

LACHOWICZ, Tadeusz M.; MULCZYK, Marian; ROWINSKI, Stefan

Further in vitro studies on the mechanism of selection among serological Shigella flexneri types. Arch.immun.ter.dosw. 9 no.1:69-76 '61.

1. Department of Bacteriology, Department of Microbial Genetics, Institute of Immunology and Experimental Therapy, Polish Academy of Sciences, Wroclaw.

(SHIGELLA)

ROWINSKI, Wojciech

Comparative evaluation of various vascular clamps. Pol. przegl.
chir. 37 no.6:585-591 Je '65.

1. Z Zakładu Chirurgii Doswiadczalnej Polskiej Akademii Nauk
(Kierownik: prof. dr. J. Niełubowicz).

ROWINSKI, Wojciech; MICHALSKI, Andrzej; LUKASIEWICZ, Hanna; OLSZEWSKI,
Waldemar; NIELUBOWICZ, Jan

Studies on the pathogenesis of acute pancreatic necrosis. Pt.1.
Pol. przegi. chir. 37 no.5:49C-496 My '65.

1. Z Zakladu Chirurgii Doswiadczalnej Polskiej Akademii Nauk
(Kierownik: prof. dr. J. Nielubowicz).

MICHALSKI, Andrzej; OISZEWSKI, Waldemar; ROWINSKI, Wojciech

Method for the production of chronic external pancreatic fistula in dogs. Pol. przegl. chir. 37 no.5:517-519 My '65.

1. Z Zakladu Chirurgii Doswiadczalnej Polskiej Akademii Nauk (Kierownik: prof. dr. J. Niebulowicz).

OLSZEWSKI, Waldemar; SZYFELBEJN, Stanislaw; ROWINSKI, Wojciech; NIELUBOWICZ,
Jan.

Healing of experimental wounds of the pancreas. Pol. przegl. chir.
37 no.4:322-325 Ap'65.

1. Z I Kliniki Chirurgicznej Akademii Medycznej w Warszawie
(Kierownik: prof. dr. J. Nielubowicz).

NIELUBOWICZ, Jan; OLSZEWSKI, Waldemar; LUKASIEWICZ, Hanna; MICHALSKI,
Andrzej; ROWINSKI, Wojciech; SZYFELBEJN, Stanislaw; WIECKOWSKA,
Wanda

Pathomechanism of meteorism. I. Composition of intestinal gases
in paralytic ileus. Pol. przegl. chir. 36 no.5:707-715 My '64.

1. Z Zakladu Chirurgii Doswiadczalnej Polskiej Akademii Nauk
(Kierownik: prof. dr J. Nielubowicz).

ROWINSKI, Wojciech; SZOSTAK, Mieczyslaw

Direct intra vitam observation of the ileocecal anastomosis.
Pol. tyg. lek. 19 no.51:1969-1971 21 D 162

1. Z I Kliniki Chirurgicznej Akademii Medycznej w Warszawie
(Kierownik: prof. dr. med. Jan Nisłubowski).

COUNTRY : RUMANIA
CATEGORY : Chemical Technology: Chemical Products and
Their Applications. Cellulose and Its *
ABS. JOUR. : RZKhlm., No. 23 1959, No. 24384
AUTHOR : Rowland, C.; Blundell, W.
INST. : -
TITLE : New Grinding Method of Paper-Mass with Conti-
nuous Feeding
ORIG. PUB. : Celul. si Hartie, 1959, 8, No 2, 42-45
ABSTRACT : Presented is the comparison of paper-mass
grinding methods in the washing troughs in
accordance with the Blake-Clauson method
(having a double cycle) and in accordance with
the new grinding method equipped with a con-
tinuous feeding. It is indicated that the new
method has advantages of a continuous, assu-
ring a possibility of operation with a cons-
tant loading. The diagram is presented.

GARD: *Derivatives, Paper.
1/1

E - 146

ROWLEY, R. KENT

Canada - Textile Workers

Fight of Canadian textile workers against the sweating system.
Vaem. prof. dvizh. no. 17, 1952.

Monthly List of Russian Accessions, Library of Congress, December 1952. UNCLASSIFIED

ROWOVACEK, J.

CZECHOSLOVAKIA/Processing of Natural Gases and Petroleum,
Motor and Rockets Fuel. Lubricants.

H.

Abs Jour : Ref Zhur - Khimiya, No 19, 1958, 65586

Author : Rowovacek, J., Gasek, J.

Inst :

Title :

A Study of the Possibility of Deodorization of Natural Gas by Activated Carbon and Alumogel.

Orig Pub : Paliva, 1958, 38, No 2, 44-46.

Abstract : In connection with the catalytic conversion (in an Ni-catalyzer) of natural gas in Bratislavia and Brno, the necessity was revealed for drawing off from this gas the methyl- or ethylmercaptan (M) used for odorization of gas in the quantity 15-20 mg/nm³, inasmuch as M can counteract the catalyzer. Isotherms of adsorption of M were found with activated carbon "Benzorbon" and by

Card 1/2

18

1ST AND 2ND ORDERS PROCESSES AND PROPERTIES INDEX 3RD AND 4TH ORDERS

Common Element

Common Variable

2959. FROM CUTTER-LOADERS TO COMBINATION MINING UNITS FOR WINNING COAL FROM THIN SLIGHTLY DIPPING SEAMS. Spivakovskii, A.O. and Rozentret, B.A. (Izvest. Akad. Nauk S.S.S.R., Otdel. Tekh. Nauk (Bull. Acad. Sci. U.S.S.R., Sect. Tech. Sci.), Jan. 1951, 80-101). A comprehensive review is given of Soviet cutter-loaders ("mining combines") with diagrams and tables showing performance figures and suitability for different geological conditions. Projects for combining these with face conveyors and mechanized roof supports to form "combination mining units" are discussed.

ASB-35A METALLURGICAL LITERATURE CLASSIFICATION

FROM DIVISION FROM DIVISION

1ST AND 2ND ORDERS 3RD AND 4TH ORDERS

Common Element

Common Variable

ROXIN S.

EXCERPTA H. ICA Sec 9 Vol 13/9 Surgery Sept. 59

4980. PROCAINE INFILTRATION OF THE CERVICO-CRANIAL GANGLION IN SKULL LESIONS - A felső nyaki idegdúc (ganglion cervicale craniale) novokainos beszűreintése koponyasérülésekben - Roxin S., Gherman E. and Gherman R. Nagybánya Egyesített Kórház sebészeti osztál. Közl. - ORV. SZLE 1958, 4/1 (67-69)

The authors successfully treated junctional nervous troubles following skull and brain injuries with procaine infiltration of the cervico-cranial ganglion. They injected 20 ml. of procaine solution (0.5%). Three cases are mentioned. The method is simple, painless, harmless and effective.

PAPPO, A.; ROXIN, T.; NUTA, M.; VELCIU, Sanda

Contributions to the use of sorbitol in clinical tests of bile
excretion. Stud. cercet. med. intern. 6 no.1:39-46 '65.

ROXIN, T.

Aspects and prospects of the use of radioisotopes in the
diagnosis and treatment of internal diseases. Stud cercet
med intern 4 no.3:295-306 '63.

(INTERNAL MEDICINE) (RADIOISOTOPES) (RADIOMETRY)
(RADIOTHERAPY)

EXCERPTA MEDICA Sec 1^a Vol 13/10 Radiology Oct 59

1914. EXPERIMENTAL STUDIES ON THE RADIOPROTECTIVE EFFECTS OF CHLORPROMAZINE AND PROMETHAZINE - Cercetări experimentale privind acțiunea radioprotectoare a clorpromazinei și prometazinei (Notă preliminară) - Roxin T., Vulcan P. and Maiorescu Em - PROBL. TER. (București) 1957, (85-91) Graphs 1

Experimental studies showed that chlorpromazine and promethazine, administered i. p. in dosages of 20 mg. per kg., afforded protection to rats irradiated with an LD of X-rays. The dose of X-rays used was 1,000 r. (162 kv., 4 ma., distance 60 cm., exposure 87 min.). The total number of rats was 72, including 32 controls, 32 receiving chlorpromazine and 8 receiving promethazine. Under these conditions, the 2 substances reduced mortality (evaluated 35 days after irradiation) from 89% to 50%. (XIV, 2)

GEIB, R.; PETRESCU, M.; GROZEA, P.; SIGHETEA, Elena; OLARU, Cornelia;
ROXIN, T.

Contribution to the therapy of neoplastic reticulopathies. Stud.
cercet. med. intern. 3 no.5:623-630 '62.

| | |
|------------------------------|---------------------------|
| (LYMPHOSARCOMA) | (SARCOMA, RETICULUM CELL) |
| (LYMPHOMA, GIANT FOLLICULAR) | (MULTIPLE MYELOMA) |
| (RETICULOENDOTHELIOSIS) | (ANTINEOPLASTIC AGENTS) |
| (ADRENAL CORTEX HORMONES) | (RADIOTHERAPY) |

ROXIN, T.; GEIB, R.; SICHETEA, Elena; GOCIU, Mariana; BUJAR, H.; GRANCEA, Alexandra

The place of radiotherapy in the current treatment of malignant lymphogranulomatosis. Clinical and radiological study of 105 cases. Stud. cercet. med. intern. 3 no.5:631-640 '62.
(HODGKIN'S DISEASE) (RADIOTHERAPY)

Roxin, T.

