

"APPROVED FOR RELEASE: 06/15/2000

CIA-RDP86-00513R001341510016-9

PODROUZEK, Josef, inz.

Czechoslovak Scientific Technical Society helps production.
Tech praca 15 no.4:308-309 Ap '63.

APPROVED FOR RELEASE: 06/15/2000

CIA-RDP86-00513R001341510016-9"

PODROUZEK, L., inz.

Study of the heating and power plant systems for regional capitals and industrial centers of Czechoslovakia. Zdravot tech 7 no.1&43 '64

PODROUZEK, L.

Problems of heating from central plants. P. 228

SO: East European Accessions List, Vol. 3, No. 9, Sept. 1954, Lib. of Congress

PODROUZEK, L.

Development of thermal power in Czechoslovakia. p. 147.
ZA SOCIALISTICKOU VEDU A TECHNIKU. Vol. 4, no. 4, Apr. 1954.

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

PODROUZEK, L.

Development of thermal power plant equipment in Czechoslovakia.

P. 2. (CZECHOSLOVAK HEAVY INDUSTRY) (Prague, Czechoslovakia) Vol. 7, no. 11, 1957

SO: Monthly Index of East European Accession (EEAI) LC Vol. 7, No. 5, May 1958

PODRouZEK, L.

Problem of supplying heat in communities. p. 245.
(Energetika, Vol. 6, no. 6, June 1956. Praha, Czechoslovakia)

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

PODROUZEK, L.

Development of thermal power in Czechoslovakia. p. 147.
ZA SOCIALISTICKOU VEDU Z TECHNIKU, Prague, Vol. 4, no. 4, Apr. 1954.

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

PODROUZEK, L.

"Problems of Heating from Central Plants." p. 228, Praha, Vol. 3, no. 7, July 1953.

80: East European Accessions List, Vol. 3, No. 9, September 1954, Lib. of Congress

8(6)

SOV/112-59-5-8603

Translation from: Referativnyy zhurnal. Elektrotehnika, 1959, Nr 5,
pp 28-29 (USSR)

AUTHOR: Podroužek, Ladislav

TITLE: Development of the Central Heat Supply in Czechoslovakia

PERIODICAL: Českosl. tyazh. prom-st', 1957, Nr 11, pp 5-10

ABSTRACT: The central heat supply was begun in Czechoslovakia in the Thirties, when a new heat-and-electricity station was constructed in Brno and a station in Praha-Holešovice was reconstructed for heat supply purposes. By 1945, six heating networks supplying 15-75 billion kilocal heat were operated in the country. The total length of heating lines was 90 km. All but one network used 3.1-14-atm, or on the average 9-atm, steam. Annual steam production was about one million tons. During 1945-1955, the process-heat requirements grew rapidly. Over this period, total steam production by heating stations increased from 1.4 to 6.2 million tons per year; 45-80% of the steam was used for industrial processes. The increase in heat production was achieved by

Card 1/3

SOV/112-59-5-8603

Development of the Central Heat Supply in Czechoslovakia

expanding existing heating stations, by turning some condensing stations into heating ones, and by constructing six new heat-and-electricity stations. The latter are usually equipped with back-pressure turbines and a few additional condensing turbines. The equipment built by Czechoslovak industry has inlet steam pressure 40-100 atm and temperature 450-500°C. During the past few years, new heat-and-electricity stations have been built on a different pattern because the new cities and settlements have central heat supply almost exclusively. Until recently, the cities have grown more rapidly than the heating stations, and for that reason the cities' heat demand has been covered by temporary means. For economical reasons, the inlet steam pressure and temperature have been raised, and new types of heating turbines have been developed, viz., a 25-Mw, 90-atm, 500°C turbine with a controlled extraction of 100 ton/hr 1.2-2.5-atm steam for house heating and another turbine with the same capacity, inlet pressure and temperature, but with two controlled extractions: 80 ton/hr at 8-11 atm and 60 ton/hr at 1.2-2.5 atm. These

Card 2/3

SOV/112-59-5-8603

Development of the Central Heat Supply in Czechoslovakia

turbines will be fed by 125- and 230-ton/hr, 100-atm, 510°C steam boilers. It is expected that in large cities, heating stations will use low-grade brown coal and lignite with an ash content of over 30%; this requires new boiler designs and a much larger area occupied by the heating station. A considerable portion of the heat is produced by industrial heating stations equipped, by and large, with back-pressure turbines. It is suggested that new industrial power stations use the back-pressure controlled-extraction turbines. The central heat supply yields a saving of 500,000-600,000 tons of reference fuel per year. It is also important that electric-energy production by the back-pressure-turbine stations is of a peak nature during the winter period; this corresponds almost exactly with the morning electrical-load peaks. As a result, construction of new back-pressure-turbine heating stations permits cutting down the building of new peak electric stations.

M. L. Z.

Card 3/3

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CIA-RDP86-00513R001341510016-9

PODROUZEK, V.

Serography of Fuchs' inhibitive systems. Cas. cesk. lek. Ved.
priloha. 63 no.3-4:52-56 1950. (CIML 20:1)

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CIA-RDP86-00513R001341510016-9"

Chemical Abst.
Vol. 48
Apr. 10, 1954
Pharmaceuticals, Cosmetics, and Perfumes

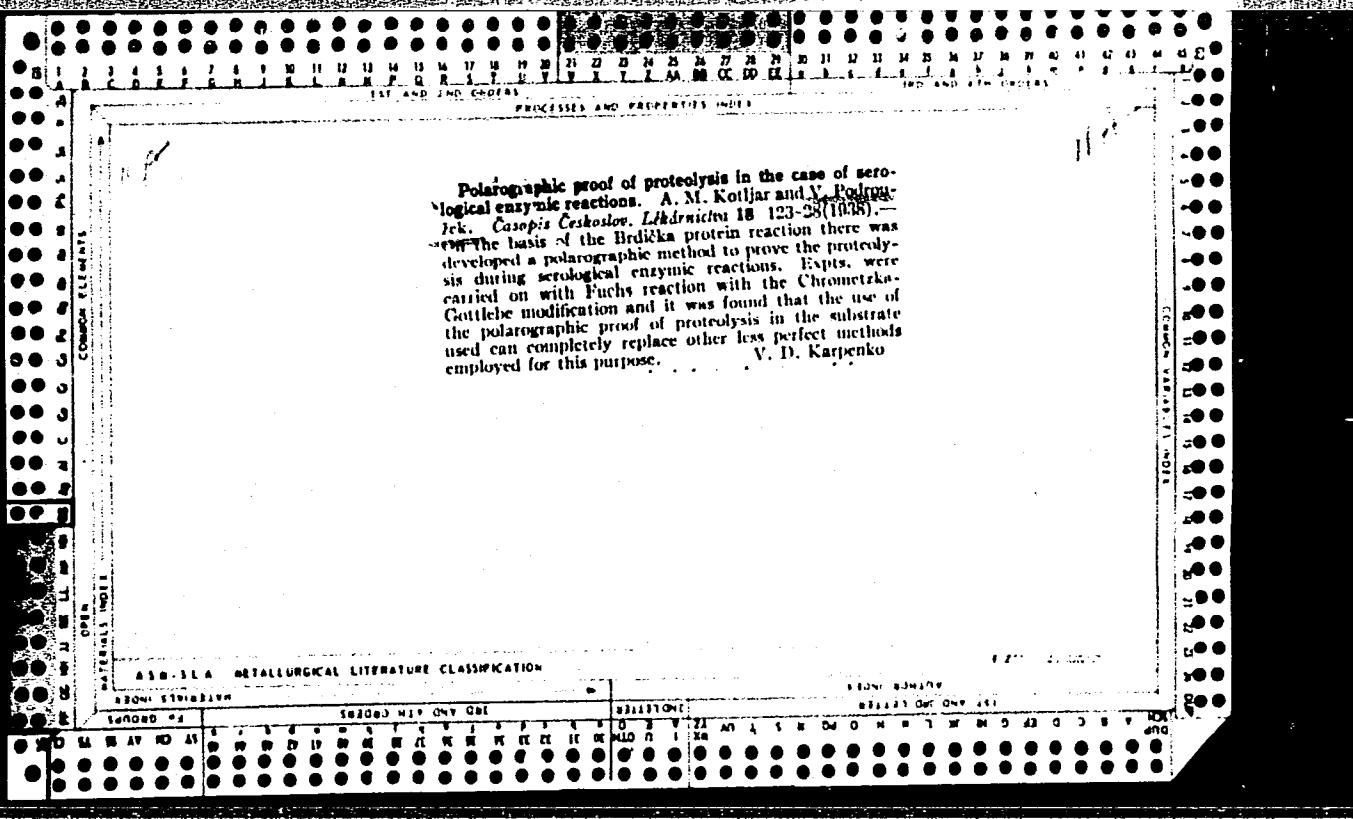
Polarographic evaluation of pollen allergen solutions.
V. Podroník (Státní fak. nemocnice, Praha, Czech.).
Chem. Listy 47, 1869-70 (1953).—Polarographic evaluation of allergen solns. is based on the detn. of SH groups in the proteins present. A mixt. of 0.5 ml. allergen soln. and 0.5 ml. Brdička's Co. soln. is polarographed at 800 mv. with an Ag anode. M. Hudlický

