"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1

Analytical Chemistry of Thorium. Information 2. Complexometric Determination of Thorium in Monazite Concentrates After Its Separation on the Cationite Ку-2 (KU-2)

S/075/60/015/004/015/030/XX
B020/B064

small amounts of rare earths are sorbed on the resin. The rare earths do not affect the complexometric determination of Th. Sorption of Zr on the resin can be avoided if it is bound by tartaric or trioxyglutaric acid (Table 2). With trioxyglutaric acid it is possible to mask approximately 10 mg of Zr, and with tartaric acid, approximately 5 mg of Zr when determining 30 mg of Th. Monazite was decomposed by fusion with sodium peroxide (Ref. 18). In the extraction with water, a large part of phosphorus dissolves as sodium phosphate, while in dissolving the precipitate in hydrochloric acid, the residual phosphoric acid precipitates zirconium down to 0.3 - 1.0 mg compared to its content before sorption. This amount is masked by tartaric or trioxyglutaric acid, and does not affect the determination of thorium. If Na_2O_2 is used instead of acid decomposition, the time of decomposition is reduced from 6 - 8 hours to 1 - 2 hours, and the disturbing phosphate and zirconium ions may be easily removed. The results obtained from analyzing some samples of monazite concentrate are listed in Table 3. They are in good

Card 2/3

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1

Analytical Chemistry of Thorium. Information 2. Complexometric Determination of Thorium in Monazite Concentrates After Its Separation on the Cationite КУ-2 (KU-2)

S/075/60/015/004/015/030/XX
B020/B064

agreement with gravimetric analyses. There are 1 figure, 3 tables, and 18 references: 3 Soviet, 3 German, 7 US, 2 British, 1 Dutch, 1 Japanese, and 1 Czech.

SUBMITTED: July 14, 1959

Card 3/3

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1

LUK'YANOV, V.F.; SEDINA, L.I.

Complexometric determination of bismuth and lead in bismuth-lead alloys. Zhur. anal. khim. 15 no.5:595-597 S-O '60. (MIRA 13:10)
(Bismuth--Analysis) (Lead--Analysis)
(Bismuth-lead alloys)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1

LUK'YANOV, V.F.; KNYAZEVA, Ye.M.

Spectrophotometric study of the reaction of zirconium with methyl thymol blue. Zav.lab. 26 no.3:263-265 '60. (MIRA 13:6)
(Zirconium--Analysis)
(Thymolsulfonephthalein)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1

23006

S/186/61/003/002/018/018
E142/E435

5.5230

AUTHORS: Luk'yanov, V.F., Nikol'skaya, I.V. and Kozlova, Ye.S.

TITLE: Analytical chemistry of thorium. III. Photometric determination of thorium with arsenazo III in natural materials

PERIODICAL: Radiokhimiya, 1961, Vol.3, No.2, pp.239-240

TEXT: The reagent arsenazo III was synthesized by S.B.Savvin (Ref.1: DAN SSSR, 127, 6, 1231 (1959)) and used for the photometric determination of thorium, uranium and zirconium. The authors describe a method for the determination of micro-quantities (1/100 to 1/1000th %) of thorium in phosphates, silicates, fluoroapatites etc. with preliminary separation of thorium from a number of accompanying elements by co-precipitation of the same on calcium oxalate. A content of rare earths, not exceeding 30 times the content of thorium, is taken into account. The method is suitable for mass-analysis since no HF or fluorides are included and it can be used for various natural materials; it is, therefore, more satisfactory than previously described methods where arsenazo III was used. Photometric determinations were carried out on a photocolorimeter with a red lightfilter. The thorium content is

Card 1/2

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1

23006
S/186/61/003/002/018/018
E142/E435

Analytical chemistry of ...

found from a calibrated curve. When only small quantities of uranium and titanium are contained in the solution (respectively 5 and 10 times the quantity of thorium) the analysis can be carried out without preliminary separation of thorium. Results of determinations of the element in various natural materials are tabulated. The achieved accuracy is the usual one obtained in photometric determinations. There are 1 table and 10 Soviet-bloc references.

SUBMITTED: October 24, 1960

Card 2/2

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1

88582

S/075/61/016/001/011/019
B013/B055

21.3000

AUTHORS: Luk'yanov, V. F. and Duderova, Ye. P.

TITLE: Studies on the Analytical Chemistry of Uranium. Report 2. Photometric Determination of Small Quantities of Uranium Using Bromopyrogallol Red

PERIODICAL: Zhurnal analiticheskoy khimii, 1961, Vol. 16, No. 1, pp. 60-62

TEXT: In the present work, bromopyrogallol red is used as reagent for uranyl ions. The reagent forms a colored complex with uranyl ions, which is stable at pH 5 - 7 and can be determined photometrically. A hexamethylene-tetramine buffer solution of pH 6.5 - 7 was used to maintain the required pH level. The absorption curves of solutions of the reagent and the complex appear in Fig. 1, the calibration curve in Fig. 2. The absorption is best measured at 620 mμ. Complex formation is practically instantaneous and its color is stable for at least 24 h. The highest optical density of solutions prepared by the method of Ostromyslenskiy - Zhob was observed at a UO_2^{2+}-to-reagent ratio of 1 to 1 (at 600, 620,

Card 1/2

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1

88582

Studies on the Analytical Chemistry of Uranium. Report 2. Photometric Determination of Small Quantities of Uranium Using Bromopyrogallol Red

S/075/61/016/001/011/019
B013/B055

and 630 mμ). The molar extinction coefficient at 620 mμ of solutions of this compound was $8.8 \cdot 10^3$ (the mean of three measurements). With a ФЭК-М (FEK-M) photocolorimeter uranium can be determined reliably down to a minimum concentration of 0.5 γ/ml (red filter, 3-cm absorption cell, D = 0.04). The most suitable uranium concentration for analysis is between 25 and 250 γ in 50 ml. At these concentrations Beer's law is obeyed. Before analysis, uranium must be separated from accompanying metals, most of which form colored compounds with bromopyrogallol red (Ref. 1). The authors separated uranium by the method developed in 1956 by V. I. Titov, A. A. Lavrova, and Ye. P. Osiko in which uranium is precipitated by α-nitroso β-naphthol as co-precipitant in the presence of Complexone III. Separation from accompanying elements may also be satisfactorily effected by partition chromatography on silica gel. The results obtained in the analysis of standard ore samples are listed in a table. There are 2 figures, 1 table, and 2 references: 1 Soviet and 1 Czechoslovakian.

SUBMITTED: July 14, 1959

Card 2/2

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1

LUK'YANOV, V.F.; MOISEYEVA, L.M.; KUZNETSOVA, N.M.

Analytical chemistry of uranium. Report No.3: Photometric determination of uranium in ores and in the products of their treatment with arsenazo 1. Zhur. anal. khim. 16 no. 4:448-451 Jl-Ag '61. (MIRA 14:7)
(Uranium--Analysis) (Arsenazo)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1

MOISEYEVA, L.M.; KUZNETSOVA, N.M.; LUK'YANOV, V.F.; SEL'MANOVA, G.L.

Analytrical chemistry of uranium. Report No.4: Photometric determination of uranium with arsenazo 1 after its separation from impurities by means of the EDE-10P anion exchanger. Zhur.anal.khim. 16 no.5:585-587 S-O '61. (MIRA 14:9)

(Uranium--Analysis)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1

LUK'YANOV, V.F.; KNYAZEVA, Ye.M.; OREDKOVA, K.I.

Complexonometric determination of calcium fluoride in fluorite ores. Zhur.anal.khim. 17 no.8:931-934 N '62. (MIRA 15:12)
(Calcium fluoride) (Complexons) (Fluorite)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1

LUK'YANOV, V.F.; KNYAZEVA, Ye.M.

Direct complexometric determination of zirconium in copper-zirconium alloys. Zav.lab. 28 no.7:804-805 '62. (MIRA 15:6)
(Copper-zirconium alloys) (Zirconium--Analysis)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1

L 10620-63

ACCESSION NR: AP3001017 S/0075/63/018/005/0562/0566 44

AUTHOR: Luk'yanov, V. F.; Lukin, A. M.; Knyazeva, Ye. M.; Kalinina, I. D.

TITLE: 4-chlorobenzene-2-phosphonic acid-(1-azo-1)-2-hydroxynaphthalene-3, 6-disulphonic acid (chlorphosphonazo R) as a reagent for photometric determination of beryllium

SOURCE: Zhurnal analiticheskoy khimii, v. 18, no. 5, 1963, 562-566

TOPIC TAGS: determination of beryllium; chlorphosphonazo R; photometry

ABSTRACT: Chlorphosphonazo R (4-chlorobenzene-2-phosphonic acid-(1-azo-1)-2-hydroxynaphthalene-3, 6-disulphonic acid) has been proposed for the photometric determination of beryllium. The reagent forms a stable yellow compound with beryllium which permits the determination of beryllium in the presence of masking substances without prior separation of beryllium. The concentrations of beryllium as low as 0.1% can be determined in the presence of 10% of iron. The sensitivity of the determination is 0.1 ppm of BeO. The relative experimental error is not more than + or - 5% when the BeO content is 0.05 to 0.50%. The relative error increase to + or - 10% when the BeO content is less than 0.05%. Although the above reagent is not selective for beryllium, K sup +, Na sup +, Ti sup +, Tl sup 3+, Sn sup

Card 1/2

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1

L 10620-63
ACCESSION NR: AP3001017

0

2+, Sn sup VI, Sb sup III, Cr sup 3+, Bi sup 3+, Ta sup V, Nb sup V ions do not form color complexes. Orig. art. has: 3 tables and 2 graphs.