ROMANIA

ROXIN, T.

MD

Institute of Internal Medicine of the Academy of the R.P.R. and
the Ministry of Health and Social Welfare (Institutul de
Medicina Interna al Academiei R.P.R. si M.S.P.S.), Bucharest.

Bucharest, Viata Medicala, No 1, 1 Jan 63, pp 5-14.

"Radiations and leukaemias."

ROXIN, T.

ROMANIA

Rumania

MD

Member of the Institute for Internal Medicine of the Academy of
the Rumanian People's Republic and M.S.P.S., Bucharest
(Institutul de medicina interna al Academiei R.P.R. si M.S.P.S.,
Bucuresti)

Bucharest, Viata Medicala, No 1, Jan 63, pp 5-13.

"Radiations and Leukaemias."

GEIB, R.; SIGHETEA, Elena; PETRESCU, M.; GROZEA, P.; ROXIN, T.

Comparative study of different therapeutic methods in malignant lymphogranuloma (Hodgkin's disease). Stud. cercet. med. intern.

3 no.1:95-111 '62.

(HODGKIN'S DISEASE therapy) (ANTINEOPLASTIC AGENTS therapy)
(ADRENAL CORTEX HORMONES therapy) (RADIOTHERAPY)

RUMANIA / Pharmacology. Toxicology. Tranquillizers. V

Abs Jour : Ref. Zhur - Biologiya, No. 3, 1959, 13795

Author : Roxin, T.; Vulcan, P.; Manolescu, Em.

Inst : -

Title : Experimental Study of Defensive Action of Chlorpromazin and Prometazin Against X-Ray Injuries. Preliminary Report.

Orig Pub : Probl. terap., 1957, 8, 85-91

Abstract : It was shown that largactil or phenergan, introduced to rats in a dosage of 20 mg/kg each, intraperitoneally 10 min. before irradiation with a lethal dose of X-Rays (1000r), lower the death rate of the animals (by estimate 35 days after irradiation) from 89 to 50%. -- From the author's resume.

Card 1/1

To 7 patients, whose treatment by other methods had been

ROXIN, T.; VULCAN, P.; MANOLESCU, Em.

Experimental studies of the radio-protective action of chlorpromazine and promethazine; preliminary note. Probl. ter., Bucur. 8:85-91 1957.

(RADIATION PROTECTION

by promethazine & chlorpromazine, against lethal x-irradiation, in rats)

(CHLORPROMAZINE, effects

protection against lethal doses of x-rays, in rats)

(PROMETHAZINE, effects

same)

Roxin, T.

RUMANIA/Human and Animal Physiology - Internal Secretions.

R-8

Abs Jour : Referat Zhur Biol., No 16, 1957, 70929

Author : Roxin, T., Ispas, I.

Inst :

Title : X-Ray Treatment of Cushing's Disease.

Orig Pub : Med., Interna, 1956, 8, No 4, 564-568

Abstract : No abstract.

Card 1/1

- 49 -

~~BOVIN T.~~ Dr.; ISPAS, I., dr.

The value of radiotherapy in Cushing's disease. Med. int.,
Bucur. 8 no.4:564-569 Aug 56.

1. Lucrare efectuata in cadrul Institutului de endocrinologie,
Prof. I. C. Parhon.

(CUSHING SYNDROME, therapy
radiother.)

(RADIOTHERAPY, in various diseases
Cushing synd.)

PETRESCU, M., dr.; OLARU, Cornelia; ROXIN, T., dr.

Radioactive phosphorus (P^{32}) therapy of polycythemia. Med.int.,
Bucur. 8 no.6:841-852 Oct 56.

(POLYCYTHEMIA, therapy
radiophosphorus)
(PHOSPHORUS, radioactive
ther. of polycythemia)

MAISLER, A., Conf.; DULCE, M., dr.; ROXIN, T., dr.

Two cases of reticulosis with cutaneous manifestations.
Med.int.,Bucur. 8 no.5:753-759 Sept 56.

(LYMPHOMA case reports
two cases with cutaneous manifest.)
(SKIN in var. dis.
lymphoma)

17(1)

RUM/2-60-3-6/36

AUTHOR: Roxin, Tiberiu, Doctor, Chief Radiologist

TITLE: The Atomic Disease¹⁹ Can Be Cured

PERIODICAL: Stiință și Tehnică, Seria a II-a, 1960, Nr 3,
pp 8-9

ABSTRACT: The article contains a brief description of 1) destructive effects of atomic radiation, 2) chemical means employed against irradiation diseases and 3) international research on this subject. Reference is made to the six Yugoslavs, who were cured in the "Curie" Hospital in Paris and to the Institutul de Hematologie (Hematology Institute) in Bucharest, where marrow transfusions have been successfully carried out in the treatment of different blood diseases. There are 2 photos and 4 figures.

Card 1/1

ROY, A.A., inzhener.

Disc-shaped working part for grinding castor plants. Sel'khoz-
mashina no.11:19-21 N '54. (MLRA 7:11)
(Agricultural machinery)

BOY, A. A.

BOY, A. A. -- "Seeking a Rational Technological Process and Working Parts for Threshing Castor Beans." Min Higher Education USSR. Moscow Inst of the Mechanization and Electrification of Agriculture named V. M. Molotov. Moscow, 1955. (Dissertation for the Degree of Candidate in Technical Sciences)

SC: 'Kryshnaya Letopis', No 1, 1956

ROY, A.A.

Effective process for threshing castor beans. Sel'khoz mashina
no. 8:12-13 Ag'55. (MIRA 8:11)
(Castor bean) (Threshing machines)

ROY, A.

Threshing machine for castor-oil plant. Nauka i zhizn' 22 no.10:50
O '55. (MLRA 9:1)

(Threshing machines) (Castor-oil plant)

ROY, I. A., kand. tekhn. nauk

Overall mechanization of castor-oil plant picking and threshing.
Trakt. i sel'khoz mash. no.10:25-27 O '64. (MIRA 17:12)

1. Rostovskiy institut sel'skokhozyaystvennogo mashinostroyeniya.

ROY, A.A.; TUMASH, V.P.

Electric-pulse broaching of deep holes in heat-resistant
steel 1Kh18N9T. Stan.i instr. 34 no.1:32 Ja '63. (MIRA 16:2)
(Electric metal cutting)

DZHABAGIN, T.K. [deceased]; ROY, D.K.; SEMENOV, P.A.

Equilibrium pressure of sulfur dioxide over water solutions.

Khim.prom. no.11:870-875 '63.

(MIRA 17:4)

ROY, D.L.; MIKHAIK, Ye.

Experimental check of the equation describing the surface activity
of a chemical process. Zhur. fiz. khim. 39 no.2:510-514 F '65.
(MIRA 18:4)

1. Moskovskiy institut stali i splavov.

BUYANOV, R., inzhener-mayor; ROY, E., starshiy inzhener-leytenant

Flying ships and automobiles. Starsh.-serzh. no.9:36-37 S '61.
(MIRA 15:2)

(Ground-effect machines)

ROY, D.K.; DZHABAGIN, T.K.; SEMENOV, P.A.

Methods of analysis in the study of the absorption kinetics of
poorly soluble gases. Izv.vys.ucheb.zav.;khim. i khim.tekh. 6
no.2:333-337 '63. (MIRA 16:9)

1. Moskovskiy institut khimicheskogo mashinostroyeniya, kafedra
mashiny i apparaty neorganicheskikh proizvodstv.
(Gases—Analysis) (Absorption)

DUBININ, A.A., inzhener; ROY, F.F., inzhener.

Fuel delivery and slag removal mechanization in boilers of small
capacity. Teploenergetika 4 no.5:59-61 My '57. (MLRA 10:5)
(Boilers)

L 38265-65 EWT(1)/EPR/EWA(m)-2/EWA(h) Ps-4/Peb NW
ACCESSION NR: AP5007450 S/0286/65/000/004/0072/0073

AUTHORS: Sterlikov, V. P.; Roy, E. V.; Chuchkin, V. G.; Rozhdestvenskiy, V. I.

TITLE: Thermal flowmeter for small flow rates of liquid. Class 42, No. 168484

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 4, 1965, 72-73

TOPIC TAGS: liquid flowmeter

ABSTRACT: This Author Certificate presents a thermal flowmeter for small flow rates of liquid. The device contains a thermocouple with two junctions as the sensing element, a measuring tube passing through the two-chambered case of a thermostated detector, and two thermostats maintaining a temperature drop between the detector chambers. To increase the accuracy of measurement, the thermocouple is placed along the axis of the measuring tube. Both junctions are placed in one detector chamber (see Fig. 1 on the Enclosure). To increase the sensitivity of the device by creating an equilibrium temperature field in the region of the detector case, it is provided with additional chambers inside of which are mounted perforated tubes. Orig. art. has: 1 diagram.

ASSOCIATION: none

SUBMITTED: 29Nov63

NO REF SOV: 000

ENCL. 01

OTHER: 000

SUB CODE: IE, ME

Card 1/2

ROY, F.F., inzh.