HD

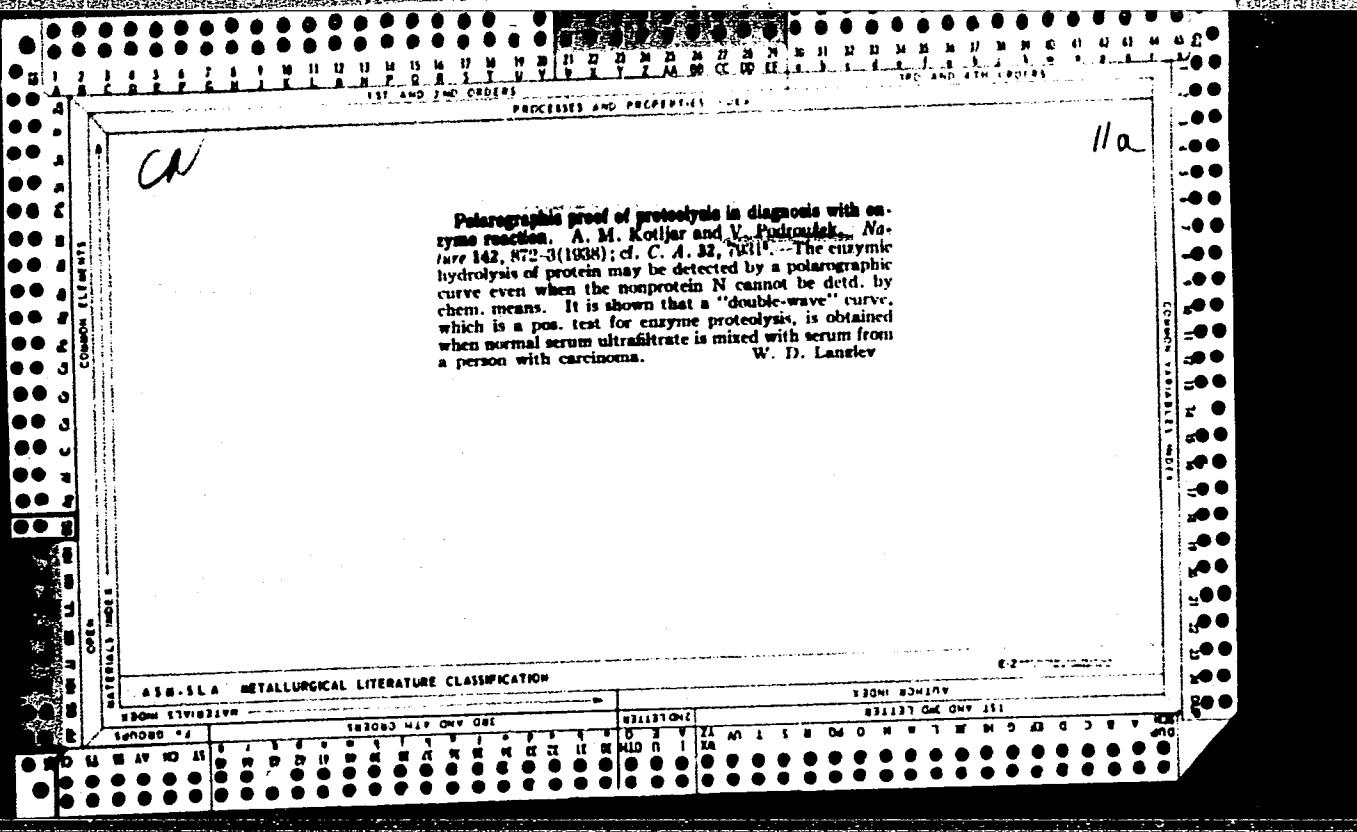
PODROUZEK, V.; MECHURA, B.

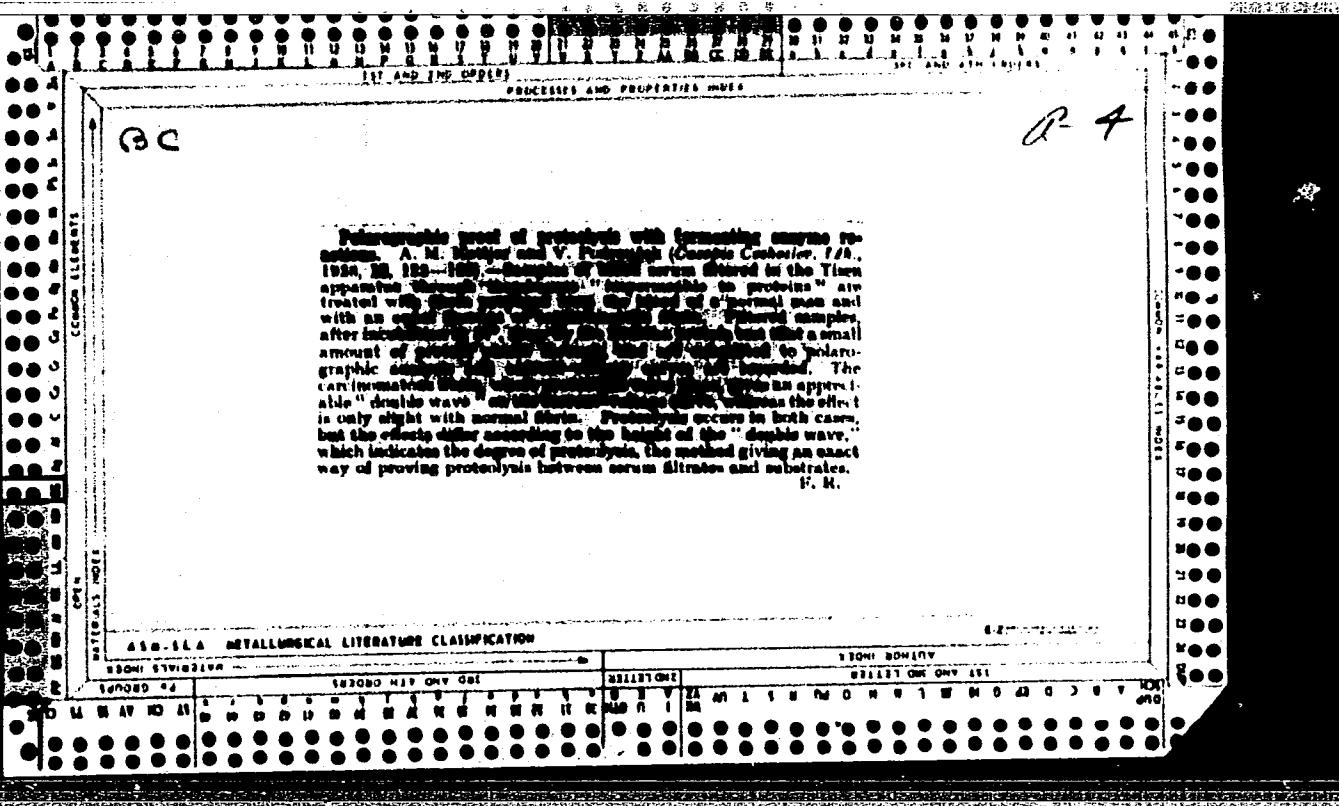
Photometric method of paper electrophoresis. Cas. lek. cesk. 93
no.24;661-664 11 June 54.

