

Alloying heat-resistant austenitic steels.... S/125/62/000/005/003/010
D040/D113

resistance of the metal. There are 7 figures and 3 tables.

ASSOCIATION: Ordena Trudovogo Krasnogo Znameni Institut elektrosvarki im.
Ye.O. Patona AN USSR (Electric Welding Institute "Order of the
Red Banner of Labor" im. Ye.O. Paton, AS UkrSSR)

SUBMITTED: January 14, 1962

Card 3/3

ACCESSION NR: AT4013946

S/2659/63/010/000/0178/0185

AUTHOR: Medovar, B. I.; Chekotilo, L. V.; Lutsyuk-Khudin, V. A.; Pinchuk, N. I.;
Puzrin, L. G.

TITLE: Boron alloys (over 0.3-0.4%) for high temperature austenite steel and weld seams

SOURCE: AN SSSR. Institut metallurgii. Issledovaniya po zharoprochny*m splavam,
v. 10, 1963, 178-185

TOPIC TAGS: boron, boron containing alloy, austenite steel, high temperature
steel, weld seam, weld metal

ABSTRACT: Austenite high-temperature steels alloyed with boron consist of two phases (austenite + boron component of eutectic origin) and are characterized by high tensile strength and elasticity. The use of boron alloys (over 0.3-0.4%) for high temperature austenite steel allows one to solve several important problems. The weld metal sharply increases stability against the formation of hot (crystalline) cracks. Hot cracks adjacent to the weld seams are completely eliminated during welding. The reliability of weld seams working under high temperature and loads is increased significantly by the exclusion of the causes of local brittle failure in the seam zone. The heat resistance of austenite steel and

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ACCESSION NR: AT4013946

weld seams is increased to a great extent. Investigations and experimental work at plants should be expanded so as to develop both new high-temperature austenite steel, as well as flow processes for the use of these steels for welding. Orig. art. has: 3 tables and 3 microphotographs.

ASSOCIATION: Institut metallurgi AN SSSR (Metallurgical Institute AN SSSR)

SUBMITTED: 00

DATE ACQ: 27 Feb 64

ENCL: 00

SUB CODE: ML

NO REF SOV: 015

OTHER: 007

Card 2/2

MEDOVAR, B.I.; PUZRIN, L.G.; LUTSYUK-KHUDIN, V.A.; PAVLIYCHUK, G.A.;
VOLOSHKEVICH, G.Z.

New phenomenon of plastic welding in the weld zone. Dokl. AN
SSSR 148 no.5:106; F '63. (MIRA 16:3)

1. Institut elektrosvarki im. Ye.O.Patona AN UkrSSR. Predstavleno
akademikom B.Ye.Patonom. (Welding)

ACCESSION NR: AP4013289

S/0135/64/000/002/0006/0007

AUTHOR: Komysh, I. I. (Engineer); Lutsyuk-Khudin, V. A. (Engineer); Sayenko, V. Ya. (Engineer); Antonets, D. P. (Engineer)

TITLE: Automatic welding of circular seams of pressure vessels of two-layer steel

SOURCE: Svarochnoye proizvodstvo, no. 2, 1964, 6-7

TOPIC TAGS: welding, automatic welding, two-layer steel, two-layer steel welding, circular seam welding, 09G2T + 1Kh18N9T steel, alloy welding

ABSTRACT: The article describes the technology of the mechanized welding of two-
ply plate metal with access to the seam from one side. In collaboration with the
Institut elektrosvariki im. Ye. O. Patona (Electric welding Institute), the authors
produced stamp-welded pressure vessels of two layer steel. Mechanized welding was
used on the circular seams of the vessels, 1000 mm in diameter. The two-layer
steel 09G2T+1Kh18N9T, 100 mm thick, was produced by the electro-slag welding
method developed by the Electric Welding Institute and patented in November of
1959. The finishing of the ends of the circular butt weld of the vessel and the
sequence of laying the individual beads are shown in Fig. 1 of the Enclosure.
First, the plating layer of the steel was welded. The root seam was welded, with
melt-through, on a semi-automatic welding rig, in carbon dioxide gas, using an
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ACCESSION NR: AP4013289

EP156 wire, in the vertical position, and then automatically welded, using an Sv-04KII19N9 wire, 3 mm in diameter, with ANF-14 flux. Welding conditions: $I_{\text{weld}} = 280-300$ a; $v_{\text{electrode}} = 83$ m/hour; $U_{\text{arc}} = 34-36$ v; $v_{\text{weld}} = 25$ m/hour. In order to prevent the appearance of flaws in a weld alloyed with chromium and nickel, foreign practice recommends the use of Armco iron electrodes. With manual arc welding, the use of these electrodes gives a positive effect since, because of the shallow fusion, the transfer of chromium and nickel from the austenitic weld to the transition layer is relatively small. In order to achieve the same results with flux-covered welding, a type A Armco iron wire was used in conjunction with a carbon oxidizing flux (AN348), while, in order to reduce penetration, welding was carried out with a vertical electrode, moving it from the zenith position to 60mm opposite to the direction of rotation of the spherical vessel. In this way the chromium and nickel content in the transitional weld did not exceed 2.5 and 1.6%, respectively. All seams welded with low-carbon electrodes were checked by ultrasonic inspection; the austenitic welds - by gammagraph inspection. "The work was carried out under the direction of Dr. of Tech. Sci. B. I. Medovar." Orig. art. has: 3 tables and 4 figures.

