

COUNTRY : USSR  
CATEGORY : Cultivated Plants, Fodder Grasses and Roots.  
RS. JOUR. : Izhdia, No. 1, 1959, No. 1705  
METHOD : Sabashtanskiy, S.A.  
INT. : AS Uzbek, SSR  
TITLE : Storage of Nitrogen and Phosphorus in Lucerne Roots during Various Phases of Mowing.  
ORIG. PUB. : Uzb. SSR, Dunlar Akad. dokimulari, Dokl. Akad. Nauk, 1957, No. 8, 57-60  
ABSTRACT : At the Central Selection Station of the All-Union Cotton Scientific Research Institute, the greatest accumulation of root ash with the highest N and P contents was obtained under mowing of the lucerne in the mass blooming phase (167.5kg/hectare of N and 42.4kg/hectare of P<sub>2</sub>O<sub>5</sub>) while the smallest N and P contents was obtained in the budding phase (90.3kg/hectare of N and 21.7kg/hectare of P<sub>2</sub>O<sub>5</sub>). The highest lucerne seed crop with a single irrigation was obtained under mowing it at the beginning of blooming (49.7 centners/hectare of seed as a total

WORD: 1/2

ZABASHTANSKIY, S.A.

Accumulation of phosphorus and nitrogen in the roots of alfalfa  
when it is cut at different stages of growth. Dokl. AN Uz. SSR  
no.8:57-60 '57. (MIRA 11:5)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut khlopkovodstva.  
Predstavleno chlenom-korr. AN UzSSR A.M. Mal'tseym.  
(Alfalfa) (Roots (Botany))

ZABASHTANSKIY, Stanislav Antonovich, kand. sel'khoz. nauk;  
NIYAZOVA, R., red.

[Triumphal step of the Bukhara youth; practices of  
Nasreddin Pulatov's Brigade on the "Uzbekistan" Col-  
lective Farm in Vabkent District, Bukhara Province]  
Pobednaia postup' bukharskoi molodezhi; opyt Nasred-  
dina Pulatova iz kolkhoza "Uzbekistan" Vabkentskogo  
raiona Bukharskoi oblasti. Tashkent, Gos. izd-vo  
UzSSR, 1963. 34 p. (MIRA 17:9)

AKHUNOVA, Tursunoy, Geroj Sotsialisticheskogo Truda; ZABASHEANSKIY,  
Stanislav Antonovich; MARTYNOV, Aleksey Nikiforovich;  
STEPANOV, M.A., nauchn. red.; TOCHILINA, L.V., red.

[Technology of cotton growing and harvesting] Tekhnologiya  
vozdelyvaniia i uborki khlopchatnika. Moskva, Vysshiaia  
shkola, 1964. 117 p. (MIRA 17:9)

1. Kolkhoz imeni Kirova Yangiyul'skogo proizvodstvennogo  
upravleniya (for Akhunova)

ROMANIA

ZARAVA, I., Eng. Candidate in Sciences (Candidat in Stiinte), of the "M. Balcescu" Agronomic Institute (Institutul Agronomic "M. Balcescu"), Bucharest.

" 'Batat', a Valuable Fodder Plant."

Bucharest, Revista de Zootehnie si Medicina Veterinara, Vol 13, No 7, Jul 63, pp 22-26.

Abstract: "Batat", or sweet potato -- Ipomoea batatas-Convul-  
ulus batatas -- is a fodder plant of high productivity newly introduced in Rumania since 1954 from the Peoples' Republic of China. The varieties introduced were the "Victoria 100" and the "166". Their botanical characteristics, productivity and nutritional value are described, and the chemical composition of the roots is given. Includes 5 tables.

1/1

RUMANIA

ZABAVA, I., Dr. Eng., of the Agronomic Institute (Institutul Agronomic), Bucharest.

"Some Problems Concerning Feed Digestibility."

Bucharest, Revista de Zootehnie si Medicina Veterinara, Vol 16, No 4, Apr 66, pp 33-37.

Abstract: The author compares digestibility data calculated according to the method of Leroy with the classic values according to O. Kellner. On the basis of calculations for 40 animal fodders, he concludes that the Leroy values show wide deviations from the actual digestibility values and are not suited for practical use in evaluating fodders.  
Includes 2 tables.

- END -

5428

CSO: 2000-N

1/1

- 95 -

L 22900-66 EWT(m)

ACC NR: AP5025772

SOURCE CODE: UR/0240/65/000/010/0071/0078

AUTHOR: Obaturov, G. M.; Zabavin, A. K.

35  
B

ORG: none

TITLE: Determination of summary dose absorption in internal irradiation

SOURCE: Gigiyena i sanitariya, no. 10, 1965, 71-78

TOPIC TAGS: gamma radiation, radiation drug, ~~radiation effect~~, isotope, radiation dosimetry, radiation biologic effect

ABSTRACT: In continuation of earlier work, the author presents three formulas for calculating the total dose absorbed by critical organs in internal irradiation, shows examples of the calculations, and compares their advantages and drawbacks. These methods are based on measuring concentrations of radioactive aerosols and the extent of their penetration, the activity of body eliminations, and the radioactivity of the human body. The first formula is based on 2 principles: the change in the amount of radioactive nuclei in the critical organ is equal to their penetration minus their elimination, proportional to N, and, the potency of the dose in the critical organ is proportional to its activity. The

Card 1/2

UDC: 613.648:621.386.82

L 22900-66

ACC NR: AP5025772

Formula is further developed for isotopes with various half lives and results are tabulated for the various organs. Its disadvantages are that no account is taken of simultaneous irradiation of other parts of the body, concentrations of aerosols reaching the respiratory tract may vary, and the constants are not sufficiently accurate. The second formula is based on 24 hour elimination for the first day of irradiation. Calculations are correct for short-term irradiation but their accuracy is low for most long life isotopes and the constants have low accuracy. The third method is one in which the dose of internal irradiation is determined in a given case by the results of measuring radioactivity in the organism and by a formula expressing the internal radiation dose. It is accurate except for the coefficients but requires expensive equipment. Orig. art. has: 11 formulas and 4 tables.

SUB CODE: 06 / SUBM DATE: 07Apr64

Card 2/2 B1 G





1ST AND 2ND ORDERS PROCESSES AND PREPARED BY

Separating mixtures of phenols and phenol-containing fractions of tars. V. I. Zolotarev, Khim. Tverdogo Topiva 4, 480-91(1953).—Phenol carbonates were obtained by treating the phenol with Ca(OH)<sub>2</sub> (twice the amt. required by theory) and passing a stream of phosgene until the soles became clear. A fractional decompos. of phenol carbonate salts was obtained with 26% NH<sub>4</sub>OH; it was found that the amts. of the individual phenols depends on the amt. of NH<sub>4</sub>OH and the duration of contact. A. A. Roetlingk

ADD-51A METALLURGICAL LITERATURE CLASSIFICATION

GROUP 02	00000-410-000-000	COLLECTION	0000-000-000
----------	-------------------	------------	--------------

PROCESSED AND RECORDED

la 21

Separating phenol mixtures in the phenol tar fractions.  
II. V. I. Galavin. Khim. Tverdog. Topica 6, 116-31  
(1935) Cf. C. A. B., 6280. — By hydrolysis of the urethans  
of the phenol fractions of peat tar the almost pure *o*-cresol  
can be sepd. and mixts. high in guaiacol and phenol can be  
separated. A. A. Bochtling

Common Illustration

Common Illustration

ABB-51A METALLURGICAL LITERATURE CLASSIFICATION

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	00
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

PROCEEDINGS AND EXPERIMENTAL DATA

The substances extracted with petroleum ether from *Doc. V. I. Zabavyn. Akad. Trudovye Tezisy 9, 108-75, 1934*. The solid residue obtained from sludge of the primary peat tar was investigated. Methylation and ultimate analysis established the humic character of the asphaltic substances of the tar. The asphaltic substances extd. from tar should be considered as humic acids of the initial peat, transformed during dry distn. Some of the substances extd. dissolved completely in alkali; their composition and properties were similar to those of humic acids. In spite of clearly deduced humic characteristics, all substances extd. from tar dissolved in the org. solvents, showing the properties of humic acids and bitumen simultaneously.

