs Jour: RefZhur-Biol., No 20, 1958, 93376.

Author : Rezabek, K.
Inst :
Title : Influence of Ethyl Alcohol on Secretion of ACTH in Rats. The Mechanism of Regulation of ACTH Secretion.

Orig Pub: Ceskosl. fysiol., 1957, 6, No 4, 501-506.

Abstract: Alcohol (I) was injected into the tails or abdomens of rats. The rats were kept on a Larsen diet at 22 degrees for a week before the injections. An hour after injection of I the ascorbic acid (II) concentration in the adrenal glands was determined. A significant reduction in the concentration of II with an intravenous

Card : 1/3

CZECHOSLOVAKIA/Human and Animal Physiology. Internal Secretion. T
Hypophysis.

Abs Jour: Ref Zhur-Biol., No 20, 1958, 93376.

injection of 4.7 ml/kg of I in a 20% solution or 9.1 mg/kg
[?] in a 30% solution administered intraperitoneally
indicated a hypersecretion of ACTH. With an intra-
venous injection of 2 ml/kg of I in a 15% solution or
6.5 ml/kg in a 20% solution injected intraperitoneally
there was no appreciable decrease in the concentration
of II. Since the investigation was demonstrated on
hypophysectomized animals, a decrease in the concentration
of II did not depend on the direct effect of I on the
adrenals, nor did it depend on alcoholic diuresis (dur-
ing the period of anesthesia 10 ml of water was injected
intraperitoneally 3 times at 15 minute intervals followed
by determinations of the concentration of I). The se-
cretion of the antidiuretic hormone (ADH) was suppressed

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T

CZECHOSLOVAKIA/Human and Animal Physiology. Internal Secretion. Hypophysis.

Abs Jour: Ref Zhur-Biol., No 20, 1958, 93376.

by the injection. This challenges the hypothesis that ADH stimulates secretion of ACTH. -- V. V. Yazvikov.

Card : 3/3

ZAHRADNIK, R.; RERICHA, R.; AZAMIT, P.; REZABKOVA, M.; SKRAMOVSKY, S.

Reaction of some cations of heavy metals with slightly soluble calcium compounds. Coll Cz Chem 25 no.1:146-158 Ja '60. (EEAI 9:12)

1. Institut fur Arbeitshygiene und Berufskrankheiten, Prag, und Institut fur anorganische Chemie, Karlsuniversitat, Prag.
(Heavy metals) (Cations) (Calcium)

CZECHOSLOVAKIA/Radio Physics - Corpuscular Optics

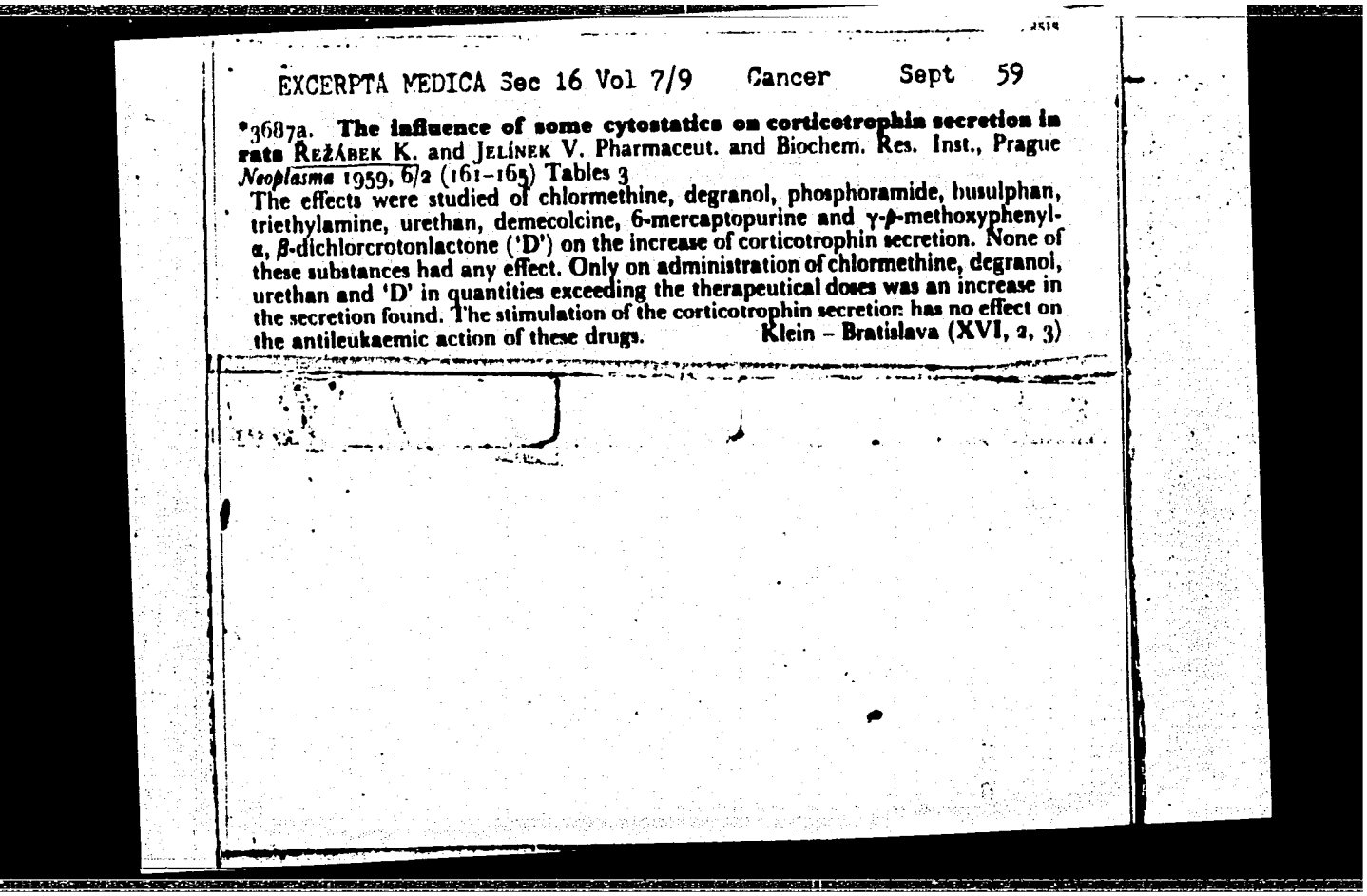
Abs Jour : Ref Zhur Fizika, No 3, 1960, 6510