1. Ze serologicke laboratoare psychiatricke kliniky K.U. v Praze.
(ELECTROPHORESIS,
photometric method of paper electrophoresis)



Polarographic proof of proteolysis in the case of serological enzymic reactions. A. M. Kotljar and V. Podringa. Česk. Lékařnicku 18, 123-28 (1938).—
On the basis of the Brdička protein reaction there was developed a polarographic method to prove the proteolysis during serological enzymic reactions. Expts. were carried on with Fuchs reaction with the Chrometzka-Gottlebe modification and it was found that the use of the polarographic proof of proteolysis in the substrate used can completely replace other less perfect methods employed for this purpose. V. D. Karpenko





CP
The serographic reaction. V. Pudrousek. *Casopis Ceského Lékařství* 62, 16-21(1949); *Chim. Zpráv.* 1950, 1, 764-5.—The term "serographic reaction" is applied to an analytical method for the detn. of the change in the phys.-chem. character of a protein particle. It is based on the polarographic detection of the change in the behavior of the protein toward a protein-decomp. reagent. This method can be used for the detn. of the synapsis of any substance in the protein carrier, whether it be a substance which does not cause derangement of the original simplex (as electrolytes or amino acids) or a substance which primarily attacks the protein carrier (immunoreactins). In both cases both the quant. evaluation of the reaction and the detn. of the simplex susceptibility to the "ergon" under investigation are possible. The results of this serographic reaction can thus be used as the basis of quant. ergonometric conclusions and for the detn. of the corresponding "feron" sensitivity. The serographic reaction is therefore primarily useful in the study of physiol. and pathophysiol. processes which take place in the protein simplexes of the blood plasma.
M. O. Moore

10

CA

The connection between the aerographic reaction and the proteolytic Alderhalden reaction. V. Padražek. Časopis Českého Lázeňství 63, 63-6 (1949); 19, 1949, 15-31; C.A. 33, 4431. —Polarographic investigation of the aerographic reaction in immunological systems deproteinized with metaphosphoric acid yielded 3 different types of curve, depending partly upon the stoichiometric ratios of the system. The results are discussed in connection with the proteolytic Alderhalden reaction, which is interpreted as an infrequently occurring special case of the aerographic reaction. Hypotheses on the mechanisms of these reactions are presented. U. Weiss.

CA

114

The serography of Fuchs inhibitive systems. V. Podrouzек, Casopis Českého Lékařnického 63, 52-6(1950).—The inhibitive systems of the Fuchs reaction for cancer (C.A. 20, 945) were studied by the serographic method that makes use of stable turbidities formed upon addn. of a 7% H₂O soln. of PhOH to reactive serographic systems. The pos. Fuchs reaction (unaffected system) is marked by little or no decrease in turbidity of the original system; the neg. reaction shows a definite reduction in turbidity. This method is less sensitive than the polarographic method but is simpler and requires less-costly equipment. James L. Jezi

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CIA-RDP86-00513R001341510016-9

PODRouZek, V.

Serographic determination of the effect of dihydrotachysterol.
Cas.cesk.lek.Ved.priloha 63 no.9-12:277-280 Dec 1950. (CIML 20:9)

APPROVED FOR RELEASE: 06/15/2000

CIA-RDP86-00513R001341510016-9"

PODRZUCKI, Czeslaw

Studies on the mechanism of overheating cast iron in the cupola while using calcium carbide in the charge. Metal i odlew no.10: 129-130 '63.

1. Katedra Odlewnictwa, Akademia Gorniczo-Hutnicza, Krakow.

PODRZUCKI, Czealaw

Studies on the influence of the addition of Na_2CO_3 to coke briquettes on some of their thermochemical properties. Metal i odlew no.10:127-128 '63.

1. Katedra Odlewnictwa, Akademia Gorniczo-Hutnicza, Krakow.

VERINA, V.N.; LUNGU, R.I.; MIRSKIY, D.A.; RADUL, M.M.; RUSANOVSKIY,
V.G.; TODIKA, M.P.; PODRUKHINA, V., red.; KURMAYEVA, T.,
tekhn. red.

[Geography of the Moldavian S.S.R.] Geografiia Moldavskoi SSR;
uchebnoe posobie dlia VIII klassa. Kishinev, Gos.izd-vo
"Kartia moldoveniaske," 1962. 112 p. (MIRA 15:11)
(Moldavia--Geography)

PODRUKS, B.; ARKHIPOV, I., starshiy instruktor

Propaganda automobile came to the plant...Pozh.delo 7 no.8:
12 Ag '61. (MIRA 14:8)

1. Predsedatel' oblastnogo soveta Dobrovol'nogo pozharnogo
obuchestva.
(Fire prevention--Study and teaching)

BOGDANOV, F.R., prof. (Kiyev, Vladimirskaya ul., d.9, kv.10); PODRUSHNYAK,
Ye.P., kand. med. nauk

Gerontologic and geriatric problems in orthopedics and traumatology.
Ortop., travm. i protez. 25 no.6:3-9 Je '64.

(MIRA 18:3)

1. Chlen-korrespondent AMN SSSR (for Bogdanov).

PODPRUZHNIKOV, V.I., inzh.; VENGER, F.I., inzh.

Industrial testing of coal plow equipment for inclined seams.
Ugol' Ukr. 10 no. 1:24-25 Ja '66. (MIRA 18:12)

1. Luganskiy filial Dongiprouglemasha.

PODRZUCKI, Cz., dr inz.

Answering R.Krzeszewski's notes directed to the editors of Przeglad Odlewictwa in connection with my articles published in nos. 1 and 6 of 1961 of this periodical: "Determination of the Linear Burning Speed of Coke and the Height of the Burning Zone in the Cupola"; "Determination of the Proportion Coefficient 'A' in the Formula for the Height of the Burning Zone in the Cupola." Przegl odlew 12 no.1:Suppl.:Biul inf Inst odlew 12 no.1/2:29-33 '62.

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CIA-RDP86-00513R001341510016-9

PISZAK, Jur; PODRZUCKI, Czeslaw

Professor Czeslaw Kalata, his scientific, teaching, and professional activities. Przegl odlew 15 no.3:61-64 Mr '65.

APPROVED FOR RELEASE: 06/15/2000

CIA-RDP86-00513R001341510016-9"

PODRZUCKI, Czeslaw, dr. inz.; NABOZNY, Marian, mgr. inz.;
STRAMA, Stanislaw, inz.

Experiments in carburizing cast-iron outside the cupola-furnace. Huta Lenina prace no.10:47-66 '61.

71 G

c.1.

Serographic reaction of immunochemical receptors of the first and second orders. Vilém Podrousek (Masaryk Univ., Brno). *Casopis Českého Lékařství* 62, 125-32 (1949).— The serographic method was used to follow the reaction of immunoreagins. Differences between mol. and particulate antigens were noted. The mode of development of complex compds. with excess antigen is indicated and development of "secondary denaturation" in the equivalent zone was proven. The L_1 value equalled Ramon's L_f value and could, therefore, be substituted for L_f in Ramon's method. Oldřich Šebek

"APPROVED FOR RELEASE: 06/15/2000

CIA-RDP86-00513R001341510016-9

PODRYVANOV, A.A.