New designs of water heating boilers. Energ. i elektrotekh. prom.

no.2:44-46 Ap-Je '64.

(MIRA 17:10)

AUTHORS:) Dubinin, A.A. (Eng.) and Roy, F.F. (Eng.). 633
TITLE: On the question of mechanisation of fuel supply and ash removal in low power boilers. (K voprosu mekhanizatsii toplivopodachi i shlakoudaleniya kotlov maloy moshchnosti).
PERIODICAL: "Teploenergetika" (Thermal Power), Vol.4, No.5, May, 1957, pp. 59-61 (U.S.S.R.)

ABSTRACT: The supply of fuel to small boiler houses can be mechanised by the use of a vertical horizontal skip and self-unloading bucket with a small crusher. This system has been used for boiler houses with an output of 6-12 tons of steam per hour. The fuel is delivered from the store to the boiler house by a mobile loader type M4000. This loader consists of special automobile on the back of which is mounted a lifting device with a capacity of about 2.4 tons lifted to a height of 9 m. On its way from the store to the boiler house the loader passes onto a weigh-bridge to determine the weight of fuel. A sectoral shutter is installed under the crusher and it opens automatically as the bucket comes underneath it. The loaded bucket then passes to the fuel bunkers above the furnaces where it is tipped. When the steam output is less than 6 tons per hour the auto-loader can be fitted with a grab which takes fuel from the store and lifts it directly to the bunker gallery unloading it into the crusher bunker from which it goes by gravity to a furnace. The loader can deliver coal

633

On the question of mechanisation of fuel supply and ash removal in low power boilers. (Cont.)

at the rate of 4.5 tons per hour from a store 150 m away. This method of fuel delivery is very simple and cheap.

Simple ash removal systems are described. In the first of these a channel filled with water is provided directly under the furnaces forming a water shutter. The ash is removed from this channel by dragging a scraper along it with a winch and rope, the ash being deposited in a small collecting sump. If it is necessary to repair the scraper, screens can be fitted under the outlet apertures of the furnace slag bunkers. In another installation a scraper type conveyor is installed in the water channel. A further arrangement employing low head hydraulic ash washing is also briefly described. This last method is different from the previous two in that there are no wearing parts, it is simple to service and the initial cost is low. 5 figures, no literature references.

Card 2/2

VOLOSHCHENKO, S.P., inzh.; ROY, G.I., inzh.

Internal automatically actuated cage hoist stopping device.
Gor. zhur. no. 11:62-63 N '60. (MIRA 13:10)

1. Nauchno-issledovatel'skiy gorno-razvedochnyy institut
(for Voloshchenko). 2. Rudoupravleniye im. Ordzhonikidze,
Krivoy Rog (for Roy).

(Mine hoisting--Equipment and supplies)

SOLNYSHKOV, A. I. ; KOMAROV, V. P.; KUZNETSOV, V. S.; ABROYAN, M. A.; IVANOV, N. F.
ZHELEZNIKOV, F. G.; ROYFE, I. M.; ZABLITSKAYA, G. R.; IVLEV, I. V. ; LATMANISOVA, G. M.
and GERASIMOV, V. P.

Current Injector for a Strong Focussed Linac.

report presented at the Intl. Conf. on High Energy Accelerators, Dubna, August 1963.