Author : Rezanka Ivan
Inst : -
Title : Stray Fields of Conical Pole Pieces

Orig Pub : Chekhosl. fiz. zh., 1959, 9, No 2, 266-268

Abstract : The author calculates the stray field of conical pole pieces, intended for the production of an inhomogeneous sector magnetic field, which varies in the meridian plane in inverse proportion to the distance from the axis of the field. Assuming that the pole pieces are not bounded in the radial direction and that their surfaces are equipotential, and also assuming that the air gap between them is small, the author reduces the problem of finding the stray field to the solution of the plane problem, obtained by Coggeshall (Coggeshall N.D., Journal of Applied Physics, 1947, 18, 855). -- V.A. Bazakutsa

Card 1/1



*3687a. **The influence of some cytostatics on corticotrophin secretion in rats** REŽÁBEK K. and JELÍNEK V. Pharmaceut. and Biochem. Res. Inst., Prague *Neoplasma* 1959, 6/2 (161–165) Tables 3

The effects were studied of chlormethine, degranol, phosphoramide, busulphan, triethylamine, urethan, demecolcine, 6-mercaptopurine and γ-β-methoxyphenyl-α, β-dichlorcrotonlactone ('D') on the increase of corticotrophin secretion. None of these substances had any effect. Only on administration of chlormethine, degranol, urethan and 'D' in quantities exceeding the therapeutical doses was an increase in the secretion found. The stimulation of the corticotrophin secretion has no effect on the antileukaemic action of these drugs. Klein – Bratislava (XVI, 2, 3)

REZABEK, K.; SOUCEK, J.

"Our experience with the hypophysectomy of rats"

Ceskoslovenska Fysiologie. Praha, Czechoslovakia. Vol. 8, no. 1, Jan 1959

Monthly list of East European Accessions (EEAI), LC, Vol. 8, No. 7, July 59, Unclas

PEKAREK, J.; REZABEK, K. (Technical assistance: H. Haisova, G. Pekarkova and V. Stejskal)

The investigation of different components of pertussis vaccine obtained by centrifugation. J. Hyg. Epidem., Praha 3 no.1:67-78 1959.

1. Institute for Sera and Vaccines, Institute of Pharmacy and Biochemistry, Prague. J. Pekarek, Ustav ser a ockovacich latek, Praha 12, Tr. W. Plecka 108. Ceskoslovensko.

(WHOOPING COUGH, immunol.
vaccine components obtained by centrifugation)

PEKAREK, J.; REZABEK, K. (Technical assistance: H. Wiesnerova, N. Nova)

An endocrinological test for innocuity of the pertussis vaccine. J. Hyg. Epidem., Praha 3 no.1:79-84 1959.

1. Pharmacy and Biochemistry Research Institute, Prague Institute of Sera and Vaccines, Prague. J. Pekarek, Ustav ser a ockovacich latek, tr. W. Piecka 108, Praha 12, Czechoslovakia.
(WHOOPING COUGH, immunol.
vaccine, endocrinol. test for innocuity)

REZABEK, K.

Effect of ethanol on secretion of ACTH secretion in mice; studies on the mechanism of regulation of ACTH secretion. Cesk. fysiol. 6 no.4:501-506 Nov 57.

1. Za technicke spoluprace H. Wiesnerove a V. Nove Fysiologicke oddeleni Vyskumneho ustavu pro farmacii a biochemii, Praha.

(ACTH, physiology,
secretion, eff. of ethyl alcohol (Cz))
(ALCOHOL, ETHYL, effects,
on ACTH secretion (Cz))

REZABEK, K.; KOZLIK, V.; ROTH, Z.

Comparison of Sayer's and Munson's methods of titration of corticotropin. Cesk. fysiol. 8 no.3:242 Apr 59.

1. Vyzkumny ustav pro farmacii a biochemii. Utvar biologicke kontroly leciv. Praha. Predneseno na III. fysiologickych dnech v Brne dne 14. 1. 1959.

(ACTH, determ.
titration, Sayer's & Munson's methods, comparison (Cz))

REZABEK, L.

621.335.42(437)

4683. Solving the problem of modern tramway transport. A. BOROVANSKÝ AND L. REŽÁNEK. *Elektrotech. Obzor*, 42, *No.* 12, 665-72 (1933) *In Czech.*

General notes on the design requirements of modern tramways and detailed technical description of a tramcar developed jointly by the Czechoslovak Ministry of Engineering and the CKD Engineering Works of Prague, to meet the special requirements of the Prague tramway system.

H. NOREL.

[illegible], L.; [illegible], A.

Electric mining locomotives of the CKD (Ceskomoravska-Kolben-Danek) Stalingrad Machinery Works. p. 279.
(ELEKTROTECHNICKY OBZOR, vol. 44, no. 5, May 1955, Praha)

SO: Monthly List of East European Accession,(EEAL), LC, Vol. 4, No. 11, Nov. 195 , Unel.

REZABEK, L.