ASSOCIATION: none

SUBMITTED: 25Jul61 DATE ACQD: 12Jun63 ENCL: 00

SUB CODE: 00 NO REF SOV: 012 OTHER: 000

ch/kb
Card 2/2

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1

L 7001-65 EWT(m)/EPF(m)-2/EWP(q)/EWP(b) Pu-4 AFMDC/ZFWL/AEDC(b)/RAEM(t)
JD/WW/JG

ACCESSION NR: AP4042627 S/0075/64/019/007/0899/0902

AUTHOR: Luk'yanov, V. F.; Khyazeva, Ye. M.

TITLE: Determination of zirconium in alloys by means of N-benzoylphenylhydroxylamine

SOURCE: Zhurnal analiticheskoy khimii, v. 19, no. 7, 1964, 899-902

TOPIC TAGS: zirconium, gravimetric analysis, quantitative analysis, Zr(C sub 13 H sub 10 O sub 2 N) sub 4, N-benzoylphenylhydroxylamine, zirconium, benzoylphenylhydroxylamine, masking agent, hydrogen peroxide, mineral analysis, alloy analysis, interfering ion

ABSTRACT: The conditions for precipitating zirconium with N-benzoylphenylhydroxylamine (BPHA) to form compounds suitable for gravimetric analysis, and application of this method to the analysis of zirconium alloys were investigated. Quantitative precipitation of zirconium was obtained from 0.5-0.6N H_2SO_4 solutions with 4% ethanol solution of BPHA. The compound formed has the formula $Zr(C_{13}H_{10}O_2N)_4$. A number of masking agents for Ti, Nb and Ta were examined: H_2O_2 was effective but caused the precipitate to lose its crystallinity, hence the Zr had to be determined

Card 1/3

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1

L 7001-65
ACCESSION NR: AP4042627

gravimetrically after calcining the complex to ZrO_2. Oxalic, nitrilotriacetic and ethylenediaminetetraacetic acids hindered the precipitation of the zirconium N-benzoylphenylhydroxylamine. Tartaric, citric, maleic, malonic and malic acids did not affect the precipitation. No material was found to completely retain Ti in solution when in the presence of Zr or Hf. BPHA also precipitated Nb, Ta, Sn(II), Sn(IV), Ce(IV), W and Mo in acid solution, hence it may not be used for determining Zr in minerals. It is, however, applicable in the analysis of Zr alloys. In the analysis the alloy was dissolved in HF, with added H_2SO_4 and then the solution was evaporated to dryness. After the addition of potassium pyrosulfate, the mixture was fused at 700-800C in a muffle furnace, cooled and dissolved in 0.5N H_2SO_4. Heating the solution over boiling water bath for 10-15 minutes, 0.4% solution of BPHA was added, and the resultant solution was heated continuously for 30-40 minutes. Subsequent to cooling, the material was filtered, washed and dried at 110-120C for 40-45 minutes and weighed. [illegible]

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1

[illegible] 40-42 minutes and weighed. Orig. art. has: 2 tables.

ASSOCIATION: None

SUBMITTED: 05Aug63 DATE ACQ: 00 ENCL: 00

Card 2/3

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1

L 7001-65

ACCESSION NR: AP4042627

SUB CODE: GC CH NO REF SOV: 003 OTHER: 002

Card 3/3

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1

L 24196-65 EWT(m)/EWP(t)/EWP(b) IJP(c) JD/JG
ACCESSION NR: AP4047499 S/0075/64/019/010/1264/1265

AUTHOR: Luk'yanov, V. F.; Moshchanskaya, N. G.

B

TITLE: Photometric investigation of the solubility of lanthanum, cerium and praseodymium oxalates by means of arsenazo III.

27 27 27

SOURCE: Zhurnal analiticheskoy khimii, v. 19, no. 10, 1964, 1264-1265

TOPIC TAGS: lanthanum oxalate, cerium oxalate, praseodymium oxalate, solubility, photometric determination

ABSTRACT: The solubility of La, Ce and Pr oxalates in water at 25C was determined with a high degree of accuracy (relative experimental error did not exceed 4.5%) by a photometric method with arsenazo III. Portions of the saturated solutions of the oxalates $R_2(C_2O_4)_3 \cdot 10H_2O$ were mixed with a 0.005% solution of arsenazo III and acetate buffer (pH 5.4) solution; the optical density was measured. A two-fold excess of oxalate ions in the rare earth nitrate solution did not affect the results. The data agreed with literature data. The solubility of the

Card 1/2

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1

L 24196-65

ACCESSION NR: AP4047499

oxalates decreased in the series La>Ce>Pr. Orig. art. has: 1 table and 1 figure

ASSOCIATION: None

SUBMITTED: 28Nov63 ENCL: 00 SUB CODE: IC, GC

NR REF SOV: 007 OTHER: 005

Card 2/2

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1

L 52709-65 EWT(d)/EWT(m)/EWP(w)/EWP(c)/EWA(d)/EWP(v)/T/EWP(t)/EWP(k)/EWP(b) EWP(1)/EWA(h)/EWA(c) Pf-4/Peb JD/WW/HM/HW/EM

ACCESSION NR: AP5012641 UR/0135/65/000/005/0009/0011
620.1.051:672.3

43
42
B

AUTHOR: Kurkin, S. A. (Candidate of technical sciences); Luk'yanov, V. F. (Engineer); Gubanov, Yu. N. (Engineer); Parakhin, V. A. (Candidate of technical sciences)

TITLE: Unit for testing models of welded thin-wall vessels under conditions of biaxial tension

SOURCE: Svarochnoye proizvodstvo, no. 5, 1965, 9-11

TOPIC TAGS: cylindrical shell, thin wall shell, design strength, burst strength, burst test welded shell, welded container, shell testing, biaxial tension test

ABSTRACT: The design and operation are described of a unit for testing the design strength of welded thin-wall shells, end closures, and containers working under internal pressure. The unit makes it possible to test 1) flat specimens by hydrostatic bulging, 2) cylindrical shells without end closures by internal pressure while preserving the axial component of the stresses, 3) cylindrical shells with one or both end closures, and 4) welded subassemblies with welded connecting piping by internal pressure with static, repeated-static, or prolonged loading. The

Card 1/2

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1

L 52709-65

ACCESSION NR: AP5012641

changeover from one type test to another is made by changing individual components of the unit. The clamping of specimens before testing is effected by the hydraulic system which is actuated by the same pump that provides the test pressure. The clamping force increases automatically with increasing pressure. Pressures and the curvature of the bulge of a flat specimen and of the outside perimeter of the shell or container tested are recorded automatically. Author Certificate No. 169849 has been issued for the unit. Orig. art. has: 8 figures. [MS]

ASSOCIATION: MVTU im. Baumana

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

NO REF SOV: 002 OTHER: 001 ATD PRESS: 4012

DR

Card 2/2

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1

L 42050-65 EWT(d)/EPA(s)-2/EWT(m)/EWA(d)/EWP(v)/T/EWP(t)/EWP(k)/EWP(h)/EWP(b)/EWP(1)/EWA(c) Pf-4 JD/HW/HW

ACCESSION NR: AP5010940 UR/0286/65/000/007/0122/0122

AUTHORS: Kurkin, S. A.; Luk'yanov, V. F.; Vinokurov, V. A.; Gubanov, Yu. N.; Parakhin, V. N.

TITLE: Apparatus for testing thin sheet metal and welded joints. Class 42, No. 169849

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 7, 1965, 122

TOPIC TAGS: sheet metal, welding evaluation, test method, hydraulic pressure, internal stress

ABSTRACT: This Author Certificate presents an apparatus for testing thin sheet metal and welded joints acted upon by biaxial tension. The apparatus uses the method of applying pressure through an opening or of applying internal pressure up to failure. To test a high strength metal, to reduce the size of the apparatus, and to measure the radius of curvature of the tested specimen, the apparatus is provided with a holding device containing two perforated plates between which the specimen and a locking ring are placed. Turning of the ring locks the upper plate by the action of a grooved joint.

Card 1/2

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1

L 42050-65

ACCESSION NR: AP5010940

ASSOCIATION: none

SUBMITTED: 08Jan64 ENCL: 00 SUB CODE: IE

NO REF SOV: 000 OTHER: 000

Card 2/2

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1

L 5438-66 EWT(d)/EWT(m)/EWP(w)/EWP(c)/EWA(d)/EWP(v)/T/EWP(k)/EWP(z)/EWP(b)/EWP(l)/
ACC NR: AP5022346 EWA(c)/ETC(m) MJW/ JD/WW/HW/EM SOURCE CODE: UR/0135/65/000/009/0007/0010

AUTHOR: Kurkin, S. A. (Doctor of technical sciences); Luk'yanov, V. F. (Engineer) 50 47 B
44 55 44,55

ORG: MVTU im. N. E. Baumana
44 55

TITLE: Evaluating the design strength of a welded, thin-walled container from the results of a biaxial tension test

SOURCE: Svarochnoye proizvodstvo, no. 9, 1965, 7-10

TOPIC TAGS: metal, alloy, alloy strength, burst strength, design strength, strength test, burst test/VAD-1T alloy, VKS-1 steel

ABSTRACT: A method for preliminary evaluation of the design strength of a welded, thin-wall container based on the results of a relatively simple bulging test are discussed. In the bulging test developed by MVTU, flat specimens of sheet metal with or without weld are bulged to fracture by a hydrostatic pressure applied in increments (Fig. 1). After each increment the pressure is released and the curvature of the bulge

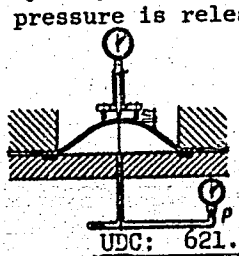

Fig. 1. Burst test

Card 1/2 UDC: 621.791.011:620.162.2

09010627

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1

L 5438-66

ACC NR: AP5022346

3

and the sheet are measured. Graphs are then plotted from which the design strength of a container can be determined. The method makes it possible to evaluate the effect of various factors individually or in combination. It was used to evaluate the performance of VAD-1T alloy, VKS-1 steel, and a low-carbon steel. Orig. art. has: 5 figures and 6 formulas. [AZ]

SUB CODE: AS, MM/ SUBM DATE: none/ ORIG REF: 004/ OTH REF: 005/ ATD PRESS: 4134

Card 2/2

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1

KNYAZEVA, Ye.M.; LUK'YANOV, V.F.