BC

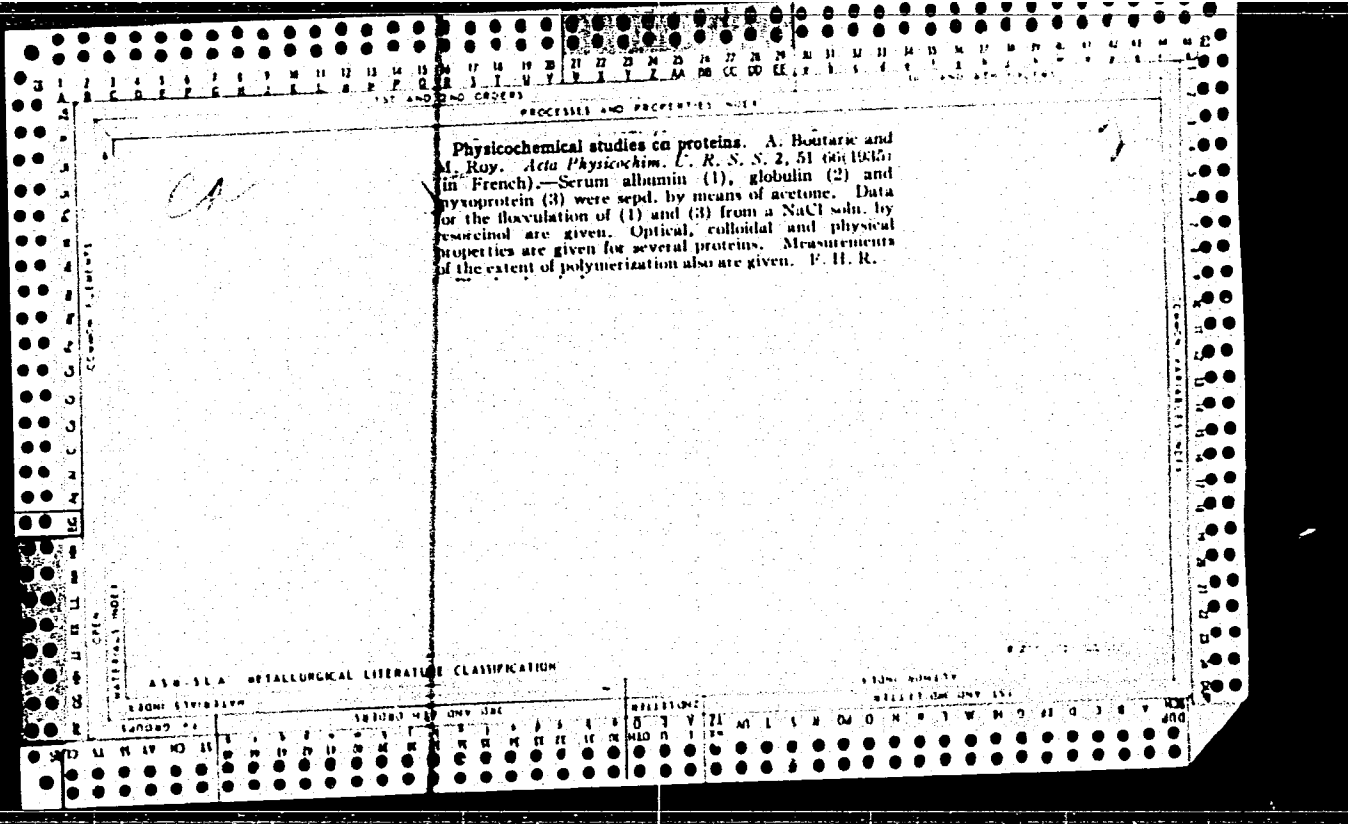
PROCESSES AND PROPERTIES INDEX

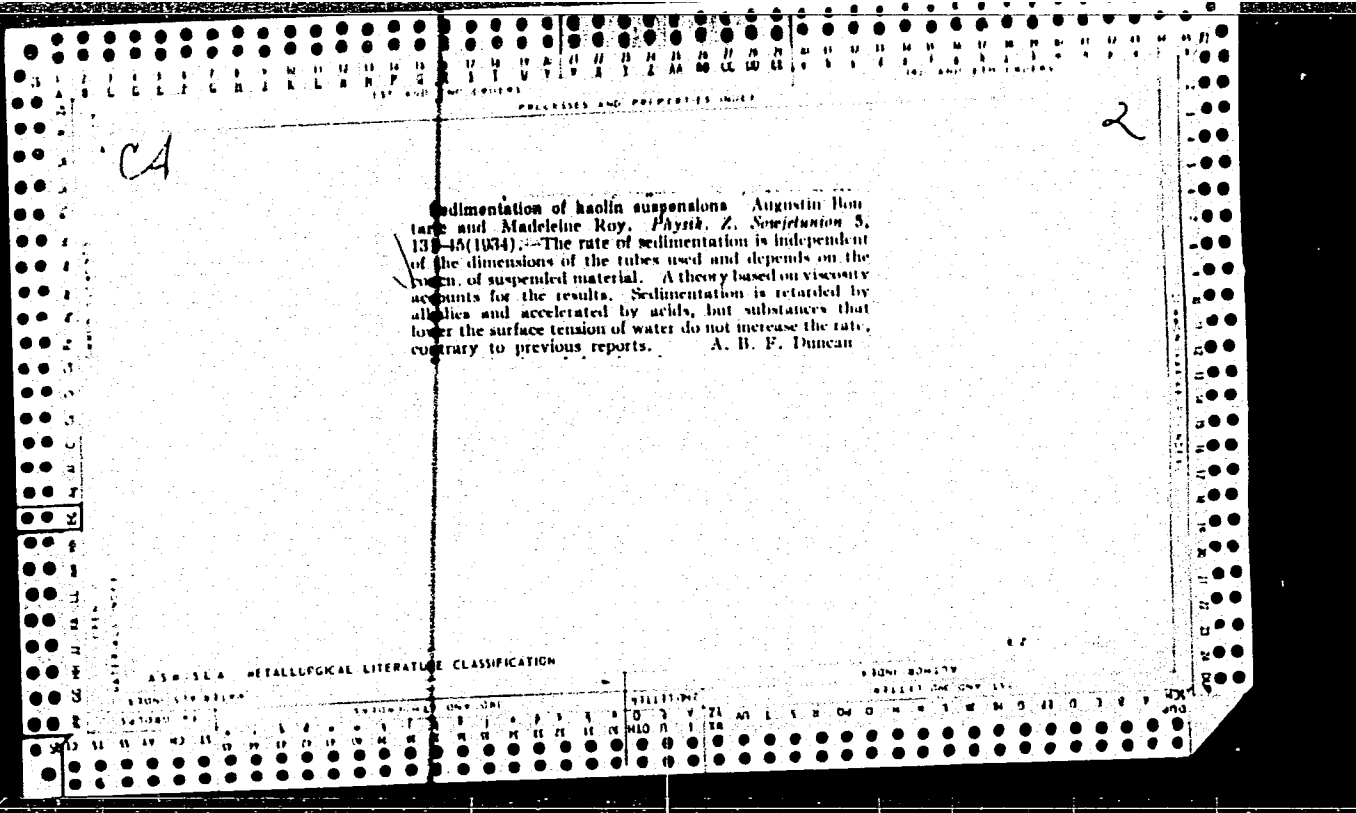
Physico-chemical researches on the proteins. A. BOUTARIC and M. ROY (Acta Physicochim. U.R.S.S., 1935, 2, 51-56). Proteins as ordinarily prepared contain salt impurities which modify their colloidal properties. Pure preps. obtained by COMe₂ pptn. have now been investigated. The optical density and η of coagulating mixtures of resorcinol (I) with serum-albumin and myxoprotein have been determined. (I) is fixed by the pptd. protein, and the solubility decreases to zero as the amount fixed approaches a limiting val. Absorption data for a no. of proteins on charcoal standardized against Na oleate are given and the influence of different protein concns. on the time of pptn. of Fe(OH)₃ sol has been determined. It has been shown by both methods that the degree of polymerisation of albumin and myxoprotein obtained from various physiological secretions is the same. R. S.

ASA-SLA METALLURGICAL LITERATURE CLASSIFICATION

FROM STORAGE

REELSTONE





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

1ST AND 2ND ORDERS

3RD AND 4TH ORDERS

PROCESSES AND PROPERTIES INDEX

SA

A 54
1

1401. Rate of Sedimentation of Suspensions of Kaolin. A. Boutaric and Madeleine Roy. *Phys. Zeits. d. Sowjetunion*, 8, 1, pp. 181-185, 1934. *In French*.—Experiments on the rate of sedimentation of suspensions of kaolin are carried out in vertical tubes 1 metre long, the observed quantity being the rate of descent of the surface of demarcation between the suspension and the clear supernatant liquid. This rate is found to vary with time according to a hyperbolic law, for which a theoretical interpretation is suggested. The rate decreases with increase of the concentration or age of the suspension. It is very susceptible to small changes in the acidity of the liquid, being accelerated by acids and retarded or suppressed by alkalies. An investigation is made upon the effect of adding salts or substances which produce large changes of surface tension, the effect of small alterations of acidity being eliminated by using N/1000 sulphuric acid instead of water. Contrary to the reports of certain other workers, the added substances are found not to affect the rate of sedimentation.