Conditions for further development of streetcars. p.350

ELEKTROTECHNICKY OBZOR. (Ministerstvo tezkeho strojirenstvi a Ceskoslovenske vedecka technicka spolecnost pro elektrotechniku pri Ceskoslovenske adaemii ved) Praha, Cezechoslovakia
Vol.48, no.7, July 1959

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

Z/031/62/000/002/001/003
D006/D102

AUTHOR: Řezáč, Antonín, Engineer

TITLE: Compound tool-holders with multiple-edge inserts

PERIODICAL: Strojírenská výroba, no. 2, 1962, 66-68

TEXT: The author describes mechanical tool-holders using throw-away carbide inserts, developed by the VNII Tool Research Institute in Moscow. The holders can be used on center and turret lathes, semi-automatic and automatic lathes, and on transfer machines. The inserts are triangular, square, pentagonal and hexagonal for setting angles of 45, 60 and 90° respectively, and are made of the same carbide grades as are used for other carbide tools. The tool-supporting surface of the holder is inclined to provide a 10-12° negative rake. The holder design is rather simple: The insert is slipped onto a pin and pressed against the holder by a wedge which is tightened by a clamp screw. All inserts have a circumscribed-circle diameter of 18 mm and a center-hole diameter of 5.2 mm. For center and turret lathes, the holders are set up directly on the machines; for semi-automatic and automatic lathes and transfer machines, they are set up on

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special setup fixtures. Once and edge is worn, the insert can be indexed without removing the holder from the machine. When damaged by broken inserts, the supporting surface of the holder is easily repaired by overlaying and grinding. The rigidity of the tools is about the same as that of solid holders with brazed-on tips. The tools feature a satisfactory chip flow within a wide range of cutting conditions (feed 0.3-0.7 mm/revolution; speed 80-200 m/min; depth 3.5 mm) without a special chip breaker. Similar holders were also developed for ceramic inserts, and laboratory tests have shown their satisfactory performance. There are 7 figures, 1 table and 2 Soviet-bloc references. (Technical editor: Vladimír Rosek).

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REZAC, Antonin, inz.

Shallow cutting shapers. Stroj vyr 12 no.4:284-285 Ap'64.

"Design of fixtures" by H. Mauri. Pt.2. Reviewed by Antonin Rezac. Ibid.:317

REZAC, A., inz.

Power clamping devices. Stroj vyr 12 no.1:46-47 Ja'64.

REZAC, Antonin, inz.

"Jigs" by H.E. Scheibe. Reviewed by Antonin Rezac. Stroj vyr 10 no.12:637 '62.

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AUTHOR: Rezač, A., Engineer (Prague)

TITLE: Raising cutting tool power by correct dividing of the cutting edges

PERIODICAL: Mashinostroene, no. 5, 1961, 13-19

TEXT: The article which appeared originally in the Czech journal "Strojírenská výroba" [Abstractor's note: No date of publication given], comprises an analysis of the principles which may help to improve the cutting power of metal cutting tools. In conducting this study the author divides the cutting power P into three perpendicular components as shown in Fig. 1. The empirical formula for estimating the P_z component, representing in most cases 90 % of the total power acting upon a cutting tool, is:

$$P_z = C_{pz} \cdot b^{x}_{pz} \cdot c^{yp}_{z}$$

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where C_{pz} is constant, b = width of chip and a = thickness of chip: $x_{pz} = 1$ and $y_{pz} = 0.75$ for all kinds of steel and cast iron with the exception of certain refractory and stainless steels, and in those cases where $y_{pz} = 1$. Specific resistance to cutting k_s is used to show how the cutting power depends on the thickness of the chip. If F is used to denote the cross section of the chip in mm^2 then

$$k_s = \frac{P_z}{F} = \frac{C_{pz} \cdot b \cdot a^{0.75}}{b \cdot a} = \frac{C_{pz}}{a^{1-0.75}} = \frac{C_{pz}}{a^{0.25}} .$$

The formula shows how the specific resistance depends on the constant C_{pz} and on the thickness a of the chip. This formula is applicable only for chips with a thickness from 0.03 to 0.08 mm. The specific resistance increases when thinner chips are cut. This is evident from Fig. 3, showing the tested specific resistance for

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SAE 1112 American steel as cited by W.R. Backer, E.R. Marschall and M.C. Shaw (Ref. 2: The Size Effect in Metal Cutting-Transactions of the ASME, January, 1952, p. 61). Fig. 4 shows the specific resistances for low carbon steel, Fig. 5 for carbon steel and Fig. 6 for cast iron. According to Fig. 5, the specific resistance for a feed where a = 0.03 mm will be 550 kg/mm^2, which means that one tooth will cut a chip where $F_1 = b \cdot a = 10.0.03 = 0.3$ mm^2. To cut such a chip the power required to act upon one tooth will be:

$$Q_1 = F_1 \cdot k_{s1} = 0.3.550 = 165 \text{ kg}.$$

If the same chip is cut by two teeth, cutting one after the other and each removing one half of the width, but with a doubled feed, the quantity of the removed material will be the same as if the chip were cut with one tooth. If the width of the chip is 5 mm -- as shown in Fig. 7 -- the feed 0.06 mm and the specific resistance 420 kg/mm^2, the power required to act upon one tooth will be:

$$Q_2 = F_2 \cdot k_{s2} = 0.3.420 = 126 \text{ kg}.$$

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If the one tooth is loaded as much as in the previous case, it will cut a chip 5 mm wide but thicker than 0.06 mm. The power of 165 kg will be required to cut a chip with a thickness of 0.0905 at a specific resistance of 360 kg/mm^2, and a cross section of 0.452 mm^2. If the whole width is cut by three teeth, each removing one third of it, but with a tripled feed, the power required to act upon one tooth will be:

$$Q_3 = F_3 \cdot k_{s3} = 0.3.366 = 110 \text{ kg}.$$

If one tooth is loaded as much as in the first case it will cut -- removing one third of the width, i.e. 3.33 mm -- a chip thicker than 0.09 mm. The power of 165 kg will be required to cut a chip 0.158 mm thick at a specific resistance of 314 kg/mm^2 and a cross section of 0.526 mm^2. If the number of sections increases into which the whole width is divided, the quantity of the material removed by one tooth using the same power increases also. Such a group of teeth is called by the author a "toothed section". The number of teeth in such a section should be equal to the sections,

Raising cutting tool power by ...

in which the whole width is divided. Fig. 8 shows the estimated cutting power increase for "toothed sections" when low carbon and carbon steel are cut. Fig. 9 shows the same but for various kinds of cast iron. The formula $P_z = C_{pz} \cdot b \cdot a^{y}_{pz}$ is applicable in cases, where for $F = a \cdot b$, $a > 0.1$. If the "toothed section" has n teeth, the width b of the chip should be divided into n sections. If the whole depth is to be removed by a section having n teeth with equal power acting upon one tooth, the thickness a of the chip should increase u times. The power P_z required to act upon one tooth for a section with n teeth will be:

$P_z = C_{pz} \cdot \frac{b}{n} \cdot u^{y}pz \cdot a^{y}pz$, where both powers should be equal, then

$C_{pz} \cdot b \cdot a^{y}pz = C_{pz} \cdot b \cdot a^{y}pz \frac{1}{n} \cdot u^{y}pz$, i.e. $1 = \frac{u^{y}pz}{n}$ or $n = u^{y}pz$.