Disk grinding device. Mashinostroitel' no.8:14 Ag '63.
(MIRA 16:10)

APPROVED FOR RELEASE: 06/15/2000

CIA-RDP86-00513R001341510016-9"

"APPROVED FOR RELEASE: 06/15/2000

CIA-RDP86-00513R001341510016-9

PODRZUCKI, Czeslaw

Factors affecting the chemical composition of cupola combustion gases. Przegl odlew 14 no.6:169-174 Je '64.

APPROVED FOR RELEASE: 06/15/2000

CIA-RDP86-00513R001341510016-9"

PODRZBCKI, Czeslaw

Studies on the dependence of the chemical composition of the stack
gases on the blast volume. Przegl odlew 14 no.8/9:236-2/2 Ag-S '64.

COUNTRY : USSR
CATEGORY : Cultivated Plants. Fruits. Berries. Nuts. Tea.
M
ABS. JOUR. : PZhBiol., No. 1, 1959, No. 1778
AUTHOR : Podufalyy, T.; Dravina, O.
INST. :
TIME : Kyegrass and Grass Mixtures for Irrigated orchards.

CHG. PUB. : Vinogradnost' i sadovedstvo SSSR, 1957,
No. 2, 28-30
ABSTRACT : In many Crimean fruit-irrigated orchards, particularly
when the space between the rows is filled with vegetable
plants for a prolonged time, a weekly portions dense layer
"the plowed underbottom" is formed in the sub-tillable
horizon. It can be broken down by way of turning in the
garden soil with herbaceous-leguminous grass mixtures.
A better grass mixture for this purpose in irrigated
fruit-bearing orchards of the Crimea appears to be
kyegrass with lucerne.

CARD: 111

MOSKVIN, V.M., doktor tekhn. nauk, prof.; PODVAL'NYY, A.M., inzh.

Effect of stresses on the corrosion resistance of concrete. Trudy
NIIZHEB no.9:124-142 '59 (MIRA 13:3)
(Concrete--Corrosion) (Strains and stresses)

VOSTRIKOVA, A.M.; SAKHAROVA, V.V.. Prinimali uchastiye: FISHKO, F.Ye.;
YEFIMOVA, N.M.; BABURSKAYA, Z.T.; POZDNYAKOVA, K.I.; SHCHEGLOVA,
K.D.; KUSTOVA, V.T.; POD'yACHIKH, P.G., red.; STRONGIN, V.L.,
red.; PYATAKOVA, N.D., tekhn.red.

[Public health in the U.S.S.R.: compendium of statistics] Zdravookhranenie v SSSR; statisticheskii sbornik. Moskva, Gosstatizdat
TsSU SSSR, 1960. 271 p.
(MIRA 13:8)

1. Russia (1923- U.S.S.R.) TSentral'noye statisticheskoye upravleniye.
2. Otdel statistiki naseleniya i zdravookhraneniya TSentral'nogo statisticheskogo upravleniya SSSR (for all except Strongin, Pyatakova).
3. Chlen Kollegii TSentral'nogo statisticheskogo upravleniya SSSR (for Pod'yachikh).

(PUBLIC HEALTH--STATISTICS)

PODPRYATOVA, T.

Activities of the health group in Murmansk Province. Zdrav. Ros.
Feder. 4 no.7:16-19 Je '60. (MIRA 13:9)

1. Glavnnyy vrach oblastnogo doma sanitarnogo prosveshcheniya.
(MURMANSK PROVINCE...PUBLIC HEALTH)

BOLGO, YA. S., PODROVSKAYA, YE. I.

Ticks

Anti-tick treatment of cattle with DDT and benzene hexachloride in Voronezh Province.
Veterinariia 29 no. 3, 1952.

9. Monthly List of Russian Accessions, Library of Congress, July 1958, Unclassified.
2

PODROUZEK, ANTONIN

V. Sulfo esters. Vladimír Pilc, Rudolf Vlček, and Antonín Podrouzek. Czech. 84,692, Nov. 1, 1955. The sulfonation of fats and oils yields sulfoesters of uniform properties suitable for use in the textile and tanning processes. Train oil 400 kg. (I no. 115) is sulfonated with 100 kg. of 93% H₂SO₄, and the reaction mixt. is washed with 500 l. of 20% soln. of Na₂SO₄, slowly heated to 35°, and maintained at 30-40° 12 hrs. After sepg. the lower acidic layer, the emulsion of sulfo esters is neutralized with NH₄OH to pH 6.4. The product contains 73% fatty acids and 0.5% nonsaponifiable substances, and the emulsion is stable at 70° for more than 2 hrs.

L. J. Urbánek

(3)

SELIGER, V.; PODROUZEK, V.

Discussion on paper partition electrophoresis of proteins.
Cesk. fysiol. 4 no.3:365-367 1955.

1. Ustav telovychovneho lekarstvi LFMU, fysiologicke oddeleni,
Praha.

(BLOOD PROTEINS, determination,
in athletes, electrophoresis)
(ATHLETICS, physiology,
blood proteins, electrophoresis)
(ELECTROPHORESIS,
of blood proteins in athletes)

SELIGER, V.; PODROUZEK, V.

Statistical considerations on Brdicka's reaction in normal subjects.
Cesk. fysiol. 5 no.2:254-257 23 June 56.

1. Ustav telovychevneho lekarsti LF KU, fysiologicke oddeleni,
Praha.

(BLOOD PROTEINS,
normal levels (Cx))

for analysis. The samples were placed on
filter paper and placed between two glass plates. It was unnecessary to trace the paper in a
translucency interpretation if a suitable spectrometer was
chosen. The stains are stained with bromophenol blue in a
5% soin of citric acid in 97% CH_3O . The photometry of the
yellow coloration with yellow light has the advantage that
the exponential dependence of the absorption on concentration is
avoided and additive and intergrainement zones do not appear.

Ivo M. Hais

FOLLOW ZEEF, V

Med ✓ A continuous polarographic method of determining oxygen consumption in man. V. Podroužek, V. Seliger, and Z. Trefný. *Českostov. Fysiol.*, 3, 430-1(1954); *Excerpta Med.*, Sect II, 8, 635(1955).—A special capillary, bent at a right angle, with a dropping rate of 0.38 sec, is used as dropping electrode. The expired air is bubbled through 3 ml. of 0.1*N* KCl in a special vessel at the rate of 100 ml./min. The current is registered continuously at 1.4 v. K. L. C.

3

POD ROYKINA, Ye. I.