A. A. Podgorny

METALLURGICAL LITERATURE CLASSIFICATION

REGD DIVISION

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

PROCEDURE AND PREPARATION

187 AND 188 SERIES

ca
21

Selection of coals in heavy solvents as a method for their investigation. I. V. J. Zharvin. *Bull. acad. sci. U. R. S. S., Class. sci. Ser.* 1941, No. 4, 27-40. — Place weighed amts. of coal and anthracene oil in a Pyrex test tube (100 mm. long, 28 mm. in diam.) with a narrow neck through which a thermometer (with readings up to 400°) is inserted and a side neck connected through a Würtz flask (to collect any escaping oil) to an anemometer. Place the test tube in a pressure chamber. Increasing pressure facilitates considerably the adhesion of the plastic grains by pressing the grains against each other and increasing the contact surface. Artificial compression of the coal mixt. produces the same effect. Differential grinding of the components of the coal mixt. det. the mech. properties of coke. Increase of the strength of coke from coarse grinding of both components disproves the theory of soln. and dispersion of the components. Eight references.

W. R. Hena

ASB-52A METALLURGICAL LITERATURE CLASSIFICATION

FROM SYNDICATE

FROM SCHLAF

1ST AND 2ND COVERS		PERFORATED FOR REPRODUCTION		2ND AND 3RD COVERS	
MATERIALS UNIT		METALLURGICAL LITERATURE CLASSIFICATION		SERIALS UNIT	
1	2	3	4	5	6
7	8	9	10	11	12
13	14	15	16	17	18
19	20	21	22	23	24
25	26	27	28	29	30
31	32	33	34	35	36
37	38	39	40	41	42
43	44	45	46	47	48
49	50	51	52	53	54
55	56	57	58	59	60
61	62	63	64	65	66
67	68	69	70	71	72
73	74	75	76	77	78
79	80	81	82	83	84
85	86	87	88	89	90
91	92	93	94	95	96
97	98	99	100	101	102

*ca*

Solution of coals in heavy solvents as a method for their characterization and study. V. I. Zabaikin, *Bull. acad. sci. U.R.S.S., Classe sci. tech.* 1941, No. 7/8, 71-3; cf. *C.A.B.* 1462. Metens (I) dissolves a smaller fraction of coal than does anthracene oil (II) (4-6%, instead of 12-21%) but has the advantage of leaving the exts. uncontaminated. The soly. in II varies, but in I does not vary, with the coking qualities of coal. B. C. P. A.

*21*

PROCESSING AND RECORDING INDEX

B-1-3

Light petroleum fractions obtained by primary (see E. V. I. Zavarin, *J. Appl. Chem. Amer.*, 1941, 54, 546-548) - Primary cuts obtained from an ordinary coal (I), a brown coal (II), and a shale (III) were examined. The residues obtained from (I) and (II) were mixtures of substances of the heavy and light types. The heavy substances in (I) were neutral and in (II) acid; the latter thus resembled the heavy acids. The residues from (III) consisted only of resin-like substances.

ASAC-SLA REFERENCE LITERATURE CLASSIFICATION

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

1858. REACTION OF THE ORGANIC SUBSTANCE OF COAL WITH BENZOIC ANHYDRIDE. Zavarin, V. I. (Dokl. akad. sci. U.R.S.S., C. sci. tech., 1943 Part 8, 35-49; Brit. abstr. 1945, B I 10) When powdered coal is added to boiling  $Bz_2O$  the b.p. of the liquid gradually falls. The rate of fall and the final b.p. depression are the larger the younger is the coal; they can be used for characterising a coal specimen. The rate of depression rises with the ratio coal:  $Bz_2O$ ; the ratios 1:20, 1:40, and 1:80 were used. The reaction product contains  $Bz_2O$ ,  $BzOH$ , a product sol. in  $CHCl_3$ , and a product insol. in  $CHCl_3$ . 1g. of coal yields 0.2-1.7 g. of sol. and 0.7-2 g. of insol. product. If a coal is first dissolved in anthracene oil, pptd. by  $C_6H_6$ , dried, and then heated with  $Bz_2O$ , the yield of sol. product is raised and of insol. product lowered. Both these products can be saponified by  $KOH$ ; the sap. val. is the greater the younger is the coal (0.6-0.3 g. of  $KOH$  per 1g. of product). The reaction between coal and boiling  $Bz_2O$  produces also a little  $CO_2$ ,  $CO$ ,  $H_2$  and paraffinic hydrocarbons, but at 300° a similar reaction occurs without evolution of gas.

436.514 METALLURGICAL LITERATURE CLASSIFICATION

FROM: 004174

CENTRAL INDEX

FROM DIVISION

SEARCHED WITH ONLY ONE

REFERENCE

RELIST ON ONLY 151

SEARCHED



CA

22

PROCESSES AND REACTION MIXTURE

Oxidation of oils, tars, and asphaltens of Perm petroleum, and problems of genesis of asphaltic and tarry substances. V. I. Zakhvin, *Bull. Acad. Sci. U.S.S.R., Classe sci. chim.* 1967, No. 9/10, 57-67. From a sample of crude petroleum an asphaltene fraction (I), a resin fraction (II), and an "oil fraction" (III) still contg. some resins were isolated. Oxidation of I by an air current at 180-90° for 218 hrs. produced a mixt. similar (both chemically and physically) to natural humic acids. Oxidation II was slower (402 hrs. at 181-8° in an O current) and yielded an asphaltene-like product (IV) which differed from I by its reaction with  $H_2O_2 + HCl$  and with  $CH_3N_3$ , and by its resistance to further oxidation. Oxidation of III by O for 230 hrs. at 181-8° gave a product similar to IV, volatile substances, etc. Probably, natural asphaltens are formed through oxidation and decomposition of other petroleum substances. B. A.

*Inst. Mineral Fuels, AS USSR*

*Solution in heavy solvents as a method of evaluation and investigation of coals.* V. J. Zolotarev and V. I. Barkova. *Bull. Acad. Sci. U.R.S.S., 1971, 14, 1662-1667, 1971, 14, 1662-1667; cf. C.A. 26, 1462-1667, 1971.* Coal dissolves to a large extent in anthracene oil (A) (fraction 345-381° from coal tar) and in xylene (R) (from rosin, m. pt 161°), somewhat below 100°, at ordinary pressure; in this process the constituents of the coal undergo no chemical change. Various Donetsk-Basin

coals showed solubilities in A of 22-90%, in R of 4-52%; Kurzetsh-Basin coals dissolved in A to the extent of 86-92%, in R to 48-33%; in all cases soly. in A is substantially higher, roughly twice as high as in R. Soly. of coal in pyridine is several times higher after treatment with either A or R; this indicates that soly. in A and R merely changes the colloidal structure of the constituents of the coal (depolymerization) so as to render them more readily sol. in lighter solvents such as pyridine. In this respect, A is more efficient than R; e.g., soly. of a given coal in pyridine was raised from 17% to 63% and 80%, resp., after treatment with R and with A. The coking ability of a coal resides in the fraction sol. in the heavy solvent; the insol. residue does not coke but gives a powder; the latter fraction also contains practically all the ash. The yield in volatile matter from the A-dissolved fraction is equal to, or somewhat lower than, that of untreated samples; the yield from the residue is the same as, or lower than, that from the original coal. With R, the yield in volatile matter is 0-12% higher from the dissolved fraction than from the residue. The lower dissolving power of R as compared with A and the higher plasticity on coking of the R-dissolved fraction indicate that R is a more selective solvent toward coal than is A. The R-sol. part is richer in H. This classification contrasts with

the results of Krasnits on extn. with toluene at 200° of a coal of similar compn. and similar R-soly. With the object of detg. the nature of the difference in solvent behavior of A and R, samples of coal and of its fractions were subjected to oxidation. On exposure to air at 150-180°, for 168 hrs., the R-sol. fraction yields 1.7 times more H<sub>2</sub>O and 1.4 times more CO<sub>2</sub> than the insol. residue. The oxidation products contain C 70.54%, H 3.04%, ester methoxyl 4.40%, ether methoxyl 0.13%; for the R-sol. fraction and the insol. residue, the figures are 72.83, 3.50, 3.69, 3.95% and 73.23, 2.68, 3.28, 5.33%, resp.; thus all three substances are of the same chem. nature and differ only in colloidal condition. The same results were obtained in oxidation expts. with permanganate. A extn. from coal all its plastic constituents; this fraction is further split by R into a hydrohumic est. and a huminic residue. N. Thon

CA

Reaction between the organic matter of coal and sulfur.  
V. I. Zabavina and A. I. Khrisunova. *Bull. Acad. Sci. U.S.S.R. Chem. Div. Sect. 1946, 1620-31* (in Russian).—

