GRASHCHENKOV, N.I.; STEPIN, V.I.

Pathophysiological analysis of patients with periodic attacks of prolonged sleep. Zhur.nevr.i psikh. 54 no.1:48-51 Ja '54.
(MLRA 7:1)
(Sleep)

STEPIN, V. I.

NIKONOVA, O.S.; STEPIN, V.I.

Unilateral lesion of the cranial nerves in tumors of the cranial base. Zhur. nevr. i psikh. 54 no.8:653-658 Ag '54. (MLRA 7:9)

1. Nervnoye otdeleniye bol'nitsy imeni S.P.Botkina.
(NERVES, CRANIAL, diseases,
unilateral lesions caused by tumors of cranial base)
(CRANIUM, neoplasms,
tumors of cranial base causing unilateral lesions of cranial nerves)

STEPIN, V.M.

Drill for drilling holes in the ground. Put' i put.khoz. 7 no.9:39 '63. (MIRA 16:10)

1. Nachal'nik sluzhby puti [illegible] "Tulaugol'", g. Tula.

STEPIN, V.M. (Tula)

Reconditioning of ties on approach tracks. Put' i put. khoz. 9 no.12:10 '65. (MIRA 19:1)

STEPIN, V.S., dotsent

Etiopathogenesis of millet poisoning of sheep. Veterinariia 42 no.9:61-63 S '65. (MIRA 18:11)

1. Semipalatinskiy zootekhnicheesko-veterinarnyy institut.

L 38262-66 EWT(1)/T JK

ACC NR: AP6028649 (A,H) SOURCE CODE: UR/0[illegible]

AUTHOR: Stopin, V. S. (Docent)

ORG: Semipalatinsk Zootechnical-Veterinary Institute (Semipalatinskiy zootekhnicheskо-veterinarnyy institut)

TITLE: Localization of antibodies in vaccinated animals and in animals with brucellosis

SOURCE: Veterinariya, no. 5, 1966, 13-15

TOPIC TAGS: antibody, brucellosis, blood, circulatory system, animal, vaccine

ABSTRACT: Vaccinated animals differ from animals with brucellosis with respect to the antibody content of various lymphoid organs. Vaccinated animals have a high titer of antibodies during the first 3 weeks only in the regional lymph nodes, after which all the lymph nodes contain antibodies in a low titer (1:20) or none at all. They can be found only in the superficial cervical nodes. Sick animals with a high antibody titer in the blood have large quantities of antibodies in several lymph nodes, generally in the superficial inguinal and pelvic nodes. A rather high antibody titer is occasionally found in the mesenteric and other lymph nodes, spleen, and in udder tissue.

UDC: 619:616.981.55-097.217:636.3

Card 1/2

L 38262-66

ACC NR: AP6028649

The nature of the serological reaction in the lymphoid organs is helpful in evaluating the degree of their involvement in the vaccinal process. The presence of antibodies in the inguinal and pelvic nodes of sick animals can be used as a supplementary method of differentiating brucellosis in animals scheduled for slaughter.

Orig. art. has: 1 table. [JPRS: 36,932]

SUB CODE: 06 / SUBM DATE: none

Card 2/2 mlp

L 28463-66 EWT(1)/T JK

ACC NR: AP6029186 SOURCE CODE: UR/0016/66/000/005/0093/0098

AUTHOR: Stepin, V. S.

ORG: Semipalatinsk Zooveterinary Institute (Semipalatinskiy zooveterinarnyy institut)

TITLE: Significance of the regional lymph nodes in immunogenesis in rabbits vaccinated with dried live brucellosis vaccine

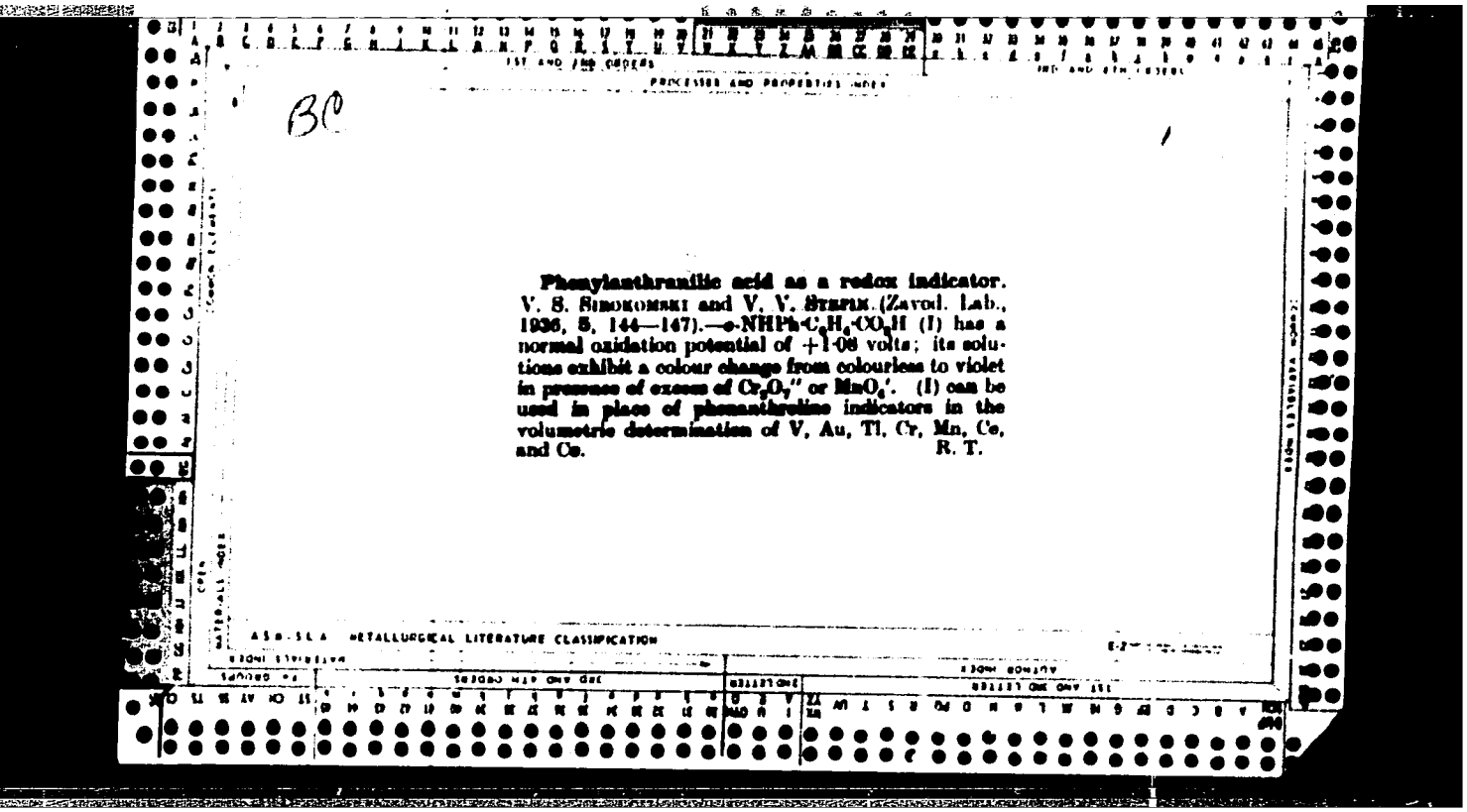
SOURCE: Zhurnal mikrobiologii, epidemiologii i immunobiologii, no. 5, 1966, 93-98

TOPIC TAGS: rabbit, vaccine, immunization, brucellosis, circulatory system, blood, antibody

ABSTRACT: Initial and repeated vaccinations with brucellosis vaccine from strain 19 caused a simultaneous increase in the plasma cells and antibodies in the lymph nodes. The cytological and serological changes reached a peak about the 6th day and disappeared about the 30th day after vaccination and bout the 90th day after revaccination. These changes were more pronounced in the regional lymph nodes than in the remote nodes. Resection of the regional lymph nodes 24 and 72 hours after vaccination or revaccination markedly inhibited antibody formation in the blood and remote nodes. The significance of the regional lymph nodes in immunogenesis is greater after revaccination, perhaps because of intensification of their barrier-fixing function. Orig. art. has: 4 tables. [JPRS: 36,932]

SUB CODE: 06 / SUBM DATE: 02Mar65 / ORIG REF: 011

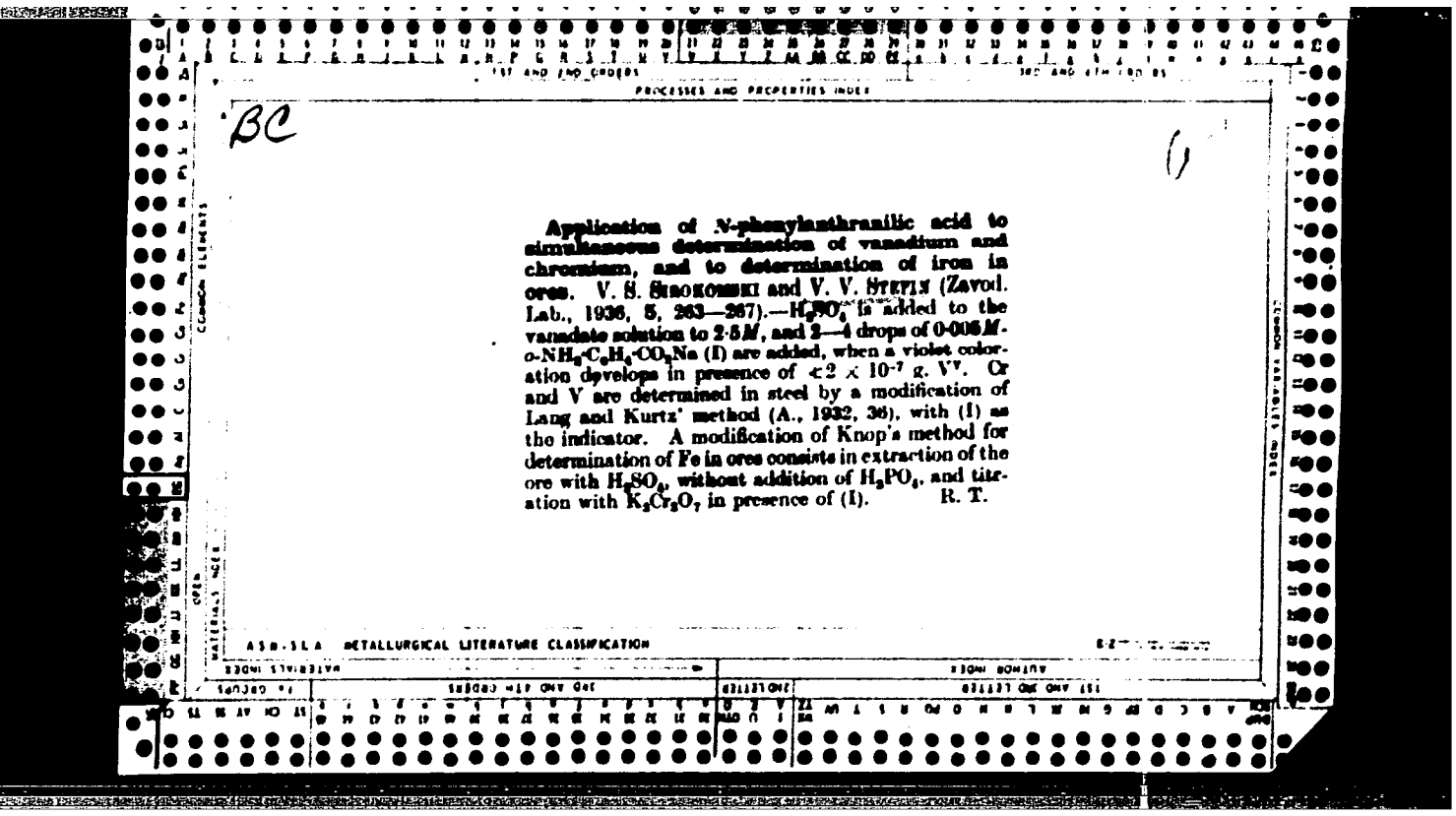
Card 1/1



BC

Phenylanthranilic acid as a redox indicator. V. S. Simokonski and V. V. Stepin. (Zavod. Lab., 1936, 5, 144—147).—*o*-$NHPhC_6H_4CO_2H$ (I) has a normal oxidation potential of +1·08 volts; its solutions exhibit a colour change from colourless to violet in presence of excess of Cr_2O_7'' or MnO_4'. (I) can be used in place of phenanthroline indicators in the volumetric determination of V, Au, Tl, Cr, Mn, Ce, and Co. R. T.

A S M - S L A METALLURGICAL LITERATURE CLASSIFICATION

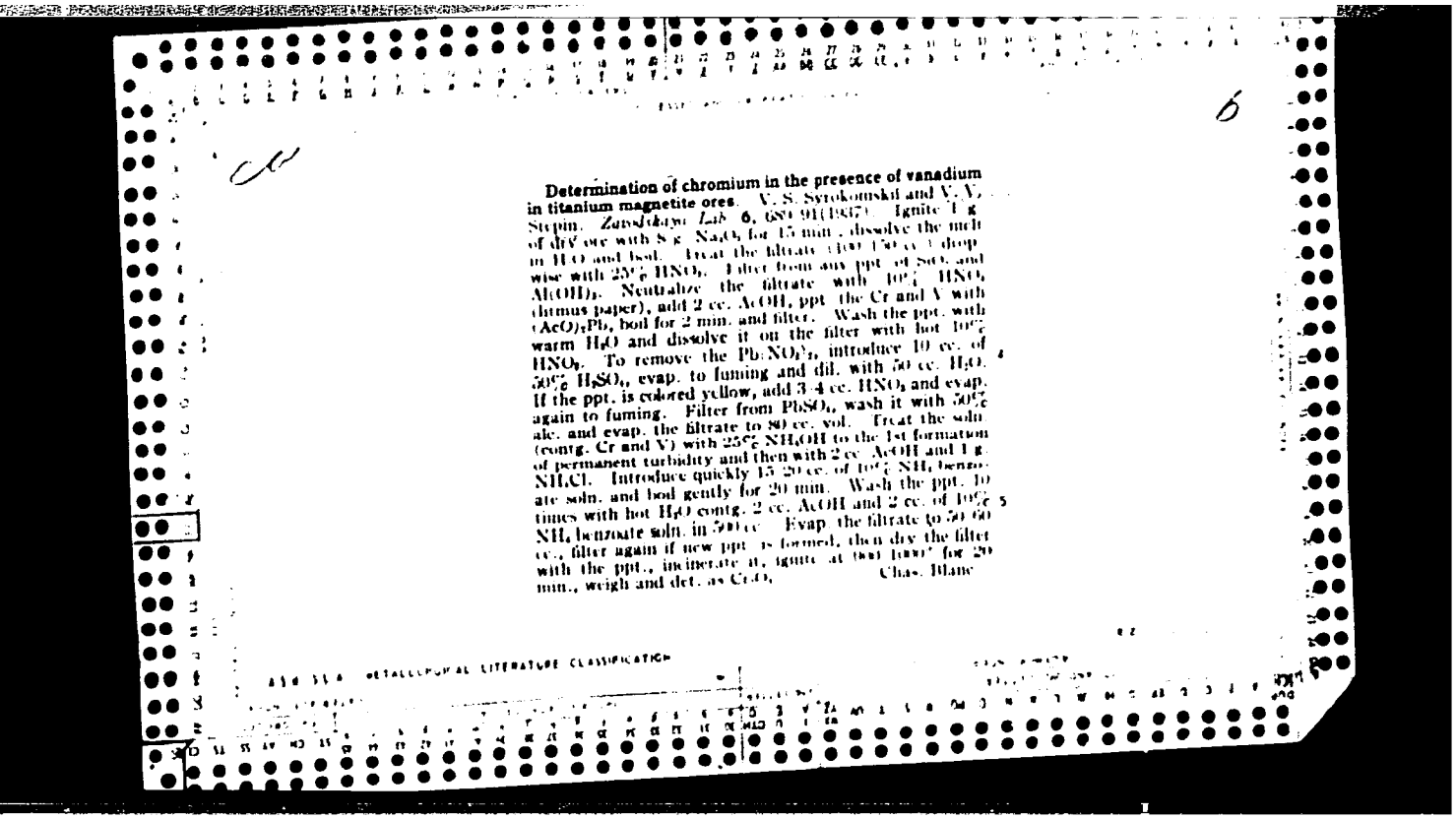


BC

(1)