The cut made by one tooth for a section with one tooth will be: $F_1 = b \cdot a$ and for a section with n teeth:

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$F_n = \frac{b}{n} \cdot u \cdot \alpha = F_1 \cdot \frac{u}{n}$. If the value for Y_{pz} and n are given, the value for u can be determined by the given formula as well as the power increase $\frac{u}{n}$. The value y_{pz} will amount to 0.75 for low carbon steel, carbon steel and cast iron, 0.6 for bronze and 0.75 and over for various stainless and refractory steels, and, depending on the kind of the material it may exceed the value of 1 as stated by N.F. Pronki (Ref. 3: Protyagivaniye zharoprochnykh i titanovykh materialov (Stretching of heat-resistant and titanic materials), Oborongiz, 1958). The data given in Table 1 show the estimated values for the best known indices y_{pz} as well as the power increase $\frac{u}{n}$ for each separate n. The power increase $\frac{u}{n}$ shown in the table is the lowest power increase achieved in removing material by toothed sections. For thinner chips, for which the empirical formula for specific resistance is not applicable, the power increase is even greater as shown in Figs. 8 and 9. The new regulations for

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removing material by dividing the chips, using toothed sections are valid only for materials where the y_{pz} is less than 1, but are not valid if the thickness a of the chip exceeds its width b. Fig. 10 shows the thickness of the chips for tools operating in sections, compared with the initially removed thickness. The form of the cutting edges, however, and its relation to the part removing the material is not yet defined. The Issledovatel'skiy otdel po metalloobrabotke (Metalworking Research Section) of the Chelyabinsk Tractor Plant studied the influence of the chip breaker's form, when used with reamers for round holes, according to D.K. Margutis (Ref. 4: Protyazhki peremennogo rezaniya (Stretchings of a Variable Cutting), Mashgiz, 1956). Three kinds of reamers were used for the study. The first frequently used in the CSR, where each tooth removes a thin layer of the material, was equipped with chip breakers as shown in Fig. 11 a. The chip breakers had the form of semi-circular channels, so that the angle between the cutting edge and the chip breaker was 90°. The first tooth removed a chip with a thick-

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ness s, and the tooth following the chip breaker - a chip with a thickness 2s. After drilling a previously determined number of holes, three kinds of wear appeared. The least wear I occured at the place where the tooth was removing a chip with the thickness s without a chip breaker as shown in Fig. 11 a. Similar wear occured also when a reamer, in which the teeth following each other were of the same height, but the first narrower than the second as shown in Figs. 11 b and 11 c. The third reamer used had the first tooth divided in equal sections, so that the width of the cutting edge was equal to the width of the chip breaker as shown in Fig. 11d. The following tooth had its external diameter equal to the diameter of the first one but worked without a chip breaker, removing only the width left by the chip breaker. The chip breaker was sharpened so that the angle $\varkappa$ was 20°. This time where s = 0.15 mm per tooth, only wear I occured. After reaming 650 parts, the wear amounted to 0.25 mm. The form of the chip breaker depends on its use, but the most important is the angle $\varkappa$ as shown in Fig. 12. Spiral drills

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have only two cutting edges and can, therefore, be used only for machining with a section consisting of two teeth as shown in Fig. 13. Each cutting edge, according to the new method, has sharpened chip breakers distributed in such a way that the width of the cutting edge is equal to that of the chip breaker. The basic principles for an increase in the cutting power are (1) when machining is done by n-toothed sections, the cutting edge will be interrupted in such a way that the distance between the cutting edge, i.e. the width of the chip breaker, is n-1 times greater than the length of the cutting edge removing the material; (2) the form of the distance between the cutting edges may differ. It is sufficient that the angle between the cutting edge and the intermediate space be 15° to 25° (maximum from 8° to 45°). It would, however, be better to increase it by 1° or 2°. When the thickness of the chip removed by one tooth is increased in accordance with the data given in Fig. 10, an increase of the cutting power as given in Figs. 8 and 9 will be achieved. There are 1 table, 14 figures and 4 references: 3 Soviet-bloc, and 1 non-Soviet-bloc. The reference to the English-lang-

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uage publication reads as follows: W.R. Backer, E.R. Marschall, M. C. Shaw; The Size Effect in Metal Cutting-Transactions of the ASME, January, 1952, p. 61.

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Fig. 1. Forces acting upon the cutter while cutting.

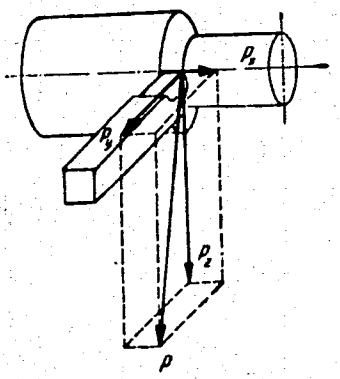

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Fig. 3. Specific cutting resistance when processing SAE 1112 steel.