(1) Samples (0.1-0.2 g) of 100 mesh lignin hard coals were heated with 1.5 g. Sulfur in Rat 300, 160, and 400 from the kinetically inert amt. of  $H_2$  (sulfur), the amt. of  $H_2$  split off by the coal was found to increase with temp. in all cases; for example, for 2 different coals 0.63, 1.35, 1.07 and 0.03, 0.13, 0.37%, at 350°, the amt. of  $H_2$  ranged from 0.11 to 1.30%. There is a distinct parallelism between the amts. of  $H_2$  and the vol. of the coal in anthracene oil and in retene. Reaction of S with coals in these solvents results in increased splitting off of  $H_2$ , nearly the same for most coal varieties: 2.4-2.9% at 350°, and varying much less between 160 and 400°. The retene-sol. fraction splits off, uniformly, about 3-3.5%  $H_2$ , the retene-insol. about 2%; the two fractions differ by about 1%  $H_2$  in their elementary compn. Respectively, soln. in retene, resulting in both a disruption of the colloidal structure and of chain bonds, annuls original differences between coal varieties. On the other hand, reaction with S permits characterization of the given sort of coal. (2) The amt. of S bound by coal reacting with a benzene soln. of  $S_2Cl_2$  is mostly 4-8% (in one case 1.2%), with no apparent relation with the original S content of the coal. After soln. in retene and subsequent reaction with  $S_2Cl_2$ , the amt. of S bound by a coal with an original 1.22% S rose from 4.10 to 8.25%. In another instance (originally 2.6% S) from 1.2 to 9.6%. Practically the same amt. of S (8-10%) is bound by the retene-sol. and the insol. fractions. The observed considerable increase of bound S after soln. in retene cannot be reconciled with the representation of Pustovikil and Kharlamovich (C. A. 41, 2777), ascribing the binding to this ether-hydrolike soln. of S to double bonds in coal (similar to addn. of S in the vulcanization of rubber), since there is no reason why soln. in retene should increase the no. of double bonds in coal. The S bound by the coal is easily given up, soln. of the sulfurized coal in retene evolving  $H_2S$  until the S content does not exceed that of the original coal.

458.514 METALLURGICAL LITERATURE CLASSIFICATION

117 AND 120 INDEX      PROCEEDS AND SUBORDINATE INDEX

F      B

1660. REACTION WITH ABETIC ACID AS A METHOD OF CHARACTERIZATION AND INVESTIGATION OF COALS. Zabavin, V. I. (Dokl. Akad. Sci. U.S.S.R., Sect. Tech. Sci. July 1967, 871-880). Gives results of investigation of the products of reaction and solution of two types of coals with abietic acid. Use of this acid confirms and extends information concerning coal structures etc. obtained by use of anthracene oil as solvent.      E. L. R.

ASAC EL'S METALLURGICAL-LITERATURE CLASSIFICATION

GENERAL SECURITY      SPECIAL SECURITY      SPECIAL SECURITY

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	00
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

ea

21

Reaction between the organic matter of hard coals and sulfur. A. I. Khrisunova and V. I. Zabayin (Inst. Combustible Minerals Acad. Sci. U.S.S.R., Moscow). *Izv. Akad. Nauk S.S.S.R., Otdel. Tekh. Nauk* 1944, 387-70; cf. *C.A.* 41, 3374; 3382. — The amt. of S bound by coal treated with  $S_2Cl_2$  was detd. for a variety of Don Basin coals ranging from fat gas coals to lean coal sorts. The long-flame coal was found to bind up to 14% S, easily agglomerating sorts not over 1-3%, lean coals none at all. After light oxidation, the S-binding capacity of the long-flame coal fell to below 6%, while the amt. of S bound by coal sorts of medium age rose markedly, e.g. from 3 to 7%; even lean coal sorts react with S to some extent after oxidation. Weathering has very nearly the same effect as oxidation. The plot of the amt. of S bound, against the yield of volatile matter, shows, for the original coal sorts, a uniform rise, with a bend-over to very steep rise for the 2 fattest sorts, and curves with a max. for the same coals after oxidation or weathering; the max. lies in the region of 23-30% volatile matter. Thus, binding of S is not linked with the presence of unsatd. bonds but is a function of the age and of structural particularities. N. Thon

ASB-SEA METALLURGICAL LITERATURE CLASSIFICATION

USSR .

X-ray examination of cokes. A. B. Biczler, V. I. Zats-  
vin, and A. M. Zubko (Central Sci.-Research Inst. Ferrous  
Met.). Doklady Akad. Nauk. S.S.S.R. 87, 587-70(1962).  
Cokes from high-volatile coal (14.99 V.) and low-volatile  
coal (19.32 V.) were subjected to soaking in a temp. range  
from 350 to 1200°, and their structural changes were investi-  
gated by an x-ray method. Results obtained show that a  
structural skeleton of coke itself is not three-dimensional  
crystals, but that the latticed blocks are arranged in parallel  
and arbitrarily oriented to each other. An intensive growth  
of the lattice resulted due to the carbon which is deposited  
during the process of the elimination of volatile matter.  
W. Farafonow

ZABAVIN, V. I.

Fuels

Dissertation: "Characteristics of the Chemical Nature, Composition, and Structure of Organic Substances of Coal." Dr Tech Sci, Inst of Mineral Fuels, Acad Sci USSR, 30 Mar 1954 (Vechniyaya Moskva, Moscow, 17 March 1954)

SO: SUK 213, 20 Sept 1954

ZABAVIN, V.I.

USSR/Chemical Technology - Chemical Products and Their Application. Treatment of solid mineral fuels I-12

Abs Jour : Referat Zhur - Khimiya, No 4, 1957, 12838

Author : Zabavin V.I., Gordiyenko N.P., Kleymenova L.A.,  
Russianova N.D., Surkova V.L., Sharypkina M.Ya.

Title : On Chemical Composition of Coal and Its Change on Oxidation

Orig Pub : Khimiya, i tekhnol. topliva, 1956, No 5, 23-31

Abstract : Presented are the results of exhaustive "hot" extraction (in which the sample is heated by solvent vapor) of coal of different grades from the new deposits of the Kuznetsk coal fields, unoxidized and of different degree of disintegration, with alcohol-benzene and with 5% solutions of KOH in alcohol-benzene removes from coal of grade D and G<sub>2</sub> 3-12% of extract, ~ 1% from coal of grade Zh, and > 0.5% from coal of grades K-TS. Yield of extract from oxidized coal of grades G<sub>1</sub> and Zh<sub>2</sub> is higher than from

Card 1/2

- 206 -



USSR/Chemical Technology - Chemical Products and Their  
Application. Treatment of solid mineral fuels

I-12

Abs Jour : Referat Zhur - Khimiya, No 4, 1957, 12838

the non-oxidized, reaching in the case of strongly oxidized coal 5-6%. Oxidation of coal of other grades does not increase the yields of extract. Yield of aqueous, alkaline alcohol-benzene extract exceeds by several times that of alcohol-benzene extract, while the yield of aqueous alkaline alcohol-pyridine extract is still higher. Content of acid substances in the extracts increases with increase in the degree of oxidation of the coal. It is appropriate to utilize the method of extraction for an evaluation of the extent of oxidation and in the study of the mechanism of coal oxidation.

Card 2/2

- 207 -

ZABAYIN, V.I.

New methods for determining the degree of oxidation and reduction of coals and the quality of coal on the basis of an oxidized sample. Trudy Lab.geol.ugl. no.6:172-182 '56.

(MLRA 10:2)

1. Institut goryuchikh iskopayemykh Akademii nauk SSSR.  
(Coal--Analysis)

ZABAVIN, V.I.

Multi-conduit stroboscopic automatic recorder. Приборостроение  
no.9:28-29 S '56. (MLRA 9:10)

(Electronic instruments)

ZABAVIN, V.I.

Multichannel stroboscopic recorders with intermediate carriers. Pri-  
borostreemie no.2:14-15 F '57. (MIRA 10:4)  
(Electronic instruments) (Stroboscapy)

ZABAVIN, V. I.

AUTHORS: Zabavin, V.I. and Kleymenova, L. A. (Moscow). 21-8-9/54

TITLE: Thermohydrolytic splitting of the basic organic mass of hard coal. (Termo-gidroliticheskoye rasshchepleniye osnovnoy organicheskoy massy kamennykh ugley).

PERIODICAL: "Izvestiya Akademii Nauk, Otdeleniye Tekhnicheskikh Nauk" (Bulletin of the Ac.Sc., Technical Sciences Section), 1957, No.8, pp. 72-77 (U.S.S.R.)