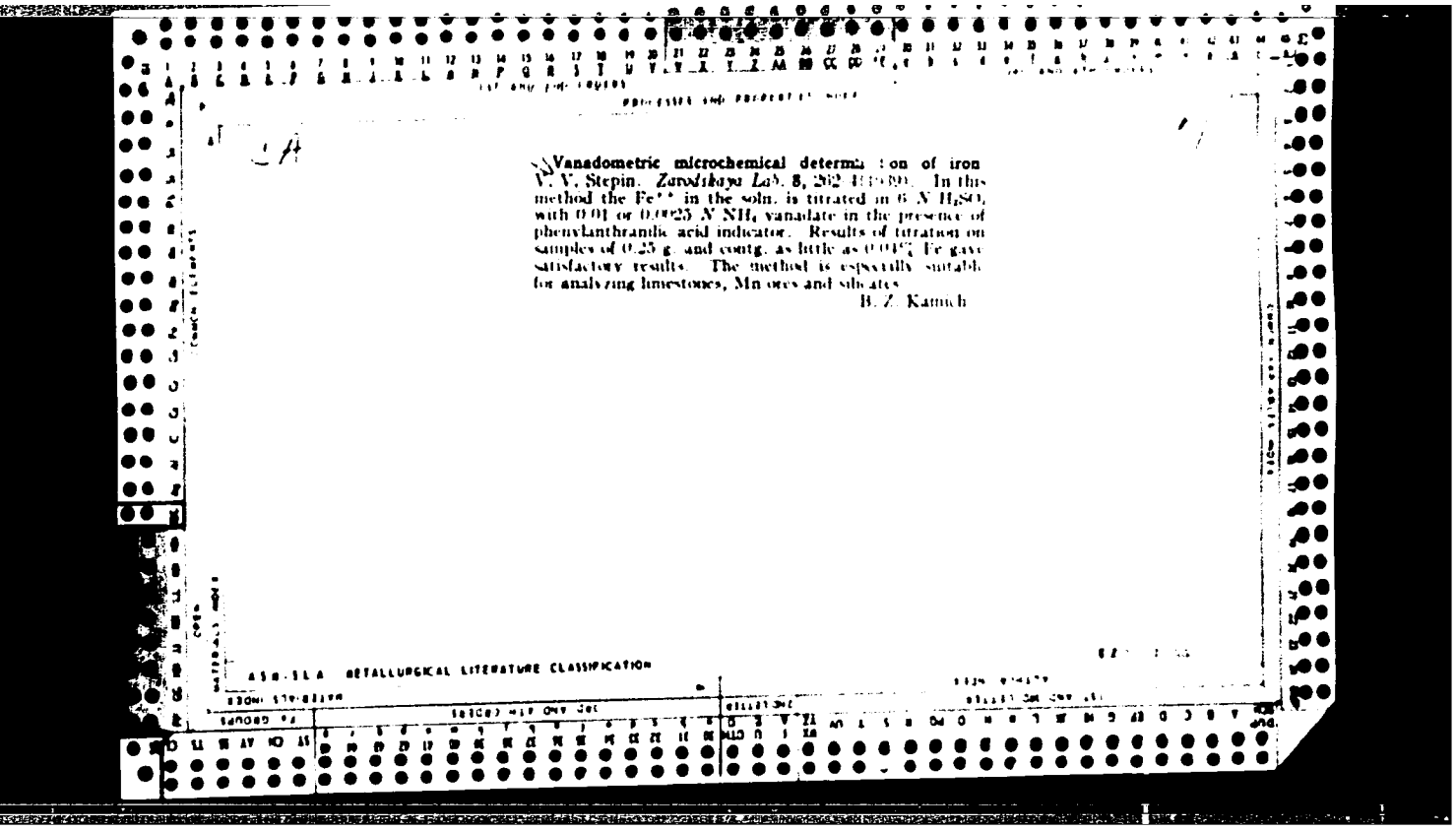
Application of *N*-phenylanthranilic acid to simultaneous determination of vanadium and chromium, and to determination of iron in ores. V. S. SHOKOMSKI and V. V. STEPIN (Zavod. Lab., 1936, 5, 263—267).—H_3PO_4 is added to the vanadate solution to 2·5*M*, and 2—4 drops of 0·005*M*-*o*-$NH_2{\cdot}C_6H_4{\cdot}CO_2Na$ (I) are added, when a violet coloration develops in presence of $<2 \times 10^{-7}$ g. V^V. Cr and V are determined in steel by a modification of Lang and Kurtz' method (A., 1932, 36), with (I) as the indicator. A modification of Knop's method for determination of Fe in ores consists in extraction of the ore with H_2SO_4, without addition of H_3PO_4, and titration with $K_2Cr_2O_7$ in presence of (I). R. T.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



Determination of chromium in the presence of vanadium in titanium magnetite ores. V. S. Syrokomskii and V. V. Stepin. *Zavodskaya Lab.* 6, 680-91(1937). Ignite 1 g. of dry ore with 8 g. Na_2O_2 for 15 min., dissolve the melt in H_2O and boil. Treat the filtrate (100-150 cc.) dropwise with 25% HNO_3. Filter from any ppt. of SiO_2 and $Al(OH)_3$. Neutralize the filtrate with 10% HNO_3 (litmus paper), add 2 cc. AcOH, ppt. the Cr and V with $(AcO)_2Pb$, boil for 2 min. and filter. Wash the ppt. with warm H_2O and dissolve it on the filter with hot 10% HNO_3. To remove the $Pb(NO_3)_2$, introduce 10 cc. of 50% H_2SO_4, evap. to fuming and dil. with 50 cc. H_2O. If the ppt. is colored yellow, add 3-4 cc. HNO_3 and evap. again to fuming. Filter from $PbSO_4$, wash it with 50% alc. and evap. the filtrate to 80 cc. vol. Treat the soln. (contg. Cr and V) with 25% NH_4OH to the 1st formation of permanent turbidity and then with 2 cc. AcOH and 1 g. NH_4Cl. Introduce quickly 15-20 cc. of 10% NH_4 benzoate soln. and boil gently for 20 min. Wash the ppt. 10 times with hot H_2O contg. 2 cc. AcOH and 2 cc. of 10% NH_4 benzoate soln. in 500 cc. Evap. the filtrate to 50-60 cc., filter again if new ppt. is formed, then dry the filter with the ppt., incinerate it, ignite at 900-1000° for 20 min., weigh and det. as Cr_2O_3. Chas. Blanc

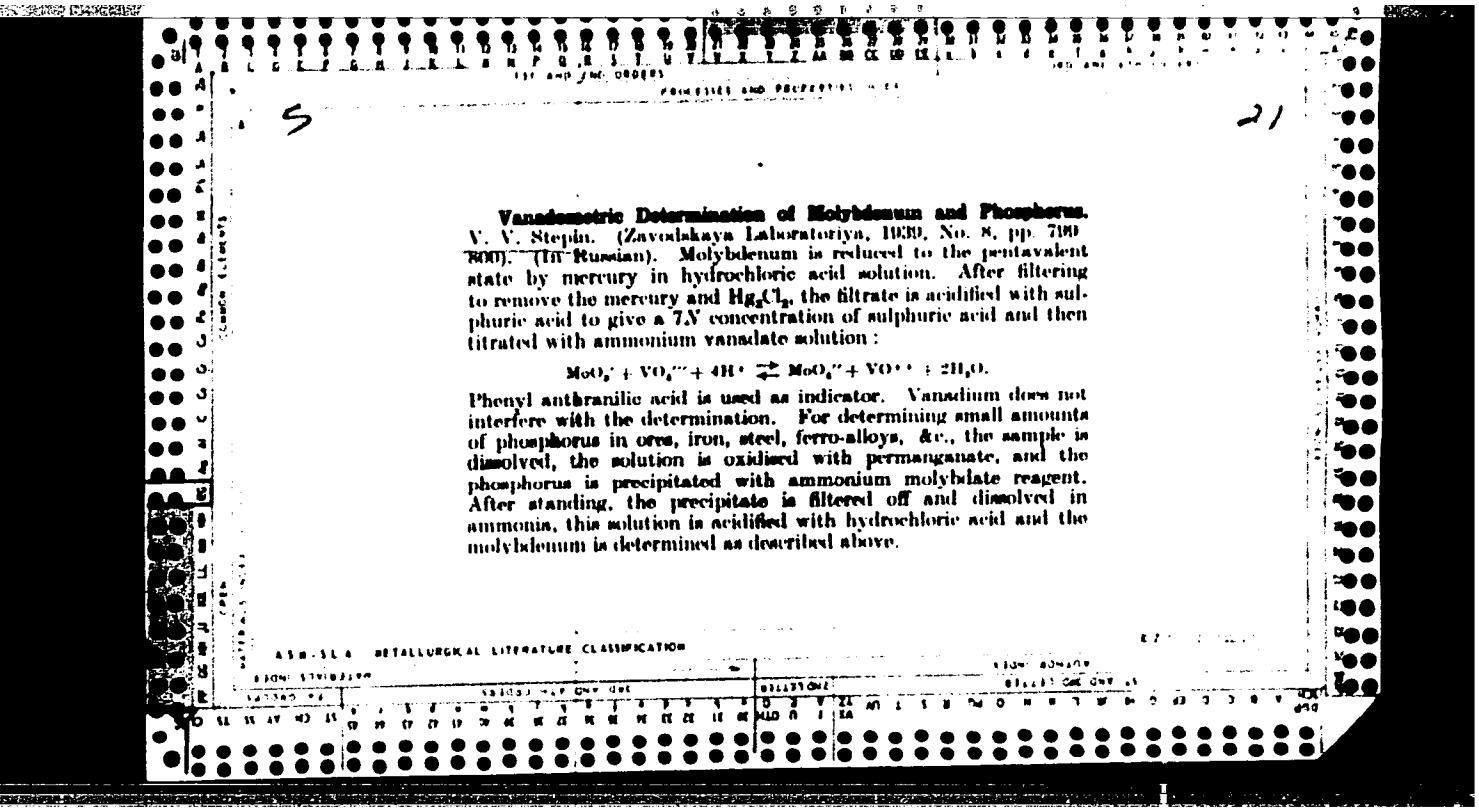
METALLURGICAL LITERATURE CLASSIFICATION



Vanadometric microchemical determination of iron V. V. Stepin. *Zavodskaya Lab.* 8, 282 (1939). In this method the Fe^{++} in the soln. is titrated in 6 *N* H_2SO_4 with 0.01 or 0.0025 *N* NH_4 vanadate in the presence of phenylanthranilic acid indicator. Results of titration on samples of 0.25 g. and contg. as little as 0.01% Fe gave satisfactory results. The method is especially suitable for analyzing limestones, Mn ores and silicates.

B. Z. Kamich

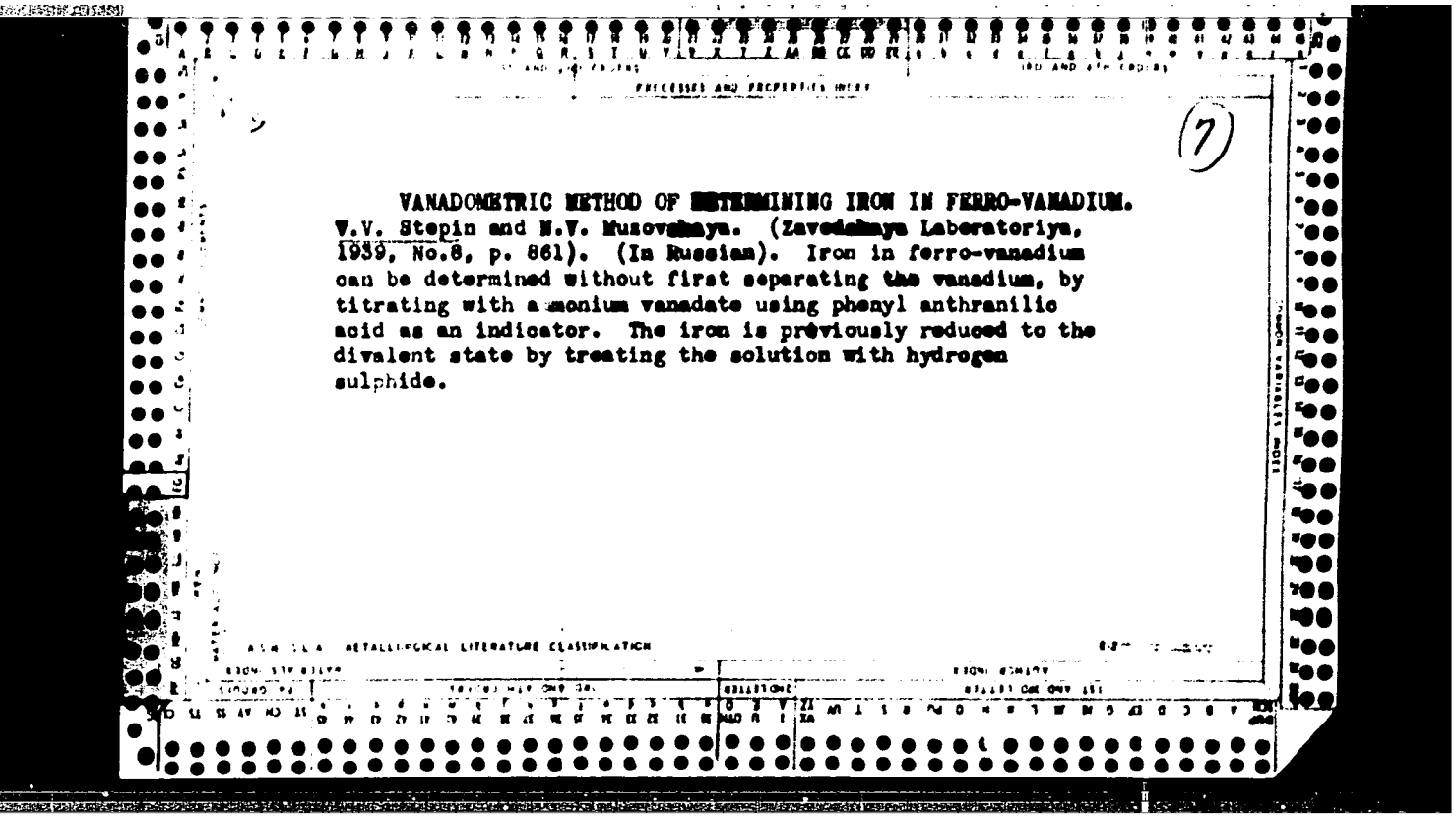
A50-11A METALLURGICAL LITERATURE CLASSIFICATION



Vanadometric Determination of Molybdenum and Phosphorus. V. V. Stepin. (Zavodskaya Laboratoriya, 1939, No. 8, pp. 799–800). (In Russian). Molybdenum is reduced to the pentavalent state by mercury in hydrochloric acid solution. After filtering to remove the mercury and Hg_2Cl_2, the filtrate is acidified with sulphuric acid to give a 7*N* concentration of sulphuric acid and then titrated with ammonium vanadate solution:

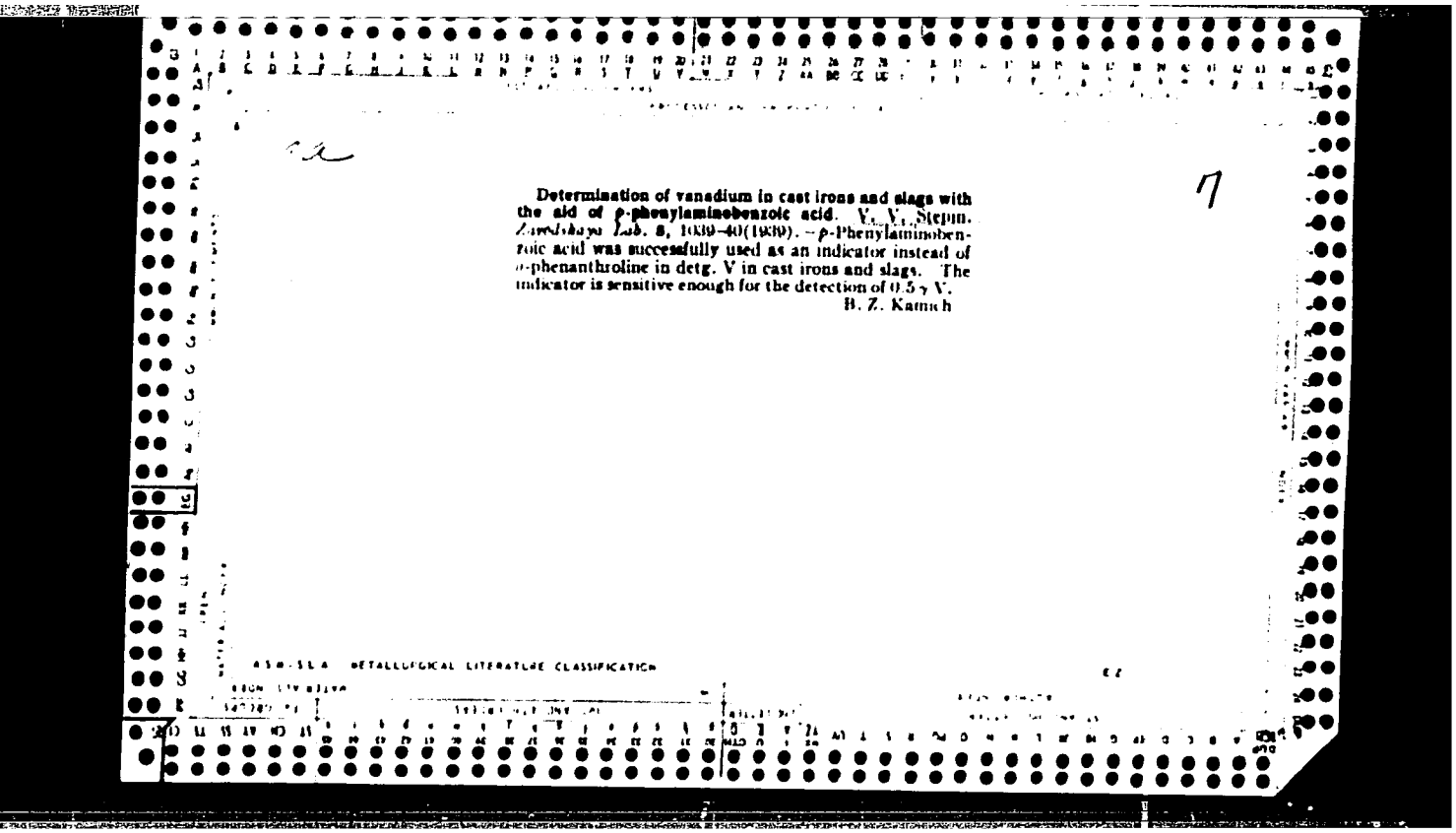
$$MoO_2^{\cdot} + VO_4''' + 4H^{\cdot} \rightleftarrows MoO_4'' + VO^{\cdot\cdot} + 2H_2O.$$

Phenyl anthranilic acid is used as indicator. Vanadium does not interfere with the determination. For determining small amounts of phosphorus in ores, iron, steel, ferro-alloys, &c., the sample is dissolved, the solution is oxidised with permanganate, and the phosphorus is precipitated with ammonium molybdate reagent. After standing, the precipitate is filtered off and dissolved in ammonia, this solution is acidified with hydrochloric acid and the molybdenum is determined as described above.



(7)

VANADOMETRIC METHOD OF DETERMINING IRON IN FERRO-VANADIUM.
V.V. Stepin and N.V. Musovskaya. (Zavodskaya Laboratoriya, 1939, No.8, p. 861). (In Russian). Iron in ferro-vanadium can be determined without first separating the vanadium, by titrating with ammonium vanadate using phenyl anthranilic acid as an indicator. The iron is previously reduced to the divalent state by treating the solution with hydrogen sulphide.



Determination of vanadium in cast irons and slags with the aid of *p*-phenylaminobenzoic acid. V. V. Stepin. *Zavodskaya Lab.* 8, 1039–40(1939). — *p*-Phenylaminobenzoic acid was successfully used as an indicator instead of *o*-phenanthroline in detg. V in cast irons and slags. The indicator is sensitive enough for the detection of 0.5 γ V.
B. Z. Kamich

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

STEPIN, V.V.

The Laboratory of Standard Specimens puts new spectrum analysis standards on the market. Izv. AN SSSR.Ser.fiz.19 no.2:178-179 Mr-Ap '55. (MLRA 9:1)

1.Laboratoriya standartnykh obraztsov pri Ural'skom institute metallov. (Tartu--Spectrum analysis--Congresses)

STEPIN, V.V.; SILAYEVA, Ye.V.

Gravimetric analysis of tungsten in concentrates and in steel alloys. Zav.lab. 21 no.2:149-151 '55. (MLRA 8:6)

1. Ural'skiy institut chernykh metallov.
(Tungsten) (Metallurgical analysis)

STEPIN, V.V.

Production of new standard specimens and spectral standards. Zav. lab. 21 no.3:381-382 '55. (MLRA 8:6)

1. Nachal'nik Laboratorii standartnykh obraztsov. Ural Inst. Ferrous Metallurgy

Category: USSR/Analytical Chemistry - General Questions. G-1

Abs Jour: Referat Zhur-Khimiya, No 9, 1957, 30949

Author : Stepin V. V.
Inst : Urals Institute of Ferrous Metals
Title : New Standard Specimens and Spectral Standards

Orig Pub: Zavod. laboratoriya, 1956, 22, No 11, 1391-1393

Abstract: A review of the work, during 1955, of the Laboratory of Standard Specimens of the Urals Institute of Ferrous Metals, relating to provision of new standard specimens for checking chemical, potentiometric and photocolorimetric methods of analysis, and of standards for spectral analyses. In addition to descriptions of new series of standards, there are reported the results of their study from the standpoint of the effect on magnitude of error in analysis of "third elements" and of the structure of alloys.

Card : 1/1 -25-

66558

SOV/81-59-15-53184

Translation from: Referativnyy zhurnal. Khimiya, 1959, Nr 15, p 130 (USSR)

AUTHORS: Stepin, V.V., Pliss, A.M., Silayeva, Ye.V.

TITLE: Methods for Determining Admixtures in Vanadium Metal. Communication 1.

PERIODICAL: Byul. nauchno-tekhn. inform. Ural'skiy n.-i. in-t chern. metallov, 1958, Nr 4, pp 103-109

ABSTRACT: A photometric method has been developed for determining P in vanadium metal in the form of a blue phosphorus-molybdenum complex with preliminary separation of V on a H-cationite filter. For increasing the sensitivity of the method extraction of the blue complex by butyl alcohol has been applied. The method permits the determination of small quantities of P with an error of $\pm$ 0.0005%. A photometric method has also been developed for determining Si in vanadium metal in the form of a blue silicon-molybdenum complex with preliminary separation of V on a H-cationite filter. It has been established that for the preparation of the blue complex it is more expedient to apply Mohr's salt as a reducing agent; the error of determination is $\pm$ 0.0075%. The gravimetric method for determining Si in vanadium metal which is based on the separation of a gel of the silicic

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66558

SOV/81-59-15-53184

Methods for Determining Admixtures in Vanadium Metal. Communication 1.

acid in a sulfuric acid solution has been made more precise. The photometric method for determining As in the form of a blue arsenic-molybdenum complex with its preliminary separation by distillation has been made more precise. With the aim of increasing the sensitivity of the method, extraction by a mixture of butyl alcohol and ethylacetate has been applied. The method permits the determination of As with an error of ± 0.0002%.

Authors' summary.

Card 2/2

AUTHORS: Stepin, V. ..., Ponosov, V. I., Silayeva, Ye. V. SOV/32-24-8-7/43

TITLE: The Separation of Trace Amounts of Bismuth, Cobalt, Nickel, Phosphorus, Iron, and Copper Using Ionites (Otdeleniye malykh kolichestv vismuta, svintsa, kobal'ta, nikelya, fosfora, zheleza i medi s pomoshch'yu ionitov)

PERIODICAL: Zavodskaya Laboratoriya, 1958, Vol. 24, Nr 8, pp. 934-938 (USSR)

ABSTRACT: In this paper chromatographic methods are described for separating the above metals in the analysis of nickel and nickel alloys. The separation is based upon the difference in the stability of the complex compounds which these elements form in concentrated acid solutions. In 8n hydrochloric acid these complexes are adsorbed onto the anionite, and with subsequent elution with 4-0.5n hydrochloric acid the less stable complexes of cobalt, copper, and iron are destroyed and completely desorbed. Lead is desorbed with a 0.02n hydrochloric acid solution, and bismuth with a 2n sulfuric acid solution. To separate out phosphate ions "vofatit P" and anionite

Card 1/2

e Separation of Trace Amounts of Bismuth, Cobalt, Nickel, Phosphorus, Iron, and Copper Using Ionites SOV/32-24-8-7/43

type: AN-2F and TM were used. The latter were used in the Cl^- form, and the cationites were used in the H^+ form. An analytical procedure is given which employs data obtained by Nel'son and Krause (Ref 4) in their investigations on the degree of adsorption of lead, and which can be used for the determination of iron according to the ion exchange method of D.I. Ryabchikov and V.Ye. Bukhtiarov (Ref 9). The separation of the iron and copper fractions in the method just referred to was not successful, and the probable cause of this failure was the variable quality of the anionite used. Also mentioned are the attempts of Mur and Kraus (Ref 5) to selectively elute nickel, manganese, cobalt, copper, iron, and others, in this order, from the anionite.
There are 5 figures, 6 tables, and 12 references, 10 of which are Soviet.

ASSOCIATION: Ural [illegible] institut chernykh metallov (Ural Institute for Ferrous Metals)

Card 2/2

SOV/32-24-10-66/70

AUTHOR: Stepin, V. V.,

TITLE: On the Issue of Standard Samples and Spectral Standards (O vypuske standartnykh obraztsov i spektral'nykh etalonov)

PERIODICAL: Zavodskaya Laboratoriya, 1958, Vol 24, Nr 10, pp 1294-1294 (USSR)

ABSTRACT: In the last two years the laboratory of the institute mentioned under Association has considerably extended the nomenclature of the standard samples and standards. The following standard samples were issued: Carbon steels with 0,022% S, 0,033% P, 0,12% C, 0,64% C, 1,05% C, alloyed steels with 0,46% C, 0,77% Mn, 1,11% Cr, 0,10% Cu, 0,13% C, 0,68% Mn, 0,105% P, 0,115% S and 0,23% Si, 0,13% C, 0,34% Si, 0,42% Mn, 24,6% Cr, 0,22% Ni, 5,77% Al, 0,11% Cu and 0,27% Ti, 0,18% C, 9,08% Mn, 0,53% Si, 0,11% Cu, 4% Ni and 12,64% Cr, 0,16% C, 1,25% Mn, 0,72% Ni, 23,03% Cr, 13,13% Ni and 0,12% Cu, 0,38% C, 0,40% Mn, 2,27% Si, 9,42% Cr, 0,18% Ni and 0,77% Mo. A number of other standard samples are also given without mentioning their compositions. By the end of 1958 the issue of steel samples of the following composition is planned: 0,20% C, 0,40% Mn, 0,32% Si, 0,18% Ni, 0,43% Mo, 0,40% W and 0,75% V. Some data on the working program

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On the Issue of Standard Samples and Spectral Standards SOV/32-24-10-66/70

of this laboratory are given, and the issue of a number of spectral standards with boron, 75% ferrosilicon, silicomanganese, cast iron ("processed" with magnesium), tungsten structural steel and chromium-nickel structural steel is mentioned.

ASSOCIATION: Laboratoriya standartnykh obraztsov Ural'skogo nauchno-issledovatel'skogo instituta chernykh metallov (Laboratory for Standard Samples of the Ural Scientific Research Institute of Ferrous Metals)

Card 2/2

5 (2)

AUTHORS: Petukhova, N. I., Kurbatova, V. I., Stepin, V. V., Ponosov, V. I. SOV/32-25-7-13/50

TITLE: News in Brief (Korotkiye soobshcheniya)

PERIODICAL: Zavodskaya laboratoriya, 1959, Vol 25, Nr 7, p 805 (USSR)

ABSTRACT: N. I. Petukhova, V. I. Kurbatova, V. V. Stepin and V. I. Ponosov describe a method for the colorimetric determination of tantalum in crystalline silicium, in the absence of titanium, iron molybdenum and tungsten. Ta is separated from Ti, Fe and Mo by precipitation of the latter with phenylarsonic acid. The separation of Ta from W takes place by means of a precipitation of copperon. The final determination of Ta is carried out colorimetrically according to the pyrogallol reaction. V. I. Kurbatova (Ural'skiy institut chernykh metallov - Ural Institute for Iron Metals) suggests a method for the determination of aluminum in manganese ores. The method is based upon an electrometric and compensation-free titration of Al with a solution of sodium fluoride (or ammonium fluoride) in a mixture of acetate buffer. Within the sphere of pH 3-5 well reducible results were achieved. V. V. Stepin and V. I. Ponosov (Ural'skiy institut chernykh metallov - Ural Institute for Iron

Card 1/2

Metals) describe a method for separating small amounts of lead from molybdenum by means of a weakly alkaline anion exchanger TM. Lead is adsorbed from a 1.5 - 2.5 n salt solution, while molybdenum remains in the solution. The method can be applied to the analysis of ferromolybdenum. Lead is determined according to the dithizon method. The granulation of the anion exchanger is found to be 0.39 + 0.15 mm, the rate of flow of the solution 1.0 - 1.2 ml/min. There are 2 Soviet references.

ASSOCIATION: Uralskiy institut chernykh metallov (Ural Institute for Ferrous Metals)

STEPIN, Vasiliy Vasil'yevich; SILAYEVA, Yelizaveta Vasil'yevna; PLISS, Anastasiya Mikhaylovna; KURBATOVA, Vera Ivanovna; KRYUCHKOVA, Lidiya Merkur'yevna; PONOSOV, Vladimir Il'ich; DYMOV, A.M., doktor khim. nauk, prof., red.; FEDOROV, A.A., st. nauchn. sotr., red.; TKACHENKO, N.S., inzh., red.; DOBRZHANSKIY, A.V., st. inzh., red.; LEVIT, Ye.I., red.izd-va; ISLENT'YEVA, P.G., tekhn. red.