1962	Vergin, V.T.	05/22/59-12/22/23
AUTHOR:		
TITLE:	Conference on Metals and Metal Enameling (naukachnoye po sledstviyu i osnovaniyu metallov)	
PUBLISHER:	Strolo i knizhka, 1954, Br. 12, pp. 47-48 (USSR)	
ABSTRACT:	The organizers of the conference were Leninskogo oblastnogo nauchno-tekhnicheskogo pravleniya obshchestva strukturnykh materialov (Scientific and Technical Society of the Industry of Building Materials), Leninskogo tekhnologicheskogo in-ta (Institute of National Economy) and Leninskogo Tekhnologicheskogo in-ta (Leninsk Technological Institute). The program of the conference included the most important problems of metal synthesis, enameling of steel products and industrial apparatus. About 250 experts took part in the conference, representatives from works in the Urals, Orel, Novosibirsk, Ulan-Ude, Krasnoyarsk, Barnaulsk, as well as functionaries of the universities, of the scientific research and design institutes in Leningrad, Moscow, Leningrad, Saratov, Nizhny Novgorod, and others. More than 40 reports were given and discussed. Professor K.J. Tsvetkov, director of the LITI (Institut Lensovet), in his opening speech, stressed the great economic importance of the problems of enamel metal products and apparatus.	
CARD 1/6		
<p>1. I.I. Litvinov (Institut Lensovet) reported on the influence of metal quality on the formation of "fibrous scales" in enameling. A.I. Sipen, Institut srednykh silikatov AM SSSR (Institute of Silicate Chemistry of the AS USSR), spoke on the present state of the problem of calculating the properties of glass and enamel according to their composition.</p> <p>H.V. Serbyakova (LITI Institut Lensovet) gave a survey of foreign literature on metals and metal enameling.</p> <p>M.I. Lifshits, Nauchno-tekhnicheskii in-tu in-tu selenotermicheskikh (Scientific Research Institute of Sanitary Disinfection), reported on the enameling of products in the electric field of a corona discharge.</p> <p>I.G. Petruzye, Leningradskii selenotermicheskii in-tu (Leningrad Institute of Sanitary Disinfection) reported on the character of interaction between metals and sealed enamel.</p> <p>B.S. Zaitsev, Orel'skiy nauchno-issledovatel'skiy in-tu chernykh metallov (Orel'skiy Scientific Research Institute of Ferrous Metals) reported on the influence of the condition of the steel surface on the formation of the enamel coat.</p> <p>A.I. Borisenko, In-tu in-silicate chernykh metallov (Institute of AJ USSR), spoke on the new method of obtaining thin silicate coats of solid solutions.</p> <p>Ye.B. Todorovskiy spoke on a new enameling method with heating of the products by high-frequency currents.</p> <p>P.A. Berezovetskiy (Vsesoyuznyi nauchno-tekhnicheskii selenotermicheskii in-tu) gave information on new enamel used by the factory.</p> <p>S.I. Polozov, Novosibirskiy nauchno-tekhnicheskii selenotermicheskii in-tu (Novosibirsk Institute) reported on the dependence of the softening and the enamel deliquescence on the correlation of boric and non-boric acids.</p>		
CARD 2/6		

Conference on Enamels and Metal Baseplates

Sov7/2-54-12-27/2

P.C. Pukinskis, Latvian State University (Latvian State University), reported on the investigation of fritted price enamels for casting cast iron.

V.Ia. Lekshkin, Scientific Research Institute of Sanitary Engineering, reported on the influence of chemical composition on some properties of easily fusible powder enamels.

The rest metal workers, the following reports were given:

L.V. Gavrilova on price-less steel and aluminum enameling.

M.V. Slobodchikova on non-plumbable aluminous enamel for aluminum.

G.G. Efremova on alkylglycidyl enameles.

Ia.V. Mironov on the classification of a systematic series of oxides for devitrifying blue and white porcelain pigments.

The Novocherkassk Polytechnic Institute gave the following reports:

K.P. Astrov on new methods of enamel baking and on the influence of iron oxides on the physico-chemical properties of the price coat.

V.G. Berlin on the importance of the gas phase in the burning process of the price coat.

Ie.I. Chistov on phosphate enamels.

Ie.I. Podrozhnikov on price-less coats.

Collegues of the Dnepropetrovsk Chemical-Technological Institute reported:

C.I. Palapayev on the solid content and basicity of enamels, and on the inheritance of the composition on some properties of price enamels.

Iu.J. Marinov on the damping of enamels by uniticity.

I.V. Puriš, Leningradsky Khimiko-Plastichesky Zavod (Leningrad Chemical Plant) and S.I. Solynits (MILKIMASH) on the experiments of manufacturing enamelized chemical apparatus of steel.

A.M. Sapegin spoke on the causes of blistering of price enamels at the Zaporozhsky Metallurgical Works (Zaporozh'e "Metallurg" Works) and the methods of preventing this fault.

V.I. Zarobtsev, Iugansksky Works Issaii Artem, reported on the successful application of vibration grinding for crushing sand and non-bonded enamel layers, as well as on the replacement of waine while titanium enamels.

V.G. Sotnikov reported on the improvements in the burning technology of enamel, as well as in connection with the change-over of furnaces to gas, as well as on proposals of materials for burning.

V.A. Chirikov reported on the work of the design office of the enamel factory at the Alyksenykelskoe works.

D.I. Tsvetkov, representative of the State Office for Planned Economic Control, reported on the planned production volume for the next year, as well as on the standard specifications of both consumption, provided.

The members of the conference passed resolutions for obtaining an improvement in the quality of enamel products, as well as for increasing their production and creating a new technology and new production methods.

Card 1/6

S/081/60/000/022/011/016
A005/A001

Translation from: Referativnyy zhurnal, Khimiya, 1960, No. 22, p. 326, # 89435

AUTHORS: Azarov, K. P., Berdova, G. V., Grechanova, S. B., Podroykina, Ye. I.

TITLE: Enamels for Steel Without Prime Coat

PERIODICAL: Tr. Novocherk. politekhn. in-ta, 1959, Vol. 97, pp. 93-98

TEXT: The effect of some physical-chemical properties was studied of enamels without and with prime coat and with and without boron, on the origination process of coating swelling. Form the variation of the index of refraction, the solubility of Fe_2O_3 was determined in white boric titanic enamels without prime coat, antimonic enamels without prime coat, and enamels with prime coat with and without boron. The solubility of Fe_2O_3 in enamels without prime coat is lower than that in boric enamels with prime coat and near the solubility in enamels with prime coat without boron. With increasing content of Fe_2O_3 the viscosity of the enamels with boron and without prime coat as well as the enamels without boron and with prime coat increases sharply, but that of the enamels with boron and prime coat decreases. The experiments on the artificial swelling of enamels showed that

Card 1/2

MUZYCHUK, F.M.; PODRUCHNYY, L.F., traktorist

Improving the use of tractor trailers. Mekh.sil'.hosp.
10 no.12:14 D '59. (MIRA 13:3)

1. Glavnnyy inzhener Chortkovskoy remontno-tekhnicheskoy
stantsii, Ternopol'skoy oblasti (for Muzychuk). 2. Kolkhoz
"1 Travnya," Chortkovskogo rayona (for Podruchnyy).
(Tractors--Trailers)

GROMOZDOV, G.G.; PODRUJKOV, A.A.; KADER, Ya.M., red.; BUKOVSKAYA, N.A.,
tekhn.red.

[How to keep healthy] Kak sokhranit' zdorov'e. Moskva, Voen.
izd-vo M-va obor.SSSR, 1960. 113 p. (MIRA 13:12)
(Military hygiene)

NEFEDOV, Ya. G.; PODRUL', S. I.

Mining Machinery

Three years service of hammer drills under the guarantee system. Gor.Zhur. no. 4, 1952.

9. Monthly List of Russian Accessions, Library of Congress, April ² 1953, Uncl.

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PODRUSHNYAK, Ye.P. (Kiev).

Using sulfathalidine in surgical practice. Vrach.delo no.2:167-169
(MIRA 10:6)
1957.

1. Pervaya klinika (zav. - prof. A.G.Yeletskiy) Ukrainskogo nauchno-
issledovatel'skogo instituta ortopedii i travmatologii.
(PHTHALANILIC ACID)
(SURGERY, ASEPTIC AND ANTISEPTIC)

"APPROVED FOR RELEASE: 06/15/2000

CIA-RDP86-00513R001341510016-9

PODRUSHNYAK, Ye.P., kand.med.nauk (Kiyev)

Work of medical societies. Vrach.delo no.3:329 Mr'58 (MIRA 11:5)
(UKRAINE--MEDICAL SOCIETIES)

APPROVED FOR RELEASE: 06/15/2000

CIA-RDP86-00513R001341510016-9"

Country : USSR
Category : Farm Animals. The Honeybee.
Abs. Jour : RZBiol., No. 4, 1959, No. 16767
Author : Podruchnyy, P. I.
Institut. : My Experience in Treating Foul Brood.
Title :
Orig. Pub. : Pchelovodstvo, 1958, № 7, 51-52
Abstract : European foul brood has been successfully eliminated from apiaries by strength ening weak colonies with young bees (and not by brood), by keeping their hives intact and by discontinuing egglaying of the queens for 21-23 days before the onset of the main collection [of honey].