ABSTRACT: In an earlier paper (13) one of the authors expressed the view that the main organic mass of hard coal may have a structure which is characteristic of the high molecular substances of the polymerhomologic type, i.e. it consists of particles of similar chemical composition built up on the same principle and differing from each other solely by the physical properties. It follows that the residue from the alkali extraction must have a composition similar to that of the dissolving coal particles, i.e. it must consist of substances of acidic and neutral character of an equal or similar nature. The here described experiments were based on earlier observations of one of the authors (14,15) that after dissolution of hard coal at 350 C in anthracene oil, retene and colophony oil and separating from the solution by means of benzole or petroleum ether, the solubility of the coal substance in the benzene, pyridine and phenol increases

Card 1/2

24-4-9/54

Thermo-hydrolytic splitting of the basic organic mass of hard coal. (Cont.)

to several times the original value. Particularly, the solubility of the grade  $\Delta$  and  $\Gamma$  coals in pyridine increases from 15-26% to 65-80%. On the basis of the described experimental results a method was developed of thermo-hydrolytic splitting of the main organic mass of hard coals under soft conditions. The method consists in successive heating of the coal and its residues with  $\alpha$ -naphthol at 280 C and with a 5% solution of potassium hydrate in a mixture of alcohol and pyridine at about 90 C and separation from the solution of substances of an acidic and neutral character. By using this method it is possible to bring into solution and to split into chemical components up to 80% of the organic mass of the hard coals  $\Delta$ ,  $\Gamma$  and  $\Pi$  by treating them four to six times. The main mass of the investigated coal splits as follows: Grade  $\Delta$  coal decomposes solely in substances of an acidic nature; coal of the Grade  $\Gamma$  decomposes into substances which are acidic and neutral in equal quantitative ratio; coal of the Grade  $\Pi$  decomposes into a substance which is purely neutral in its nature. There are 4 tables, 1 figure and 17 references, 9 of which are Slavic.

SUBMITTED: April 8, 1957.

AVAILABLE: Library of Congress

Card 2/2

ZABAVIN, V.I.

**AUTHOR:** ZABAVIN, V.I. 1961-5-11/13

**TITLE:** Forming Schemes of Impulses from Sinusoidal Voltage with a Downward-Transformed Feed Voltage. (Skhemy formirovaniya impul'sov iz sinusoidal'nogo napryazheniya s pouzhenym napryazheniyem pitaniya, Russian)

**PERIODICAL:** Radiotekhnika, 1957, Vol 12, Nr 5, pp 73-77 (U.S.S.R.)

**ABSTRACT:** Schemata are investigated which offer a number of advantages compared to those with multivibrators and trigger systems. The schemata mentioned here have been worked in form of three varieties: with electron tubes, as a combination of electron tubes with semiconductor triodes, and with semiconductor triodes. It is shown that in order to form impulses from a sinusoidal voltage by using condenser discharge systems by means of an electron tube and by using a positive back-feed, it is necessary to create certain conditions in order to prevent parasitical excitation. Such conditions are warranted by the application of a reduced feed voltage of the discharge tube anodes and by the selection of a sufficiently great time constant of the condenser charge. (With 5 Illustrations).

**ASSOCIATION:** Not given

**PRESENTED BY:**

**SUBMITTED:** 4.4.1956

**AVAILABLE:** Library of Congress

Card 1/1

ZABAVIN, V. I.

24-1-14/26

AUTHORS: Zabavin, V. I., and Nemtsova, V. G.

TITLE: Determination of the degree of oxidation of hard coal from the yield of water and of CO<sub>2</sub> during heating. (Opredeleniye stepeni okislennosti kamennykh ugley po vykhodu vody i uglekisloty pri nagrevanii ugley).

PERIODICAL: Izvestiya Akademii Nauk, Otdeleniye Tekhnicheskikh Nauk, 1958, No.1, pp. 107-112 (USSR).

ABSTRACT: A method expressing correctly the degree of oxidation of hard coal must express the change taking place during oxidation in the entire organic mass of the coal. This requirement is met by methods based on determining the content in oxidized hard coal of oxygen containing functional groups; these methods include the new method described in this paper. The method was developed on the basis of the conception of the primary oxidation of the coal, namely, transformation of the fundamental organic mass of the coal into humic acid and as the limit of oxidation of coal its full transformation into such acid was considered. This assumption of the primary oxidation of coal permits comparison with the limit oxidation of lower stages of oxidation and to express the degree of oxidation by means of a relative

Card 1/4



24-1-14/26

Determination of the degree of oxidation of hard coal from the yield of water and of CO<sub>2</sub> during heating.

number. For developing the practical part of the method, the thermal instability of humic acids was applied. G. Stadnikoff et alii (Ref.8) have shown that humic acid separated from Ukrainian brown coal decomposed during heating, emitting water and CO<sub>2</sub>, owing to breaking up of hydroxyl and carboxyl groups; heating of the acids to 300-350°C resulted in almost complete destruction of the carboxyl groups. Therefore, it could be assumed that the humic acids form during oxidation of hard coal could also be decomposed during the heating of the coal to 300-350°C, accompanied by the formation of water and CO<sub>2</sub>. The remaining coal substance, which did not yet become transformed into humic acid, will decompose in a similar manner due to the fact that functional groups form in it. On the whole, the separation of water and of CO<sub>2</sub> from the coal will be the more pronounced the more intensive the oxidation of the coal. The greatest yield is obtained during full initial transformation of the organic mass into humic acids. If this assumption is correct, the quantitative determination of the yield

Card 2/4

24-1-14/26

Determination of the degree of oxidation of hard coal from the yield of water and of  $\text{CO}_2$  during heating.

of water and of  $\text{CO}_2$  forming on heating of oxidized coal to  $300-350^\circ\text{C}$  permits expressing the degree of oxidation of the coal. The experiments described in this paper confirm these assumptions; they yield results which express satisfactorily the degree of oxidation of the coal and enable development of a simple and rapid method of determining the degree of oxidation. By means of the described method, the yield of the water and of  $\text{CO}_2$  is measured, from which the yield of these products from the non-oxidized coal is deducted and the difference is related to the respective yield values from humic acids. A method was developed for determining the degree of oxidation of hard coal from the quantity of water and  $\text{CO}_2$  produced by the coal on heating to  $350^\circ\text{C}$ . As a measure of the degree of oxidation of the coal, the ratio of the produced water and  $\text{CO}_2$  to the quantities produced under equal conditions from coal oxidized in humic acid (and considered as being the limit of the primary oxidation of coal) is applied; the degree of oxidation being expressed in percent. This method produced results which express more accurately the degree

Card 3/4

24-1-14/26

Determination of the degree of oxidation of hard coal from the yield of water and of CO<sub>2</sub> during heating.

of oxidation of the coal than other chemical methods. From the experimental point of view, the main feature of the method is its simplicity and ease and speed of execution.

There are 2 figures, 1 table and 9 references - 8 Russian, 1 German.

SUBMITTED: May 15, 1957.

AVAILABLE: Library of Congress.

Card 4/4

119-3-12/1h

AUTHOR: Zabavin, V. I.

TITLE: Tensometric Device With Phase Impulse Modulation  
(Tenzometricheskaya ustanovka s fazoimpul'snoy modulyatsiyey)

PERIODICAL: Priborostroyeniye, 1958, Nr 3, pp. 29-30 (USSR).

ABSTRACT:

The newly developed device the basic diagram of connections of which is given is designed as a Wheatstone bridge with a tensometer in one diagonal serving as transmitter. A sinusoidal phase modulated voltage is used as input. This is new as compared to other similar devices since up to now only amplitude modulated voltages have been used. The peculiarity of the phase modulated voltage consists in the fact that it is due to the addition of two voltage vectors shifted against each other by  $90^\circ$ . The amplifier contains the valves RV 12 P 2000 and has an amplification factor of approximately 1000. The smallest voltage amplitude, which can be transmitted by the potentiometer is 3 mV. The amplifier measures  $50 \times 50 \times 100$  mm. Since no special constancy is required from the amplifier it may be constructed also with crystal triodes.

Card 1/2

Tensometric Device With Phase Impulse Modulation

119-3-12/11

There is 1 figure.

AVAILABLE: Library of Congress.