[Analysis of ferrous metals, alloys and manganese ores] Analiz chernykh metallov, splavov i margantsevykh rud. [By] V.V. Stepin i dr. Moskva, Metallurgizdat, 1964. 498 p. (MIRA 17:3)

1. TSentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii (for Dymov, Fedorov, Tkachenko, Dobrzhanskiy).

SHEPIN, V.V.; SHAYAM, Ye.V.

Review of the book "Industrial analysis in metallurgy by P.Ia. Iakovlev and E.F. Iakovleva. Zhur. anal. khim. 19 no.12:1523-1524 '64. (MIRA 18:1)

SHEMYAKIN, Fedor Mikhaylovich; STEPIN, Vasiliy Vasil'yevich; KHARLAMOV, I.P., red.

[Ion exchange chromatography in the analysis of metals] Ionoobmennyi khromatograficheskii analiz metallov. Moskva, Metallurgiia, 1965. 295 p. (MIRA 18:4)

L 58720-65 EWT(m)/EWP(t)/EWP(b)/EWA(h) Peb JD

AM5016871 BOOK EXPLOITATION S/ 17 15 B+1

Shemyakin, Fedor Mikhaylovich; Stepin, Vasiliy Vasilevich

Ion-exchange chromatographic analysis of metals (Iono-obmennyy khromatograficheskiy analiz metallov) Izd-vo "Metallurgiya", 1965. 295 p., illus., append. Errata slip inserted. 4832 copies printed. Editor: I. P. Kharlamov; Editor of the publishing house: O. M. Kamayeva; Technical editor: L. V. Dobuzhinskaya

TOPIC TAGS: chromatographic metals analysis, ion exchange chromatography

PURPOSE AND COVERAGE: This book was intended for specialists in analytic-chemical central and shop laboratories, for engineers in the metallurgical and machine-building industries, and for personnel in scientific-research institutes and higher educational institutions. The book is presented as a laboratory manual for metallurgical plants. Basic theoretical positions in ion-exchange chromatography are presented, sorbents used are listed, and their selection and standardization are described, as well as the apparatus used, the technique, and the application

Card 1/3

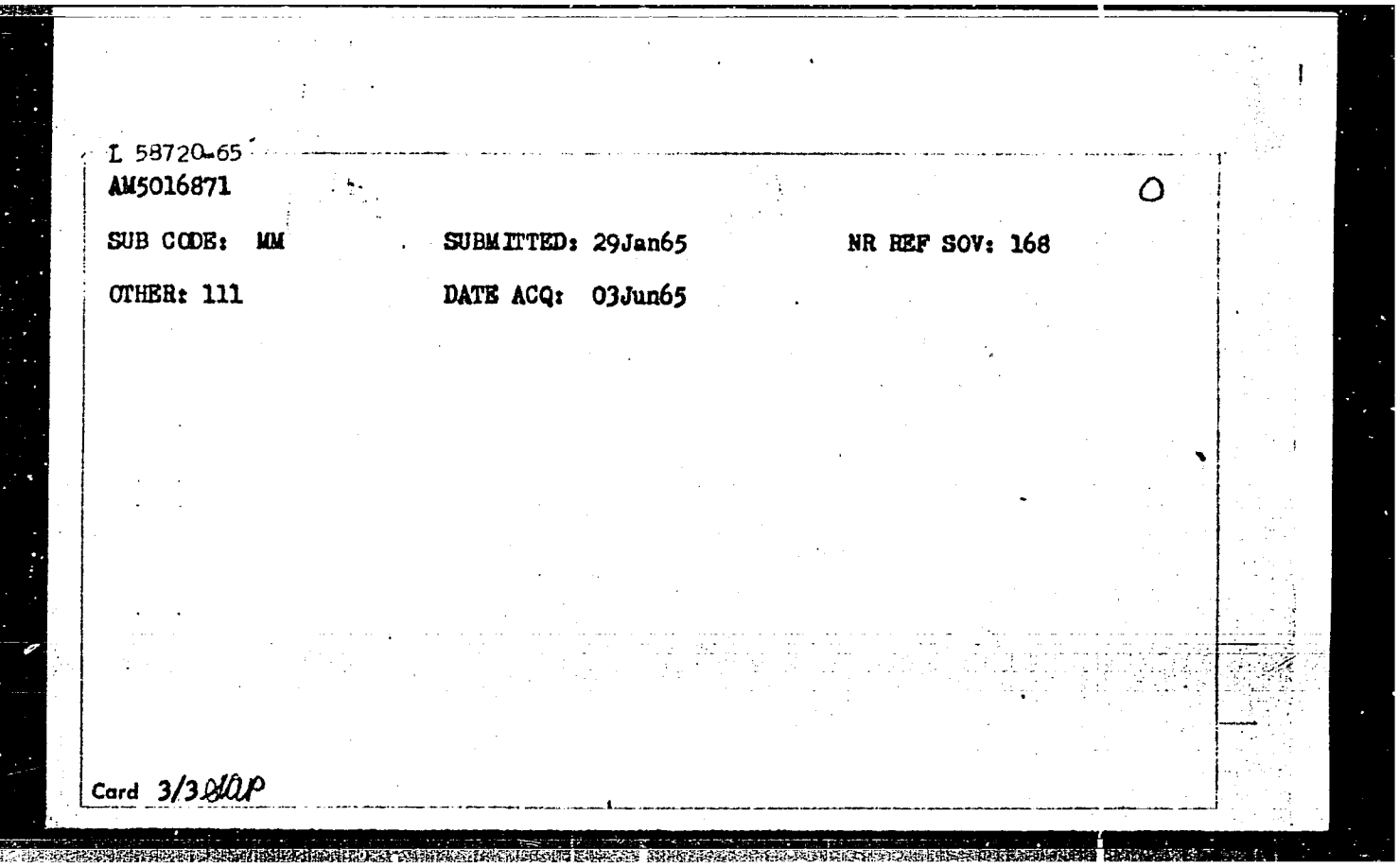
L 58720-65

AM5016871 2

of ion-exchange chromatography in metals analysis. The introduction was written by Professor A. M. Dymov, Doctor of Chemical Sciences.

TABLE OF CONTENTS:

Card 2/3



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AM5016871 O

SUB CODE: MM SUBMITTED: 29Jan65 NR REF SOV: 168

OTHER: 111 DATE ACQ: 03Jun65

Card 3/3

STEPIN, Vasiliy Vasil'yevich; SILAYEVA, Yelizaveta Vasil'yevna; KURBATOVA, Vera Ivanovna; KHANOVA, Tamara Filaretovna; BARBASH, Tat'yana L'vovna; PONOSOV, Vladimir Il'ich

[Analysis of nonferrous metals and alloys] Analiz tsvetnykh metallov i splavov. Moskva, Metallurgiia, 1965. 187 p. (MIRA 18:9)

L 61049-65 EWT(m)/EWG(m)/EWP(t)/EWP(b) LJP(c) DS/JD/GS/RM
ACCESSION NR: AT5014249 UR/0000/65/000/000/0093/0095

AUTHORS: Stepin, V. V.; Ponosov, V. I.; Mel'chekova, Z. Ye.

TITLE: Investigation and development of methods for the determination of Zn in heat-resistant and magnesium alloys and of Pb, Zn, and Bi in metallic vanadium with the application of ion-exchange chromatography

SOURCE: AN SSSR. Institut fizicheskoy khimii. Ionoobmennaya tekhnologiya (Ion exchange technology). Moscow, Izd-vo Nauka, 1965, 93-95

TOPIC TAGS: zinc, zinc alloy, lead, bismuth, vanadium, magnesium alloy, ion exchanger, ion exchange resin, analysis/ AV 17 anion exchange resin

ABSTRACT: This work was undertaken to develop fast, simple, and reliable methods (using ion-exchange chromatography) for the determination of Zn in high-temperature and magnesium alloys as well as for the determination of Zn, Pb, and Bi in metallic vanadium. Methods for the determination of Zn in high-temperature alloys in the presence of Fe, Mn, Si, Cr, Mo, V, Cu, Ti, Bi, Co, Al, and Ni, and in magnesium alloys using a strongly basic anion-exchange resin AV-17 have been developed. The experimental error is 10% for an initial concentration of Zn = 10^{-3} - 10^{-4}% and 2-5% for an initial concentration of Zn = 0.2 to 1.2% respectively.

Card 1/2

L 61049-65
ACCESSION NR: AT5014249

A method for the determination of trace amounts of Pb, Zn, and Bi in metallic vanadium is developed. This method is based on the ion-exchange properties of the TM anion-exchange resin (saturated with chloride ions). The error in the determination is 10% for an initial concentration of elements equal to 2×10^{-3} - 2×10^{-4}. Orig. art. has: 1 equation.

ASSOCIATION: none

SUBMITTED: 26Feb65 ENCL: 00 SUB CODE: IC, GC

NO REF SOV: 005 OTHER: 000

Card 2/2

STEPIN, V.V.

Standard samples and specimens as a means of improving the quality of analysis. Zav. lab. 31 no.8:915-916 '65. (MIRA 18:9)

STEPIN, Ye.K.

Rodents in the lower Amur Valley. Izv. Irk.gos. protivochum. inst. 10:122-131 '52. (MIRA 10:12)
(AMUR VALLEY--RODENTIA)

SOV/120-59-5-38/46

AUTHORS: Bakulin, Ye. A. and Stepin, Ye. V.

TITLE: A Source for the Isotopic Analysis of Chlorine

PERIODICAL: Pribory i tekhnika eksperimenta, 1959, Nr 5, pp 138-139 (USSR)

ABSTRACT: A description is given of an ion source for the measurement of the isotopic composition of chlorine based on the phenomenon of surface ionization. The ion source was developed for the analysis of small quantities of chlorine in chlorine-containing specimens. In order to increase the number of analysed specimens without releasing the vacuum, the source was made up of four independent evaporators and ionizers fixed on a drum (Fig 1,2). The device is shown in Fig 1 in which 1 is the evaporator, 2 is the drum, 3 is an insulator, 4 is a tungsten wire, 5,6 are sleeves, 7 is a bronze plate, 8 is a glass holder, 9 is a centring washer. The evaporators were made of tantalum foil, 0.15 mm thick and in the form of narrow "boats". The ionizers were in the form of tungsten wires 0.15 mm in diameter and placed above the boats with the aid of special sleeves. The sagging of the wires on heating was prevented by

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A Source for the Isotopic Analysis of Chlorine

flexible bronze plates. The specimens could be changed by rotating the glass support. The chlorine-containing salt was deposited in the form of a solution of ethyl alcohol. The use of ethyl alcohol is convenient since it wets tantalum and the salt is deposited in a uniform layer. The wire could be heated up to 2500°C and since evaporation of the salt from the boat due to thermal radiation from the wire was small, the evaporator had to be heated independently. The evaporator was heated with a current of 2 to 3 A. Fig 2 shows the disposition of the drum, the wire of the evaporator and the accelerating electrode. In this figure 1 is the evaporator, 2 is the drum, 4 is the tungsten wire and 10 the accelerating electrode. The source can be used to study solid specimens containing 10^{-7} g of chlorine. Since the source is based on surface ionization, a simple mass spectrum is obtained which makes the isotopic analysis of chlorine much easier. The source can also be used for other electro-negative elements which show the effect of surface ionization. There are 2 figures and 3 Soviet

Card2/3

SOV/120-59-5-38/46

A Source for the Isotopic Analysis of Chlorine

References.

ASSOCIATION: Fiziko-tekhnicheskiy institut AN SSSR
(Physico-technical Institute, Ac.Sc., USSR)

SUBMITTED: July 29, 1959

Card 3/3

ACCESSION NR: AP4041760 S/0076/64/038/006/1655/1656

AUTHOR: Bakulin, Ye. A.; Stepin, Ye. V.

TITLE: Separation of hydrogen isotopes in aqueous solutions of hydrochloric acid.

SOURCE: Zhurnal fizicheskoy khimii, v. 38, no. 6, 1964, 1655-1656

TOPIC TAGS: heavy water, deuterium, isotope separation, electrical transport, transference cell, electromigration, isotope enrichment

ABSTRACT: This work describes the construction of a transference cell (Fig. 1) and presents the results on the separation of hydrogen isotopes in aqueous solutions of hydrochloric acid by the ionic mobility method. The 50 cm^3 cathode compartment (1) was filled with HCl of the desired concentration, containing ~12 % deuterium. The anode compartment (2) was ~1 cm^3 in volume and was filled with $CuCl_2$ electrolyte. The formation of a boundary between HCl and $CuCl_2$ was done in the central part of the column, consisting of a tube (3), 2 mm in diameter and ~8 cm long. To improve the formation of a boundary this tube was filled with 60 - 70 micron quartz sand. Since hydrogen ions will be different in mobilities, then deuterium enrichment will occur in the boundary region. However, the isotope

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ACCESSION NR: AP4041760

exchange takes place in aqueous solutions as follows:

$$H^{+} + HDO \longrightarrow D^{+} + H_2O$$

Since deuterium enrichment occurs in the boundary region, this equation will be shifted to the left, toward the increased concentration of deuterium in water. The experimental conditions are such that the boundary between HCl and $CuCl_2$ is stationary with respect to the instrument. Therefore, solvent flow takes place from the cathode compartment through the boundary into the anode compartment. This solvent, however, is enriched with heavy hydrogen at the boundary. When the concentration of HCl varies from 3.2 N to 10.3 N the shift of the isotopic composition of deuterium was 0.16 % and 0.28 % respectively. It is postulated that this method may be used for the study of the isotopic hydrogen exchange in acid solutions. "The authors express their gratitude to Academician B. P. Konstantinov for his continual interest in this work and his valuable discussions of the results." Orig. art. has: 1 figure.