Q-5

Card:

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81

PODRUSHNYAK, Ye.P. (Kiyev)

Preparation of manuscripts in research and medical institutes.
(MIRA 14:3)
Vrach. delo no. 2:149-150 F '61.
(UKRAINE—MEDICAL RESEARCH)

PODRUTSKIY, I.YE., Eng., and FILAKHTOV, A.L., Eng.

Dams

Building a barrier on an extremely pervious base. Gidr.stroi. 21, no. 5, 1952.

MONTHLY LIST OF RUSSIAN ACCESSIONS, LIBRARY OF CONGRESS, SEPTEMBER 1952. UNCLASSIFIED.

USSR/Engineering - Hydraulics, Con-
struction

May 52

"Erection of a Cofferdam on Highly Impermeable
Foundation," I. Ye. Podrutskij, A. I. Filaktor,
Engineers

"Gidrotekh Stroit" No 5, pp 21-23

Describes procedure of erecting cofferdams during
construction of hydroelec power station, when
river bed was covered with 12-m alluvial layer
over gabbro rocks. Alluvium represented mixt. of
sand and pebbles with occurrence of boulders up to

230T14

1 m in diam. Watertightness of foundation
attained by grouting alluvium with cement and
by blankets built on pressure side of coffer-
dams.

PODRUTSKIJ, I. YE.

230T14

PODRUTSKIY, I. YE.

PA156T31

USSR/Engineering - Hydroelectric Plants Dec 49
Construction Industry

"Combining Structural and Installation Work in
Building Hydroelectric Power Station," I. Ye.
Podrutskiy, Engr, 2 $\frac{1}{2}$ pp

"Gidrotekh Stroi" No 12

Describes method for reducing time required to
build hydroelectric power stations by carrying
out structural and installation work at the same
time. Editor requests readers' views. Includes
sketch.

FDD

156T31

1. PODRUTSKIY, I. Ye., Eng.: FILAKHTOV, A. I., Eng.
2. USSR (600)
4. Hydroelectric Power Stations
7. Use of standard bridges in building hydro power centers. Gidr.stroi.
21 no. 10 1952
9. Monthly List of Russian Accessions, Library of Congress, February 1953. Unclassified.

1. PODRUTSKIY, I. YE., FILAKHTOV, A. L., Engs.

2. USSR (600)

4. Hydroelectric Power Stations

7. Utilizing submerged sand and gravel pits for the construction of a hydroelectric power station. Gidr.stroi. No. 11 1952.

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

PODRUZSKII, A. P.

O vostochnom kontse Sibirskoi zheleznoi dorogi i torgovem porte Amurskogo
basseina. [On the eastern end of the Siberian railway and on the port of Amur
basin]. (Zemlevedenie, 1894, v. 1, kn. 1) DLC: G1.Z7

SO: Soviet Transportation and Communications, A Bibliography, Library of Congress,
Reference department, Washington, 195~~5~~ Unclassified.

"APPROVED FOR RELEASE: 06/15/2000

CIA-RDP86-00513R001341510016-9

POPRYADCHIK, Yu. S.

KOCHAN, E.K. (Vilnius); POPRYADCHIK, Yu.S. (Vilnius)

Observations of minor planets at the Vilnius Astronomical Observatory
of Vilnius State University. Astron.tair. no.156:1-2 Ja 55.
(Planets, Minor) (MIRA 8:10)

APPROVED FOR RELEASE: 06/15/2000

CIA-RDP86-00513R001341510016-9"

"APPROVED FOR RELEASE: 06/15/2000

CIA-RDP86-00513R001341510016-9

KOKHAN, Ye.K. (Vilnius); PODRYADCHIK, Yu.S. (Vilnius)

Observations of minor planets at the Vilnius Astronomical Observatory
of the Vilnius State University. Astron.tsir. no.146:4 F '54. (MLRA 7:6)
(Planets, Minor)

APPROVED FOR RELEASE: 06/15/2000

CIA-RDP86-00513R001341510016-9"

"APPROVED FOR RELEASE: 06/15/2000

CIA-RDP86-00513R001341510016-9

KOKHAN, Ye.K.; PODRYADCHIK, Yu.S.

Observations of minor planets made at the Vilnius Astronomical Observatory
of the Vilnius State University. Astron.tair. no.137:5 Ap '53.
(MLRA 6:8)
(Planets, Minor)

APPROVED FOR RELEASE: 06/15/2000

CIA-RDP86-00513R001341510016-9"

PODRYADCHIK, Yu.S.

KOKHAN, Ye.K. (Vilnius); PODRYADCHIK, Yu.S. (Vilnius).

Observations of minor planets at the Vilnius Astronomical Observatory
of Vilnius State University. Astron.tsir. no.140:7 Ag '53.
(MIRA 7:1)
(Planets, Minor)

PODRZUCKI, Cz., dr inż.

News from the Department of Foundry Practice, 1959-1961.
Metal i odlew no.10:131-134 '63.

PODRZUCKI, Czeslaw

Studies on the reactivity of coke. Koks 7 no. 6:227-233 N.D 1962.

1. Katedra Odlewnictwa, Akademia Gorniczo-Hutnicza, Krakow.

KALATA, Czeslaw, prof. inz.; PODRZUCKI, Czeslaw, dr inz.

"Radiated recuperators for cupolas" by J. Szreniawski, A. Jopkiewicz.
Reviewed by Czeslaw Kalata, Czeslaw Podrzucki. Przegl odlew 12 no.12:
393-394 D '62.

"APPROVED FOR RELEASE: 06/15/2000

CIA-RDP86-00513R001341510016-9

PODRZUCKI, Czeslaw, dr inz.

"Hot blast cupolas" by R. Chudzikiewicz. Reviewed by
Czeslaw Podrzucki. Przegl odlew 12 no.10:332-334 0 '62.

APPROVED FOR RELEASE: 06/15/2000

CIA-RDP86-00513R001341510016-9"

PODRZUCKI, C.

Modern Methods of Intensifying the Cupola Process in the Light of Jerzy
Buzek's Works, p. 128.

PRZEGŁAD ODLEWNICTWA (Stowarzyszenie Techniczne Odlewników Polskich)
Krakow, Poland.
Vol. 9, no. 5, May 1959.

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

Podrzucki, C.

✓ Modern Technology of Cast Iron Melting with Special
References to Melting in Cupola Furnaces with Water Cooled
Linings. M. Gajewski, C. Podrzucki and Z. Wittek. (Przeglad
Gospodarczy, 1955, 5, (7-8), 196-202; (9), 257-270). (In
Polish). A general review of methods leading to an improve-
ment in the efficiency in cupola melting is given. The following
problems are discussed: the use of two or more rows of
 tuyeres; oxygen enrichment of blast, basic lining and water
cooling of lining. (68 references). - V. G.

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POSBROCKI C

Modern methods of intensification of cupola process as seen in the light of Jerzy Buzek's works. C. Budzinski
Przegląd Odlewnictwa 9, 128-34(1959).—The term "intensification of cupola process" was defined as the increase in cupola efficiency and in liquid metal temp., owing to application of technological and design improvement. The modern methods of controlling the cupola efficiency were discussed on the basis of J. Buzek's classical formula (cf. Geiger, *Handbuch der Eisen- und Stahlgiesserei*, 1925, vol. I, 2nd ed.), in which the magnitude of actual blast and coke consumption were considered as the main factors. The effect of blast amt. on the cupola efficiency was explained in terms of phys. chemistry. At high pressure and temp. during the cupola process the reaction of fuel burning had a diffusional character, and was detd. by the rate of O diffusion from gaseous stream to the burning surfaces. The optimum magnitude of blast, as established by B., should be adjusted for the present conditions of the process, when higher quality of cast iron is required, and less suitable fuels are used. The factors affecting directly the superheating temp. of cast iron were the height above the tuyère, beyond which metal charge stopped melting, with corresponding height of combustion zone, and the temp. in the combustion zone. The temp. of the combustion zone was simply related to the theoretical temp. of fuel combustion, which increased with the blast temp., to the O contents, and to the fuel quality. The outlined considerations reasoned the modern trend of intensification of cupola process by an increase in actual amt. of blast, applying of hot blast, O-enriched blast, and system of multirow tuyères.