Legend: 1 - thickness of the chip in mm; 2 - specific resistance in kg/mm^2; 3 - polishing; 4 - micromilling; 5 - milling; 6 - reaming; 7 - drilling; 8 - grinding; 9 - turning and honing;

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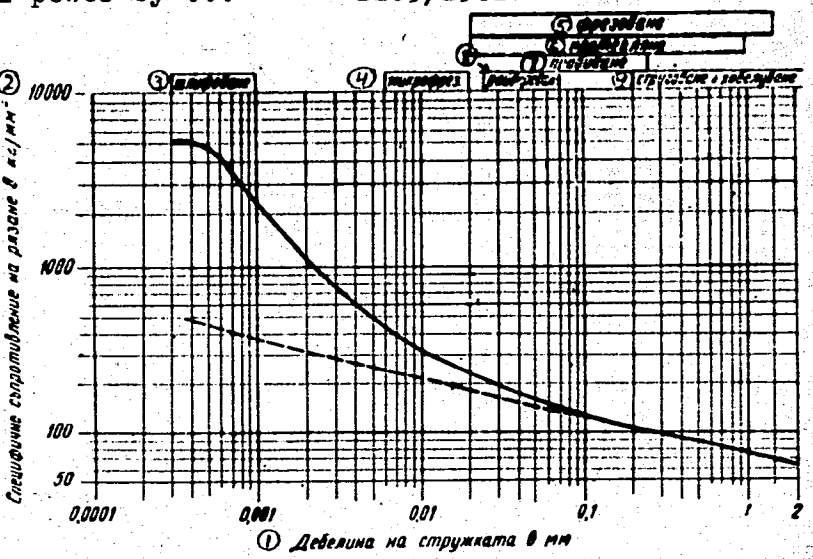

FIG.3

Фиг. 3. Специфично съпротивление на рязане при обработването на стомана SAE 1112

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Fig. 4. Specific cutting resistance of low carbon steels.

Legend: 1 - Specific resistance in kg/mm^2; 2 - thickness of chip in mm.

Fig. 4

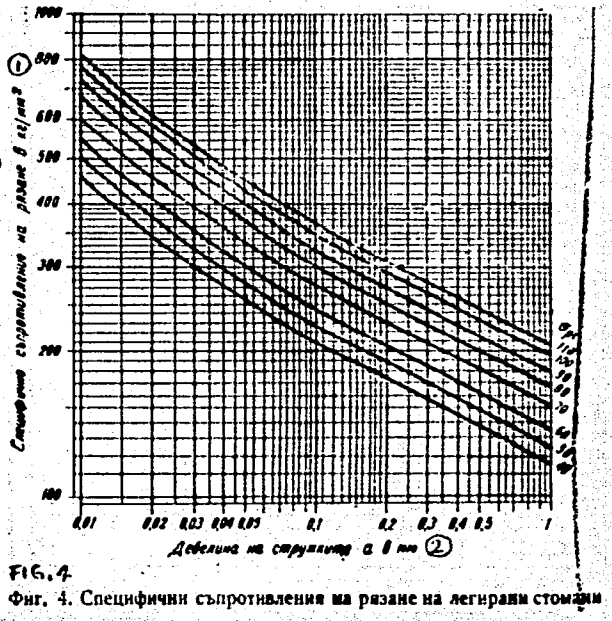

FIG.4

Фиг. 4. Специфични съпротивления на рязане на легирани стомани

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Fig. 5. Specific resistance for carbon steels.

Legend: 1 - Specific resistance in kg/mm^2; 2 - thickness of chip in mm.

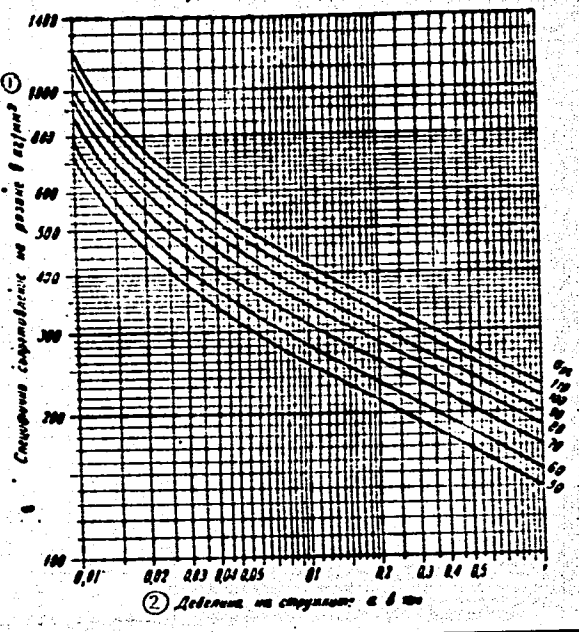

Fig. 5

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Fig. 6. Specific resistance for cast iron.

Legend: 1 - Specific resistance in kg/mm^2; 2 - thickness of chip in mm.

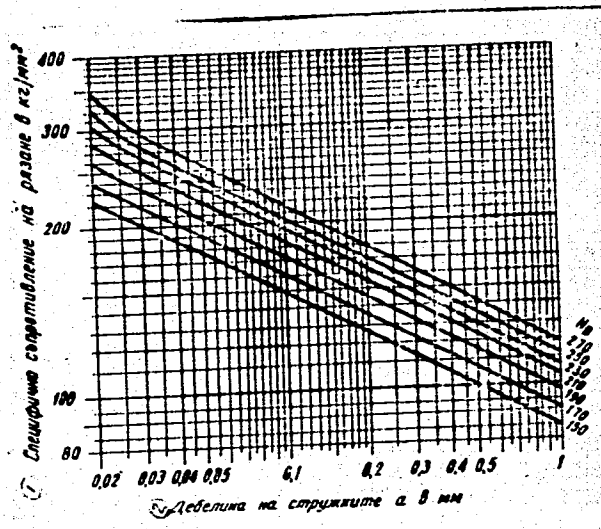

Fig. 6.

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Fig. 7. Cross section of chips when reaming is carried out by toothed sections.