ASSOCIATION: Leningradskiy fiziko-tekhnicheskiy institut (Leningrad Institute of

Card 2/4

ACCESSION NR: AP4041760

Physics and Technology)

SUBMITTED: 19Jun63	DATE ACQ: 00	ENCL: 01
SUB CODE: NP	NO REF SOV: 003	OTHER: 000

Card 3/4

ACCESSION NR: AP4041760

ENCLOSURE: 01

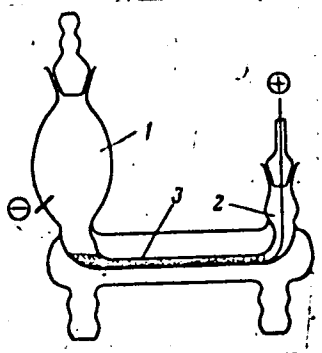

Fig. 1 -- Construction of transference cell

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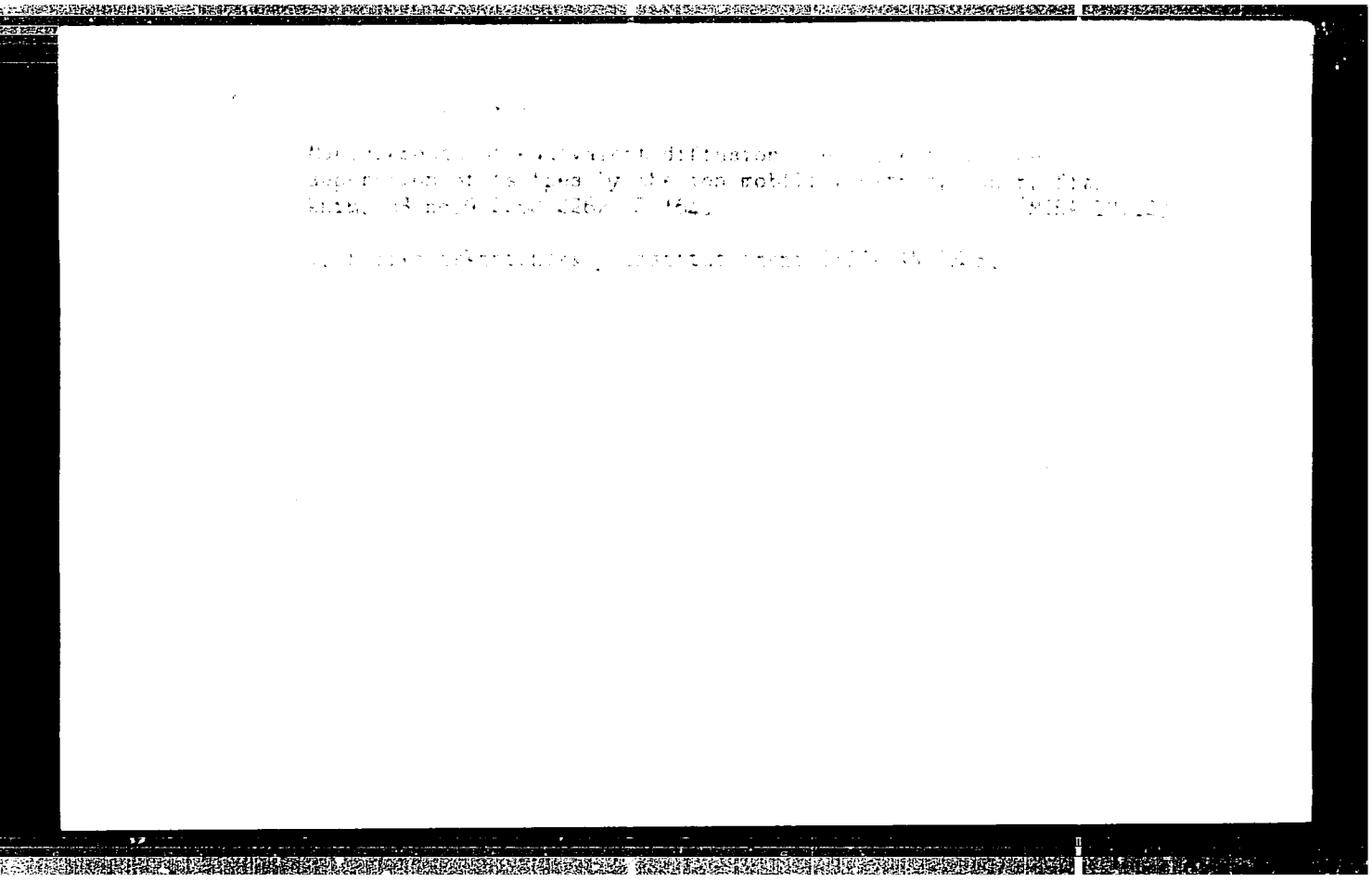

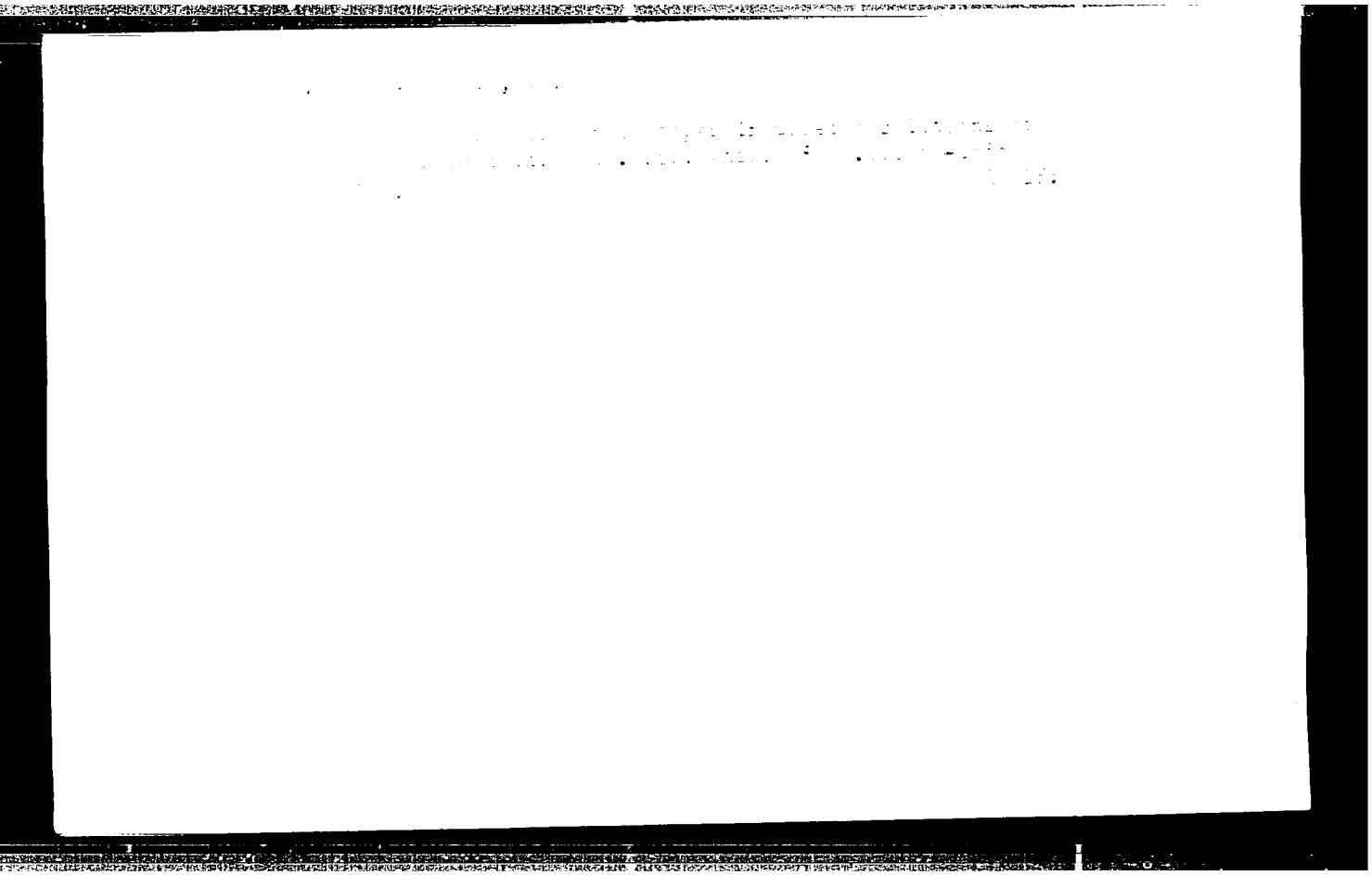

APPROVED FOR RELEASE: 08/26/2000 CIA-RDP86-00513R001653220016-5"

L 2496-66 EWT(1)/ETC/EPF(n)-2/EWG(m)/EPA(w)-2 IJP(c) AT

ACCESSION NR: AP5020729 UR/0057/65/035/008/1419/1422

AUTHOR: Bakulin, Ye. A.; Stepin, Ye. V.; Shcherbinina, V. V. 41,55 44,05 44,05 64 55 03

TITLE: Investigation of the electric double layer in a plasma 21,44,55

SOURCE: Zhurnal tekhnicheskoy fiziki, v. 35, no. 8, 1965, 1419-1422

TOPIC TAGS: discharge plasma, plasma structure, electric capacitance, mercury, space charge

ABSTRACT: The authors have determined the thickness of the double layer at the boundary of a cylindrical object in a mercury plasma by measuring its capacitive reactance. The plasma was produced by a low-voltage mercury vapor discharge between a hot cathode and a 7 cm diameter cylindrical anode and diffused into the interior of a 11 cm diameter 30 cm long metallic cylinder which was electrically connected to the anode. Centrally located within and coaxial with this cylinder was a 1.16 cm diameter 7 cm long cylindrical electrode, the double layer at the boundary of which was the object of investigation. The concentration and temperature of the plasma were measured with an 0.1 mm diameter 5 mm long cylindrical probe. The capacitance of the cylindrical electrode was measured at electrode potentials from 20 to 100 V below the anode potential by a resonance method at 0.7

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Mc/sec, and the measured capacitance is presented graphically as a function of electrode potential for discharge currents of 2, 3, and 4 A. It is concluded after some discussion that the measured capacitance is due almost entirely to the double layer, and the thickness of the double layer is calculated with the formula for the capacitance of a cylindrical capacitor with unit dielectric constant. The double layer thicknesses were also calculated with the 3/2 power law. The thicknesses calculated with the 3/2 power law were approximately 15% less than the measured thicknesses. It is suggested that this may be due to the fact that the 3/2 power law gives essentially the thickness of the ionic layer and not that of the whole space charge layer. "The authors are very grateful to V.Ye.Golant and N.I.Vinogradov for valuable discussions of the results of the work." Orig. art. has: 3 formulas and 4 figures.

ASSOCIATION: Fiziko-tekhnicheskiy institut im. A.F.Ioffe AN SSSR, Leningrad (Physico-technical Institute, AN SSSR)

SUBMITTED: 17Nov64 ENCL: 00 SUB CODE: ME

NR REF SOV: 003 OTHER: 007

GAVRILOV, B.G., STEPINA, L.F.

Redistribution of methyl groups in the interaction of naphthalene with p-xylene and mesitylene on aluminosilicates. Neftekhimiia 3 no.4:511-514 Jl-Ag '63. (MIRA 16:11)

1. Leningradskiy gosudarstvennyy universitet imeni Zhdanova.

STEPINA, Jaroslav, inz. dr., kandidat [illegible]

Calcualtion of the effective roter current distribution of a synchronous machine with a rectifier. Acta techn. Cz 9 no.3:255-280 '64.

1. Institute of Electrical Engineering, Czechoslovak Academy of Sciences, Prague 1 - Nove Mesto, Vavlavske namesti 55.

ŠTĚPINA, J.

9

621.3.011

1644. OPERATIONAL MATHEMATICS FOR CYCLIC SOLUTIONS OF ELECTRIC CIRCUITS BY MEANS OF THE LAPLACE TRANSFORMATION. J.Štěpina and O.Konfček. Elektrotech. Obzor, Vol. 43, No. 9, 443-50 (1954). In Czech.

The calculation is based on Lurje's work and requires only the simplest knowledge of the Laplace transformation. The classical treatment by a linear differential equation with constant coefficients, based on the assumption that a physical system defined by the equation assumes after a period T the same conditions of energy as at inception, is complex as it employs Fourier series, whereas the Laplace transformation is more convenient, for it presents a universal solution in an integral form and the resultant function is expressed by a sum of exponentials. Individual solutions for RL and RLC circuits are presented and resonant conditions analysed. The first thesis to the problem was established by Churchill and Lurje, but the second, derived by the authors, uses the inverse integral of the Laplace transformation and is claimed to be original.

J.C.Stark

STEPINA, J.

2

621.3.011

2059. PHYSICAL BACKGROUND TO THE ANALYSIS OF ELECTRIC CIRCUITS BY TRANSFORMATION ACCORDING TO G.KRON. J.Stěpina.

Elektrotech. Obzor, Vol. 43, No. 10, 516-21 (1954). In Czech.

Kron's transformation method for calculating electric circuits is based on the correlation of the analysed circuit and of a system of subcircuits gained by dismembering the analysed circuit into short-circuited branch-circuits. Kron sought to justify this process by geometrical analogy which led to involved configurations often contradicting current physical theories and to sharp controversy. It was shown that Kron's matrix operation could be deduced from the very results obtained from the operation itself, i.e. from the loop equations of the analysed circuit. The author tries to elucidate the remaining controversial points of the transformation method all of which are shown to be deducible on physical instead of geometrical grounds.

J.C.Stark

STEPINA, J.

Phase currents of the stator as a generalization of symmetric components for asymmetric induction motors.

P. 121. (Ceskoslovenska akademie ved. Ustav pro elektrotechniku. Prace. Vol. 3, 1955 (Published 1956)

Monthly Index of East European Accessions " (EEAI) LC. Vol. 7, no. 2, February 1958

STEPINA, J.

621.313.333.025.1 : 621.316.717 : 621.3.016.1

5028. **Universal diagrams for the calculation of the starting torques of single-phase induction motors.** J. Štěpina. *Elektrotech. Obzor*, 44, *No.* 1, 354–8 (1955). In Czech.

The most usual starting methods of 1-, 2- and 3-ph. induction motors with 1-ph. supply are considered. The universal diagram is then first derived for a 2-ph. motor, its universal character being assured by the introduction of an auxiliary impedance into the starting circuit, so that the solution applies for capacitor as well as resistance starting methods. It is then shown that the results apply equally to 1-ph. and 3-ph. motors. The derivation considers the inverse braking field. The diagrams evolved can be used for determining the relative starting torques of asymmetrical motors referred to that of symmetrical machines, the auxiliary starting impedance and show the effect of the motor parameters on the magnitude of the starting torque. The results of calculations by aid of the diagram are verified by experiment.

B. F. KRAUS

Stepina, J.

"Losses in rotors due to eddy currents during the asynchronous starting of turbogenerators.

p. 85 (Prace, Vol. 6, 1956 (Published 1957) Praha, Czechoslovakia)

Monthly Index of East European Accessions (EEAI) LC, Vol. 7, No. 6, June 1958

ST[illegible], J.

Determination of the zero impedance of three-phase asynchronous motors. p. 198.

(Elektrotechnicky Obzor. Vol. 46, no. 4, Apr. 1957. Praha, Czechoslovakia)

SO: Monthly List of East European Accessions (EEAL) LC, Vol. 6, no. 10, October 1957. Uncl.

STEINA, J.

"Design of the suxiliary winding os fingle-phase asynchronous motors.

p. 84 (Elektrotechnicky Obzor. Vol. 47, no. 2, Feb. 1958, Praha, Czechoslovakia)

Monthly Index of East European Accessions (EEAI) LC,Vol. 7, No. 6, June 1958

PHASE I BOOK EXPLOITATION SOV/4400

Československá akademie věd. Sekce technická

Práce ústavu pro elektrotechniku ČSAV z r. 1958, IX (Proceedings of the Institute for Electrical Engineering of the ČSAV (Czechoslovak Academy of Sciences) for 1958, No. 9) Prague, 1959. 193 p. 700 copies printed.

Scientific Ed.: Miloslav Tayerle, Engineer, Doctor; Ed. of this issue: Marie Moravcová; Tech. Ed.: František Končický.

PURPOSE: This collection of articles is intended for specialists in the field of high-voltage technique.

COVERAGE: The collection contains 9 original papers devoted to high-voltage technique and to special problems of heavy-current engineering. The papers deal with the so-called supercorona effect which has an important influence on the dimensioning of the sparking distance for very high voltages at commercial frequency, and with the effects of periodic forces of short circuits on transformer windings. Also discussed are impedance models containing active components, the measurements of electric quantities using a-c model technique, the effect of eddy currents in d-c motors fed from rectifiers, as well as the contemporary state and comparative study of the theory of purely dielectric breakdown of solids and experimental investigations of impact properties of instrument transformers with layer windings. No personalities are mentioned. References accompany each paper.

There are 2 references: 1 Czech and 1 German.

IV. Čemus, Jiří. Feasibility of Impedance Models With Active Components — 61
There are 6 references: 3 Czech and 3 German.

V. Čemus, Jiří. Admittance Models — 75
There are 5 references: 4 Czech and 1 German.

VI. Hlaďík, Jiří. Measurement of Electric Quantities in the Technique of A-C Models — 87
There are 29 references: 11 Czech, 13 English, 1 French, and 4 German.

VII. Štěpina, Jaroslav, and Jiří Bendl. Effect of Eddy Currents on D-C Motors Fed From Rectifiers — 123
There are 13 references: 5 Czech and 8 German.

VIII. Batka, Vilém. Present State of the Theory of Pure Electric Breakdown of Solids — 159
There are 26 references; 1 Czech, 8 Soviet, 14 English, and 3 German.