Reaction of zirconium with certain complexons. Zhur. neorg. khim. 10 no.5:1107-1109 My '65. (MIRA 18:6)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1

LUK'YANOV, V.F.; KOZLOVA, A.B.

Analytical chemistry of thorium. Report No.4: Complexometric determination of thorium in monazite concentrates after its separation by 2-indenylphosphonic acid. Zhur. anal. khim. 20 no.10:1097-1099 '65. (MIRA 18:11)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1

L 23413-66 EWT(d)/EWT(m)/EWP(w)/EWA(d)/EWP(v)/T/EWP(t)/EWP(k)/EWA(h)/ETC(m)-6

ACC NR: AP6004139 IJP(c) JD/WW/ HM/EM SOURCE CODE: UR/0125/66/000/001/0043/0049

AUTHOR: Kurkin, A. S.; Luk'yanov, V. F.; Meshaykin, N. S.; Simonik, A. G.

ORG: [Kurkin, Luk'yanov, Meshaykin] MVTU im. Bauman

TITLE: Tests of base metal, welded joints and models of thin-walled vessels of EP257 high-strength steel

SOURCE: Avtomaticheskaya svarka, no. 1, 1966, 43-49

TOPIC TAGS: hydraulic buckling, metal test, tensile test, weld evaluation, pressure vessel, high-strength steel/ EP257 high strength steel

ABSTRACT: The use of high-strength steels as the material of thin-walled welded vessels working under pressure has shown that the danger of rupture of the vessels in the presence of mean stresses lower than the ultimate strength of the base metal is the greater the higher this ultimate strength is. In this connection, the authors tested the welded joints and base metal of pressurized thin-walled vessels of EP257 high-strength steel by the newly developed method of biaxial streching by means of the hydraulic buckling of flat sheet specimens via a round orifice. In testing the base metal the purpose is to determine the true peripheral stress σ_1 as a function of true deformation in the direction of thickness ε_3 until the instant of rupture. Considering that the shape of the bulge is almost spherical, the measurements (Fig. 1)

Card 1/4 UDC: 621.791.7:672.4:53.092

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1

L 23413-66

ACC NR: AP6004139

0

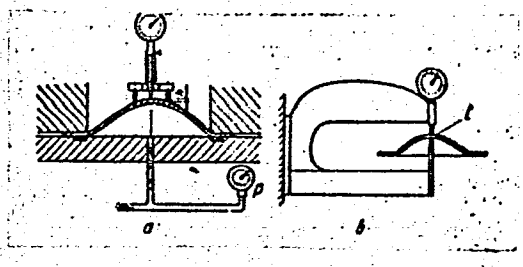

Figure 1. Measuring the principal parameters of pressure:
a - curvatures of surface; b - thickness during test (pressure is measured by a manometer)

Card 2/4

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1

L 23413-66

ACC NR: AP6004139

4

of pressure P, radius R of curvature and thickness t in the zone of zenith of the bulge are used to calculate the true stresses σ_1

and the true deformation

$$\sigma_1 = \frac{PR}{2t} \quad (1)$$

$$\varepsilon_{3p} = \ln\frac{t}{t_0} \quad (2)$$

where t_0 is initial thickness of the sheet specimen, ε_{3p} is the plastic component of true deformation with respect to thickness. The function $\sigma_1 = f(\varepsilon_3)$ is determined by measuring thickness t in the presence of various levels of loading and then, with the aid of a corresponding formula, used to evaluate the future loadbearing ability of the material in a pressurized cylindrical vessel. Strength is determined according to the magnitude of the stresses in the base metal at the instant of rupture of the welded joint as well as according to the direction of fracture -- along or across the weld. On this basis it is established that the best results are obtained for welded joints subjected to isothermal annealing at 880°C for 20 minutes. Subsequent hydraulic rupturing tests of containers of EP257 steel with welded-on lids and with measurement of strains during loading confirmed the objectivity of the estimates obtained during the tests of flat specimens under conditions of biaxial stretching by the hydraulic buckling method. Thus, the biaxial stretching test may be recommended as a basic test

Card 3/4

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1

L 23413-66

ACC NR: AP6004139

for evaluating the effect on the structural strength of a container of different types of treatment, welding and final hot working of the sheet metal from which the container is constructed. Orig. art. has: 5 figures, 3 tables and 15 formulas.

SUB CODE: 11, 13/ SUBM DATE: 19Feb65/ ORIG REF: 002/ OTH REF: 000

Card 4/4

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1

28(1) SOV/118-59-3-17/22

AUTHOR: Luk'yanov, V.G., Engineer

TITLE: Coal Mining With the PKG Combine (Provedeniye vyrabotok po uglyu kombaynom PKG)

PERIODICAL: Mekhanizatsiya i avtomatizatsiya proizvodstva, 1959, Nr 3, pp 52-53 (USSR)

ABSTRACT: The most important measure for facilitating working conditions and increasing speed in mining is the mechanization of preparatory work. Considerable success was achieved by Lenin Prize winner and Head of the Mechanical Department of the "Baydayevskaya" Mine (Kuzbass), Y.Y. Gumenik, and the Chief Administrator of the same mine, M.G. Kovalchuk, having introduced in 1953 the boring combine machine PKG 1; the factory testing of this equipment, gave good results. In 1954 an improved machine, PKG 2, and in 1957 the first models of machine PKG 3 were designed. Using the combine machine speeds up work, reduces the time needed for preparation of Bremsberg fields, and decreases production costs by 2-3 times. The machine

Card 1/2

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1

Coal Mining With the PKG Combine SOV/118-59-3-17/22

can be easily maneuvered. The boring time of the machine is 50% of that of the whole process; therefore, in order to cut out the stops and increase speed, it is necessary to construct telescopic conveyers, or similar equipment permitting the continuous work of the machine. There are 2 tables.

Card 2/2

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1

AKIMOCHKIN, P.V., starshiy prepodavatel'; LUK'YANOV, V.G., assistent

Investigating ore loading and car change in drift mining. Izv. vys.ucheb.zav.; gor.zhur. no.5:18-24 '59. (MIRA 13:5)

1. Tomskiy ordena Trudovogo Krasnogo Znameni politekhnicheskiy institut imeni S.M.Kirova. Rekomendovana kafedroy shakhtnogo stroitel'stva.

(Ore handling) (Mine railroads--Cars)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1

LUK'YANOV, Viktor Georgiyevich; AKIMOCHKIN, Petr Vikulovich; TUTNOV, A.O., otv. red.; MELIKHOV, I.D., red.izd-va; VOLDYREVA, Z.A., tekhn. red.

[Practice in and prospects for using equipment in placing supports in horizontal workings] Opyt i perspektivy primeneniia krepeukladchikov v gorizontal'nykh gornykh vyrabotkakh. Moskva, Gosgortekhizdat, 1963. 87 p. (MIRA 16:6) (Mine timbering) (Reinforced concrete construction)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1

LUK'YANOV, V.I.

Unusual case of invasion of man by Ascaridia galli. Med. paraz. i paraz. bol. 32 no.4:489-490 Jl-Ag '63. (MIRA 17:8)

1. Iz parazitologicheskogo otdeleniya Borisoglebskoy gorodskoy sanitarno-epidemiologicheskoy stantsii (glavnyy vrach P.D. Likhacheva) Voronezhskoy oblasti.

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1

LUK'YANOV, V. I. - FILIPOV, M. F. - GROMOV, N. K.

Moscow - Heating from Central Stations

Practical systems for district heat supply in Moscow.
Gor. khoz. Mosk. no. 1, 1953

9. Monthly List of Russian Accessions, Library of Congress, May 1953. Unclassified.

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1

LUK'YANOV, V. I.

PHASE I BOOK EXPLOITATION SOV/4896

Moskovskiy dom nauchno-tekhnicheskoy propagandy imeni F. E. Dzerzhinskogo

Avtomaticheskye rotornyye linii - sredstvo kompleksnoy avtomatizatsii proizvodstva. (Rotary-Transfer-Machine Lines-a Means of Full Automation of Production) Moscow, Mashgiz, 1960. 221 p. 10,000 copies printed.

Ed.: L. N. Koshkina; Ed. of Publishing House: I. Vasil'yeva; Tech. Ed.: G. V. Smirnova; Managing Ed. for Literature on Metalworking and Machine-Tool Making: V. I. Mitin, Engineer.

PURPOSE: The book is intended for technical personnel in the machinery industry.