W. Tomaszczyk

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PODRZUCKI, C.

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J. of the Drossy Student
V-176 Feb 1954
Engineering practice

The Actual Blast Volume in a Cupola. M. Czyzewski and C. Podrzucki. (Przeglad Odkrywictwa, 1953, 3, (7), 202-210). [In Polish]. Attention is drawn to the large blast losses in cupola operation which are seldom taken into consideration in evaluating cupola performance. For this reason the concepts of real (p_r) and apparent (p_a) blast volume are introduced. The ratio p_r/p_a is called blast efficiency, which in modern cupolas varies between 0.5 and 0.98. Literature dealing with cupola performance is critically surveyed in the light of apparent and real blast volume. The dependence of the coke consumption on the ratio $\text{CO}/(\text{CO}_2 + \text{CO})$ and on the real blast volume is discussed for various cupola outputs using Polish coke. Methods for the approximate and exact determinations of real blast volume are described. — v. G.

PODRZUCKI, C.

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621.715.31 : 621.611

Czyżewski M., Podrzucki C. Actual Amount of Blast Air in the Cupola. "Rzeczywista ilość powietrza dmuchu do pieczenia". Przegląd Górnictwa No. 7, 1953, pp. 202-210, 3 figs., 4 tabs.

Blast is one of the basic parameters which in any examination of the cupola process should be taken into consideration. The authors of the present paper distinguish the apparent amount of blast air i.e. the amount supplied by the ventilator and measured in the interconnecting tubes - from the actual amount of blast air, which is, due to losses, a lesser quantity. In other countries, technical literature makes, when considering the cupola process, no such distinction. On the basis of various papers on this subject it is demonstrated that the neglect of losses in blast air has influenced many investigators in arriving at conclusions which are erroneous and at variance with basic principles of the process of combustion and with rules laid down by Buzek for cupola operation. This paper indicates two methods of determining the real amount of blast air. The first method is approximate, based on knowledge of the amount of coke burned, and of the production of cupola; the result is reached by means of a nomogram applicable only to the present type of foundry coke and is based on functional equations computed by Buzek, Jungbluth and others. The second method is illustrated by an example and is based on calculations. To make these calculations, accurate knowledge of parameters of the cupola operation is necessary, and in particular the chemical composition of the metallic charge, coke, cast iron, combustion gases, flux and slag. This fact may, from the practical point of view, present considerable difficulties.

PODRZUCKI, Czeslaw

Gupola output in the light of coke combustion and metal melting processes. Metal i odlew no.10:83-112 '63.

1. Katedra Odlewnictwa, Akademia Gorniczo-Hutnicza, Krakow.

PUDRZUCKI, Czeslaw

Determination of the linear combustion rate of coke in the cupola
combustion zone. Metal i odlew no.10:115-117 '63.

1. Wydzial Odlewnictwa, Akademia Gorniczo-Hutnicza, Krakow.

PODRZUCKI, Czeslaw, dr inz.

Bibliography of works and patents of members of the Department
of Foundry Practice of the School of Metallurgy and Mining
during the years 1956-1961. Metal i odlew no.10:135-153 '63.

PODRZUCKI, Czeslaw; KOSOWSKI, Adam

Determination of water requirement for the wet spark
arrester of the cupola. Przegl naukowo-techn AGH
no. 6:29-39 '62.

1. Katedra Odlewnictwa, Akademia Gorniczo-Hutnicza, Krakow.

137-1958-2-2694

Podsechinov, A.V.
Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 2, p 71 (USSR)

AUTHORS: Fridlyander, I.N., Zahkarov, Ye.D., Podsechinov, A.V.,
Klyagina, N.S., Solov'yeva, V.V.

TITLE: Air-cooled and Water-cooled Round Ingots Cast From Alloy V95
(an Aircraft Aluminum Alloy) (Issledovaniye kruglykh slitkov
splava V95, otlitykh s okhlazhdeniyem vodoy i vozdukhom)

PERIODICAL: V sb.: Metallurg. osnovy lit'ya legkikh splavov. Moscow,
Oborongiz, 1957, pp 5-46

ABSTRACT: A study was made of the structure and properties of air-cooled and water-cooled cast round ingots (370 mm in diameter) and of sections obtained from them. Water cooling was found to enhance the quality and evenness of the mechanical properties and to reduce formation of liquation bands; on the other hand, water cooling would impair the corrosion resistance of the sections and intensify the formation of liquation burls on the ingots. Ingots of alloy V95 should be water-cooled.

G.S.

Card 1/1 1. Alloys--Ingots--Properties--Determination

36787

S/137/62/000/004/033/201

A006/A101

1D-1210(2408)
AUTHORS: Podsechinov, A. V., Semenov, A. Ye.

TITLE: The effect of the dimensions of the transitional zone in large-size ingots on the mechanical and casting properties of deformed aluminum alloys

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 4, 1962, 35, abstract 4G220
(V sb. "Deformiruyemye alyumin. splavy". Moscow, Oborongiz, 1961,
181 - 188)

TEXT: The quality of large-size ingots depends considerably on the dimensions of the transitional zone. A decrease of these dimensions at a lesser casting rate, promotes an improvement of mechanical properties and a reduction of segregation in large size ingots. The poor quality of the ingots is caused by microporosity due to insufficient feed of the crystallizing metal in the lower section of the crystallization range. Cracks in large size ingots of alloys А 16 (D16), АК 4 (AK4), ВД 17 (VD17), АК 4-1 (AK4-1) are of the cold type and are determined by the ductility of the cast metal at low temperatures. When

Card 1/2

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The effect of the...

casting large-size ingots with elimination of water, it is necessary to reduce the lower limit of the casting speed on account of cold crack formation, and the upper limit for the purpose of improving the quality of ingots.

G. Svodtseva

[Abstracter's note: Complete translation]

Card 2/2

KHABAROVA, O.Ye.; ZASYPKIN, V.A.; SEMENOV, A.Ye.; PODSECHINOV, A.V.
[deceased]

Characteristics of smelting and casting of the VAD23 alloy.
(MIRA 17:6)
Alium. splavy no.3:201-208 '64.

PODSECHINOV, P. [Podsiechynov, P.]

Framed stock buildings. Sil'. bud. 12 no.10:8-10 0 '62.
(MIRA 15:10)

1. Nachal'nik otdela stroitel'stva Donetskogo oblastnogo uprav-
leniya proizvodstva i zagotovki sel'skokhozyaystvennykh produk-
tov.
(Donetsk Province--Barns)

PODSECHENOV, P. [Podsiechenov, P.]

Let's use wood from deciduous trees in construction. Sil'.
(MIRA 14:6)
bud. 11 no.4:11-12 Ap '61.

1. Nachal'nik otdela kapital'nogo stroitel'stva Stalinskogo
oblastnogo upravleniya sovkhozov.
(Ukraine--Wood)

PODSECHINOV, P. [Podsiechynov, P.]

Effectiveness of framed structure livestock buildings. Sil'.bud.
13 no.5:9-10 My '63. (MIRA 17:3)

1. Nachal'nik stroitel'nogo otdela Donetskogo oblastnogo upravleniya
stroitel'stva i zagotovok sel'skokhozyaystvennykh produktov.

PODSECHINOV, P. [Podsiechynov, P.]

Pay daily attention to construction methods without using wooden
elements. Sil'. bud. 10 no.9:3-5 3 '60. (MIRA 13:8)
(Stalino Province--Precast concrete construction)
(Farm buildings)

LASKOWSKI, Witold, mgr inz.; PODSEDKOWSKI, Andrzej, mgr inz.

Mustang type axial fan with rotor blades to be set during
rotation. Gosp paliw 13 no.4:137-138 Ap '65.