L. A. W.

CONCENTRATIONS

MATERIALS INDEX

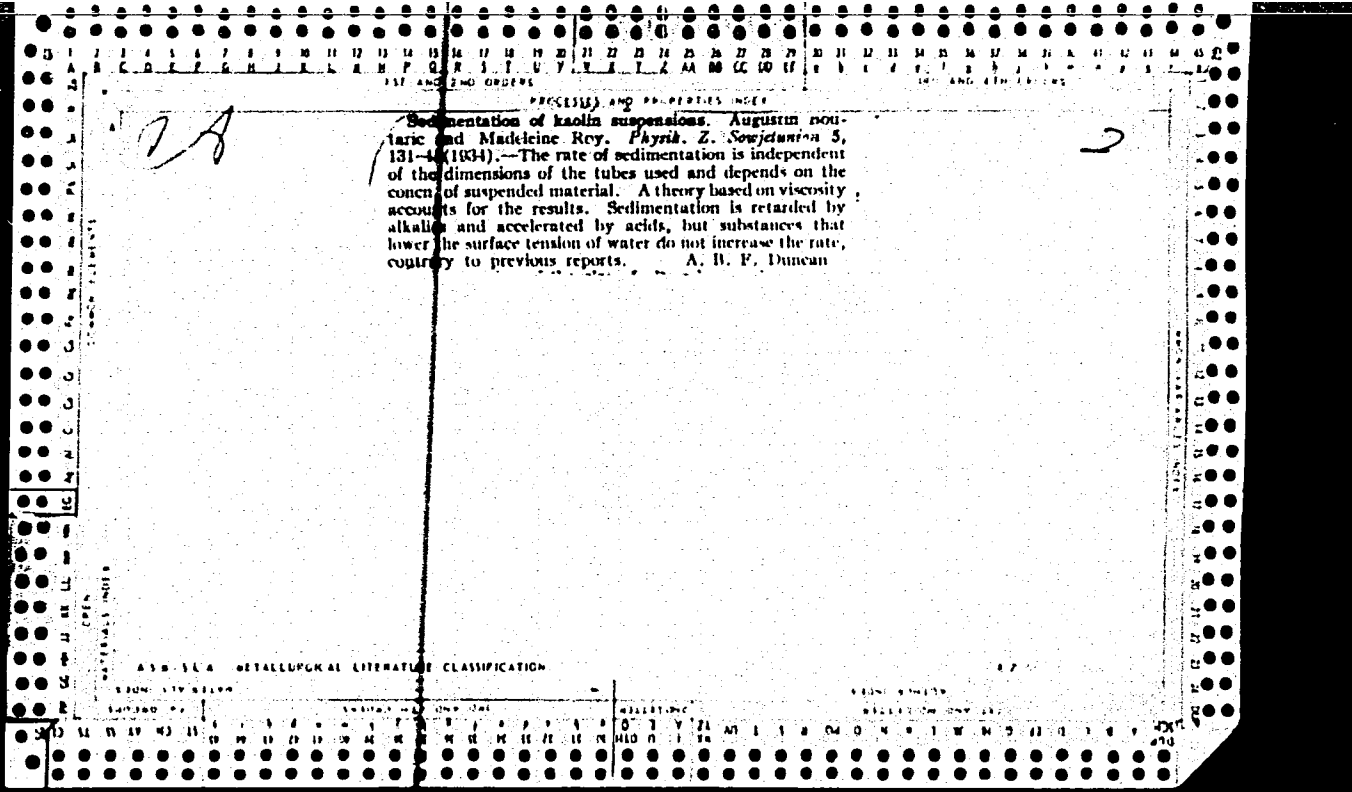
A 50-51 A METALLURGICAL LITERATURE CLASSIFICATION

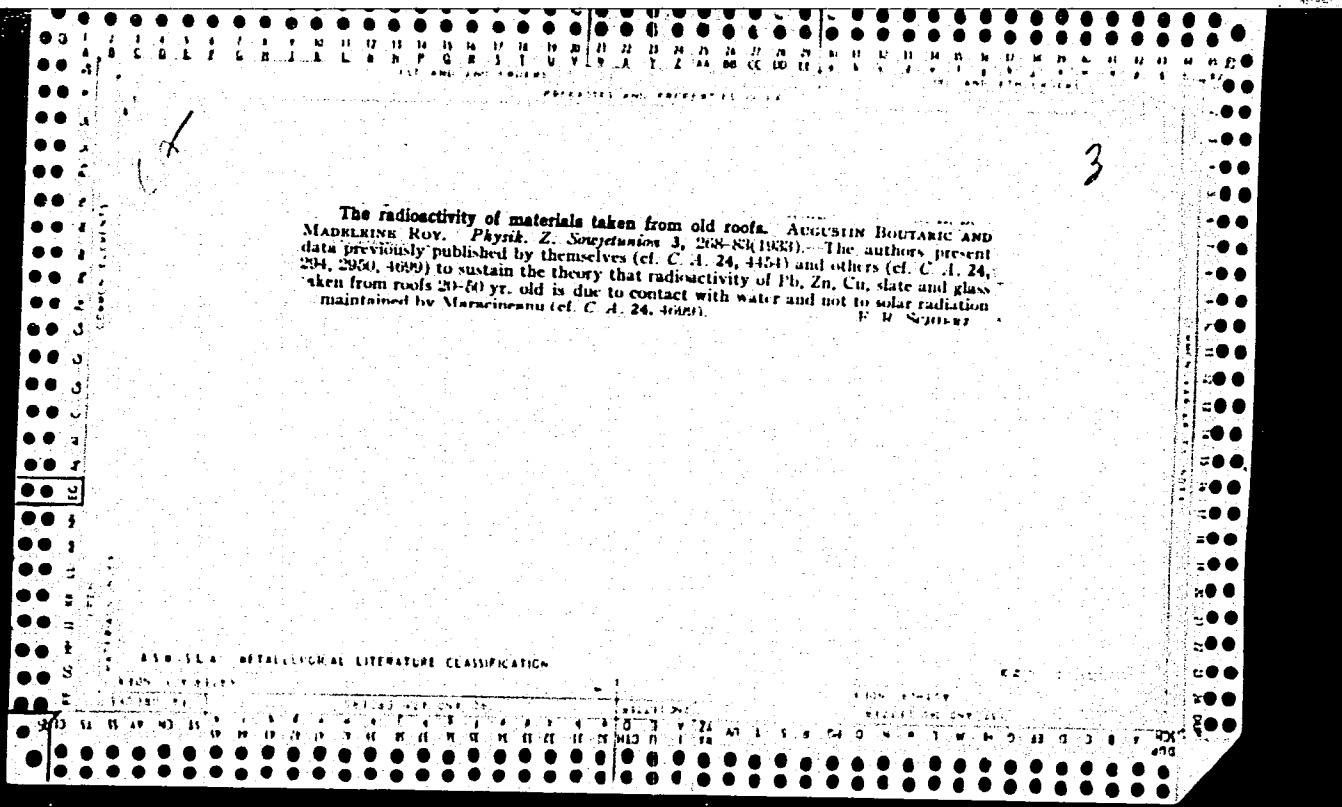
GROUPS

1ST AND 2ND ORDERS

3RD AND 4TH ORDERS

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





ROY, N. A.
CA

2

Phase transition of barium titanate near 120°. I. A. Roč (P.N. Lebedev Phys. Inst., Acad. Sci. U.S.S.R., Moscow). *Doklady Akad. Nauk S.S.S.R.* 81, 545-7 (1951).—In the temp. range 100-130°, the dielec. const. ϵ of BaTiO₃, measured in rising and in falling temp., forms a hysteresis loop extending from about 4-5° above the max. to about 20° below it. Outside this temp. range, the temp. variation of ϵ is reversible. On cooling, the max. of ϵ is shifted by about 1° to lower temps., and is somewhat higher than the max. on heating. The width of the loop varies from one sample to another; in the instance given, it is 1.2°. Samples of BaTiO₃ contg. different amts. of SrTiO₃ (up to 30%) show hysteresis loops of about the same width as BaTiO₃. On 3 hrs. standing at const. temp., near the max., ϵ remained unchanged; consequently, the hysteresis is not

linked with any unstable process. This transition is one of the 1st kind, as transitions of the 2nd kind are not accompanied by undercooling. It is analogous to the phase transitions of the 1st kind of monocryst. BaTiO₃ at 0 and -91° (Merr, *C.A.* 43, 4061d). The observations lead to the conclusion that in the transition range, ϵ is detd. mainly by the dielec. const. of the cubic phase; as long as only the cubic phase is present, ϵ increases continuously, but falls sharply when, on sufficient undercooling, the tetragonal phase makes its appearance in a large part of the crystals. The relative amts. of the cubic and the tetragonal phases can be estd. from the widths of the hysteresis loops, which decrease as the temp. from which the undercooling is begun, is lowered, and is max. on undercooling from a temp. above the transition range, where only the cubic phase is present. At the point of closing of the loop, the amt. of cubic phase is zero. The fact that the nature of the transition is of the 1st kind around 120° is further corroborated by the discontinuous change of birefringence (Kay and Voumlen, *C.I.* 44, 1774h) and the temp. hysteresis of the peak of x-ray reflection (Känzig, *C.I.* 45, 6801d).

N. Thon

ROY, N.

Roy, N. "Research on the wave length as a function of variation in the slit contours of a generator with a four-segment magnetron," Sbornik nauch. rabot studentov (Rost. n/D gos. un-t im. Molotava), Issue 1, 1949, p. 133-40

SO: U-3566, 15 March, 53, (Letopis 'Zhurnal 'nykh Statey, No. 14, 1949).

CA

The nature of electromechanical vibrations in BaTiO₃ ceramic ware. N. A. Rol (P. N. Lebedev Phys. Inst. Acad. Sci., U.S.S.R.), *Doklady Akad. Nauk S.S.S.R.* 73, 437-40 (1950).—The vibrations of a polarized ceramic disk in an alternating field, E , are studied. Graphs are given of: (1) the amplitude, A , of the radial vibrations, the resonance frequency f_R , the antiresonance, f_A , and the frequency f_M of vibrations with max. A , as functions of the const. polarizing field E_0 for $E = 30$ v./cm.; (2) A and f_R as functions of E

for several values of E_0 ; (3) the temp. dependence of f_R and f_A for $E_0 = 20$ kv./cm. and $E_0 = 0$; (4) the temp. dependence of f_M (the frequency of the exciting field) and of A for a depolarized disk excited by a strong field with frequency half that of the natural oscillation of the disk. The vibrations are due to the reorientation in a field E of the polar axes of the lattice cells, owing to transitions of a Ti ion, which may be of 3 kinds: (a) transitions from a position near the perpendicular to E_0 , by 90°, to the longitudinal direction, which lead to vibrations with the frequency of E and the direction of E_0 ; (b) transitions of 180°, which cause the frequency of the vibrations to double; (c) transitions of 90° from a position near the antiparallel to E_0 , to a position near the perpendicular, when, for $E_0 = 0$, the vibrations are damped out, and for increasing E_0 the amplitude of the vibrations with the frequency of the field E increases. For large E_0 the probability of all transitions decreases, but A does not, since the linear piezo effect begins to be manifest. Up to the Curie point the vibrations are due to the quasi-electrostriction effect (Ti-ion transfer) and $A(T)$ is proportional to E^2 ; near the Curie point and above it they are due to electrostriction and A increases rapidly due to the largeness of the dielectric permeability ϵ . The elasticity depends on the temp. T , E , and E_0 . Ellen H. Dunlap

ACCESSION NR: AP4044725

S/0207/64/000/004/0108/0113

AUTHORS: Ioffe, A. I. (Moscow); Naugol'nykh, K. A. (Moscow); Roy, N. A. (Moscow)

TITLE: On the initial stage of an electric discharge in water

SOURCE: Zhurnal prikladnoy mekhaniki i tekhnicheskoy fiziki, no. 4, 1964, 108-113

TOPIC TAGS: electric discharge, ionized gas, heat transfer, dissociated gas, discharge column, gas pressure, plasma conductivity

ABSTRACT: The process of an electric discharge column spreading in water was discussed analytically for small spreading rates and zero magnetic forces. A theoretical model is constructed on the basis of small dR/dt (R - column radius) assumption which leads to linear acoustic approximations that satisfy Laplace's equation $\Delta\phi = 0$ and the linearized Euler momentum equation. This in turn leads to an expression for the pressure around the discharge column given by

$$p - p_0 = -\rho_0 \frac{\partial \phi}{\partial t} - \frac{\rho_0}{2} \left(\frac{\partial \phi}{\partial r} \right)^2$$

. Dissociative heat transfer in a thin layer around the discharge column is considered to be the primary source of energy loss, and for a planar geometry and constant mass flow rate the temperature distribution

Card 1/2

ACCESSION NR: AP4044725

is described by the equation $\frac{dT}{dx} = -\frac{R_p}{2\kappa T_1} 5.5 [(1 + \alpha) - T_1]$. Analysis shows this transition layer to be of the order of 10^{-5} cm. The temperature within the column is determined using conduction-diffusion equation with Saha's equilibrium ionization expression for temperature estimates not exceeding 15000C. A mean adiabatic coefficient γ is determined for water in the 9000-16000C temperature range and 500 to 2000 atm range ($\gamma = 1.21$), and from an energy balance equation an expression is derived for column expansion rate u given by

$$u^4 \left(\ln \frac{2c}{u} - \frac{1}{2} \right) = \frac{N_0 (\gamma - 1)}{2\pi\gamma p}$$

Radius versus time and discharge potential versus time curves are calculated using experimentally determined column radii. This is done by means of photographing the discharge. "The authors thank S. I. Braginskiy for helpful discussions." Orig. art. has: 16 formulas and 6 figures.

ASSOCIATION: none

SUBMITTED: 09Jan64

ENGL: 00

SUB CODE: ME,GP

NO REF SOV: 005

OTHER: 005

Card 2/2

USSR/Physics - Barium Titanate, Phase Transition on 1 Dec 51

"Phase Transition of Barium Titanate Close to 120°C," N. A. Roy, Phys Inst Imeni Lebedev, Acad Sci USSR

"Dok Ak Nauk SSSR" Vol LXXXI, No 4, pp 545-547

Roy was guided in this work by N. N. Andreyev, Corr Mem Acad Sci USSR. He also acknowledges the helpful discussions of I. M. Brekhovskikh and M. A. Iaskovich. Samples used were prepd in B. M. Vul's laboratory. Studied the results of measurements of the dielec permeability subject

202191

USSR/Physics - Barium Titanate, Phase Transition on (Contd) 1 Dec 51

samples vs temp (90-140°C); also studied the temp hysteresis loop corresponding to various max temps of heating. Submitted by Acad M. A. Lenotovich 3 Oct 51.