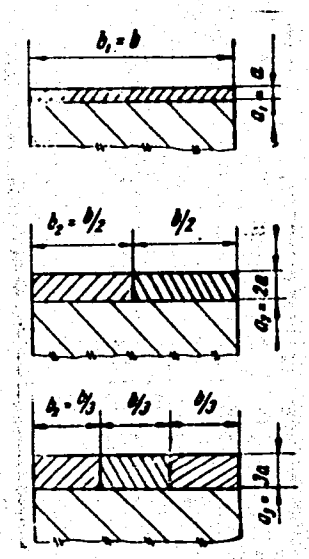

Fig. 7

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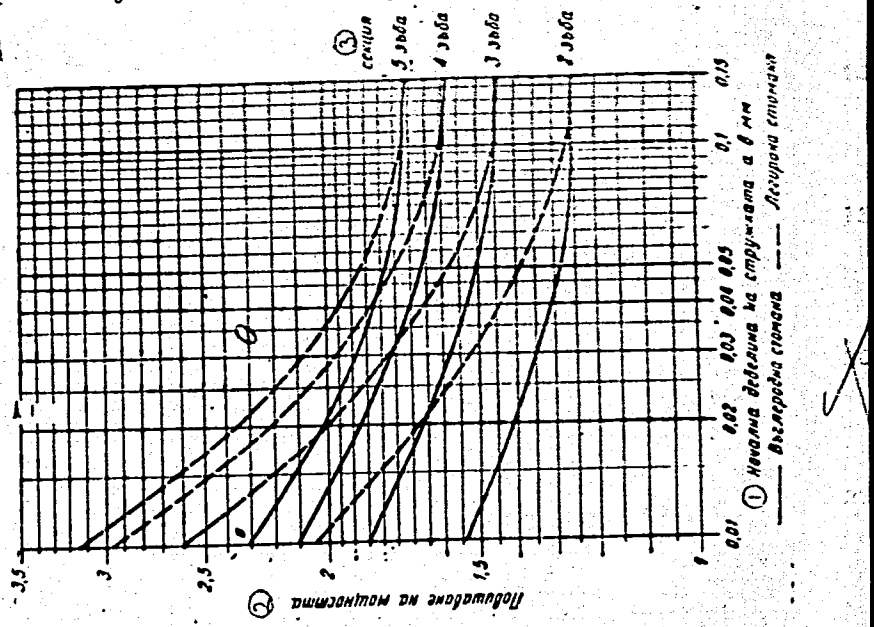

Fig. 8. Increasing cutting power of tools cutting steel by toothed sections.

Legend: 1 - Initial thickness of chip in mm, - carbon steel - - low carbon steel; 2 - increase of cutting power; 3 - section, 5 teeth, 4 teeth, 3 teeth, 2 teeth.

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Fig. 9. Increasing cutting power of tools, cutting cast iron by toothed sections.

Legend: 1 - Increase of cutting power; 2 - section, 5 teeth, 4 teeth, 3 teeth, 2 teeth.

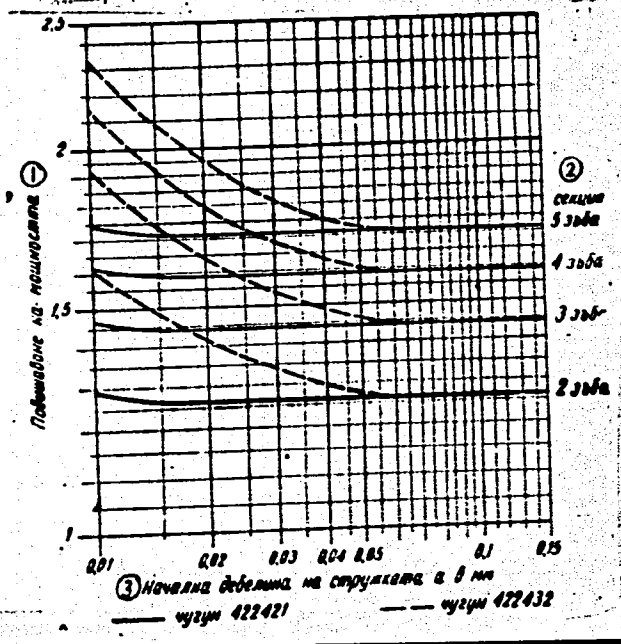

Fig. 9

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Fig. 10. Thickness of chips made by tools operating with toothed section.

Legend: 1 - Thickness of chip cut by the cutting tools in the section; 2 - initially removed thickness of chip in mm; —— cast iron 422421 ----- carbon steel --- low carbon steel cast iron 422432; 3 - section, 5 teeth, 4 teeth, 3 teeth, 2 teeth.

Fig. 10.

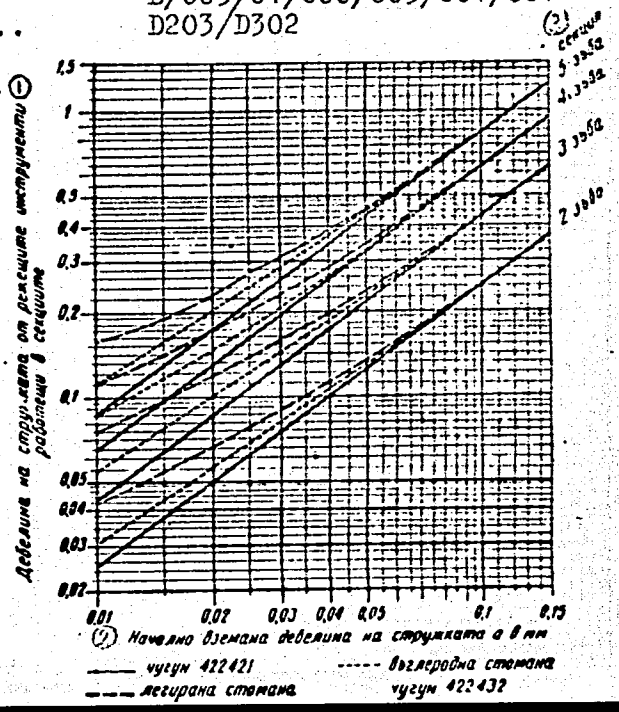

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Table 1.
1 - Minimum increase of feed and the cutting power under equal loading of a tooth by dividing the chip, using toothed sections; 2 - *u - increase of feed when the whole width is machined by toothed sections; **$\frac{u}{n}$ - increasing the cutting power by dividing the chips by toothed sections.