1. Compressor, Fan and Pump Laboratory of the Institute of
Heat Engineering, Lodz.

CHUMAKOV, M.P.; VOROSHILOVA, M.K.; VASIL'YEVA, K.A.; BAKINA, M.N.; DROZDOV,
S.G.; PODSEDOVSKIY, T.S.; KOSTINA, K.A.; SHIRMAN, G.A.; YANKEVICH,
O.D.; USPANSKIY, Yu.S.; ASHMARINA, Ye.Ye.

Preliminary report on massive peroral immunization of the population
against poliomyelitis with live virus vaccine from attenuated Sabin
strains. Vop.virus. 4 no.5:520-533 S-0 '59. (MIRA 13:2)

1. Institut po isucheniyu poliomiyelita AMN SSSR, Moskva.
(POLIOMYELITIS, immunol.)

SHEYNBERGAS, M.M.; PAKTORIS, Ye.A.; ROGOL', Yu.M.; PODSEDOVSKIY, T.S.; TENIKAYTITE, M.I. [Tenikaityte, M.]

Epidemic of infectious hepatitis in three northern districts
of the Lithuanian S.S.R. Vop.med.virus. no.9:173-180 '64.
(MIRA 18:4)

1. Iz Vil'nyusskogo nauchno-issledovatel'skogo institut'
epidemiologii i gigiyeny i Instituta virusologii imeni Ivanov-
skogo AMN SSSR, Moskva.

PAKTORIS, Ye.A.; KREYEK, Kh.Ya.; PODSEDLOVSKIY, T.S.; SPOTARENKO, S.S.;
FAYYERSHTEYN, S.G.

Results of mass use of gamma globulin during the pre-epidemic
season in the prophylaxis of epidemic hepatitis. Vop.med.virus.
(MIRA 18:4)
no.9:392-408 '64.

PODSEDOVSKIY, T.S.

Some results of the use of gamma globulin in the prophylaxis
of epidemic hepatitis in the Lithuanian S.S.R. Vop.med.virus.
(MIRA 18:4)
no.9:412-419 '64.

1. Vil'nyusskiy nauchno-issledovatel'skiy institut epidemiologii
i gigiyeny.

PAKTORIS, Ye.A.; PODSEDOVSKIY, T.S.

Experience in mass prevention of epidemic hepatitis in the
Lithuanian S S. R. using γ -globulin. Report No.1: Duration
of the preventive activity of γ -globulin in epidemic hepati-
tis. Zhur. mikrobiol., epid. i immun. 41 no.11:112-116 '65.
(MIRA 18:5)

1. Institut virusologii imeni Ivanovskogo AMN SSSR i Vil'nyus-
skiy institut epidemiologii i gigiyeny.

PODSEDOVSKIY, T.S.; PAKTORIS, Ye.A.

Results of γ -globulin mass prophylaxis of epidemic hepatitis
in the Lithuanian S.S.R. Report No.2: Comparative data on the
effectiveness of various doses and methods of γ -globulin pro-
phylaxis of epidemic hepatitis. Zhur. mikrobiol., epid. i immn.
42 no.1:61-66 Ja '65. (MIRA 18:6)

1. Vil'nyusskiy institut epidemiologii i gigiyeny i Institut
virusologii im. Ivanovskogo AMN SSSR.

PCDSEKIN, Yu.I.

Inertial shaker cut grates with a large lifting capacity. Sber. st.
NIITIAZHMASHA Uralmashzavoda no.9:88-96 '65.

(MIRA 18:8)

PODSEVALOV, N. N.

Novyi metod obrabotki ispytanii samoletov na skoropod'emnost'. Moskva,
1935. 24 p., tables, diagrs. (TSAGI. Trudy, no. 220)

Summary in English.

Title tr.: A new method of interpreting airplane tests on acceleration.
QA911.M65 no. 220

SO: Aeronautical Sciences and Aviation in the Soviet Union, Library of
Congress, 1955.

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S/114/61/000/001/009/009
E194/E355

26.2124

AUTHOR: Podsevalov, B.V., Engineer

TITLE: An Investigation of the Temperature Distribution
in Gas-turbine Blade Root Joints Cooled by Blowing
Air Through Ducts

PERIODICAL: Energomashinostroyeniye, 1961, No. 1,
pp. 40 - 44

TEXT: In recent designs of gas turbines, the blade roots are cooled by passing air through special cooling ducts of comparatively large size. The air may be delivered to the blade roots either through radial holes drilled in the rotor or by blowing the air axially along the rotor through a series of blade roots. Five methods of blade-root cooling are distinguished, according to the location of the cooling ducts. The main object of the present investigations carried out at the Central Boiler Turbine Institute was to assess the effectiveness of cooling a gas-turbine rotor with various arrangements of ducts in the blade roots. In addition to studying heat exchange and resistance a study was made of

Card 1/8

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E194/E355

An Investigation of the Temperature Distribution in
Gas-turbine Blade Root Joints Cooled by Blowing Air
Through Ducts

the temperature distribution in the blade-root zone. The object was to limit the temperatures in the metal so that gas-turbine rotors could be made of pearlitic steel whilst using gas temperatures of 700 - 750 °C. The work was carried out at the suggestion of LMZ (Leningrad Metal Works) which designed and made a model gas-turbine rotor.

Tests of a number of blade-root cooling systems were made on a model of a section of a rotor, a cross-sectional diagram of which is given in Fig. 1. The blades were heated by air delivered by a centrifugal compressor at rates up to

500 m³/min at pressures before the combustion chamber of 3 - 3.5 kg/cm². The basis of comparison was a fir-tree root with three teeth used in the stationary gas turbine of the Leningrad Metal Works. Five variants of cooling duct in this root were used and are sketched in Fig. 2. The five

Card 2/6

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E194/E355

An Investigation of the Temperature Distribution in
Gas-turbine Blade Root Joints Cooled by Blowing Air
Through Ducts

corresponded to the classification of different methods of cooling mentioned above. The instrumentation and experimental procedure are described. The conditions of test were similar to those met in service, the heat-transfer coefficient from the gas to the blading being

650 - 750 kcal/m².hr.⁰C and the gas speed at inlet to the blading 140 - 170 m/sec. The tests were carried out at Mach numbers of 0.15 - 0.45. Empirical formulae are given for the resistance and heat transfer in terms of numerical relationships between the Nusselt and Reynolds numbers.

For example, for turbulent air flow conditions:

$$\text{Nu} = 0.018 \text{ Re}^{0.80}$$

Card 3/8
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E194/E355

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An Investigation of the Temperature Distribution in
Gas-turbine Blade Root Joints Cooled by Blowing Air
Through Ducts

For transient conditions of air flow:

$$Nu = 0.000045 Re^{1.5}$$

Analysis of the temperature distribution in the blade root zone showed that, depending on the method of cooling and the initial temperature of cooling air, the total reduction in the temperature of the metal was 195 - 350 °C. There are qualitative and quantitative differences in the temperature distribution in the blade roots in the different cases. The temperatures for the cases tested are plotted in Fig. 4. Of the blade cooling systems illustrated in Fig. 2 it is considered that Nos. 4 and 3 are the best and 2 the worst. Electrical modelling tests of all five variants, the results

Card 4/6
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S/114/61/000/001/009/009
E194/E355

An Investigation of the Temperature Distribution in
Gas-turbine Blade Root Joints Cooled by Blowing Air
Through Ducts

of which have been published elsewhere, are in good agreement with the present thermal tests. It is concluded that analysis of the temperature distribution in the blade root joints showed that this method of cooling a gas-turbine rotor is very efficient. When the cooling air duct was properly sealed it was possible to reduce the temperature of the rotor lugs by an average of 300 °C, as compared with the gas temperature which, with this method of cooling, may be allowed to reach 800 °C. The consumption of cooling air at an initial temperature of 180 - 300 °C is not more than 1.5% of the gas consumption. One of the best methods of passing the cooling air is that in which the air is passed only through gaps of large size located between the rotor lugs and the upper edges of the blade root teeth. Another is one in which the air is blown simultaneously through these gaps and through ducts at

Card 5/8