COVERAGE: This collection of articles explains the principles of full automation based on the use of rotary transfer machines in various industries. The rotary operational transfer machines used for basic processing are discussed, and also the special power equipment and

Card 1/4

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1

accessories for these machines and [production] lines. No personalities are mentioned. There are no references.

TABLE OF CONTENTS:

Koshkin, L. N. Basic Problems in the Full Automation of Product Manufacture 3

PART I. ROTARY TRANSFER MACHINES FOR BASIC MANUFACTURING PROCESSES

Luk'yanov, V. I. Rotors for Die-Pressing Operations 21

Vlasov, M. D. Rotors for Heat Treatment 32

Sirotin, P. I. Rotors for Mechanical Processing 42

Shumilin, D. V. Rotors for Chemical Processing 52

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1

LUK'YANOV, V.I., kandidat arkhitektury

Progressive principles of planning and building industrial city districts. Izv. ASIA no.2:21-27 '60. (MIRA 13:7)
(City planning)
(Factories--Design and construction)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1

LUK'YANOV, V.I.

Requirements concerning general plans for industrial enterprises related to urban development. Prom.stroi. 38 no.4:6-9 '60. (MIRA 13:8)

1. Nauchno-issledovatel'skiy institut gradostroitel'stva Akademii stroitel'stva i arkhitektury SSSR.
(Factories--Design and construction)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1

LUK'YANOV, V.I.; KHORKHOT, A.Ya.; ZORKIN, G.N.; NORMANN, B.B.; PLESHKOV, L.Ye.; LYTKIN, K.F.; KOZHEVNIKOV, O.A.; TEMCHIN, N.A.; ORLOV, V.V.; ZLATOLINSKIY, V.N.; MAKHOV, M.S.; RUKAVISHNIKOV, I.D.; SHITOVA, L.N., red.izd-va; OSENKO, L.M., tekhn.red.

[Instructions for drafting general plans of industrial enterprises] Ukazaniia po proektirovaniiu general'nykh planov promyshlennykh predpriiatii. Odobreny Gosudarstvennym komitetom Soveta Ministrov SSSR po delam stroitel'stva 15 noiabria 1960 g. Moskva, Gos.izd-vo lit-ry po stroit., arkhit. i stroit.materialam, 1961. 131 p. (MIRA 15:2)

1. Akademiya stroitel'stva i arkhitektury SSSR. Institut gradostroitel'stva i rayonnoy planirovki. 2. Akademiya stroitel'stva i arkhitektury SSSR, Nauchno-issledovatel'skiy institut gradostroitel'stva i rayonnoy planirovki (for Luk'yanov). 3. Akademiya stroitel'stva i arkhitektury USSR, Nauchno-issledovatel'skiy institut gradostroitel'stva (for Khorkhot). 4. Giproaviaprom (for Zorkin, Normann). 5. Gosudarstvennyy soyuznyy institut po proyektirovaniyu metallurgicheskikh zavodov (for Pleshkov). 6. Gosudarstvennyy institut po proyektirovaniyu zavodov tyazhelogo mashinostroyeniya (for Lytkin, Kozhevnikov). 7. Gosudarstvennyy proyektnyy institut No.1 (for Temchin). 8. Gosudarstvennyy proyektnyy institut stroitel'noy promyshlennosti (for Orlov, Zlatolinskiy). 9. Gosudarstvennyy proyektnyy institut po promyshlennomu transportu (for Makhov, Rukavishnikov).

(Industrial plants--Design and construction)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1

ORLOVSKIY, Z.A., kand. tekhn. nauk, red.; GODES, I.G., kand. tekhn. nauk, red.; NESOV, V.D., inzh., red.; LUK'YANOV, V.I., kand. arkh., red.; STRASHNYKH, V.P., red.izd-va; KLIMOVA, G.D., red.izd-va; RODIONOVA, V.M., tekhn. red.; MAUMOVA, I.D., tekhn. red.

[Construction specifications and regulations] Stroitel'nye normy i pravila. Moskva, Gosstroiizdat. Pt.2. Sec.G. ch.6.[Sewerage standards for design (SNiP II-G6-62)] Kanalizatsiia normy proektirovaniia (SNiP II-G.6-62) 1962. 72 p. Pt.2. Sec.M. ch.1. [General plans of industrial enterprises; standards for design (SNiP II-M.1-62)] General'nye plany promyshlennykh predpriiatii; normy proektirovaniia (SNiP II-M.1-62) 1962. 54 p. (MIRA 16:3)

1. Russia (1923- U.S.S.R.) Gosudarstvennyy komitet po delam stroitel'stva. 2. Gosudarstvennyy komitet Soveta Ministrov SSSR po delam stroitel'stva (for Orlovskiy, Nesov). 3. Akademiya kommunal'nogo khozyaystva RSFSR (for Godes). 4. Nauchno-issledovatel'skiy institut gradostroitel'stva Akademii stroitel'stva i arkhitektury SSSR (for Luk'yanov). (Sewerage--Standards) (Industrial plants--Design and construction)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1

84411

S/056/60/039/004/029/048
B006/B063

24.4500

AUTHOR: Luk'yanov, V. K.

TITLE: Rotational State Energies of Non-axial Nuclei With J = 10 and J = 12

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1960, Vol. 39, No. 4(10), pp. 1051 - 1052

TEXT: A. S. Davydov et al. (Refs. 1 and 2) developed a theory of non-axial nuclei, and calculated the energy of rotational levels up to J = 8. In the present paper, the author gives a numerical computation of rotational levels with J = 10 and J = 12, using a wave function given by Davydov and V. S. Rostovskiy: $\psi_{JM} = \sum_{K\geq 0} |JK\rangle A_K$, $(\hat{H}-\varepsilon)\psi = 0$, where $\hat{H}$ is the operator of the rotational energy of the non-axial nucleus, which is a function of the non-axiality parameter γ. The rotational energies $\varepsilon(10)$ and $\varepsilon(12)$ are calculated for different values of γ. They are given in $\hbar^2/4B\beta^2$ units in the following table:

Card 1/2

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1

84411

Rotational State Energies of Non-axial Nuclei With J = 10 and J = 12

S/056/60/039/004/029/048
B006/B063

γ	0°	10°	15°	20°	25°	30°
$\varepsilon(10)$	73.33	76.14	75.28	72.51	70.62	70
$\varepsilon(12)$	104	106.9	103.8	99.52	97.11	96

The transition energies between rotational states up to J = 10 for Th^{232} and up to J = 12 for U^{238} were experimentally determined by the method of multiple Coulomb excitation (Ref. 3). In order to have agreement with the theory of non-axial nuclei, it was necessary to introduce additional terms into the formula $\varepsilon = AJ(J+1)$. The parameters of these terms were selected in such a way that agreement with the above theory was guaranteed. No additional terms are required for the model of the non-axial nucleus, and excellent agreement was found for $\gamma = 12^\circ$ (U^{238}) and $\gamma = 15^\circ$ (Th^{232}) (see Fig.). The author thanks Professor A. S. Davydov and V. S. Rostovskiy for valuable advice and comments. There are 1 figure, 1 table, and 3 references: 2 Soviet and 1 US.

ASSOCIATION: Saratovskiy gosudarstvennyy universitet (Saratov State University)

SUBMITTED: May 11, 1960

Card 2/2

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1

S/188/62/000/002/010/013
B154/B102

AUTHOR: Luk'yanov, V. K.

TITLE: Deuteron stripping on non-axial nuclei

PERIODICAL: Moscow. Universitet. Vestnik. Seriya III. Fizika, astronomiya, no. 2, 1962, 74-79

TEXT: Basing on previous publications concerning deuteron stripping on non-axial nuclei, the author determined the proton angular distribution, the reduced widths, and the polarization, which are changed by the nuclear rotation. The amplitude of the (dp) reaction is

$$I = \sum_{jlm} \left(\frac{1}{2}\,\frac{1}{2}\,\mu_n\mu_p \,|\, 1\mu_d\right) \left(l\,\frac{1}{2}\,m\mu_n \,|\, j\mu\right) (I_i j M_i \mu \,|\, I_f M_f)\ \Theta_{jl}\, F_l^m, \qquad (4)$$ where

Card 1/4

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1

$$F_l^m = \int \psi_p^*(\vec{k}_p \vec{r}_p) V_{np}(\rho) R_l(r_n) Y_{lm}^*(\theta_n \varphi_n) \Phi_d(\rho) \times$$
$$\times \psi_d(\vec{k}_d \vec{r}_p \vec{r}_n) d\vec{r}_n d\vec{r}_p d\rho,$$

$$\Theta_{jl} = \sqrt{\frac{2I_i+1}{2I_f+1}} \sum_{K_i K_f \Omega} C_{il\Omega} A_{K_i} A_{K_f} g(K) (I_i j K_i \Omega / I_f K_f).$$

For the proton angular distribution as calculated from I^2 by summation over the projections of the momenta in the channel inputs and outputs the expression

$$\frac{d\sigma}{d\Omega} \sim \sum_{jl} (2l+1)^{-1} \Theta_{jl}^2 \sum_m |F_l^m|^2.$$

is obtained. In the case of plane waves for p and d, F_l^m has the form of a Buttler integral ($r_n > R$). θ_{jl}^2 is the reduced width in terms of the single-particle reduced width; ($\theta_{jl}^2 = S_{jl}$). S_{jl} is a spectroscopic