1. Tensometric device--Development 2. Phase modulation  
--Applications

Card 2/2

ZABAVIN, V. I. (Moskva); KLEYMENOVA, L. A. (Moskva)

Characteristics of products derived from the thermal-hydrolytic  
splitting of the basic organic mass of coal. Izv. AN SSSR, Otd. tekhn.  
nauk Met. i topl. no. 1:90-93 Ja-F '59. (MIRA 12:6)  
(Hydrolysis) (Coal)

ZABAVIN, V.I.

11(7)

PLANE I BOOK REVISIONS 807/1996

Andriyenko, I. I. Institute of Geology and Mineralogy (Genetics of Solid Fuels) Moscow, *ISSL*, 1999. 356 p. Review copy inserted. 2,000 copies printed.

Sponsoring Agency: Vsesoyuznyy Nauchnoissledovatel'skiy Tsentr D. I. Mendeleevskoye Khimicheskoye Obshchestvo, Moscow.

Editor: B. N. Karavayev, Corresponding Member, USSR Academy of Sciences, and S. G. Nizov, Doctor of Chemical Sciences; Ed. of Publishing House "A. S. Khimicheskaya Tekhnika", M.: I. P. Kharkov.

PREPARE: This collection of articles is intended for geologists, coalologists, and other specialists interested in the genesis of solid mineral fuels.

CONTENTS: The collection of papers on the genesis of solid mineral fuels has been prepared for presentation at the 2nd All-Union Conference on this subject. The collection of papers is devoted to the question of the origin of microcrystalline and plants is discussed in connection with studies on the origin of hard coal and brown coal, and on the role of certain mineral components in the coal-formation process. The chemical composition of peat and the organic mass of coal are analyzed and shown in a number of tables. Bituminous "Kobaltovaya" oil shales are analyzed as are the brown coals of the Berezovskiy basins. Microcrystalline and carbonization of coal found in different parts of the Urals and the Ukrainian SSR are also discussed. The transformation of peat into matter into combustible minerals is analyzed. References accompany individual articles.

Author: ZABAVIN, V. I. Genesis of Russian Submarine Oil Shales

ZABAVIN, V. I. On the Question of the Origin of Russian Submarine Oil Shales	69
ZABAVIN, V. I. On the Question of the Origin of Russian Submarine Oil Shales	77
ZABAVIN, V. I. and I. A. VILKIN. Lignite and Initial Stages of Coal Formation	98
ZABAVIN, V. I. Origin of Brown Coal Found in the Berezovskiy Basin of the Ukrainian SSR	106
ZABAVIN, V. I. Irregular Carbonization of Bituminous Coal Found on the Eastern Flank of the Central and Northern Urals	112
ZABAVIN, V. I. Petrographic and Chemical Characteristics of Some Types of Coal from Yakutskaya and Republika Dagestan	137
ZABAVIN, V. I. Conditions of Formation of Bituminous Coal from Submarine Oil Shales	141
ZABAVIN, V. I. Petrographic and Chemical Characteristics of Bituminous Coal from the Eastern Flank of the Eastern Urals	160
ZABAVIN, V. I. Geologic Conditions of Transformation of Coal Shales in the Northwestern Part of the Russian Federation	165
ZABAVIN, V. I. Some Possible Conditions Under Which Coal Shales Could Have Been Formed at the Kuznetsk Basin	169
ZABAVIN, V. I. Evolution of Hard Coal During Metamorphism	189
ZABAVIN, V. I. Changes in Microscopic Characteristics of Clastic Coals of the Kuznetsk Basin During Metamorphism	198
ZABAVIN, V. I. Genesis of Japanese Coal at Tera	221
ZABAVIN, V. I. Organic Matter in Coal	241
ZABAVIN, V. I. Some General Petrological and Chemical Questions Concerning the Transformation of Peat	247
ZABAVIN, V. I. Characteristics of the Process of Transformation of Peat into Microcrystalline Minerals and the Connection of These Characteristics With the Principal Properties of Combustible Minerals	269
ZABAVIN, V. I. Genetic Features of the Coal Substratum as Determined by Petrographic Findings	273
ZABAVIN, V. I. Chemical Nature of the Solid Organic Mass of Peat and Bituminous Coal Changes During Metamorphism	309
ZABAVIN, V. I. Changes in the Structure and Properties of Bituminous Coal During the Coalification Process	319
ZABAVIN, V. I. Role of Mineral Elements in the Coal-Forming Process	318
ZABAVIN, V. I., A. L. RUBINOVICH, and A. S. TROVATSKY. Genesis of Organic Sulfurous Compounds Contained in Coal	341

*a* I. 10319-66

ACC NR: AP5021827

SOURCE CODE: UR/9356/65/000/008/0039/0046

AUTHORS: Kirpichnikov, Ye. (Engineer); Zabava, V. (Correspondent of the journal)

ORG: <sup>44</sup> Leningrad Regional Combine "Lenvodstroy" (Leningradskiy oblastnoy trest "Lenvodstroy") <sup>13</sup>

TITLE: News in land reclamation technology

SOURCE: Tekhnika v sel'skom khozyaystve, no. 8, 1965, 39-46

TOPIC TAGS: land reclamation, construction machinery, drainage system, agriculture/ E 352 excavator, KM 1400 digger, D 208 grader, DN 1.8 turf cutter

ABSTRACT: Advances in land reclamation technology are discussed. Since the formation of "Lenvodstroy" six years ago, the number of land reclamation stations has grown from 7 to 17. Each station has operational divisions with annual budgets of 250--300 000 rubles. Monthly premiums are paid to workers, technicians, and administrators for exceeding quotas of reclaimed land. The stations have added 8260 hectares of reclaimed land to this region in the past year (almost twice the 1962 figure) with 13 200 hectares anticipated for the present year. Land

Card 1/2

UDC: 631.6:626.86



L 10329-66

AOC NR: AP5021827

reclamation consists primarily of building a network of open drying canals or closed drainage channels. Instead of using excavators E-352 (170 m<sup>3</sup> daily capacity) for shallow canal construction, a combination of three machines, namely, canal digger KM-1400, heavy grader D-20B, and a shovel-scraper, has been found more productive (600 m<sup>3</sup> daily). Because of the increasing maintenance cost of the drainage network (148 500 rubles in 1961, 179 800 in 1962, and 463 000 in 1962 for this region), more emphasis has been placed on the quality and life of the canals, resulting in between-maintenance periods of 10--12 years instead of 1--2 years for earlier construction techniques. Water erosion has been lessened by using different methods of slowing water flow (waterfalls, barriers, etc) and by lining the canals (with turf, etc). A new turf cutter developed for this purpose is described in some detail (cutter DN-1.8). Closed drainage ditch excavation has been improved by modernizing excavators EFN-171 and EFN-142 for automatically controlled operation (EFN-142A). Other labor saving methods, such as streamlined loading, unloading, and continuous laying of drainage pipes, semi-automatic pipe drilling (for joints) (a complete description of a drilling rig is presented), have substantially increased output. Some increased output indicators (amounts of vegetables and potatoes) are tabulated for several combines. Orig. art. has: 6 figures and 1 table.

SUB CODE: 13/

SUEM DATE: none

Card 2/2 02

ZABAVIN, Vladimir Ivanovich; KARPOVICH, V.L., red.

[Bituminous and brown coal; chemical composition and structure, properties, genesis] Kamennye i burye ugli; khimicheskii sostav i struktura, svoistva, genezis. Moskva, Nauka, 1964. 197 p. (MIRA 17:8)

ZABAVIN, V.I. (Moskva); KLEYMENOVA, L.A. (Moskva); STREL'TSOVA, A.T.  
(Moskva)

Hydrolytic and thermohydrolytic splitting of the Donets Basin  
main organic coal mass. Izv. AN. SSSR. Otd. tekhn. nauk Met. 1  
topl. no.2:170-172 M-Ap '61. (MIRA 14:4)  
(Donets Basin--Coal)  
(Hydrolysis)

NAZAROVA, N.I.; MAKEYEVA, R.I.; ZABAVIN, V.I.