STEPINA, JAROSLAV,

STEPINA, J.

Higher harmonic field in the air gap of single-phase asynchronous motors. p. 196

ELEKTROTECHNICKY OBZOR. (Ministerstvo tezkeho strojirenstvi a Ceskoslovenske vedecka technicka spolecnost pro elektrotechniku pri Ceskoslovenska akademii ved) Praha, Czechoslovakia. Vol. 48, No. 4, April 1959

Monthly List of East European Accessions (EPAI), LC, Vol. 8, No. 7, July 1959
Uncl.

STEPINA, J.; BENDL, J.

Influence of the ripple of current from a rectifier on DC series motors, p. 528.

ELEKTROTECHNICKY OBZOR. (Ministerstvo tezkeho strojirenstvi a Ceskoslovenske vedecka technicka spolecnost pro elektrotechniku pri Ceskoslovenske akademii ved)
Praha, Czechoslovakia, Vol. 48, No. 10, Oct. 1959.

Monthly List of East European Accession, (EEAI), LC, Vol. 8, No. 12, Dec. 1959.
Uncl.

STEPINA, Jaroslav, Ing, Dr. Kanidat der technischen Wissenschaften;
BENDL, Jiri, Ing., Kandidat der technischen Wissenschaften

The transient states in the laminated circuit of the commutating poles of a direct-current machine with massive supports. Acta techn Cz 5 no.3:259-276 '60. (EEAI 9:10)

1. Institut fur Elektrotechnik der Tschechoslowakischen Akademie der Wissenschaften, Praha.
(Electric machinery)

STEPINA, Jaroslav, C.Sc., Inz.Dr.; BENDL, Jiri, C.Sc., Inz.

Improvement of the compensation process in the commutating pole circuit of direct current machines. Acta techn Cz 6 no.4:392-403 '61.

1. Ceskoslovenska akademie ved, Ustav pro elektrotechniku, Praha 1, Vaclavske namesti 55.

(Electric machinery)

STEPINA, Jaroslav, inz., dr., C.Sc.

Shielding in the frontal area of a turbo-alternator.
El tech cas 13 no.5:266-275 '62.

1. Vedecky pracovnik, Ustav pro elektrotechniku, Ceskoslovenska akademie ved, Vaclavske namesti, Praha 1 - Nove Mesto.

STEPINA, Jaroslav, inz., dr., C.Sc.

Shielding in the frontal area of a turboalternator. El tech cas 13 no. 6:357-370 '62.

1. Ustav pro elektrotechniku, Ceskoslovenska akademie ved, Vaclavske namesti 55, Praha 1 - Nove Mesto.

STEIN, Jaroslav, inz., dr., kandidat technickych ved

Simple calculation of eddy loss in massive bodies and bodies set up of sheets. El tech obzor 51 no.4:164-168 Ap '62.

1. Ceskoslovenska akademie ved.

STEPINA, Jaroslav, inz., dr., kandidat technickych ved

Shielding of transformer tanks with aluminum to limit additional losses. El tech obzor 51 no.7:330-336 Jl '62.

1. Ceskoslovenska akademie ved.

STEPINA, J.

"Electric machine winder" by C.Bala, A.Petita and V.Lefler. Reviewed by J.Stepina. Elektrotechnik 18 no.1:27 Ja '63.

STEPINA, J.

"Miniature electromotors for models" by Vladimir Prochazka. Reviewed by J. Stepina. Elektrotechnik 18 no.8:242 Ag '63.

L 38316-66

ACC NR: AP6028004 SOURCE CODE: CZ/0042/65/000/009/0527/0539

AUTHOR: Stepina, Jaroslav (Engineer; Doctor; Candidate of sciences; Prague); Bendl, Jiri (Engineer; Candidate of sciences; Prague)

ORG: Electrical Engineering Institute, CSAV, Prague (Ustav pro elektrotechnika CSAV)

TITLE: Design of a synchronous alternator for the feeding of rectifiers

SOURCE: Elektrotechnicky casopis, no. 9, 1965, 527-539

TOPIC TAGS: electronic rectifier, electronic component, electronic engineering

ABSTRACT: The article gives a method by which the preliminary design of a synchronous alternator of usual construction for loading with rectifiers can be made. The so-called type power output is used as a determining value for the machine design, that value being determined from the losses in the winding and in the iron. The article gives a general view of various factors which influence the resulting losses and likewise the type power output. It is shown that in unfavorable cases the type power output can reach a multiple of the power output of the basic harmonic. This paper was presented by J. Lammeraner.

Orig. art. has: 9 figures and 23 formulas. [Orig. art. in Eng.] [JPRS: 34,691]

SUB CODE: 09/ SUBM DATE: 03May65/ ORIG REF: 006/ OTH REF: 003

Card 1/1

21(4) PHASE I BOOK EXPLOITATION SOV/2714

International Conference on the Peaceful Uses of Atomic Energy. 2nd, Geneva, 1958

Doklady sovetskikh uchenykh; yadernoye goryucheye i reaktornyye metally. (Reports of Soviet Scientists; Nuclear Fuel and Reactor Metals) Moscow, Atomizdat, 1959. 670 p. (Series: Its: Trudy, vol. 3. 8,000 copies printed.

Ed. (Title page): A.A. Bochvar, Academician, A.P. Vinogradov, Academician, V.S. Yemel'yanov, Corresponding Member, USSR Academy of Sciences, and A.P. Zefirov, Doctor of Technical Sciences; Ed. (Inside book): V.V. Parevernev and G.M. Pchelintseva; Tech. Ed.: E.I. Mazel'.

PURPOSE: This volume is intended for scientists, engineers, physicians, and biologists working in the production and peaceful application of atomic energy; for professors and students of schools of higher technical education where the subject is taught; and for people interested in atomic science and technology.

COVERAGE: This is volume 3 of a 6-volume set of reports on atomic energy, presented by Soviet scientists at the Second International Conference on the Peaceful Uses of Atomic Energy, held in Geneva from September 1 to 13, 1958. Volume 3 consists of two parts. The first part, edited by A.I. Zubov, is devoted to geology, prospecting, concentration and processing of nuclear source material. The second part, edited by O.L. Zverev, includes 27 reports on metallurgy, metallography, processing technology of nuclear fuels and reactor metals, and neutron irradiation effects on metals. The titles of the individual papers in most cases correspond word for word with those in the official English language edition on the Conference proceedings. See SOV/2081 for the titles of the other volumes of the set.

Card 7/11

BOL'SHAKOV, K.A.; FEDOROV, P.I.; STEPINA, L.A.

Fusibility curve for the lithium - lithium nitride system.
Izv.vys.ucheb.zav.; tsvet.met. 2 no.4:52-53 '59.
(MIRA 13:1)

1. Moskovskiy institut tonkoy khimicheskoy tekhnologii. Kafedra khimii i tekhnologii redkikh i rasseyannykh elementov.
(Lithium--Thermal properties)
(Lithium nitride--Thermal properties)

84082
S/181/60/002/009/023/036
B004/B056

9.2571

AUTHORS: Latsh, V. V., Minayev, N. G., Somin, B. Kh., Stepina, N.E.

TITLE: Dissolution of Excess Iron Oxide in Ni-Zn Ferrite

PERIODICAL: Fizika tverdogo tela, 1960, Vol. 2, No. 9, pp. 2191 - 2198

TEXT: For the purpose of explaining the contradictory published data concerning the solubility of Fe_2O_3 in ferrites, the authors carried out the following experiments: Ni-Zn ferrites with a content of 50-95 mole% Fe_2O_3 and an NiO/ZnO ratio of from 0.43 to 4.0 were synthetized from the oxides, were briquetted after the addition of polyvinyl alcohol as a binding agent, annealed for 4 h at 1000-1350°C, after which they were either slowly cooled (100°C/h) in a furnace or quenched with air or water. Besides, they were also slowly cooled under oxygen deficiency (0.7 to 0.35 torr). Fig. 1 shows the results obtained by chemical analysis: The quantity of Fe_2O_3 converted into magnetite as a function of the Fe_2O_3 content and the cooling conditions; Fig. 2 shows the quantity

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of Fe_2O_3 converted into magnetite as a function of the annealing temperature. The quenched samples were found to have the highest magnetite content. The Fe_2O_3 excess dissociates to form magnetite, and together with the ferrite it forms solid solutions of iron-nickel-zinc ferrite of stoichiometric composition. When slowly cooled in air, the magnetite is oxidized to γ-Fe_2O_3 or α-Fe_2O_3. The latter separates as the second phase. Figs. 3-6 (microphotographs) confirm this process. The quenched samples form a homogeneous phase, while the slowly cooled samples have two phases because of the separation of hematite. X-ray analysis (Fig. 7) shows that the lattice constant of quenched samples approaches that of magnetite (8.38 kX), whereas Fe_2O_3 formed by oxidation reduces the lattice constant (8.32 kX at 100 mole% Fe_2O_3). Fig. 8 shows the temperature of the dissociation of Fe_2O_3 to Fe_3O_4, as a function of the Fe_2O_3 content. For pure Fe_2O_3, the dissociation temperature is 1450°C, and in the system

Dissolution of Excess Iron Oxide in Ni-Zn Ferrite

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B004/B056

Ni-Zn-ferrite - Fe_2O_3, it approaches the value of 900°C with decreasing iron-oxide excess. There are 8 figures and 23 references: 11 Soviet, 4 US, 2 British, 3 German, and 1 French.

SUBMITTED: October 26, 1959

Card 3/3

STEPINA, N.G. [Stepina, N.H.], dots.; MIDLER, T.L.; GONCHARUK, G.M. [Honcharuk, H.M.]

Fangotherapy for poliomyelitis patients during initial hospitalization. Ped., akush. i gin. 19 no.4:11-14 '57. (MIRA 13:1)

1. Kafedra infektsionnykh bolezney detskogo vozrasta (zav. - dots. N.G. Stepina), Klinika detskikh bolezney lechebnogo fakul'teta (zav. - dots. V.P. Chernyuk) Odesskogo gosudarstvennogo meditsinskogo instituta im. M.I. Pirogova (direktor - prof. I.Ya. Deyneka) i gorodskaya infektsionnaya bol'nitsa (glavnyy vrach - S.T. Kolesnikov).
(BATHS, MOOR AND MUD) (POLIOMYELITIS)

STEPINA, N.G. [Stepina, N.H.]; [illegible], F.I.

Method for early mud treatment in pontine forms of poliomyelitis. Ped., akush. i gin. 22 no.3:13-15 '60. (MIRA 14:4)

1. Kafedra infektsionnykh detskikh bolezney (zav. - dotsent N.G. Stepina [N.H.Stepina]) Odesskogo meditsinskogo instituta im. M.I. Pirogova (direktor - zasluzhennyy deyatel' nauki prof. I.Ya.Deyneka) i klinicheskoy infektsionnoy bol'nitsy (glavnyy vrach - L.T. Zhidovlenko).

(BATHS, MOOR AND MUD) (POLIOMYELITIS)

STEPINA, N.G.; GONCHARUK, A.N.; NEDOSTUP, F.I.

Fangotherapy in poliomyelitis in children. Vop. kur., fizioter. i lech. fiz. kult'. 30 no.3:268-269 My-Je '65.
(MIRA 18:12)

1. Kafedra infektsionnykh bolezney detskogo vozrasta (zav.-dotsent N.G. Stepina) Odesskogo meditsinskogo instituta i Odesskaya klinicheskaya infektsionnaya bol'nitsa (glavnyy vrach L.T. Zhidovlenko). Submitted June 20, 1963.

STEPINA, N.I.; FILIPPOV, A.A.

Some problems concerning the methodology for studying the electrical strength of long air gaps subject to the action of a.c. voltages. (MIRA 15:12)
Izv. NIIPT no.9:241-250 '62.
(Electric power distribution) (Electric discharges)

GUTMAN, Yu.M.; STEPINA, N.I.; FILIPPOV, A.A.

Discharge voltages of air and line insulation subject to the action of switching surges with simplest form. Izv. NIIPT no.9:251-273 '62. (MIRA 15:12)

(Electric power distribution) (Transients (Electricity))
(Electric insulators and insulation)

L 17843-65 EPA(s)-2/EWT(m)/EPF(c)/EWG(v)/EPR/EPA(w)-2/EWP(j) Pc-4/Pe-5/
Pab-10/Pr-4/Ps-4/Pt-10 WW/RM
ACCESSION NR: AP5000416 S/0104/64/000/008/0053/0057

AUTHOR: Stepina, N. I. (Engineer); Filippov, A. A. (Candidate of technical sciences) B

TITLE: Switching-surge breakdown voltages of air insulation 15

SOURCE: Elektricheskiye stantsii, no. 8, 1964, 53-57

TOPIC TAGS: air insulation, air insulation electric strength, switching surge breakdown voltage

ABSTRACT: The results of an experimental investigation of the electric strength of various airgaps at 40-260 cps switching surges are reported. The airgaps investigated were: rod-plane, rod-rod, ring-plane, ring-ring, wire-support, and wire-plane. The test voltage was obtained from two cascade-connected transformers that could develop an overall amplitude of up to 2,000 kv. Actual 50% breakdown voltage and rms deviation values for all above electrodes, with

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L 17843-65
ACCESSION NR: AP5000416

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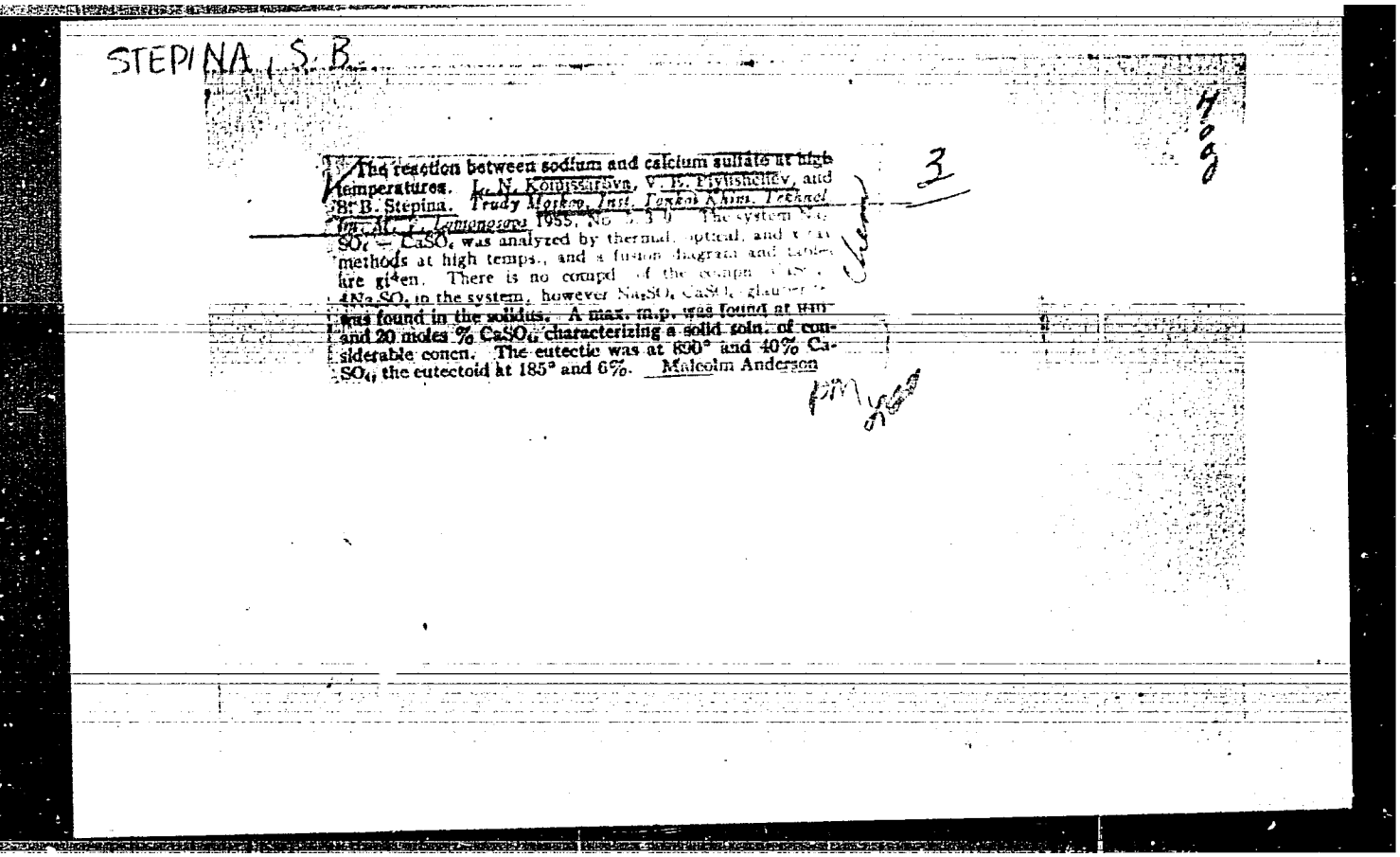
1.5--5-m separations, are tabulated. These conclusions are reported: (1) The 50% switching-surge breakdown voltages are close to those occurring with a gradual rise of commercial-frequency (50 cps) voltage; (2) Rms deviation in the probability distribution is 3--5 times higher in the surge-voltage case than in the commercial-voltage case; (3) The 50% breakdown voltage increases as the frequency decreases from 260 to 40 cps; (4) At 75 cps, the positive-polarity breakdown voltage is higher if it was preceded by a negative-polarity half-wave; at 260 cps, no negative-polarity effect is noticeable; (5) The negative-polarity breakdown voltage is much higher than the positive-polarity voltage in the case of unsymmetrical airgaps. Orig. art. has: 5 figures and 1 table.