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1

factor. The polarization is given by

$$P = P_z = \frac{\sum\limits_{\mu_d M_l M_f} \left\{ \left| I\left(\mu_p = +\frac{1}{2}\right)\right|^2 - \left| I\left(\mu_p = -\frac{1}{2}\right)\right|^2 \right\}}{\sum\limits_{\mu_d M_l M_f} \left\{ \left| I\left(\mu_p = +\frac{1}{2}\right)\right|^2 + \left| I\left(\mu_p = -\frac{1}{2}\right)\right|^2 \right\}}.$$

If $z \uparrow\uparrow \vec{k}_d \times \vec{k}_p$ and the $\hat{l}\,\hat{s}$ interaction in both channels is ignored, then P is given by

$$P = P_z = \frac{2}{3} \frac{\sum\limits_{jl} (-)^{j-l-\frac{1}{2}} \theta_{jl}^2 (2j+1)^{-1} (2l+1)^{-1} \sum\limits_m m |F_l^m|^2}{\sum\limits_{jl} \theta_{jl}^2 (2j+1)^{-1} \sum\limits_m |F_l^m|^2}.$$

In Buttler's approximation $F_l^m = \text{const}\ Y_{lm}(\theta_{\vec{k}}, \varphi_{\vec{k}})$, where $\vec{k} = k_d - k_p$, one obtains $P \sim \sum\limits_m m \left|Y_{lm}\right|^2 = 0$. From this it follows that according to

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1

the Buttler theory the polarization always vanishes. If the deuteron and proton waves are distorted the polarization will not vanish. In this case corrections to the rotation may arise in the reduced widths. For $Mg^{25}(dt)Mg^{24}$ reactions, comparison of the theoretical and the experimental values of θ^2_{jl} obtained by other authors shows satisfactory results. There is 1 table. The most important English-language reference is: E. M. Hamburger, A. G. Blair, Phys. Rev., 119, 777, 1960.

ASSOCIATION: Kafedra elektrodinamiki i kvantovoy mekhaniki, Moskovskiy universitet (Department for Electrodynamics and Quantum Mechanics, Moscow University)

SUBMITTED: June 12, 1961

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1

LUKYANOV, V.K.

On the transfer of charged particles in reactions with heavy ions. Acta physica Pol 22 no.6:529-531 D '62.

1. Joint Institute for Nuclear Research, Dubna.

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1

S/048/62/026/008/025/028
B104/B102

AUTHOR: Luk'yanov, V. K.

TITLE: Reduced widths in stripping reactions on nonaxial nuclei

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Seriya fizicheskaya, v. 26, no. 8, 1962, 1096-1097

TEXT: The amplitude of stripping reactions produced by rotation of a non-axial nucleus can be written in Born approximation as

$$I = \int d\tau\, d\mathbf{r}_n \psi_f^* V_{np} \Phi_i \psi_i \langle \psi_{I_f M_f}(\zeta \mathbf{r}_n) | \psi_{I_i M_i}(\zeta) \rangle, \quad (1)$$

wherein <.....> is the overlapping integral of the wave functions of the initial and final nuclei. If the wave function $\psi_{I_f M}$ of the final nucleus can be represented as the product of a single-particle neutron function and of the function $\psi_{I_i M_i}$ of the target nucleus, then the spectroscopic factor $S_{jl}(I)$ can be separated from $|\langle \ldots \rangle|^2$. $\theta^2_{jl}(I) = S_{jl}(I)\gamma_0^2$ is

Card 1/2

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1

the reduced level width which can be measured experimentally. The S factor takes account of the effect due to collective excitation of the nucleus and is calculated by using wave functions from the theory of nonaxial nuclei. The wave functions are represented as the product of a rotation function, of the function of the particles outside the core, and of a neutron function. The following is obtained for the S factor:

$$S_{jl} = \frac{2I_i+1}{2I_f+1}\left|\sum_{K_iK_f} g(K)\, A_{K_i}A_{K_f}C_{jlK_f-K_i}(I_ijK_iK_f-K_i\,|\,I_fK_f)\right|^2; \qquad (2).$$

Here A_K are the coefficients for the expansion of the rotation function of a nonaxial nucleus with respect to Wigner D-functions and $C_{jl\Omega}$ are the coefficients for an expansion of the neutron wave function. The results (Table) are in good agreement with experimental data. There is 1 table.

ASSOCIATION: Laboratoriya teoreticheskoy fiziki Ob"yedinennogo instituta yadernykh issledovaniy (Laboratory of Theoretical Physics of the Joint Institute of Nuclear Research)

Card 2/2

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1

LUK'YANOV, V. K.; PETKOV, I. Zh.

"Concerning Collective Excitations of Nuclei by Scattering of Electrons."

report submitted for All-Union Conf on Nuclear Spectroscopy, Tbilisi, 14-22 Feb 64.

OIYaI (Joint Inst Nuclear Res)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1

LUK'YANOV, V. K.

"Excitation of Nuclei by Scattering of Heavy Ions."

report submitted for All-Union Conf on Nuclear Spectroscopy, Tbilisi, 14-22 Feb 64.

OIYAI (Joint Inst Nuclear Res)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1

LUK'YANOV, V.K.; FOKIN, A.G.

Geometrical effect in stripping reactions on deformed nuclei.
Izv. AN SSSR. Ser. fiz. 28 no.1:56-59 Ja '64. (MIRA 17:1)

1. Ob"yedinennyy institut yadernykh issledovaniy.

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1

ACCESSION NR: AP4042966 S/0048/64/028/007/1207/1211

AUTHOR: Luk'yanov, V.K.; Petkov, I.Zh.

TITLE: On collective excitation of nuclei in electron scattering [Report, 14th Annual Conference on Nuclear Spectroscopy held in Tibilisi 14-21 1964]

SOURCE: AN SSSR. Izv. Seriya fizicheskaya, v.28, no.7, 1964, 1207-1211

TOPIC TAGS: nuclear structure, electron scattering, nuclear model, shell theory

ABSTRACT: The cross sections for inelastic scattering of electrons by nuclei with excitation of collective nuclear states are calculated. The calculations are intended to apply to heavy nuclei to which the unified model is known to afford an adequate approximation; therefore the "improved" Born approximation of D.Saxon and L. J.Schiff (Nuovo Cimento,6,614,1957) and W.Czyz and K.Gottfried (Ann.Physik 21,47, 1963), which takes approximate account of the distortion of the wave function by the Coulomb field, is employed. The transverse terms in the interaction are neglected; this should be justified at scattering angles greater than 5° for excitation of low-lying levels by 150 MeV electrons. Only quadrupole nuclear transitions and the $0^+ \rightarrow 0^+$ monopole transitions are treated, and the nuclear states are described in

Card 1/2

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1

ACCESSION NR: AP4042966

terms of the nonaxial nuclear model of A.S.Davy*dov et al (Nucl.Phys.8,237,1958; 12, 58,1959; 24,682,1961; 27,134,1961). The cross sections are calculated both for nuclei with a constant density (sharp boundary) and for nuclei with a Gaussian density distribution. The cross sections for the excitation of the first and second 2^+ levels of Mg^{24} and the $0^+ \rightarrow 0^+_\beta$ transition in Gd^{156} by 150 MeV electrons were evaluated numerically as examples and the results are presented graphically. The cross section for exciting the second 2^+ level of Mg^{24} was found to be less than that for the first 2^+ level by a factor of about 12. Smearing the nuclear surface by employing a Gaussian density distribution exerted very little influence on the Mg^{24} cross sections, but it decreased the Gd^{156} cross section by an order of magnitude. Orig. art.has: 21 formulas and 3 figures.

ASSOCIATION: Laboratoriya teoreticheskoy fiziki Ob"yedinennogo instituta yadernikh issledovaniy (theoretical Physics Laboratory, Joint Institute for Nuclear Research)

SUBMITTED: 10Jan63

ENCL: 00

SUB CODE: NP

NR REF SOV: 002

OTHER: 005

Card

2/2

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1

ACCESSION NR: AP4042967 S/0048/64/028/007/1212/1219

AUTHOR: Luk'yanov, V.K.

TITLE: Excitation of nuclei in scattering of heavy ions /Report, 14th Annual Conference on Nuclear Spectroscopy held in Tibilisi 14-21 Feb 1964/

SOURCE: AN SSSR. Izv. Seriya fizicheskaya, v.28, no.7, 1964, 1212-1219

TOPIC TAGS: nuclear reaction, ion scattering, inelastic scattering, Coulomb excitation

ABSTRACT: Formulas are derived for the cross section for nuclear excitation by inelastic scattering of heavy ions. One advantage of employing heavy ions for Coulomb excitation investigations is the relative ease with which effects due to compound nucleus formation can be distinguished, for the compound nucleus is very unlikely to decay via an inelastic scattering channel with the reconstitution of the same heavy ion that formed it. At energies near the Coulomb barrier, moreover, transitions can be excited by nuclear interaction that are forbidden in pure Coulomb excitation. The cross section for such a transition will be very sensitive to the behavior of the nuclear potential near the surface of the nucleus and can afford in-

1/3

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1

ACCESSION NR: AP4042967

formation concerning it. The formula for the cross section is derived in rather general form by a distorted wave method in which both the nuclear and Coulomb interactions are included. The simplifications possible in the "quasi-classical approximation", valid for $Z_1Z_2e^2 \gg \hbar v$, are then introduced. Finally, the cross section for the excitation of the $0^+ \rightarrow 0^+_\beta$ vibrational transition, which is forbidden in pure Coulomb excitation, is obtained in closed form. In deriving this last expression; the nuclear potential is assumed to be proportional to $(a/r)\exp(-r/a)$ for r greater than the "radius" of the nucleus. The cross sections for the excitation of the $0^+ \rightarrow 0^+_\beta$ transition in Gd^{156} by inelastic scattering of C^{12} and A^{40} were evaluated, and the results are presented graphically. The cross section for excitation by A^{40} increased much less rapidly with increasing energy than that for excitation by C^{12}. It is accordingly advantageous to employ heavier ions in investigations of the contemplated type, for they enable one to work farther below the Coulomb barrier. The cross section for excitation by A^{40} was calculated for the two values 0.4 and 0.6 fermi for the parameter a in the expression for the nuclear potential outside the nucleus. The cross section for the larger value of a was found to be the greater by more than a factor 100; this illustrates the great sensitivity of the cross sections for such processes to the form of the nuclear potential outside the nucleus. Orig. art.has; 38 formulas and 2 figures.