Tendency toward the self-oxidation, spontaneous heating, and  
self-ignition of the coals of Kirghizistan fields. Izv. AN  
Kir. SSR. Ser. est. i tekhn. nauk 2 no.5:9-20 '60.  
(MIRA 13:9)

(Kirghizstan-- coal)

ZABAYIN, V.I. (Moskva); NEMTSOVA, V.G. (Moskva)

Thermal hydrolysis and hydrolysis in splitting the basic organic  
lignite mass. Izv. AN SSSR, Otd. tekhn. nauk Met. i topl. no.2:  
168-172 Mr-Apr '59. (MIRA 12:6)  
(Coal geology) (Hydrolysis)

SOV/180-59-1-17/29

**AUTHORS:** Zabavin, V.I., Kleymenova, L.A. (Moscow)

**TITLE:** Characteristics of the Products of Thermo-Hydrological Decomposition of the Main Organic Mass of Brown Coal (Kharakteristika produktov termo-gidrologicheskogo rasshchepleniya osnovnoy organicheskoy massy kamennykh ugley)

**PERIODICAL:** Izvestiya Akademii nauk SSSR, Otdeleniye tekhnicheskikh nauk, Metallurgiya i toplivo, 1959, Nr 1, pp 90-93 (USSR)

**ABSTRACT:** Experiments were made, the results of which are entered in Table 1, p 91; these characterise the products of hydrolytic and thermo-hydrolytic decomposition of the organic mass of the coals D, G and PZh of Kuzbass origin. On the basis of the obtained results, the following conclusions are arrived at: 1) Decomposition products of acidic coals of the grades D and G consist mainly of compounds containing about half as much phenol hydroxyl and about one third to one quarter of carboxyl groups, as humic acids of brown coals. A quantitatively smaller part of decomposition products of acidic coals have a content of functional groups which is near to that contained in humic acids. 2) The decomposition products of G and PZh coals which are neutral also contain

Card 1/3

SOV/180 .59-1-17/29

Characteristics of the Products of Thermo-Hydrological Decomposition of the Main Organic Mass of Brown Coal

functional groups, but in a quantity which is still smaller than the corresponding acidic products. The content in these of phenol hydroxyls is three to eight times lower than in humic acids of brown coal and the content of carboxyl groups is seven to nine times lower.

3) The molecular weight of the products of hydrolytic decomposition of coals determined cryoscopically is low, and fluctuates between 166 and 650. The equivalent weight of the acidic products varies between 199 and 335, and of the neutral products, between 382 and 1724.

4) The above enumerated indices vary regularly during the process of metamorphosis of the coals D, G and PZh; particularly, the molecular weight of the products of hydrolytic decomposition changes in one direction whilst the equivalent weight changes in the opposite direction.

5) The contents of C, H and N in the products of hydrolytic decomposition of coals of the grades D, G and PZh is lower and the oxygen content is higher, than in

Card 2/3

SOV/180-59-1-17/29

Characteristics of the Products of Thermo-Hydrological Decomposition  
of the Main Organic Mass of Brown Coal

the initial coals. The oxygen contained in the  
investigated coals is between 25 and 39% in the form of  
functional groups, and between 61 and 75% in another  
form.

Card 3/3 There are 2 tables and 7 references, 4 of which are  
Soviet, 2 English and 1 German.

SUBMITTED: February 6, 1958



ZABAVIN, V.I.; MOROZDINA, L.A.; KHMISOVA, V.G.

Studying the oxidation process of coals as related to their  
tendency for self-heating and self-ignition. Trudy IGI 8:198-212  
'59. (MIRA 13:1)

(Coal weathering)

L 31769-66 T/ENP(t)/ETI IJP(c) JD

ACC NR: AP6021700

SOURCE CODE: CZ/002/66/016/001/0041/0044

AUTHOR: Zabavnik, B. (Engineer)

23  
E

ORG: Institute of Technology, Kosice (Vysoka skola technika)

TITLE: Effect of the composition of the mixed nitriding atmosphere upon the thickness and hardness of the hardened surface layer

10

SOURCE: Strořirenstvi, v. 16, no. 1, 1966, 41-44

TOPIC TAGS: nitridation, ammonia, hardness

ABSTRACT: The results are presented of experimental research work on the effect of the proportion of NH<sub>3</sub> in mixed nitriding atmospheres of the NH<sub>3</sub> + N<sub>2</sub> type upon the structure and hardness of the surface layer, comparing two different brands of steel. The optimal composition of the combined atmosphere is given from the viewpoint of the high quality of the surface layer. The recommended compositions are also very economical in terms of production cost. Orig. art. has: 2 figures and 3 tables.  
[Based on author's Eng. abst.] [JPRS]

SUB CODE: 11, 07, 20 / SUBM DATE: none / ORIG REF: 002 / SOV REF: 003  
OTH REF: 001

Card 1/1

PB

UDC: 621.785.53

AUTHOR: Zabavnikov, B. I.

TITLE: On the compression of rectangular plates with initial bending

U.S.S.R. Federal Scientific Center of Mechanics, *Mekhanika*, no. 12, 1963, 12, abstract 1791  
U.S.S.R. Federal Scientific Center of Mechanics, *Mekhanika*, no. 9, 1961, 43-49

The author makes a study of the deformation of a resilient plate with a  
curvature along one edge. The plate is subjected to a uniform load. The  
curvature is assumed to be constant. The author considers the  
case when the longitudinal ends of the plate are fastened; and 2) the  
case when the longitudinal ends are free. A variant method is used in the  
analysis. The author obtains a system of equations for the deflection  
of the plate. The author also obtains solutions for the case when the  
curvature is zero.

Author's address: [illegible]

Card 1/1

16/11/63

EWP(r)/EWT(m)/ADS

APTC

3/22/63/000 002/012/161

AUTHOR:

Zachvatnikov, B. I.

TITLE:

The "clap" of rectangular plates with initial distortion

PERIODICAL:

Referativnyy zhurnal, Mekhanika, no. 4, 1963, 14, abstract 4V108  
(Nauchn. tr. Voronezhsk. inzh.-stroit. in-t, no. 9, 1962, 303-323)

... plates having initial bending ...  
 ... but remaining linear; the tangential forces ...  
 ... approaching the two ...  
 surface. He obtains a final equation ...  
 supplemental sags, zeta and zeta sub 0, and of the load of q\*:  $\zeta + \zeta_0$  ...  
 [Abstracter's note: Complete translation.]  
 Card 1/2

L 16748-63

9/124/63/000/004/04.2/064

The "clap" of .....

0

(zeta plus zeta sub o) (zeta plus 2 zeta sub o) equals q#. He determines values for the coefficients C, B for various cases of support, and investigates the condition with earlier ones. A. S. Vol'mir.

Card 2/2

ZABAVNIKOV, B.I., insh.

Bending of rectangular flexible plates. Trudy MIIF no.122:  
328-342 '59. (MIRA 13:5)  
(Elastic plates and shells)

ZABAVNIKOV, B.I., insh.

Using the power method in the theory of elastic plates. Trudy MIF  
108:308-326 '59 (MIRA 1:3)  
(Elastic plates and shells)

ZABAVNIKOV, B.I., inzh. (Voronezh)

Stability "in the large" of rectangular elastic plates with  
initial curvature. Issl. po teor. sooruzh. no.13:189-202  
'64. (MIRA 18:2)



ZABAVNIKOV, H.A., kandidat tekhnicheskikh nauk.

Geometric efficiency coefficient and computation of the geometry of toroid  
infinitely variable transmission. Avt.trakt.prom. no.9:17-20 S '53.  
(MLBA 6:9)

1. Moskovskoye vyssheye tekhnicheskoye uchilishche im. Bauman.  
(Automobiles--Transmission devices)

ZABAVNIKOV, N.A., kandidat tekhnicheskikh nauk.

On the rational geometry of toroid stepless transmissions. Avt. trakt. prom.  
no. 11:9-11 N '53. (KLEA 6:11)

1. MVTU im. Bauman. (Automobiles--Transmission devices)

ZABAVNIKOV, N.A., kand. tekhn. nauk

Analytical determination of the starting time and distance.

Avt.prom. 27 no.6:11-14 Je '61.

(MIRA 14:6)

1. Moskovskoye vyssheye tekhnicheskoye uchilishche imeni Baumana.  
(Automobile engineering)  
(Automobile--Dynamics)

ZABAVNIKOV, N.S., uchastnik Oktyabr'skoy revolyutsii, personal'nyy pensioner,  
chlen Kommunisticheskoy partii Sovetskogo Soyuza s 1917 g.

Role of the telecommunication workers in the Great October  
Revolution. Vest. sviazi 22 no.11:26-28 N '62. (MIRA 16:12)

NADEZHINA, Ye.D.; YUDINA, V.V.; ZABAVNIKOVA, N.I.