ASSOCIATION: none

SUBMITTED: 00 ENCL: 00

SUB CODE: EE NO REF SOV: 005 OTHER: 000

Card 2/2



STEPINA, S. B.

The reaction between sodium and calcium sulfates at high temperatures. L. N. Komissarova, V. B. Plyushchev, and Br. B. Stepina. *Trudy Moskov. Inst. Tonkoi Khim. Tekhnol. im. M. V. Lomonosova* 1955, No. 3, 3-9. The system Na_2SO_4 – $CaSO_4$ was analyzed by thermal, optical, and x-ray methods at high temps., and a fusion diagram and tables are given. There is no compd. of the compn. $3CaSO_4 \cdot 4Na_2SO_4$ in the system, however $Na_2SO_4 \cdot CaSO_4$ glaserite was found in the solidus. A max. m.p. was found at 880° and 20 moles % $CaSO_4$, characterizing a solid soln. of considerable concn. The eutectic was at 880° and 40% $CaSO_4$, the eutectoid at 185° and 6%. Malcolm Anderson

5(4)
AUTHORS: Plyushchev, V. Ye., Kuznetsova, G. P., Stepina, S. B. SOV/78-4-6-39/44

TITLE: The Investigation of the System LiCl-KCl-H_2O (Issledovaniye sistemy LiCl-KCl-H_2O)

PERIODICAL: Zhurnal neorganicheskoy khimii, 1959, Vol 4, Nr 6, pp 1449-1453 (USSR)

ABSTRACT: The solubility in the system LiCl-KCl-H_2O was investigated by the isothermal method at 0, 25, 50, and 75° and the results are given in table 1. The results show that lithium chloride reduces the solubility of potassium chloride. The solubility of potassium chloride rises in the proximity of the "eutonic" point, probably under formation of complexes. No double salts or solid solutions are formed in the system LiCl-KCl-H_2O. There are 4 figures, 1 table, and 8 references, 4 of which are Soviet.

ASSOCIATION: Moskovskiy institut tonkoy khimicheskoy tekhnologii im. M. V. Lomonosova (Moscow Institute of Fine Chemical Technology imeni M. V. Lomonosov)

Card 1/2

The Investigation of the System LiCl-KCl-H_2O SOV/78-4-6-39/44

SUBMITTED: March 1, 1958

Card 2/2

BOL'SHAKOV, K.A.; FEDOROV, P.I.; STEPINA, S.B.; AKULKINA, L.M.; SHAKHOVA, M.N.

Preparation of anhydrous strontium and barium iodides and study of their interaction in molten state. Zhur.neorg.khim. 7 no.3:605-608 Mr '62. (MIRA 15:3)
(Strontium iodide) (Barium iodide)

STEPINA, S.B.; SEDEL'NIKOV, G.S.; KOSTIKOVA, R.V.

Solubility of strontium and calcium nitrates at 0°C. Zhur.neorg. khim. 7 no.3:633-640 Mr '62. (MIRA 15:3)
(Strontium nitrate) (Calcium nitrate) (Solubility)

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S/020/62/143/006/019/024
B106/B138

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AUTHORS: Plyushchev, V. Ye., Stepina, S. B., Stepin, B. D., and Lepeshkova, L. I.

TITLE: Heterotripolyhalides of alkali elements with similar properties and their importance for the production of pure rubidium and cesium compounds

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 143, no. 6, 1962, 1364-1367

TEXT: The possibility of producing pure Rb and Cs compounds via complex heterotripolyhalides is thoroughly discussed with the aid of 27 references. A method developed by the authors (V. Ye. Plyushchev, B. D. Stepin, Author's certificate USSR no. 132627 (1960); B. D. Stepin, V. Ye. Plyushchev, Author's certificate USSR no. 140051 (1961)) provides for the production of Rb preparations containing only 0.0002% potassium, from industrial RbCl containing 2 - 3% K. Rb preparations of such high purity had not been obtained by methods described before. In the present simple and economic procedure, RbCl is twice (first in aqueous solution, then in 0.5 M acetic acid) converted at 90°C into the complex Rb$[I(ClBr)]\cdot H_2O$,

Card 1/3

Heterotripolyhalides of alkali...

which is then decomposed by heating to 400°C. A further method developed by the authors for producing pure cesium bromide by precipitating the complex cesium di-iodo bromide, $CsBrI_2$, from aqueous-alcoholic solution (S. B. Stepina, B. D. Stepin, L. I. Lepeshkova, V. Ye. Plyushchev, Author's certificate USSR no. 138927 (1961)) is discussed in detail. Two applications of this process produce cesium bromide of 99.95% purity containing 0.02% Rb and <0.005% K, 0.002% Na, and 0.002% Li (the initial CsBr containing 5% Rb and up to 1.5% other alkali elements). CsBr losses in this process are lowest, so the cost of producing high-purity cesium salts from the industrial product is not more than 10% higher than that of the initial material. Advantages of the new method: (1) high purification factor (10 - 20), (2) high selectivity of CsBr isolation from mixtures with other alkali elements, hitherto not achieved by other methods, and (3) no additional operations are needed since no nonvolatile ions participate in the purification process. Therefore, the heterotripolyhalides of the alkali elements are very promising compounds for the removal of potassium microamounts from Rb salts and for the production of Cs salts which are practically free from impurities of other alkali elements. There is 1 table. The most important English-language references read as

S/020/62/143/006/019/024
B106/B138

Heterotripolyhalides of alkali...

follows: H. L. Wells, Am. Chem. J., 26, 268 (1901); M. Ischibaschi, T. Jamamoto, T. Hara, Bull. Inst. Chem. Res. Kyoto Univ., 37, no. 2, 145 (1959); M. Ischibaschi, T. Jamamoto, T. Hara, Bull. Inst. Chem. Res. Kyoto Univ., 37, no. 3, 153 (1959); H. W. Foote, M. Fleischer, J. Phys. Chem., 44, 640 (1940).

ASSOCIATION: Moskovskiy institut tonkoy khimicheskoy tekhnologii im. M. V. Lomonosova (Moscow Institute of Fine Chemical Technology imeni M. V. Lomonosov)

PRESENTED: December 13, 1961, by I. V. Tananayev, Academician

SUBMITTED: December 6, 1961

Card 3/3

LEPESHKOVA, L.I.; STEPINA, S.B.; PLYUSHCHEV, V.Ye.

Preparation of pure cesium salts using cesium diiodobromide. Izv.vys.ucheb.zav.; khim.i khim.tekh. 7 no.6:875-880 '64. (MIRA 18:5)

1. Moskovskiy institut tonkoy khimicheskoy tekhnologii imeni Lomonosova, kafedra khimii i tekhnologii redkikh i rasseyannykh elementov.

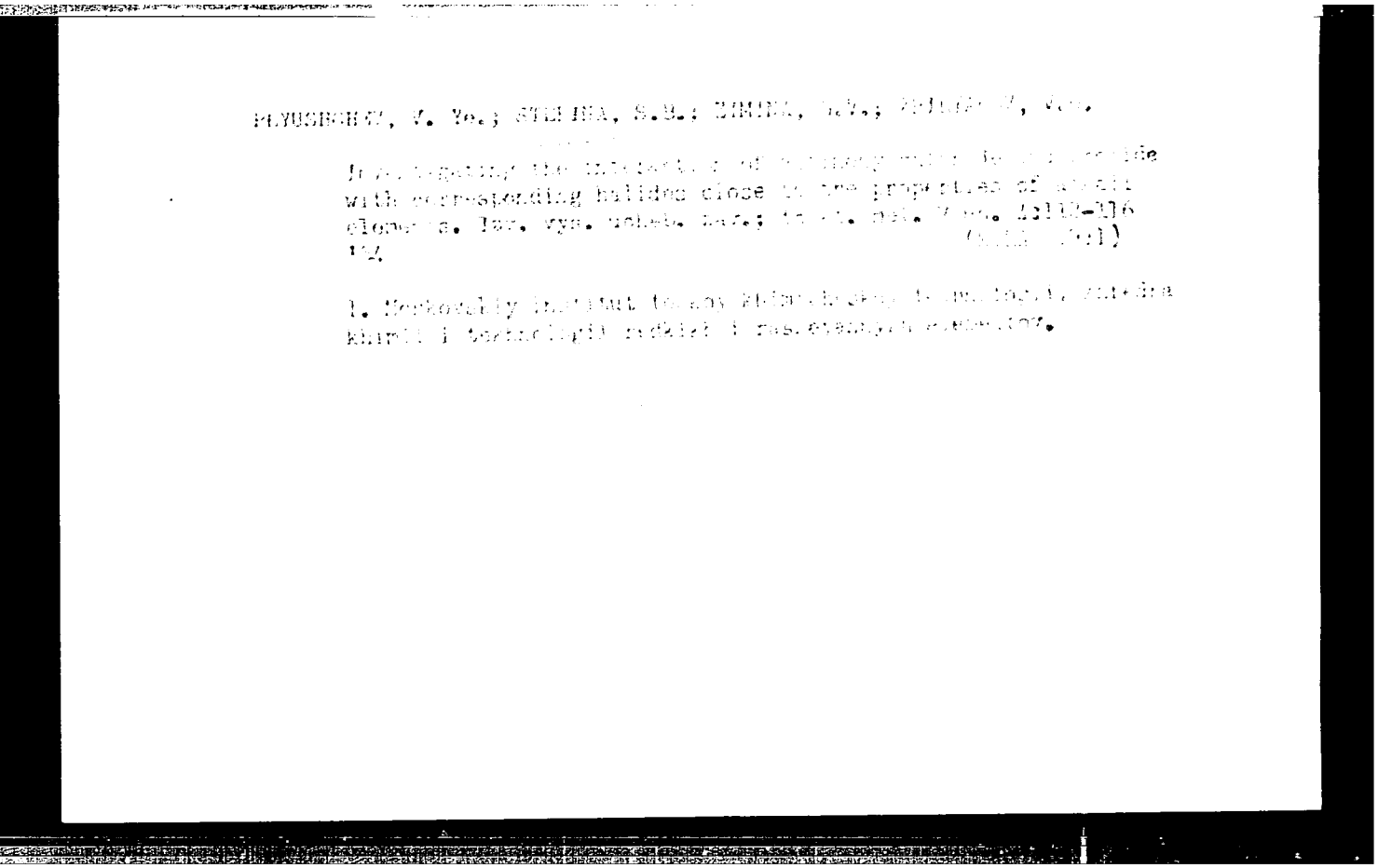
VLASO[illegible], I.V.; [illegible]INA, G.V.; [illegible], A.B.; [illegible], G.I.; [illegible]HCHEV, V.Ye.

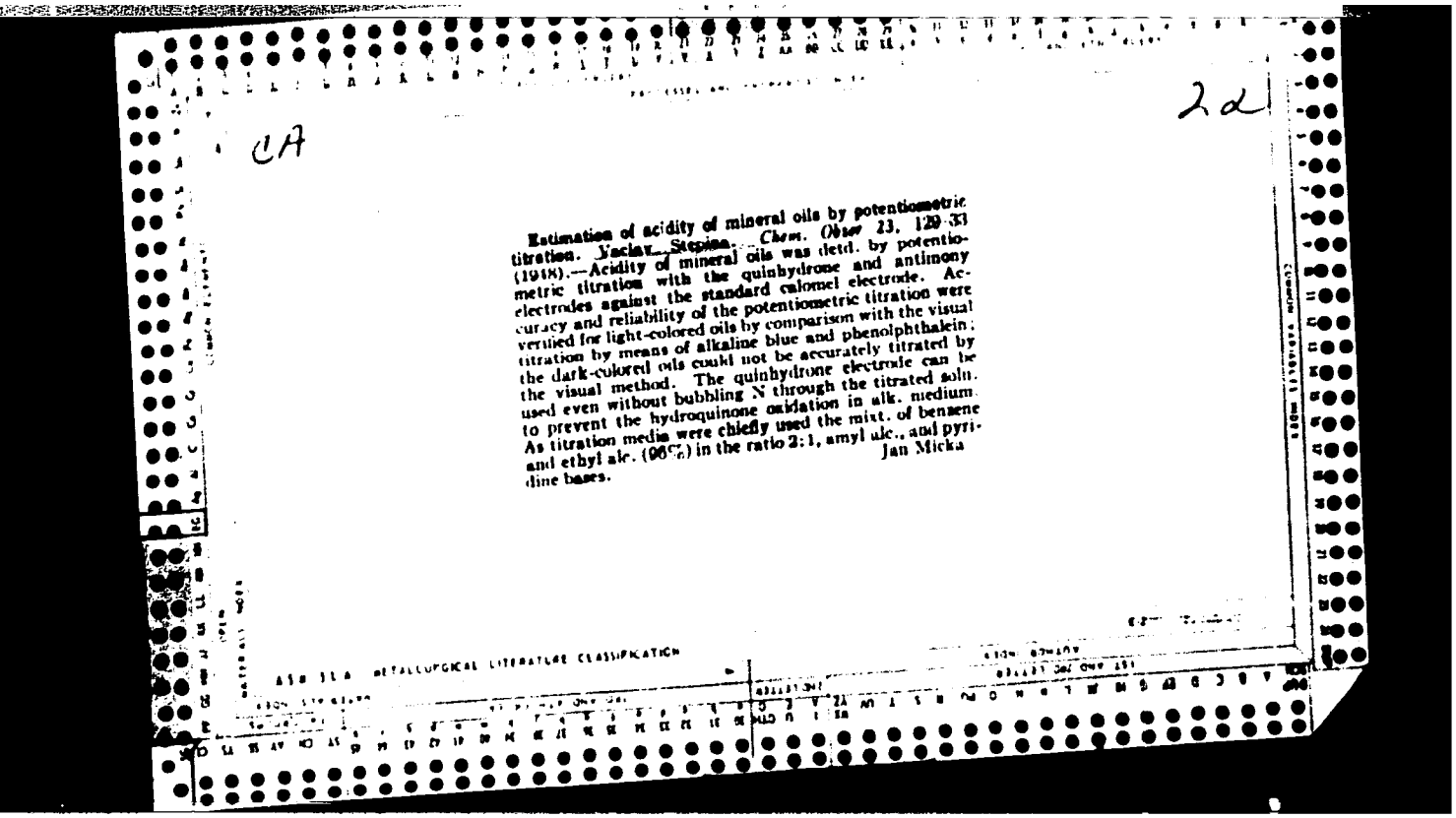
Solubility of potassium, rubidium, an[illegible] [illegible] in hydrobromic acid. Zhur. neorg. khim. 9 [illegible] Ag '64. (M[illegible] 17:11)

[illegible], C.?.; PLYUSHCHEV, V.Ye.; STEPINA, S.B.