Минимално увеличаване на подаването и мощността на инструментите при еднакво натоварване на зъба чрез деление на стружката посредством зъбни секции

$y_{pz}=0,9$		$y_{pz}=0,7$		$y_{pz}=0,75$		$y_{pz}=0,7$		$y_{pz}=0,6$	
u^*	$\frac{u^{**}}{n}$	u	$\frac{u}{n}$	u	$\frac{u}{n}$	u	$\frac{u}{n}$	u	$\frac{u}{n}$
1	1	1	1	1	1	1	1	1	
2,160	1,080	2,378	1,189	2,512	1,260	2,692	1,346	3,175	1,
3,390	1,130	3,948	1,316	4,327	1,442	4,804	1,601	6,240	2,
4,666	1,167	5,657	1,414	6,350	1,587	7,246	1,811	10,056	2,
5,979	1,196	7,477	1,495	8,550	1,710	9,966	1,993	14,620	2,924
7,322	1,220	9,391	1,565	10,903	1,817	12,931	2,155	19,811	3,302
8,690	1,241	11,386	1,624	13,391	1,913	16,154	2,308	25,614	3,658
10,080	1,260	13,454	1,682	16,000	2,000	19,504	2,438	32,000	4,000

* u – увеличаване подаването при обработване на цялата широчина със зъбни секции; ** $\frac{u}{n}$ – повишаване на мощността при деление на стружките със зъбните секции.

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Fig. 11. Wear of reamer teeth at different forms of the chip breaker.

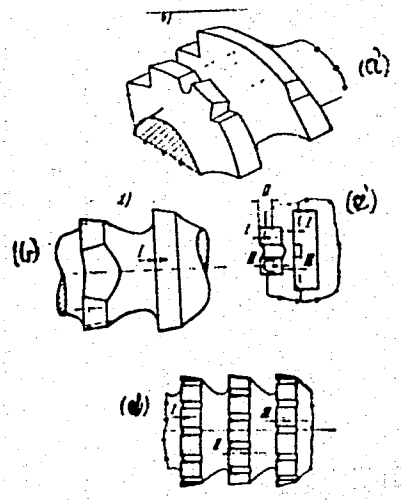

Fig. 11.

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Fig. 12. -Kinds of chip breakers.

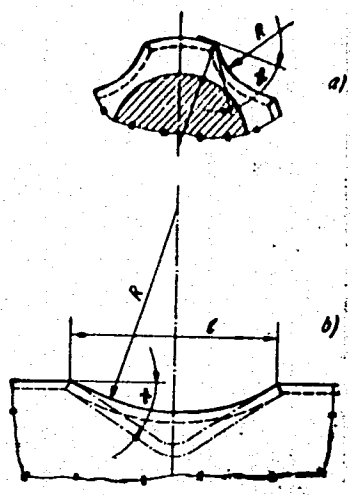

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Fig. 13. Spiral borer manufactured according to the new method $a = 0.6\sqrt{D}$.

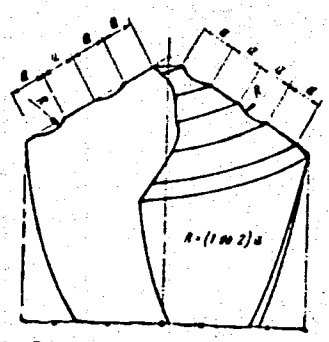

Fig. 13
Фиг. 13. Винтообразен свредел, изработен по новия начин, $a = 0{,}6\sqrt{D}$

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ACCESSION NR: AP5019257 CZ/0032/64/014/011/0843/0847

AUTHOR: Rezac, A. (Engineer)(Prague)

TITLE: Computation of the peripheral cutting force in milling

SOURCE: Strojirenstvi, v. 14, no. 11, 1964, 843-847

TOPIC TAGS: metal cutting cutting tool

Abstract [author's Czech summary]: A new method is proposed for computing the peripheral cutting force in milling, and the efficiency of milling. The formulas include the relationship between the mean chip thickness and the length of the cyclical path described by the tool edge in the case of plain- and face-milling cutters, and the relationship between the mean chip thickness and the profile length in the case of profile cutters. The introduction of these relationships makes the methods presented in the technical literature more accurate and provides a reliable basis for designing the feeds, tools and fixtures of automatic production lines and single-purpose machines. Orig. art. has: 5 figures, 13 graphs, 13 formulas, 2 tables.

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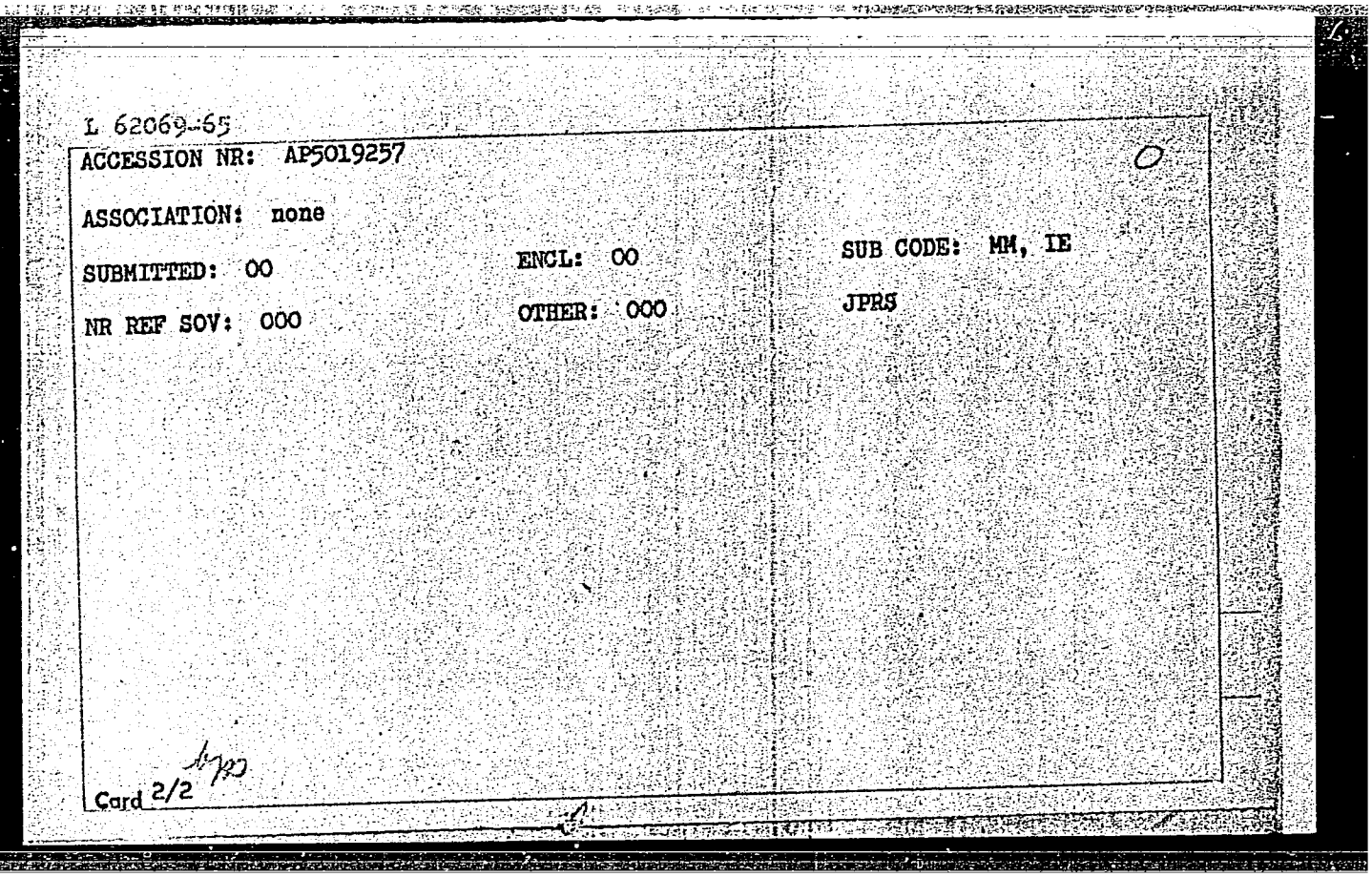