2/3

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1

ACCESSION NR: AP4042967

ASSOCIATION: Laboratoriya teoreticheskoy fiziki Ob"yedinennogo instituta yaderny*kh issledovanii (Theoretical Physics Laboratory, Joint Institute for Nuclear Research)

SUBMITTED: 25Jan64 ENCL: 00

SUB CODE: NP NR REF SOV: 002 OTHER: 003

3/3

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1

LUK'YANOV, V.K.; PETKOV, I.Zh.

Collective excitations of nuclei under electron scattering.
Izv. AN SSSR. Ser. fiz. 28 no.7:1207-1211 Jl '64
(MIRA 17:8)

1. Laboratoriya teoreticheskoy fiziki Ob"yedinennogo instituta yadernykh issledovaniy.

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1

LUK'YANOV, V.K.

Excitation of nuclei in the scattering of heavy ions. Izv. AN SSSR. Ser. fiz. 28 no.7:1212-1219 Jl '64 (MIRA 17:8)

1. Laboratoriya teoreticheskoy fiziki Ob"yedinennogo instituta yadernykh issledovaniy.

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1

LUK'YANOV, V.K.; PETKOV, I.Zh.

Inelastic scattering of heavy particles with excitation of collective nuclear states. Izv. AN SSSR.Ser.fiz. 29 no.5:823-829 My '65. (MIRA 18:5)

1. Laboratoriya teoreticheskoy fiziki Ob"yedinennogo instituta yadernykh issledovaniy.

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1

L 41293-66 EWT(m)/EWP(t)/ETI IJP(c) BC

ACC NR: AP6019616 (A,N) SOURCE CODE: UR/0048/66/030/002/0255/0256

AUTHOR: Gridnev, K.A.; Krasnov, L.V.; Kukhtina, I.N.; Luk'yanov, V.K.; Nikitina, V.I.; Furman, V.I.

ORG: none

46
B

TITLE: Calculation of direct nuclear reactions by the distorted wave method/Report Fifteenth Annual Conference on Nuclear Spectroscopy and Nuclear Structure, held at Minsk, 25 January to 2 February 1965/

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v. 30, no. 2, 1966, 255-256

TOPIC TAGS: nuclear reaction, mathematic method, ~~direct nuclear reaction, nuclear stripping reaction, distorted wave approximation~~ wave analyzer

ABSTRACT: The authors have employed an electronic computer to calculate differential cross sections for (d,p) reactions in the distorted wave approximation under the following simplifying assumptions: 1) the range of the nuclear forces is zero (the interaction potential is a delta-function) and 2) there is no spin-orbital coupling The calculated angular distribution of protons from the $^{17}Fe^{56}$ (d,p)Fe^{57} reaction with an incident deuteron energy of6.6MeV is compared with the angular distribution calculated in the plane wave approximation (Butler's theory) and with experimental data of V.P.Bochin, K.I.Zherebtsova, V.S.Zolotarev, V.A.Komarov, L.V.Krasnov,

Card 1/2

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1

ACC NR: AP6019616

V.F.Litvin, Yu.A.Nemilov, and B.G.Novatskiy (Vestn. Leningr.un-ta, No.22 78 (1963)). The experimental data are in much better agreement with the distorted wave calculations than with the plane wave calculations. The authors intend to publish a detailed description of their calculations and expect to relax the simplifying assumptions 1) and 2) in future work. Orig. art. has: 2 formulas and 1 figure.

SUB CODE: 20 SUBM DATE: 00 ORIG. REF: 001 OTH REF: 002

Card 2/2 LC

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1

LUK'YANOV, V.L., deputat Verkhovnogo Soveta SSSR, master bloka martenovskikh pechey; GOLIKOV, I.N.; BUY, B.I.; LEPORSKIY, V.V.; SOPOV, T., Geroy Sotsialisticheskogo Truda, val'tsovshchik; MANTSEV, R.M.; CHERNOV, V.D., stalevar

We are carrying out the decisions of the 22d Congress of the Communist Party of the Soviet Union. Metallurg 7 no.7:2-6 Jl '62. (MIRA 15:7)

1. Nichne-Tagil'skiy metallurgicheskiy kombinat (for Luk'yanov). 2. Direktor TSentral'nogo nauchno-issledovatel'skogo instituta chernoy metallurgii (for Golikov). 3. Sekretar' partiynogo komiteta Makeyevskogo metallurgicheskogo zavoda (for Buy). 4. Direktor zavoda "Azovstal'" (for Leporskiy). 5. Magnitogorskiy metallurgicheskiy kombinat (for Sopov). 6. Direktor Gosudarstvennogo soyuznogo instituta po proyektirovaniyu agregatov staleliteynogo i prokatnogo proizvodstva dlya chernoy metallurgii (for Mantsev). 7. Chelyabinskiy metallurgicheskiy zavod (for Chernov).
(Metallurgy)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1

LUK'YANOV, V.M.

KOSTYUKOVSKIY, V.Ya., gornyy inzhener; LUK'YANOV, V.M., gornyy tekhnolog.

Experience in the use of sectional timbering in lateral drifting at the Egozovskaia no. 1 mine. Shakht.stroi. no.6:25-27 Je '57. (MIRA 10:7)

(Mine timbering) (Reinforced concrete constructions)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1

LUK'YANOV, V.M.

VANSHTOK, A.S., gornyy inzhener; LUK'YANOV, V.M., mladshiy nauchnyy sotrudnik.

Construction of sectional reinforced concrete supports in the Kuznetsk Basin. Ugol' 32 no.8:43-45 Ag '57. (MLRA 10:9)

1. Kemerovskiy filial Giproshakhtostroymash.
(Kuznetsk Basin--Mine timbering)
(Reinforced concrete constructions)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1

L 01463-66 EWT(1)/EPF(n)-2/EWG(m) EPA(w)-2 IJP(c) AT

ACCESSION NR: AP5016651 UR/0382/65/000/002/0035/0043
533.9.082

AUTHOR: Iskol'dskiy, A. M.; Kurtmullayev, R. Kh.; Luk'yanov, V. N.; Nesterikhin, Yu. Ye.; Ponomarenko, A. G.

TITLE: Some properties of the behavior of plasma heated by collisionless shocks

SOURCE: Magnitnaya gidrodinamika, no. 2, 1965, 35-43

TOPIC TAGS: plasma shock wave, shock wave heating, plasma diagnostics, microwave, plasma containment

ABSTRACT: The generation of collisionless shocks in plasma with quasistatic axial magnetic field by use of theta-pinches (powered by a storage system with maximum energy of about 3000 J) is discussed. Plasma density in the experiments was about 10^{13} cm^{-3}. Magnetic and optical measurements indicate the formation of a cylindrical "magnetic piston" driving the collisionless shocks which concentrates along the plasma axis. Also studied are the accompanying phenomena of X-ray and microwave (8 mm) noise emission. The diagnostic instrumentation (magnetic and scintillation probes and image-converter camera) is described in detail and typical results are shown (e. g. collisionless shock is shown to run ahead of the current sheet). It

Card 1/2

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1

L 01463-66
ACCESSION NR: AP5016651

6

is shown in the experiments that plasma is heated during first current rise (with trapping of the magnetic field also occuring). Later, a cold plasma sheet formed at the tube walls together with the field trapped in the hot plasma leads to containment of plasma for a few microseconds. "The authors thank Academician G. I. Budker and Corresponding member AN SSSR R. Z. Sagdeyev for their continued interest and help in interpreting the experiment." Orig. art. has: 7 figures.

ASSOCIATION: none

SUBMITTED: 12Aug64 ENCL: 00 SUB CODE: ME, EM

NO REF SOV: 004 OTHER: 004

Card 2/2

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1

BELONOZHKO, Mikhail Arsen'yevich[Bilonozhko, M.A.]; LESIK, Fedor Lukich [Lesyk, F.L.]. Prinimali uchastiye: ZRIBNYAK, L.Ya., kand. ekonom. nauk; LUK'YANOV, V.O., kand. ekonom. nauk; CHMIR, R.D. [Chmyr, R.D.], red.; GORBUNOVA, N.M. [Horbunova, N.M.], tekhn. red.

[Plant growing; manual for secondary schools] Roslynnytstvo; pidruchnyk dlia seredn'oi shkoly. Vyd.2., perer. Kyiv, Radians'ka shkola, 1961. 202 p. (MIRA 15:7)

(Ukraine—Field crops)
(Ukraine—Pastures and meadows)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1

43489
S/205/62/002/006/021/021
E073/E435

27 1220

AUTHORS: Kholin, V.V., Luk'yanov, V.P., Barkova, A.M.