Interaction of antimony (III) chlorides and bromides with alkaline elements with closely related properties in solutions of corresponding halogen acids. Dokl. AN SSSR 163 no.4:887-890 Ag '65. (MIRA 18:8)

1. Moskovskiy institut tonkoy khimicheskoy tekhnologii im. M.V. Lomonosova. Submitted January 15, 1965.





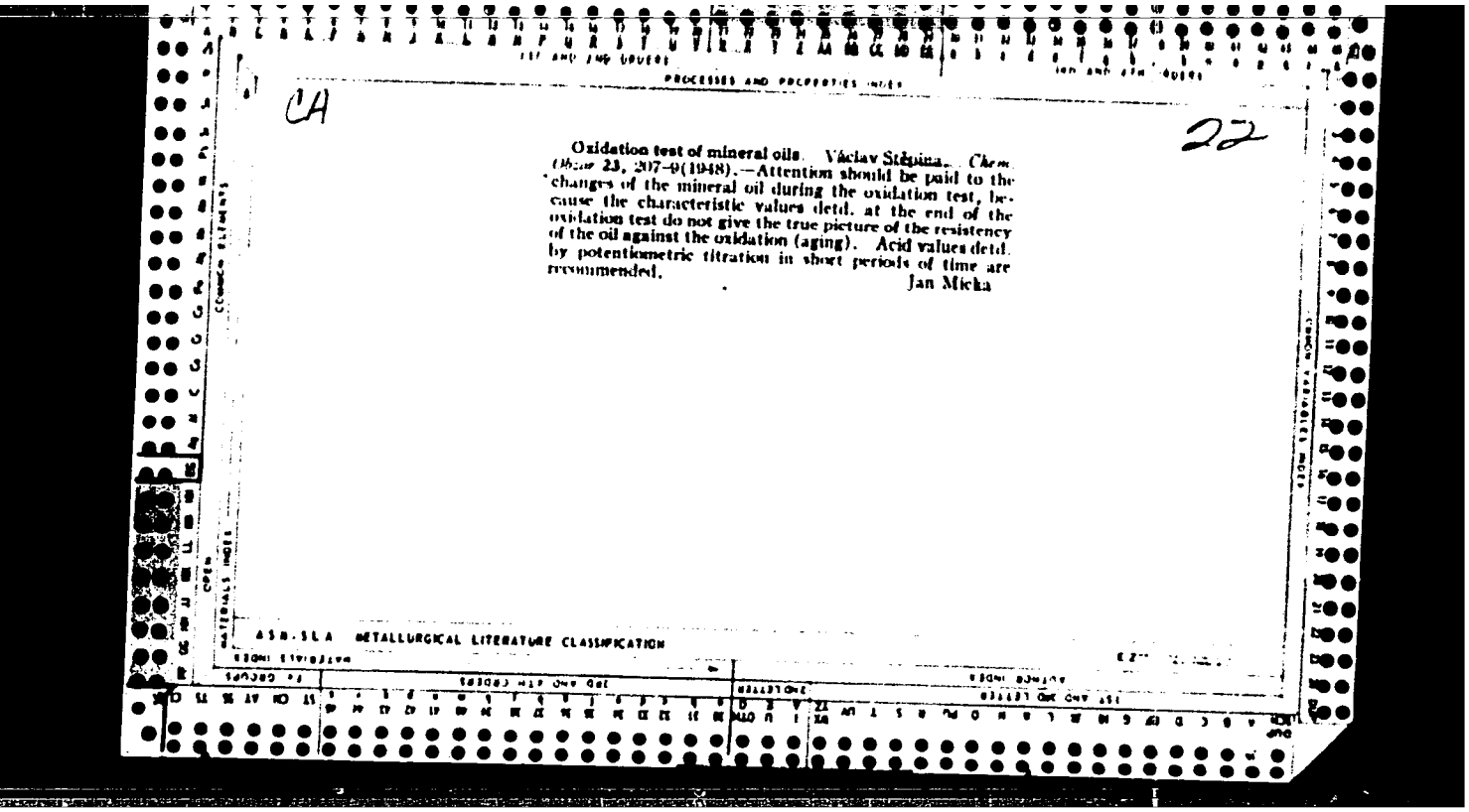
CA

21

Estimation of acidity of mineral oils by potentiometric titration. Jaclav Stejskal. *Chem. Obzor* 23, 129-31 (1948).—Acidity of mineral oils was detd. by potentiometric titration with the quinhydrone and antimony electrodes against the standard calomel electrode. Accuracy and reliability of the potentiometric titration were verified for light-colored oils by comparison with the visual titration by means of alkaline blue and phenolphthalein; the dark-colored oils could not be accurately titrated by the visual method. The quinhydrone electrode can be used even without bubbling N through the titrated soln. to prevent the hydroquinone oxidation in alk. medium. As titration media were chiefly used the mixt. of benzene and ethyl alc. (96%) in the ratio 2:1, amyl alc., and pyridine bases.

Jan Micka

A10 31A METALLURGICAL LITERATURE CLASSIFICATION



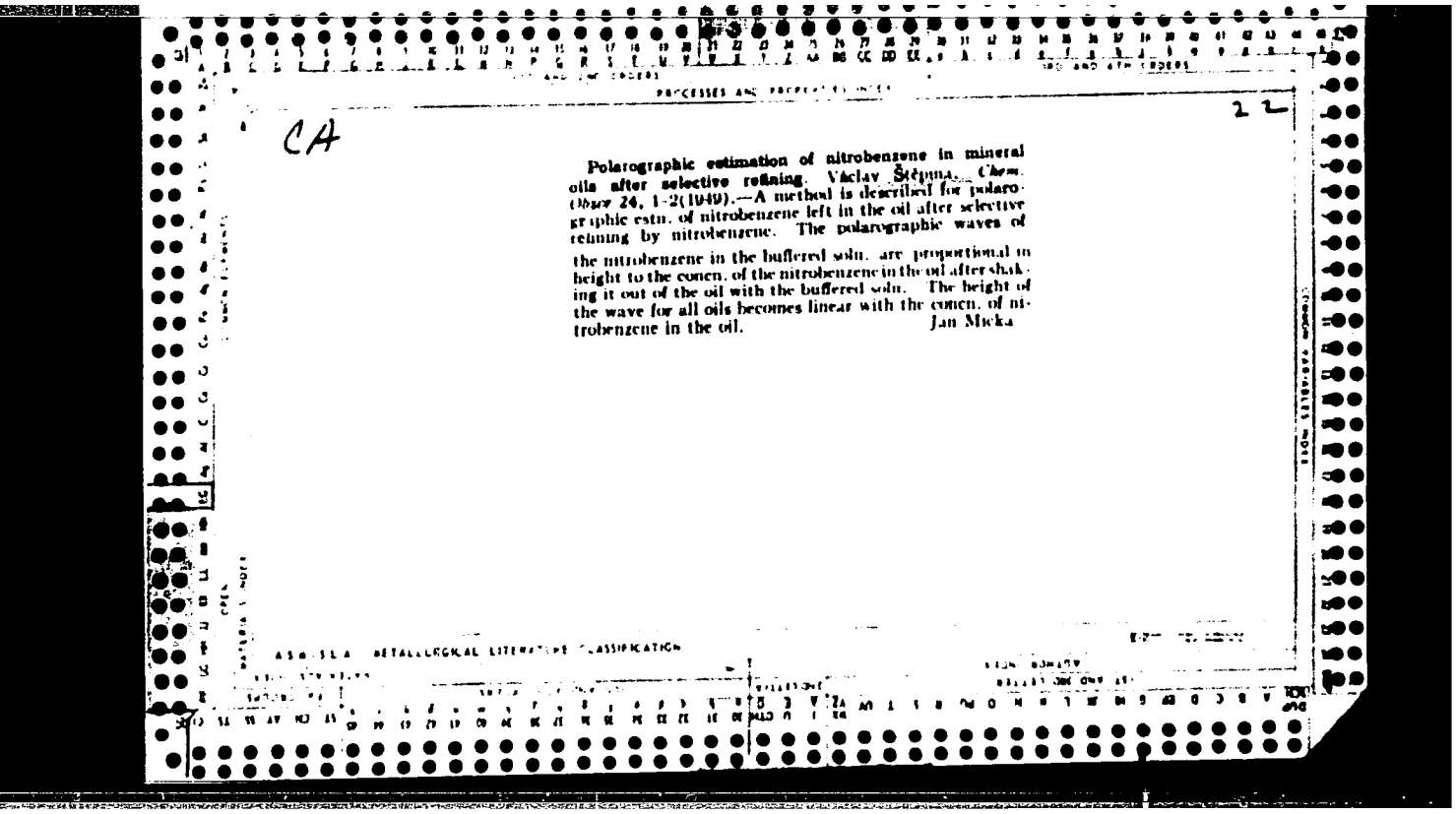
CA

22

Oxidation test of mineral oils. Václav Stěpina. *Chem. Obzor* **23**, 207–9(1948).—Attention should be paid to the changes of the mineral oil during the oxidation test, because the characteristic values detd. at the end of the oxidation test do not give the true picture of the resistency of the oil against the oxidation (aging). Acid values detd. by potentiometric titration in short periods of time are recommended.

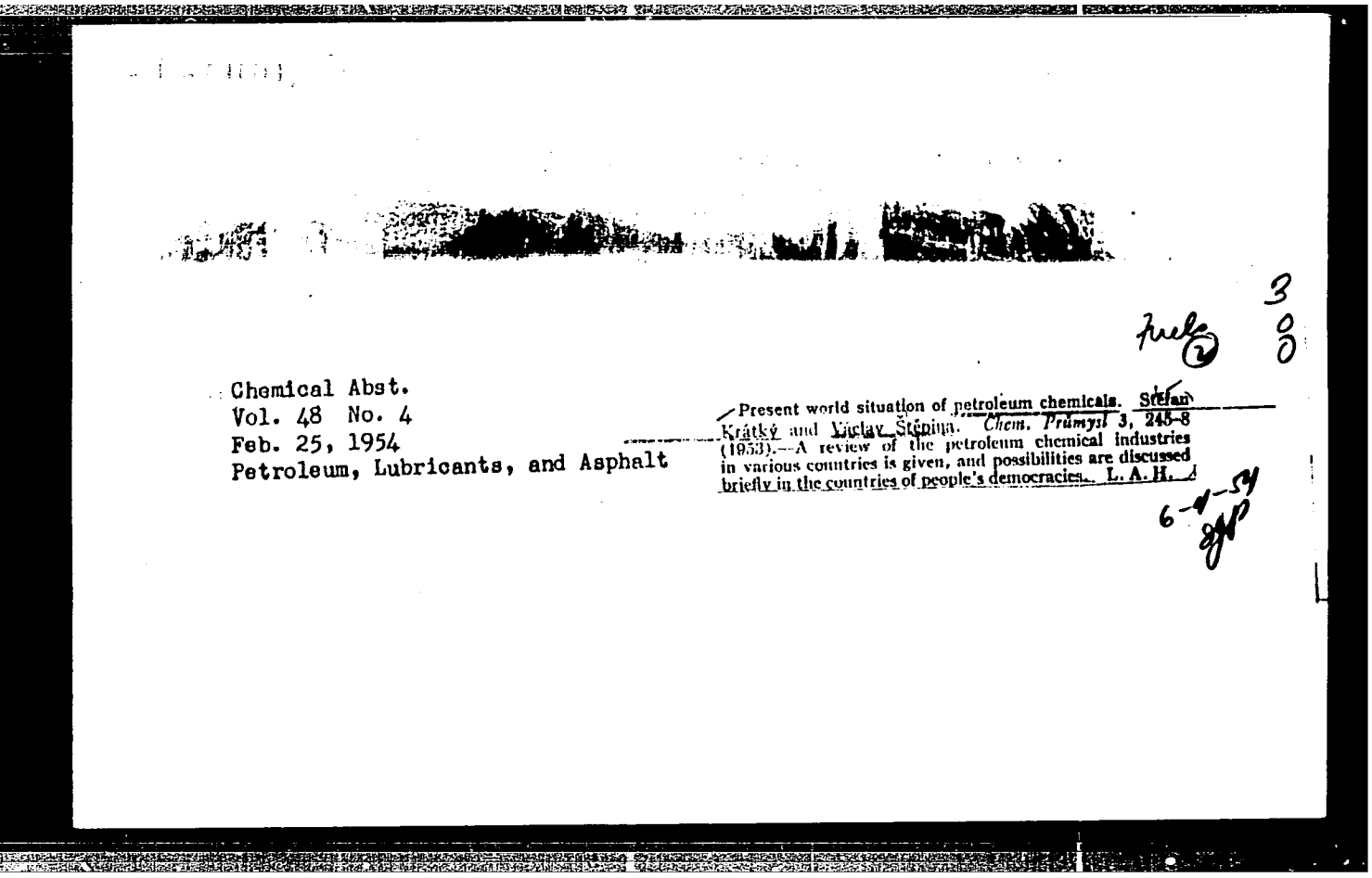
Jan Micka

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



CA

Polarographic estimation of nitrobenzene in mineral oils after selective refining. Václav Štěpina. *Chem. Obzor* 24, 1-2(1949).—A method is described for polarographic estn. of nitrobenzene left in the oil after selective refining by nitrobenzene. The polarographic waves of the nitrobenzene in the buffered soln. are proportional in height to the concn. of the nitrobenzene in the oil after shaking it out of the oil with the buffered soln. The height of the wave for all oils becomes linear with the concn. of nitrobenzene in the oil. Jan Micka



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Chemical Abst.
Vol. 48 No. 4
Feb. 25, 1954
Petroleum, Lubricants, and Asphalt

Present world situation of petroleum chemicals. Štefan Krátký and Václav Štěpina. *Chem. Průmysl* 3, 245-8 (1953).—A review of the petroleum chemical industries in various countries is given, and possibilities are discussed briefly in the countries of people's democracies. L. A. H.

6-1-54

STEPINA, V.

KRATKY, S.; STEPINA, V. "Conversion of low-molecular paraffin into olefin and acetylene." Pt. 1. p. 426. (Chemicky Prumysl. Vol. 3, no. 12, Dec. 1953. Praha.)

SO: Monthly List of East European Accessions, Vol. 3, no. 6, Library of Congress, June 1954. Uncl.

STĚPINA, V.

4

Conversion of low-molecular [weight] paraffins to olefins and acetylene. Štefan Krátký and Václav Štěpina. *Chem. Průmysl* 3, 420-31(1953); cf. *C.A.* 45, 7855*h*. The conversion of CH_4 into water gas by reaction with water vapor and by partial oxidation with O is reviewed. The production of acetylene by thermal cracking of methane in the furnace and in the elec. arc and by partial oxidation of methane by O are discussed. L. A. Helwich