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ACCESSION NR: AP5019257

ASSOCIATION: none

SUBMITTED: 00 ENCL: 00 SUB CODE: MM, IE

NR REF SOV: 000 OTHER: 000 JPRS

Card 2/2

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Increasing the cutting efficiency of tools by dividing properly machining allowances. Mechanik 34 no.1:10-16 '62.

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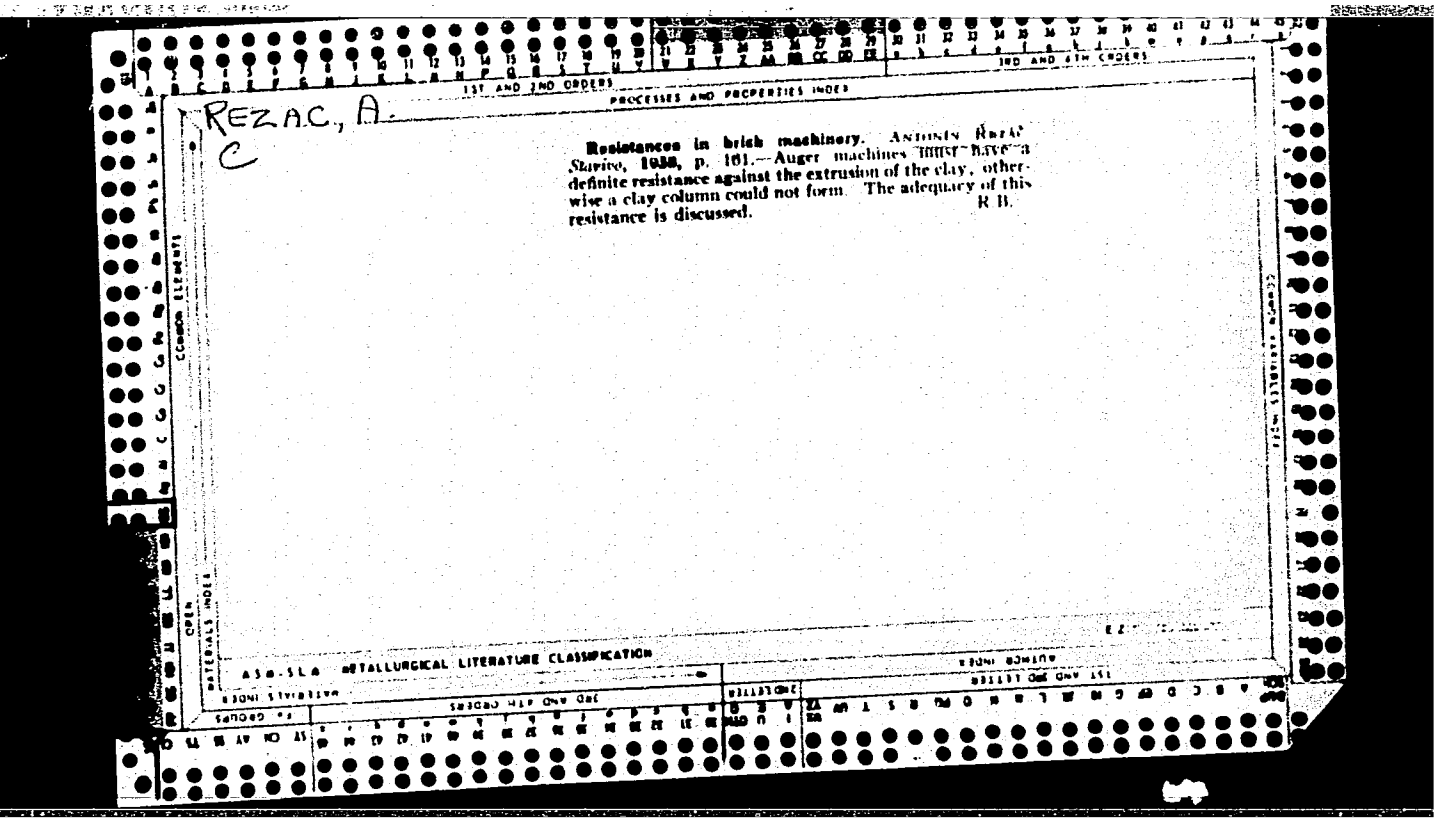

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