202191

ROY, N. A.

ROY, N.A.

300, 1/11/55

537.228.2 : 539.32
1081. THE TEMPERATURE VARIATION OF THE ELECTRO-
STRICTIVE AND ELASTIC PROPERTIES OF BARIUM
TITANATE CERAMIC. N.A. ROJ

Akust. Zh., Vol. 1, No. 3, 264-71 (1955). In Russian.

An experimental paper describing how, using a pulsed electromechanical probe, the Young's modulus and the electrostriction coefficients of barium titanate ceramic have been determined over a range of temperatures 15-150°C. Relations are given between the electrostriction coefficients connecting strain with field, strain with polarization, mechanical stress with field, mechanical stress with polarization, and conclusions arrived at concerning their dependence on temperature.

C.R.S. Manders

PM

WIK

LEH

GOLYAMINA, I.P.: ROY, N.A.

Device for measuring magnetostriction by means of interference techniques. Prib.i tekhn. eksp. no. 2:129-131 S-0 '56. (MLRA 10:2)

1. Akusticheskiy institut AN SSSR.
(Interferometry) (Magnetostriction)

46-1-1/20

AUTHOR: Roy, N.A.

TITLE: Formation and development of ultra-sonic cavitation (Review).
(Voznikoveniye iprotekaniye ultrazvukovoy kavitatsii; Obzor).

PERIODICAL: "Akusticheskiy Zhurnal" (Journal of Acoustics), 1957,
Vol. III, No. 1, pp. 3 - 18 (U.S.S.R.)

ABSTRACT: A survey of theory and experiments related to ultra-sonic cavitation. The following are covered: The theoretical strength of liquids and the hypothesis of stable nuclei. The mechanism of transition from liquid to gaseous states due to "critical nuclei" has been described by Frenkel, 1) and Zeldovich, 2); the behaviour of stable nuclei in an acoustical field; the experimentally observed strength of the liquid under the influence of an ultra-sonic field and, finally, the cavitation noise.

In conclusion, it is established that: the strength of the liquid is determined mainly by stable gaseous nuclei; there is no evidence as to the causes of their formation, though it is thought that they are stabilised by organic skins; their content in the liquid may be reduced by gas absorption, increased pressure or decrease in temperature; their size distribution in the liquid is not known; clearly, the probability of occurrence of a large, i.e. of a "weak" nucleus in the regions of increased acoustical pressure, increases with the volume increase of this region; it may also be due to the

Card 1/2

Formation and development of ultra-sonic cavitation (Cont.)
46-1-1/20

increase of the total volume of the liquid, with a stream in it. Tearing off of the liquid from the surface of a solid with bad wetting properties may distort the strength of the liquid at that spot. In an acoustical field, the stable nuclei may move into regions of higher acoustical pressure or increase their volume as a result of coagulation and, possibly, of diffusion of the dissolved gas during the expansion phase. At higher frequencies only small diameter, i.e. more stable nuclei can undergo cavitation. The above determine the main factors influencing the experimentally-observed strength of liquids. These factors are: presence of stable nuclei, volume of the region of increased pressure, sound frequency and time of sound irradiation.

In most experiments, the relative influence of one factor upon others was not adequately controlled. In the main, only qualitative data of influence of various factors (e.g. viscosity, etc.) on the observed strength are known, with the possible exception of the influence of gas content. There is enough evidence about the cavitation noise that its level could serve as means of measuring the intensity of shocks during the collapse of cavitation strata. Numerical evaluations show that this intensity should increase with decreasing frequency, at which the cavitation effect occurs.

Card 2/2

15 graphs and two tables are included. There are 22 references, of which 3 are Russian.

ROY, N. A., TRICIAN, D. P., and POLYAKOVA, A. L.

"Sound Generation by Spark and Corona Discharges in Water."

paper presented at the 4th All-Union Conf. on Acoustics, Moscow, 26 May - 2 Jun 58.

ISAKOVICH, M.A.; ROY, N.A.

Acoustic method for measuring mechanical parameters of
meteorites. Isk.sput.Zem. no.2:81-82 '58. (MIRA 12:5)
(Meteoritas--Measurement)

20-118-4-16/61

AUTHORS: Roy, N. A., Frolov, D. P.

TITLE: The Electroacoustic Efficiency of Spark Discharges
in Water (Ob elektroakusticheskom KPD iskrovogo
razryada v vode)

PERIODICAL: Doklady Akademii Nauk SSSR, 1958, Vol. 118, Nr 4,
pp. 683-686 (USSR)

ABSTRACT: The present paper attempts to determine data on the electroacoustic efficiency of a discharge subject to various conditions, which are determined by the length of the discharge gap, the amount of capacity discharged and the electric potential. The circuit diagram of this device is illustrated by a figure. This circuit permits a discharge at one gap (which is described here) and the simultaneous discharge at several gaps. The generation of the discharge is shortly discussed. A diagram represents the time characteristics of the amperage $I(t)$ and of the potential $V(t)$ during the discharge of a capacity of

$$C = 0,1 \mu \Phi$$

Card 1/3

The Electroacoustic Efficiency of Spark Discharges
in Water

20-118-4-16/61

(at a potential $V = 30$ kV) across different spark gaps. These characteristics show the following: The generation of an auxiliary spark in the air-gap guarantees an increase of the potential across the spark gap to 30 kV during fractions of a microsecond. Afterwards the potential remains almost constant during a few microseconds and a weak current passes through the spark gap. The duration of this period varies from experiment to experiment and on the average decreases on a decrease of the spark gap. This period terminates with a potential jump, which fact speaks in favour of the breakdown of the spark gap. The shorter the spark gap, the lower the potential drop. After the jump point the potential slowly decreases, the current curve, however, forms a peak. The acoustic field of the spark was determined at a distance of $R = 100$ cm from the center of the spark gap. Some oscillographs are given here. The electroacoustic impulse was here defined to be the ratio between (energy of the pulse with positive pressure / the energy stored in the condenser). A formula is written down for the total energy of the impulse. The efficiency of the transformation of a stipulated amount of electric energy into

Card 2/3

The Electroacoustic Efficiency of Spark Discharges
in Water

20-118-4-16/61

acoustic energy decreases at a decrease of the spark gap, that is to say, independent of the fact, whether C and V remain constant or whether C is increased and V decreased. The efficiency decreases also, if the length of the spark gap remains constant, when the supply of electric energy is increased by an increase of C at constant V. The transition of energy from its electric to its acoustic form in a spark discharge in water is proceeding most efficiently (with an electroacoustic efficiency of up to 30 %) in discharges with long sparks. There are 3 figures, 2 tables.

ASSOCIATION: Akusticheskiy institut Akademii nauk SSSR
(Acoustics Institute AS USSR)

PRESENTED: August 28, 1957, by N. N. Andreyev, Member of the Academy

SUBMITTED: August 24, 1957

AVAILABLE: Library of Congress

Card 3/3

IOFFE, A.I. (Moskva); NAUGOL'NYKH, K.A. (Moskva); ROY, N.A. (Moskva)

Initial stage of an electric discharge in water. PMTF no.4:
108-113 J1-Ag '64. (MIPA 17:10)

Roy, N.A.

*Matt
Junc*

1000

537.226.2
 5087. THE DEPENDENCE OF COERCIVE FORCE AND PERMITTIVITY OF BARIUM TITANATE CERAMIC UPON MECHANICAL STRESSES. N.A. Roy. Akust. Zh., Vol. 1, No. 4, 352-5 (1955). In Russian.
 Application of mechanical stress is shown to increase the coercive force of barium titanate. A study of the variation of dielectric constant with temperature of the ceramic both in the free and stressed states leads the author to the conclusion that current thermodynamic theory, taking no account of domain structure, does not fit the facts. C.R.S. Manders

Acoustics Inst, AS USSR, Moscow

*PM
mm*

ROY, N. A.

62
1956

Akusticheski Zhurnal, vol. 2, No. 1, 1956

N. A. ROI: Dielectric and piezoelectric properties of solid solutions of
 (Ba, Sr)TiO₃, (Ba, Pb)TiO₃, Ba(Tl, Sn)O₃ and Ba(Tl, Zr)O₃ 62

Abstract: Determine experimentally is the temperature behavior of the dielectric permeability of certain solid solutions on the basis of barium titanate; their piezo-moduli are measured and the magnitude of the coercive force at room temperature is found. It is established that the most interesting from the point of view of use as electromechanical transducers are solid solutions of barium titanate and lead titanate, barium titanate and barium stannate.
 (Acoustics Inst. -- Jan., 1955)

ROI
1956

L 37150-66 EWT(1)/EWT(m)/EWP(t)/ETI/EWP(k) LJP(c) JD/HW

ACC NR: AF6018054

SOURCE CODE: UR/0020/66/168/003/0556/0559

AUTHOR: Naugol'nykh, K. A.; Roy, N. A.