Accessory sphene from metasomatic trap rocks in the Siberian  
Platform (Bol'shaya Botuobiya Valley). Trudy Min. muz. no.14:  
243-249 '63. (MIRA 16:10)

(Ulakhan-Botuobuya Valley--Sphene)  
(Ulakhan-Botuobuya Valley--Rocks, Igneous)

ZABAVNIKOVA, N.I. Cand Geo Min Sci -- (diss) "Isomorphous  
replacements in *sphaeres* of various <sup>formations</sup> ~~ages~~ of the  
Soviet Union, Mos 1958, 16 pp with graphs (Acad Sci USSR,  
Inst of Geology, <sup>of Ore Deposits,</sup> ~~Mineral Beds,~~ Petrography, Mineralogy,  
and Geochemistry) 125 copies (KL, 21-58, 88, 89)

ZARAVNIKOVA, N.I.

Isomorphic replacements in sphene: [with summary in English].  
Geokhimiya no.3:226-232 '57. (MIRA 10:7)

1. Institut geologii rudnykh mestorozhdeniy, petrografii, mineralogii i geokhimii AN SSSR, Moskva.  
(Sphene)

SAVITSKIY, Ye.M.; TYLKINA, M.A.; PEKAREV, A.I.; GAVRILYUK, M.I.; ZABAVNOVA,  
A.P.

Recrystallization diagram for cast tungsten. Dokl. AN SSSR 140  
no.6:1301-1303 0 '61. (MIRA 14:11)

1. Institut metallurgii im. A.A.Baykova AN SSSR. Predstavleno  
akademikom I.V.Tananayevym.

(Tungsten crystals--Growth)



STEPANOVA, M.N.; ODINOKOVA, V.A.; ZABAVSKAYA, E.A.

Neuroblastomas of the vertebrocostal fissure in children.  
Khirurgia no.9:81-85 '61. (MIRA 15:5)

1. Iz 2-y khirurgicheskoy kliniki (zav. - prof. Ya.G. Dubrov),  
patomorfologicheskogo (i. o. zav. A.A. Naumova) i rentgeno-  
logicheskogo (zav. - dotsent A.I. Petrov) otdelov Moskovskogo  
oblastnogo nauchno-issledovatel'skogo klinicheskogo instituta  
imeni M.F. Vladimirskego.

(NERVOUS SYSTEM—TUMORS)

BARJUKOV, L.M., kand. sel'skokhozyaystvennykh nauk; ZARAVSKAYA, K.M., nauchnyy  
sotrudnik: IVANOVA, T.I., nauchnyy sotrudnik

Importance of turning over furrows. Zemledelie 7 no.11:67-71  
N '59 (MIRA 13:3)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut udobreniy i  
agropochvovedeniya.  
(Flowing)

ZABAVSKAYA, K. M.

USSR/Biology - Ultrasonics

Sep/Oct 83

"Effects of High-Frequency Oscillations on Germination of Seeds and Development of Plants," L. N. Barsukov, Cand Agr Sci, and K. M. Zabavskaya

Agrobiol, No 5 (83), pp 80-85

Brief exposure (1-3 minutes) of seeds of cultivated plants to powerful mech oscillations of sonic frequency, has the same effect as exposure to ultrasonic oscillations, i.e. it accelerates germination, facilitates more rapid plant development and hastens

27612

maturation. High-frequency oscillations are of particular value in the cultivation of crops whose seeds are characterized by retarded and imperfect germination and development. Illustrated by charts.

RASKATOV, Afanasiy Ivanovich, dots.; ZABAVSKIY, A.V., nauchnyy red.;  
CHISLOV, M.M., red.; PERSON, M.N., tekhn. red.

[Laboratory work in electrical engineering] Laboratornye raboty  
po elektrotekhnike. Moskva, Proftekhizdat, 1962. 326 p.  
(MIRA 15:7)

1. Kafedra elektrotekhniki i elektroniki Moskovskogo tekhnologicheskogo instituta myasnoy i molochnoy promyshlennosti (for Raskatov).  
(Electric engineering--Handbooks, manuals, etc.)  
(Electric laboratories--Handbooks, manuals, etc.)

ZABAVSKIY, M.P., mayor, voyenny letchik pervogo klassa

By authority of the wing commander. Vest.Vozd.Fl. no.8:23-  
25 Ag '60. (MIRA 13:9)  
(Russia--Air force) (Military discipline)

BEDNARZ, Stanislaw; ZABAWA, Mieczyslaw

Problem of traveling crane skewing. ~~\_\_\_\_\_~~ Hutnik P 29 no. 7/8:264-269  
JL-Ag '62.

1, Katedra Mechaniki Technicznej, Akademia Gorniczo-Hutnicza,  
Krakow.

ZABAWA, Mieczyslaw, mgr inz., adiunkt

Way of measuring the average value of friction resistance in bearings. Przegl mech 23 no.12:331-333 25 Je '64.

1. Department of Machine Parts, Academy of Mining and Metallurgy, Krakow.

SOV/137-58-11-22143

Translation from: Referativnyy zhurnal. Metallurgiya, 1958, Nr 11, p 45 (USSR)

AUTHORS: Sorokin, P. Ya., Zabaykin, A. V., Babich, P. P., Zakharov, O. A.

TITLE: Continuous Measurement of the Temperature of Liquid Steel in the Ladle (Nepreryvnyy zamer temperatury zhidkoy stali v kovshe)

PERIODICAL: Prom-ekon. byul. Sov. nar. kh-va Sverdl. ekon. adm. r-na, 1958, Nr 4, pp 3-6

ABSTRACT: The measurements are made in ladles of 30-45 t capacity by Pt/Ph-Pt thermocouple introduced into the ladle either by a dummy stopper from above or through the nozzle of the spare pouring aperture in the bottom of the ladle. The thermocouple junction is protected by covers made on a Zr-oxide base and are installed at 200-300 mm from the ladle bottom. The experiments conducted showed the temperature of the metal (Me) in the ladle, when under an adequate layer of slag, drops not at a gradient of 2-3°C/min, as had previously been held, but considerably more slowly. The method of continuous measurement of the temperature of the liquid steel makes it possible to determine the length of time during which the Me should be held in the ladle after the heat has been tapped, and this facilitates purification from nonmetallic

Card 1/2



SOV/137-58-11-22143

Continuous Measurement of the Temperature of Liquid Steel in the Ladle

and gas inclusions.

V. G.

Card 2/2

8(4)

SOV/32-24-12-21/45

AUTHORS:

Sorokin, P. Ya., Zabaykin, A. V., Babich, P. P., Zakharov, G.A.

TITLE:

Continuous Measurement of the Temperature of Molten Steel in the Ladle (Neprezyvnyy zamer temperatury zhidkoy stali v kovshe)

PERIODICAL:

Zavodskaya Laboratoriya, 1950, Vol 24, Nr 12, pp 1475-1477 (USSR)

ABSTRACT:

Immersion thermoelements give better results than optical apparatus in the measurement of the temperature of molten metals. From 1952 to 1954 continuous temperature measurements were carried out in liquid steel still in ladles holding 30-45 tons by the institute mentioned in the Association in collaboration with Ural'skiy vagonostroitel'nyy zavod (Ural Car-Building Plant) and Zavod transportnogo mashinostroyeniya v Chelyabinske (Transport Machine-Building Plant in Chelyabinsk). The thickness of the lining of the ladles used was 200 mm (walls) and 350 mm (floor). In one case the thermoelement was mounted as a pseudo-seal (Fig 1), while in another case it was introduced through the outlet (Fig 2). The experimental results obtained (Figs 3-5) indicate the following: the

Card 1/2

SOV/32-24-12-21/45

Continuous Measurement of the Temperature of Molten Steel in the Ladle

temperature of the liquid metal becomes stable at a particular level after 15 minutes (curve of the figure). During the casting process the temperature of the liquid metal increases slowly in the case where a slag layer of 200-250 mm thick is present, or remains constant in the case where the slag layer is thinner. Contrary to wide-spread opinion, the temperature of the metal increases at the end of the casting process, and this finding agrees with the work of Van Gryunvigen and Lauter (Ref 2), Pronov (Ref 3), Gruzin (Ref 4), and Boos and Vil'yams (Ref 5). The temperatures determined using optical pyrometers are always lower than those obtained using thermoelements. The temperatures in the upper metal layers are greater than in the lower layers (Figs 3,4). There are 5 figures and 5 Soviet references.

ASSOCIATION: Institut metallurgii Ural'skogo filiala Akademii nauk SSSR  
(Institute of Metallurgy of the Ural Branch, Academy of Sciences, USSR)

Card 2/2

LORENTSO, D.N.; OKUNEV, I.V., inzh., red.; ZABAYKIN, A.Ya., inzh., red.;  
KOZLOV, A.G., nauchnyy red.; MARES'YEV, M.I., red.; SUVSHOV,  
A.V., red.; YAMOV, A.F., red.; DUGINA, N.A., tekhn. red.