TITLE: Determination of the integral absorbed X-ray dose in animals

PERIODICAL: Radiobiologiya, v.2, no.6, 1962, 947-949

TEXT: The authors propose a new and more accurate method for the determination of the integral absorbed dose, applicable to various conditions of irradiation of test animals. According to S.N.Ardashnikov and N.S.Chetverikov, the integral absorbed dose can be calculated by means of the following expression:

$$\Pi_{integr} = \frac{\psi D A \rho}{\gamma} (1 - e^{-\gamma d}) \text{ g . rad}$$

where ψ - scaling coefficient (= absorbed dose in rad/irradiation dose in r), D - exposure dose at surface level, d - density of irradiated tissue, γ - electronic transformation coefficient, d - thickness of tissue. Two numerical examples are given. It is emphasized that the results are approximate because of the complicated geometry and irregular structure of

Card 1/2

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1

Determination of the integral ... S/205/62/002/006/021/021
E073/E435

the bodies of the test animals.

ASSOCIATION: Institut usovershenstvovaniya vrachey, Leningrad (Postgraduate School for Doctors, Leningrad)

SUBMITTED: March 5, 1962

Card 2/2

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1

S/182/63/000/003/003/008
A004/A127

AUTHORS: Teterin, P. K., Luk'yanov, V. P., Kareva, Ye. N.

TITLE: Improving the technology of producing rings from 1X21H5T (1Kh21N5T) steel

PERIODICAL: Kuznechno-shtampovochnoye proizvodstvo, no. 3, 1963, 13 - 16

TEXT: The authors report on tests carried out, together with S. T. Brun'ko and I. F. Terekhov, to study the technological ductility of 1Kh21N5T steel in the temperature range of 800 - 1,250°C. The nature of structural changes in the 1Kh21N5T steel was investigated at various heating temperatures and heat-treatment conditions. New optimum conditions of heating, deformation and heat treatment of seamless rolled rings of this steel grade were established as follows: the blank heating temperature prior to deformation should be 1,100°C; for large-size forgings weighing more than 150 kg the recommended temperature is 1,150°C. The temperature at the end of the forging or rolling process should not exceed 950°C. Heat treatment of the rings should consist in quenching in

Card 1/2

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1

water at temperatures in the range of 950 - 1,000°C. This improved technology of manufacturing seamless rolled rings of 1Kh21N5T steel makes it possible to completely eliminate rejects because of low notch toughness values. There are 5 figures and 2 tables.

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1

L 54743-65 EWG(j)/EWP(e)/EWT(m)/EWP(w)/EPF(c)/EWP(i)/EWA(d)/EPR/T/EWP(t)/EWP(k)/EWP(z)/EWP(b)/EWA(c) Pf-4/Pr-4/Ps-4 WJW/JD/WW/HW/WH

ACCESSION NR: AP5015826 UR/0182/65/000/006/0004/0007

621.73.032

55
B

AUTHOR: Teterin, P. K.; Luk'yanov, V. P.

TITLE: Open piercing of blanks of low ductility steels and alloys

SOURCE: Kuznechno-shtampovochnoye proizvodstvo, no. 6, 1965, 4-7

TOPIC TAGS: stainless steel, heat resistant steel, low ductility steel, steel open piercing, pierced hole surface quality, lubrication effect/1Kh18N9T steel, 0Kh21N5T steel, 0Kh21N6M2T steel, KhN77YuR alloy

ABSTRACT: Experiments have been made to determine the effect of the method of open piercing on the hole surface quality and on the power requirements in the production of ring-shaped blanks from hard-to-deform stainless and heat-resistant steels and alloys. Holes 60 mm in diameter were pierced in 1Kh18N9T, 0Kh21N5T, 0Kh21N6M2T, and KhN77YuT steel blanks 190 mm in diameter and 40 mm thick. The piercing was done at the blank surface temperature of 1000C, without a lubricant or with dry graphite or glass-cloth lubricant, using solid or hollow punches with or without a supporting ring. It was found that the surface of almost all holes pierced without a lubricant was rough and had numerous scaly tears. The use of

PROBABLY KhN77YuT

Card 1/2

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1

L 54743-65
ACCESSION NR: AP5015826

a lubricant (dry graphite and, particularly, glass cloth) completely eliminated the defects on the hole surface. The use of lubricants was, however, ineffective in open piercing of blanks on a supporting ring using a solid piercing punch, and this method cannot be recommended for piercing low-ductility steels and alloys under industrial conditions. Piercing with a hollow punch was found to be the best method for blanks of hard-to-deform steels and alloys. This method ensures a good quality surface of the pierced hole, requires the least power, and only slightly distorts the shape of the pierced blanks. In all cases, the use of a lubricant significantly decreased the power required for piercing. The use of glass cloth as a lubricant reduced the required power by 20--25%. Orig. art. has: 7 figures. [MS]

ASSOCIATION: none

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

NO REF SOV: 005 OTHER: 000 ATD PRESS: 4030

Card 2/2

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1

L 58401-65 EWT(m)/EWA(d)/EWP(t)/EWP(k)/EWP(z)/EWP(b)/EWA(c) Pf-4/Pad IJP(c)
MJW/JD/HW

ACCESSION NR: AT5016067 UR/2776/65/000/039/0200/0205

AUTHOR: Teterin, P. K.; Luk'yanov, V. P. 33 32 B+1

TITLE: Production of EP375 alloy bars, sheets, and plates

SOURCE: Moscow. Tsentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii. Sbornik trudov, no. 39, 1965. Spetsial'nyye stali i splavy (Special steels and alloys), 200-205

TOPIC TAGS: nickel alloy, chromium containing alloy, molybdenum containing alloy, alloy bar, alloy sheet, alloy plate, alloy mechanical property, bar rolling, sheet rolling, plate rolling/EP3.5 alloy

ABSTRACT: Experiments have been conducted to develop the technology of shaping hard to deform EP375 Ni-Cr-Mo alloy into bars 12—75 mm in diameter and sheets and plates 3.5—20 mm thick and 750—1200 mm wide. It was found that the alloy has the highest ductility at 1000—1200C. At higher temperatures the ductility drops owing to the formation of low-melting eutectics at grain boundaries. On the other hand, at 900—950C brittle intermetallic compounds are formed, which adversely affect the ductility. This limited the hot working

Card 1/2

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1

L 58401-65

ACCESSION NR: AT5016067

range of the alloy to 1000—1200C interval. Bars 45 mm in diameter were drop forged from 500-kg ingots. Smaller bars were rolled from forged billets. For plates and sheets, heavier ingots (2100—2500 kg) were used. The ingots were press forged into slabs which were hot rolled into plates 5—20 mm thick. Sheets 3.2 mm thick were cold rolled from hot rolled sheets 5.5 mm thick. Finished products after annealing at 1120—1180C had a tensile strength of 85—105 kg/mm^2, a yield strength of 37—60 kg/mm^2, and an elongation of 47—56%. The tensile strength, elongation, and especially yield strength of cold-rolled sheets were higher than those of hot-rolled plates. All the products passed prescribed tests for susceptibility to intergranular corrosion. The bars, plates, and sheets were delivered to a customer. Orig. art. has: 5 figures and 2 tables. [ND]

ASSOCIATION: Tsentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii (Central Scientific Research Institute of Ferrous Metallurgy)

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

NO REF SOV: 002 OTHER: 000 ATD PRESS: 4042

Card 2/2

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1

SOV/94-58-10-6/20

AUTHOR: Luk'yanov, V.P., Engineer

TITLE: Automatic Control of "Borets" Type Compressor Installations (Avtomaticheskoye upravleniye kompressornymi ustanovkami tipa "Borets")

PERIODICAL: Promyshlennaya Energetika, 1958, Nr 10, pp 15-17 (USSR)

ABSTRACT: This article considers automatic control and protection of 'Borets' type compressor installations with induction motor drive. Under normal conditions, when there is water in the cooling system, sufficient pressure in the oil system, normal bearing temperatures in the compressor and motor and normal compressed air temperature, automatic control causes the compressor to operate according to the receiver air pressure. The operating device is a contact manometer installed in the receiver. If during operation any of the conditions mentioned above becomes abnormal the machine is automatically stopped. A schematic circuit diagram of the automatic equipment is given and operation of the

Card 1/2

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1

SOV/94-58-10-6/20

Automatic Control of 'Borets' Type Compressor Installations

circuit is explained. The cost of installing the automatic equipment is about 10,000 roubles and the annual economy that results from its use is about 30,000 roubles. There are 3 figures.

ASSOCIATION: Dneprovskiy elektrodnyy zavod (Dneprovskiy Electrode Plant)

Card 2/2

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1

LUK'YANOV, Vladlen Pantaleymonovich; SHAPOVALENKO, A.G., kand.tekhn.nauk, retsenzent; PELEVIN, N.N., inzh., red.; GORNOSTAYPOL'SKAYA, M.S., tekhn. red.

[Automatic control of production processes] Avtomaticheskoe upravlenie proizvodstvennymi protsessami. Moskva, Mashgiz, 1963. 99 p. (MIRA 16:6)

(Automatic control)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1

KHOLIN, V.V.; LUK'YANOV, V.P.

Tables for the computation of the radiation absorption dose in rads in curietherapy of cancer of the cervix uteri. Med.rad. no.1:32-34 '62. (MIRA 15:1)

1. Iz kafedry meditsinskoy radiologii Leningradskogo ordena Lenina instituta usovershenstvovaniya vrachey imeni S.M. Kirova.
(UTERUS—CANCER) (RADIUM—THERAPEUTIC USE)
(RADIATION—DOSAGE)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1

LUK'YANOV, V.P.