ORG: Acoustics Institute, Academy of Sciences, SSSR (Akusticheskiy institut Akademii nauk SSSR)

TITLE: On the connection between the hydrodynamic and electric characteristics of a discharge in a liquid

SOURCE: AN SSSR. Doklady, v. 168, no. 3, 1966, 556-559

TOPIC TAGS: electric discharge, hydrodynamic theory, discharge channel, acoustic property, electric property

ABSTRACT: An approximate energy balance per unit length of the channel is written out for moderate-current discharges, when magnetic forces can be neglected, in the form

$$p_k \frac{ds}{dt} + \frac{1}{\gamma-1} \frac{d}{dt} p_k s = N(t),$$

The channel pressure p_k entering into this equation can be expressed in terms of the channel radius R by solving the hydrodynamic problem involving the expansion of the cylinder in the liquid in the acoustic approximation. The net result is a system of equations describing the expansion of the channel from a known dependence of the energy release on the time per unit channel length (normalized to unity). By numerically solving this equation and by regarding the discharge channel as an aggregate of point

Card 1/2

UDC: 537.528

L 37150-66

ACC NR: AP6018054

sources, an expression is obtained for the energy of the compression pulse. The results of the calculations are compared with experimental data obtained by measuring the discharge current, the electrode-gap voltage, the channel radius, and the pressure in the compression pulse. The theoretical results differed noticeably from the experimental ones in the case of large channel expansion rates. This difference is attributed to nonlinear effects, which are not taken into account in the equation, and possible deviations of the channel form from the assumed one in the case of large expansion rates. The authors thank N. G. Kozhelupova for help with the calculations. This report was presented by Academician N. N. Andreyev 4 September 1965. Orig. art. has: 4 figures, 9 formulas, and 1 table.

SUB CODE: 20/ SUBM DATE: 23Jul65/ ORIG REF: 003

Card 2/2 af

Roy, S.N.

2167. MECHANISM OF THE OXIDATION OF COAL. Mazumdar, B.K., Anand, K.S., Roy, S.N. and Lahiri, A. (BrennstChemie, 16 Oct. 1957, vol. 38, 305-307). Progressive variation of the elementary composition of coal and formation of groups such as hydroxyl, carbonyl and carboxyl (containing reactive oxygen in the course of oxidation in air at low temperature (70°C) were investigated using two coals of different degrees of coalification. It is shown that in each oxidation stage practically all the oxygen taken up appears in the reactive form and mainly as carboxyl. The oxygen originally in the coal remains unaffected. Calculations of the ring indices (R/C) for the two coals and their end products indicate that the rings are not split during oxidation. The mechanism of the process is discussed. (L).

GOROSHCHENKO, Ye.G.; PANASENKO, Ye.B.; ROY, V.A.; IZOTOV, V.P.

Preparation of cesium carbonate from pollucite-spodumene concentrates.
TSvet. met. 34 no.5:55-57 My '61. (MIRA 1415)
(Cesium carbonate) (Spodumene)

KOROLEV, Ye.M.; ROY, V.I.; MATVEYEVA, V.A.

Waterproofing of strain gauges for measuring deformations
under high pressure. Zav.lab. 25 no.10:1250-1252 '59.
(MIRA 13:1)

1. Irkutskiy filial Vsesoyuznogo nauchno-issledovatel'skogo i
konstruktorskogo instituta khimicheskogo mashinostroyeniya.
(Strain gauges)

22801

18.3100 1087, 1208, 1454 S/136/61/000/005/004/008
E111/E152

AUTHORS: Goroshenko, Ya.G., Panasenko, Ye.B., Roy, V.A., and Izotov, V.P.

TITLE: Production of caesium carbonate from pollucite-spodumene concentrate

PERIODICAL: Tsvetnyye metally, 1961, No.5, pp. 55-57

TEXT: A possible source of caesium salts are pollucite-spodumene concentrates. The object of the present investigation was to study the possibilities of producing caesium carbonate in this way with lithium as a by-product. Experiments were first made in which pollucite, spodumene and their mixtures were treated in a 20-litre autoclave. For pollucite leaching the best conditions were: 3 mols $\text{Ca}(\text{OH})_2$ per mol SiO_2 , solid:liquid ratio 1:5, temperature 220 °C, pressure 20 atm; but the stirring rate of 25 rev/min was insufficient and a horizontal ball-loaded rotating autoclave would have been preferable. Spodumene had to be converted to the beta form by roasting before leaching. Artificial concentrate was produced by mixing pollucite with alpha-spodumene (2:1) and calcining at 1000 °C and leaching with a higher stirring

X

Card 1/2

22801

Production of caesium carbonate..... S/136/61/000/005/004/008
E111/E152

rate of 110 rev/min. From the collective concentrates containing 13.80% Cs₂O and 2.70% Li₂O the recovery of lithium and caesium into the solution was 88.3 and 88.1%, respectively. If concentrates are not roasted there is selective leaching of caesium; lithium can then be recovered from the sludge at works treating spodumene by the lime method. Experiments were carried out on treatment of solutions. After conversion to alums and four recrystallizations the following degree of contamination of the caesium was obtained: 99.5% Cs, 0.2 Rb, 0.1 Na, 0.2 K, 0.0 Li. To produce one ton of caesium carbonate with the 73% recovery expected of the method requires 7.4 tons of pollucite concentrate, 15.6 slaked lime, 0.5 sulphuric acid (monohydrate), 4.6 aluminium sulphate, 0.5 anhydrous barium hydroxide and 260 m³ of carbon dioxide. The authors consider that with recovery of caesium from the mother liquor and a better design of autoclave, 87% recovery should be possible. The method developed has the advantage of not requiring pure, scarce or expensive material, it yields products of any purity up to chemical reagent standard, and can easily be switched from the production of caesium carbonate to yield any other caesium salts. There is 1 table.

Card 2/2

LAVRENT'YEVA, V.A.; ROY, V.A.; TOLSTOV, V.N.; FOKINA, V.I.; SHINGARKIN, S.M.

New advances in the treatment of multiple sclerosis, preliminary
report. Zdrav. Kazakh. 21 no. 4:42-44 '61. (MIRA 14:4)

1. Iz Ural'skoy oblastnoy bol'nitsy.
(MULTIPLE SCLEROSIS)

28 (5)

AUTHORS:

Korolev, Ye. M., Roy, V. I., Matveyeva, V. A. SOV/⁰⁵⁷⁵²32-25-10-41/63

TITLE:

Waterproofing Transmitters Which Measure Deformations Under Higher Pressure

PERIODICAL:

Zavodskaya laboratoriya, 1959, Vol 25, Nr 10, pp 1250 - 1252 (USSR)

ABSTRACT:

Investigations of the state of stress in damaged parts of industrial devices for high pressure were carried out by the tensiometric method. For the determination of deformations on the inner surfaces it was necessary to seal the transmitters against the action of water at high pressure (400-900 atm). The carbinol paste prepared for this purpose at the NIIKhIMMASH (Ref 1) proved to be inadequate. Various sealing media were tested (Table) such as bakelite varnish, silicon nitroglyphtal glue 192-T, bitumen varnish, nitro lacquer, carbinol paste, perchlorovinyl paste, technical vaseline-paraffin mixtures, and "Pushsalo"). The sealing qualities were tested by means of the transmitter of the type ET-1, and it was found that the two last-mentioned substances effect the best sealing. As the outlet of the transmitters had to be altered also for tests to be carried out at high pressure under water, a new construction

Card 1/2

Waterproofing Transmitters Which Measure Deformations 05752
Under Higher Pressure SOV/32-25-10-41/63

was worked out also for the latter (Figure), which provides for a chlorovinyl insulation with a rubber insert. There are 1 figure, 1 table, and 2 Soviet references.

ASSOCIATION: Irkutskiy filial Vsesoyuznogo nauchno-issledovatel'skogo i konstruktorskogo instituta khimicheskogo mashinostroyeniya (Irkutsk Branch of the All-Union Scientific Research- and Designing Institute for Chemical Machine Building)

Card 2/2

ROY, V.P.

Rare injury of the urinary bladder. Vest. khir. 92 no. 5-91-92
1974. (MIRA 18:1)

1. Iz khirurgicheskogo otdeleniya (zav. - V.P. Roy) Rovenskoy detskoy
ob"yedinennoy bol'nitsy (glavnyy vrach - T.A. Khivrich).

201, No. 5.

424

Noy obyt rabory na traktornoy lopate. (Moyevskiy sakharnyy zavod).
M., Pishchenvenizdat, 1954. 16s. s ill. 20 sm. (M-uo prom-stiprodguol'stu.
Tovarcu SSSR. Glaviabak). 3,500 ekz. B. ts V per.--Na 3-y s. aur. Razraborki:
A.P. Shirmov, G.I. Dikher i L.K. Dorozhou.--(54.54396) 679.7.02

SO: Unizhanaya, Letopis, Vol. 1, 1955

ROY, Ye.S.

My experience in increasing the productivity and improving the work of tractor-mounted shovels. Sakh.prom. 28 no.4:27-29 '54.
(MIRA 7:7)

1. Moyevskiy sakharnyy zavod.
(Sugar industry--Equipment and supplies) (Shovels)

1. - [REDACTED], [REDACTED]
[REDACTED] [REDACTED], 1049-51(1927)

ROYAK, D.A.