[Ural Railroad Car Plant] Ural'skii Vagonostroitel'nyi Zavod.  
Moskva, Gos. nauchno-tekhn.izd-vo mashinostroit. lit-ry.  
1961. 162 p. (MIRA 15:2)

1. Ural'skiy vagonostroitel'nyy zavod (for Lorentso).  
(Nizhniy Tagil--Railroads--Cars--Construction)

YUGOV, Vladimir Alekseyevich, kand.fiz.-mat. nauk; TELEKHIN, R.V.,  
doktor fiz.-mat. nauk, prof., red.; ZABAZLAYEVA, E.I.,  
red.

[Thin films and their use in radio measuring techniques]  
Tonkie plenki i ikh primeneniye v radioizmeritel'noi tekhnike.  
Moskva, Izd-vo Standartov, 1964. 122 p.

(MIRA 17:11)

OLEYNIK, Boris Nikolayevich; ZABOZLAYEVA, E.I., red.

[Exact calorimetry] Technika kalometrii. Moskva,  
Izd-vo stanartov, 1964. 159 p. (MIRA 18:1)

ARTEM'YEVA, Yelena Vitol'dovna; ZABAZLAYEVA, E.I., red. E-9

[Measurement of the frequency of the electrical oscillations of highly stable generators] Izmerenie chastoty elektricheskikh kolebaniy vysokostabil'nykh generatorov. Moskva, Izd-vo standartov, 1965. 55 p. (MIRA 18:5)

ZABAZNOV, P.

Attack by tank company at night. Tr. from the Russian. p. 66

AMERISKI PREGLED. (Ministerstvo na narodnata obrana) Sofia, Czechlovakia.  
Vol. 5, no. 6, 1958.

Monthly List of East European Accessions (EEAI), LC, Vol. 9, No. 2. Feb. 1960  
Uncl.



NITSKEVICH, Ye.A., dots.; KIREVSKIY, G.N., inzh., nauchnyy red.;  
FRIDMAN, I.M., inzh., nauchnyy red.; SAZANOV, B.V., dots.,  
nauchnyy red.; YUSHKOV, S.B., inzh., nauchnyy red.;  
FILIP'YEV, O.V., kand. tekhn. nauk, nauchnyy red.; VESNIKOV,  
N.G., inzh., nauchnyy red.; TARNAVSKIY, I.L., inzh., nauchnyy  
red.; IVANOVA, A.N., inzh., red.; ZABAZLAYEVA, E.I., red.;  
LANOVSKAYA, M.R., red. izd-va; DOBUZHINSKAYA, L.V., tekhn.red.

[Heat engineering] Teploenergetika [By] E.A. Nitskevich. Pod red.  
A.N. Ivanova. Moskva, Metallurgizdat, 1962. 348 p.

(MIRA 16:2)

1. Moscow. Tsentral'nyy institut informatsii chernoy metallurgii.  
(Metallurgical furnaces) (Power engineering)

TUROV, Sergey Sergeevich; ~~ZABAZLAYEVA, E.I.~~, redaktor; MULIN, Ye.V.,  
tekhnicheskiy redaktor.

[The zoological museum of Moscow University] Zoologicheskii muzei  
Moskovskogo universiteta. [Moskva] Izd-vo Moskovskogo univ., 1956.  
40 p. (MIRA 9:7)

(Moscow--Zoological museums)

ZABAZHOV, P., polkovnik; TRCFINOHUE, D., polkovnik.

A rifle company attacks a prepared enemy defense line at night.  
Voen. vest. 37 no.1:25-31 Ja '58. (MIRA 11:2)  
(Attack and defense (Military science))  
(Infantry drill and tactics)  
(Night fighting)

ZARAZNYI, P.

Sowing

Spring sowing must have a high level of cultivation practices. Kolkh. p'ol'z.  
No. 3, 1953.

Monthly List of Russian Accessions, Library of Congress  
June 1953. UNCL.

ZABAENYI, P. A.

Kulism'e pary - vazhnoe sredstvo povysheniia urozhayev (Fields with wind buffers are an important means for increasing crop yield). Moskva. Sel'khozgiz, 1954, 13 p.

SO: Monthly List of Russian Accessions, Vol. 7, No. 7, Oct. 1954.

ZABAZNYI, P., agronom.

Use virgin and fallow lands, MTS 14 no.3:9-10 Br '54. (MCHA 7:4)  
(Soils) (Crop yields)

ZABAZNYI, P.

"Wheat Growing in the USSR," *Sotsial. Sel. Sel. Khoz.*, Vol 25, No 6, pp 37-47,  
1954

Translation M-322, 2 Apr 55

USSR/ Cultivated Plants. Grains.

M

Abs Jour: Ref Zhur-Biol., No 5, 1958, 20289.

Author : P.A. Zabaznyy.

Inst : Not given.

Title : Cultivating the Soil for the Planting of Corn in Northern  
Kazakhstan's Rayons. (Obrabotka pochvy dlya poseva  
kukuruzy v rayonakh Severnogo Kazakhstana).

Orig Pub: Kukuza, 1957, No 9, 33-35.

Abstract: No abstract.

Card : 1/1



ZABAZNYI, P.A.

Wheat cultivation in the U.S.S.R. Zemledelie 5 no.11:31-37 N '57.

(Wheat)

(MERA 10:11)

ZADAY<sup>Z</sup>YY, P.A., Cand Agr Sci --(diss)" Cultivation of corn  
in the northern ~~region~~<sup>regions</sup> of Kazakhstan." Mos, 1959. 15 pp  
(VASKHIL: All-Union Scientific Research Inst of Fodder in V.R. Vil'yans),  
150 copies (PL, 39-59, 121)

- 39 -

ZABAZNYI, P. A.

Let's make use of all possibilities in increasing the production  
of pulse crops. Zemledelia 7 no.4:3-9 Ap '59.

(MIRA 12#6)

(Leguminosae)

ZARAZHY, P. A.

Pay more attention to soybean growing. Zemledelie 7 no. 11:72-78

N '59

(MIRA 13:3)

(Soybean)

ZABAENYI, P.A., agronom; KAPITANENKO, H.S., agronom.

Corn is milk, meat, and butter. Nauka i zhizn' 27 no.3:27-30  
Mr '60. (MIHA 13:6)  
(Corn. (Maize))

ZABAZHNYI, Petr Akimovich, kand.sel'skokhoz.nauk; KATSNEL'SON, S.M.,  
red.; SAVCHENKO, Ye.V., tekhn.red.

[New stage in the production of field crop seeds] Novyi etap  
v semenovodstve sel'skokhoziaistvennykh kul'tur. Moskva,  
Izd-vo "Znanie," 1961. 32 p. (Vsesoiuznoe obshchestvo po  
rasprostraneniuiu politicheskikh i nauchnykh znani. Ser.5,  
Sel'skoe khoziaistvo, no.4). (MIRA 14:2)  
(Field crops) (Seed production)

ZABAZNYI, P.A., kand. sel'skokhoz. nauk; BATURINA, A.A., agronom

Oilseed crops for the fields of the eastern regions of the  
country. Zemledelis 26 no.2:68-71 F '64. (MIR 17:6)

ZABAZNYY, P.A., kand. sel'skokhoz. nauk

Agriculture in the German Democratic Republic. Zemsdel's 26 no.12:  
84-86 D '64. (MIRA 18:4)



ZABAZNYY, P.A., kand.sel'skokhoz.nauk

Good seed as the basis of large crops. Zemledelie 27  
no.3:56-60 Mr '65. (MIRA 1951)

ZABAZNYY, P.A.

High-quality seeds as the golden resources of collective and state farms. Zemledelie 25 no.7:3-11 JI '63. (MIRA 16:9)

1. Nachal'nik Upravleniya semenovodstva Ministerstva sel'skogo khozyaystva SSSR.

(Seed production)

ZABAZNYY, P.A., kand.sel'skokhozyaystvennykh nauk

"Cultivation of spring wheat in Siberia" by P.A. Iakhtenfel'd.  
Reviewed by P.A. Zabaznyi. Zemledelie 24 no.6:91-93 Ily '62.  
(MCRA 15:7)

(Siberia—Wheat)  
(Iakhtenfel'd, P.A.)

ZABCIC, Bozidar, inz.

Use of plywood plates for the building of the Cengic Vila  
apartment houses at Sarajevo. Gradevinar 15 no.1:36 Ja 1963.