Tables for the calculation of the integral absorbed dose in combined radiotherapy of malignant tumors of the cervix uteri. Med. rad. 7 no.12:13-16 D'62. (MIRA 16:10)

1. Iz kafedry meditsinskoy radiologii (zav. - dotsent V.V. Kholin) Leningradskogo gosudarstvennogo instituta usovershenstvovaniya vrachey imeni S.M.Kirova.

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1

ACCESSION NR: AP4003129 S/0241/63/008/011/0030/0033

AUTHOR: Stukova, L. M.; Strutsovskaya, S. V.; Repina, V. A.; Luk'yanov, V. P.

TITLE: Treatment of radiation injuries of the skin and mucous membranes with chlorophyll-carotene paste

SOURCE: Meditsinskaya radiologiya, v. 8, no. 11, 1963, 30-33

TOPIC TAGS: skin radiation injury, mucosa radiation injury, chlorophyll carotene paste, radiation injury therapy

ABSTRACT: In a clinical test 39 women and 6 men, ages 25-74 yrs, were treated with chlorophyll-carotene paste for radiation injuries of the skin and mucous membranes of the pelvis. The 19 patients with skin injuries were treated by direct application of the paste to the skin with bandages. The 26 patients with mucous membrane injuries (rectitis, cystitis, and colpitis) were treated by irrigation of injured sections with the paste dissolved in a 1% novocaine solution. Chlorophyll-carotene paste was found therapeutically effective in all cases. Length of treatment depended on extent of radiation injury.

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1

ACCESSION NR: AP4003129

For radiation skin injuries, the periods were 10 days for stage II and up to a year for stage III. For radiation mucous injuries, the periods were 5-10 days for first degree, 2 weeks-1½ mos for second degree, and 1-6 mos for third degree. Chlorophyll-carotene paste quickly clears the injured surface of necrotic stratifications and stimulates the development of granulation tissue and epithelization which promotes healing. Orig. art. has: 2 figures.

ASSOCIATION: Tsentral'nyy* nauchno-issledovatel'skiy institut meditsinskoy radiologii ministerstva zdravokhraneniya SSSR i kafedry* meditsinskoy radiologii GIDUV (Central Scientific-Research Institute of Medical Radiology of the Ministry of Health SSSR and the Department of Medical Radiology of GIDUV)

SUBMITTED: 12Mar63 DATE ACQ: 20Dec63 ENCL: 00

SUB CODE: AM NO REF SOV: 004 OTHER: 000

Card 2/2

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1

LUK'YANOV, V.P., inzh.-po tekhnicheskoy informatsii

For the promulgation of advanced practices. Tekst. prom. 25 no.7:22-23 Jl '65. (MIRA 18:8)

1. Zaporskaya pryadil'no-tkatskaya fabrika goroda Serpukhova.

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1

L 17415-66 EWT(m)/EWA(d)/EWP(t) JD/HW

ACCESSION NR: AP5013676 SOURCE CODE: UR/0182/65/000/005/0001/0005

AUTHOR: Polukhin, P.I.; Teterin, P.K.; Luk'yanov, V.P.; Vorontsov, V.K.; Kartoshkin, A.A.

ORG: none

39
B

TITLE: Stress deformation state in rolling circular blanks

16,44,55

SOURCE: Kuznechno-shtampovochnoye proizvodstvo, no. 5, 1965, 1-5

TOPIC TAGS: stress analysis, strain, material deformation, circular forging, circular blank, blank, reduction, tensile stress, applied load, load, mandrel diameter effect, ram form effect, reduction degree effect

ABSTRACT: This study was carried out because there is an increasing need of circular forgings from difficultly deforming stainless, and heat resistant, steels and alloys. The stress deformation state of the metal in the area of deformation during the rolling of the circular blanks on a mandrel was investigated with respect to the form of the working surface of the ram (plane, concave, and convex), diameter of the mendrel, and degree of reduction. The experimental results show

2

Card 1/2

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1

L 17415-66

ACCESSION NR: AP5013676

that 1) the process of reduction of circular blanks on a mandrel is accompanied by the occurrence of tensile stress in the deformation area perpendicular to the applied load, 2) the tensile stress and the zone it affects in the deformation area markedly decrease with increase in the degree of reduction, and 3) an increase in the mandrel diameter and application of a concave ram tends to decrease the area of action of the tensile stress as well as of its absolute value. Orig. art. has: 4 formulas, 5 figures, and 3 tables.

SUB CODE: 13,11 SUBM DATE: 00 ORIG REF: 004 OTH REF: 000

Card 2/2 nst

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1

MAN'KOVSKIY, G.I.; LUK'YANOV, V.S.; DOLGOV, O.A.; YERSHOV, N.N.; MATANOVA, E.M.; SBOYEVA-FILINA, K.V.; VOLKOVA, V.A., red.izd-va; SUKHININA, N.D., tekhn.red.

[Methods of calculating the basic parameters of rock freezing processes in shaft sinking with the help of a hydraulic integrator] Metodika rascheta s pomoshch'iu gidrointegratora osnovnykh parametrov protsessa zamorazhivaniia gornykh porod pri prokhodke shakhtnykh stvolov. Moskva, Gos.nauchno-tekhn.izd-vo lit-ry po gornomu delu, 1960. 53 p.

(MIRA 14:5)

(Integrators) (Soil freezing)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1

LUK'YANOV, V.S.

Using the hydraulic analogy method for calculating the temperature conditions of soils, taking into account heat transfer by percolation, and for deducing certain similarity criteria. Inzh.-fiz. zhur. 5 no.2:52-57 F '62. (MIRA 15:1)

1. Institut transportnogo stroitel'stva, Moskva.
(Soil percolation) (Soil temperature)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1

LUK'YANOV, V.S., inzh.

Tapping a seam subject to sudden outbursts of coal and gas. Shakht. stroi. 6 no.5:26-27 My '62. (MIRA 15:7)

1. Ukrainskiy nauchno-issledovatel'skiy institut organizatsii i mekhanizatsii shakhtnogo stroitel'stva.
(Coal mines and mining) (Mine gases)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1

VEVIOROVSKAYA, Mariya Aleksandrovna, dots.; KRAVCHENKO, Irina Pavlovna, starshiy laborant; RUMYANTSEV, Stanislav Alekseyevich, laborant; LUK'YANOV, V.S., prof., doktor tekhn. nauk, red.; KAPUSTINA, V.S., red.; KOZLOVA, T.A., tekhn. red.

[V.S.Luk'ianov's method of hydraulic analogies and N.N. Pavlovskii's method of electrohydrodynamic analogies; applied to seepage computations]Metod gidravlicheskikh analogii V.S.Luk'ianova i metod elektrogidrodinamicheskikh analogii N.N.Pavlovskogo; primenitel'no k fil'tratsionnym raschetam. Moskva, Izd-vo Mosk. univ., 1962. 249 p.

___VI.[Nomograms for computing the development of ground water head and of seepage from channels under conditions of insteady movement]Nomogrammy dlia raschetov razvitiia podpora gruntovykh vod i fil'trtsii iz kanalov v usloviiakh neustanovivshegosia dvizheniia. 55 p. (MIRA 16:4)

(Soil percolation)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1

LUK'YANOV, V.S., inzh.

Tapping coal seams subject to outbursts of coal and gas. Shakht. stroi. 7 no.8:13-15 Ag '63. (MIRA 16:11)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut organizatsii i mekhanizatsii shakhtnogo stroitel'stva.

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1

LUK'YANOV, V.S., inzh.

Opening up a flat pitching seam made dangerous by outbursts of coal and gas. Shakht. stroi. 5 no.9:29-30 S '61.
(MIRA 16:7)

1. Ukrainskiy nauchno-issledovatel'skiy institut organizatsii i mekhanizatsii shakhtnogo stroitel'stva.
(Coal mines and mining)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1

LUK'YANOV, Vladimir Sergeyevich; LAGUTINA, Ye.V., red.

[Physician's advice to those who work and study] Sovety vracha tem, kto rabotaet i uchitsia. Moskva, Izd-vo "Znanie," 1964. 39 p. (Narodnyi universitet: Fakul'tet zdorov'ia, no.21) (MIRA 18:1)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1

1. LUK'YANOV, ENG. V. S.

2. USSR (600)

4. Warehouses

7. Temporary storage structures on building sites, Gor. khoz. Mosk., No. 6, 1949.

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

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1

LUK'YANOV, Vladimir Sergeyevich; GOLOVKO, Mark Dmitriyevich; BARSUNOV, K.P., redaktor; BOBROVA, Ye.N., tekhnicheskiy redaktor.

[Calculating the depth of frozen ground]. Raschet glubiny promerzaniia gruntov. Moskva, Gos. transp. zhel-dor. izd-vo, 1956, 163 p. (Babushkin. Vsesoiuznyi nauchno-issledovatel'skii institut transportnogo stroitel'stva. Trudy, no.23). (MLRA 10:6)
(Frozen ground)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1

LUK'YANOV, V. S. Cand Tech Sci -- (diss) "Study of the distribution of ~~efforts~~ forces in the crankshaft of a running ~~motor~~ engine." Gor'kiy, 1957. 21 pp with diagrams, 20 cm. (Min of River Fleet RSFSR. Gor'kiy Inst of Engineers of Water Transport. Chair of Resistance of Materials), 140 copies (KL, 24-57, 118)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820015-1"