Experimental study of the rigidity of the body of rotary kilns.
TSement 28 no.4:11-13 JI-Ag '62. (MIRA 15:7)

1. Gosudarstvennyy institut proyektirovaniya predpriyatiy i
po nauchno-issledovatel'skim rabotam tsementnoy promyshlennosti.
(Kilns, Rotary)

ROYAK, D. A.

Method of superposition in the theory of cylindrical shells
as applicable to the calculation of the housing and lining
of rotary kilns. Trudy Giprotsement no. 26:95-129 '63.
(MIRA 17:5)

ROYAK, D.A. (Leningrad)

Using the method of superposition in calculating a very long
cylindrical shell. Inzh.zhur. 4 no.1:69-78 '64. (MIRA 17:4)

ACCESSION NR: APl026956

S/0258/64/004/001/0069/0078

AUTHOR: Royak, D. A. (Leningrad)

TITLE: Computation of a very long cylindrical shell by the method of superposition

SOURCE: Inzhenernyy zhurnal, v. 4, no. 1, 1964, 69-78

TOPIC TAGS: cylindrical shell, superposition, radial perturbation, concentrated force, contact problem, ring and shell contact, potential function, radial force, numerical error, Poisson coefficient, Rayleigh formula

ABSTRACT: The author obtains formulas and tables which allow a very simple determination of radial perturbations of a very long cylindrical shell under the influence of any number of arbitrarily situated concentrated forces. He gives numerical values of the greatest possible error. Examples are presented illustrating his method. The formulas and tables are obtained in the following fashion. The terms of the expansion of radial perturbation are presented as tabulated roots and coefficients of a potential function, they are approximated by simple expressions, and the greatest possible error determined. The longitudinal coordinates ($\xi = |x|/AR$) make it possible to obtain coefficients which determine the sums of

Card 1/3

ACCESSION NR: APL026956

the terms of the expansion, i.e., radial perturbations without the zero-th and first terms. For determining the radial perturbation at the point $(0,0)$, subject to concentrated forces P_i applied at points with coordinates (ζ_i, φ_i) , it is necessary to describe, from the tables, the coefficients corresponding to the given coordinates. The desired result--radial perturbation--is determined by the sum of the products of these coefficients with the magnitudes of the corresponding forces and a constant multiplier. This method is especially effective when there are many forces and when the magnitudes of the forces acting on the shell are unknown and when they are to be determined from the solution of a contact problem, for example, for contact of a ring and a shell. The computations show that the obtained table of coefficients, which makes possible the direct determination of radial perturbation under the effect of radial force, guarantees accuracy of 5% under the effect of concentrated forces or forces arbitrarily distributed in squares whose largest dimension $b \leq 0.1R$, for ratios of the radius to the thickness of the shell $25 \leq R/h \leq 200$. Correspondingly, when $16 \leq R/h \leq 400$ and $b \leq 0.3 R$, the greatest possible error does not exceed 10%. Orig. art. has: 29 formulas and 2 tables.

Card 2/3

ACCESSION NR: AP4026956

ASSOCIATION: none

SUBMITTED: 24Jun63

SUB CODE: AP

DATE ACQ: 15Apr64

NO REF SOV: 008

ENCL: 00

OTHER: 001

Card 3/3

ROYAK, D.A., inzh.

Determining the contact forces acting on the freely put
on tire of a rotary kiln. Khim. i nefit. mashinostr. no.3:
23-31 S '64. (MIRA 17:12)

ROYAK, D.A.

Method of calculating the rigidity of the frame of a rotary
kiln with comparatively thin binding shells. Trudy Giprotsement
no.27:121-144 '63. (MIRA 17:12)

ROYAK, D.A., insth.

Technical consultation. Document ID: 00513R001445520002-8. (MIR: 10:8)

1. Gosudarstvennyy vsesoyuznyy institut po proyektirovaniyu i nauchno-issledovatel'skim rabotam besmennoy promyshlennosti, Leningrad.

ROYAK, D.A. (Leningrad)

Unified approximate characteristic equation for a circular cylindrical shell. Izv. AN SSSR. Otd. tekhn. nauk. Mekh. i mashinostr. no. 5:142-146. S.O. '61. (MIRA 14:9)

(Elastic plates and shells)

ROYAK, D. B.

✓ Improving quality of ball-bearing steels. M. I. Kolobov, I. Ya. Altshtol, N. V. Kels, and D. B. Royak (Met. Plant, Chelyabinsk). *Stal*, 15, 431-84 (1955). Extensive statistical studies of deoxidation practice of arc furnace heats indicated that, independently of the practice used, melting without oxidation leads to less oxide inclusions, and straight remelting improves the sulfide content. Among several deoxidation methods described, best results were obtained with a carbide slag and powdered FeSi. FeCr should be added directly after skimming off the black slag. All ingots in the plant are bottom poured. A study of 800 production heats showed a max. oxide content near the bottom and of sulfides close to the top of ingots. Refilling of hot tops caused addnl. contamination. J. D. Cat

MALINOVSKIY, Ye.I., kand. tekhn. nauk; ROYAK, D.B., inzh.

Effect of deoxidation conditions of 38KhMIUA steel on its nonmetallic inclusion content. Izv. vys. ucheb. zav.; chern. met. 2 no.4:53-56
Ap '59. (MIRA 12:8)

1. Chelyabinskiy politekhnicheskiy institut i Chelyabinskiy metallurgicheskiy zavod. Rekomendovano kafedroy metallurgii chernykh metallov Chelyabinskogo politekhnicheskogo instituta.
(Oxidation-reduction reaction) (Steel--Defects)

SOV/133-59-9-13/31

AUTHORS: Keys, N.V., Ayzenshtok, I.Ya., Komissarov, A.I. and Royak, D.B., engineers

TITLE: The Production of Steel 38KhMYuA for Internal Combustion Engines

PERIODICAL: Stal', 1959, Nr 9, pp 808-811 (USSR)

ABSTRACT: Changes in the technology of smelting 38KhMYuA steel since the start of its production in 1952, are outlined. The main points in the smelting technology used at present: a) a preliminary deoxidation of the bath with pig iron after the end of the oxidising period; at the beginning of refining, the bath is deoxidised with a mixture of silicomanganese and 75% ferrosilicon in lumps; b) addition of ferrochromium at the beginning of refining; c) diffusion deoxidation with coke and ferrosilicon during 20 minutes; d) shortening of the reducing period to 80 minutes (instead of 120 to 150 minutes in the previous technology) metal temperature before casting 1600 to 1620°C in the ladle 1575 to 1590°C. Despite improvements in the smelting technology, the proportion of defective metal is still high (in 1957 - 145%).

Card 1/3 Due to the appearance of spot segregation, head crops were

SOV/133-59-9-13/31

The Production of Steel 38KhMYuA for Internal Combustion Engines

increased to 25%. Most common defects encountered in this type of steel are described: 1) Spot segregation consisting of localised enrichment of metal in carbon, sulphur and phosphorus; the appearance of the defect is associated with the evolution of gas during crystallization. 2) "Bubbles" - in the axial zone of macrotemplets discontinuities in the metal called "coarse bubbles" (Fig 1). A fracture along the zone of the "bubbles" appears as lamination in the form of dark thread. No changes in structure in the zone of the defect was noticed, non-metallic inclusions are absent. Studies of longitudinal cross sections of ingots (Fig 2) indicated that the defect is associated with insufficient feeding of the ingot during its solidification. 3) Cracks - usually situated in the central part of macrotemplets (Fig 3). The defect was found to be caused by too early transportation of ingot bogies after teeming (40 minutes) by retaining the bogies in the casting pit for 2 hours 20 minutes this type of defect disappeared. An investigation of the defects in the finished parts - blisters (Fig 5, 6 and 7) indicated that some improvements

Card 2/3

SOV/133-59-9-13/31

The Production of Steel 38KhMYuA for Internal Combustion Engines

in the forging of semis and stamping of parts are necessary as at present, the central part of the ingot is pushed towards the internal working surface of the stamped parts. The necessity of establishing well founded standards for defects which at present are considered as unavoidable is stressed. There are 7 figures and 6 Soviet references.

ASSOCIATION: Chelyabinskiy metallurgicheskiy zavod
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Card 3/3

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TITLE: Effect of the slag regime of melting on the plasticity of Ni-Cr-base alloys 27 27

SOURCE: IVUZ. Chernaya metallurgiya, no. 11, 1965, 39-43

TOPIC TAGS: slag, nickel base alloy, chromium base alloy, plasticity, alumina, calcium

ABSTRACT: The principal parameter investigated was the Al_2O_3/CaO ratio of the slag, since this technological factor largely determines the conditions of the reduction of Ca which, according to V. M. Pridantsev (Vliyanie primesey i redkozemel'nykh elementov na svoystva splavov. Metallurgizdat, 1962), adversely affects the plasticity of Ni-Cr-base heat resistant alloys. As the Al_2O_3/CaO ratio increases, the Ca content of the melt decreases. This was verified by carrying out a large series of experimental remeltings in an electric arc furnace. The plasticity of the metal was determined visually (by forging samples to a 20 mm square with bending through 180°) and by determining the Ca content and the impact strength of specimens at high temperatures. Basic and alumina slags were used in the melting. During melting under basic slags, a slag mixture of lime and feldspar was added in the course of the melting process. 6

Card 1/2

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