ASSOCIATION: ZHDANOVSKIY ZAVOD TYAZHELOGO MASHINOSTROYENIYA (Zhdanov Heavy

Card 2/42

PATON, B.Ye., akademik; MEDOVAR, B.I.; KIRDO, I.V.; PUZRIN, L.G.;
BOYKO, G.A.; LUTSYUK-KHUDIN, V.A.

Spontaneous removal of oxide films from metals. Dokl. AN
SSSR 159 no.1:72-73 N '64. (MIRA 17:12)

1. Institut elektrosvarski im. Ye.O. Patona AN UkrSSR.

L 33544-65 EWI(m)/EWA(d)/EWP(t)/EWP(b) MJW/JD/WB S/0125/64/000/011/0093/0094
ACCESSION NR: AP5009176

AUTHOR: Medovar, B. I.; Langer, H. A.; Yushkevich, Z. V.; Lutsyuk-Khudin, V. A.
Gasik, M. I.

TITLE: Corrosion resistance of weld joints of low-carbon steel type 00Kh25N20

SOURCE: Avtomaticheskaya svarka, no. 11, 1964, 93-94

TOPIC TAGS: corrosion resistance, metal welding, nitric acid, steel, weld heat treatment, corrosion resistant, austenitic steel

ABSTRACT: Chromium-nickel austenitic steel type 1Kh18N9T and aluminum type A00 are used in equipment designed for the manufacture of concentrated nitric acid.

By following the optimum welding technology and techniques for joining type 1Kh18N9T steel the welds are stable to nitric acid at concentrations of up to 80% and temperatures of 70°C. At higher acid concentrations or higher temperatures the steel loses its corrosion resistance and weld joints frequently undergo extensive crack-type corrosion.

Attempts were made to use type E1654 steel for work under the indicated

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L 33544-65

ACCESSION NR: AP5009176

conditions. However, weld joints of the steel tend to pitting, which reaches a depth of 3 mm/year. 4

Low-carbon austenitic steels type 00Kh25N20 can be used for work with oxidizing media. The maximum decrease in the carbon of the steel must provide the necessary corrosion resistance for the steel and its weld joints under the indicated conditions.

Four samples of extremely low-carbon vacuum-thermal ferrochromium steel were prepared in induction furnaces at the Yuzhnotrubby Metallurgical Plant and the Dneprospetsstal' Plant. The chemical content of the steels is shown in Table 1.

After the steel was poured into ingots it was rolled into sheet billets. Welding was done by argon arc with a tungsten electrode. The welds were tested for corrosion resistance in a 65% solution of HNO₃ for 144 hours (solution replaced after 48 hours) and for 100 hours in a 98% solution of boiling HNO₃. The results of the tests are shown in Table 2. For purposes of comparison, results are shown in the table of tests made on weld joints of type EI417 steel (0.11% C, 23.3% Cr, 20.4% Ni, 0.22% Si, 0.67% Mn, 0.013% S, 0.037% P). The samples were compared under the same conditions as the test steels.

The tested weld samples M, P, and Sh did not change in external appearance, but the surfaces of P-steel samples exhibited extensive corrosion.

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ACCESSION NR: AP5009176

Welds of E1417 steel samples exhibited the greatest corrosion attack. The high carbon content invited extreme corrosion. It is interesting to note that the stability of type E1417 steel to an oxidizing medium such as a 65% solution of HNO_3 increased considerably after cold working. The unaffected portions of the steel deformed during stamping were distinctly evident.

Microstudy of the samples after corrosion tests revealed that welds of M, R, and Sh steels do not tend to crack or intercrystalline corrosion. Weld joints of E1417 steel typically exhibit intercrystalline corrosion.

A decrease in the carbon content of the test steels, along with increasing their corrosion resistance to oxidizing media should also increase their corrosion resistance under stress. Our experiments confirmed this assumption. The sample steels Sh and P were tested for tendencies to stress corrosion in boiling 42% magnesium chloride. The tests were conducted on samples specially stressed to 90% of the yield strength. The results of these investigations are shown in Table 3.

Orig. art. has: 3 figures, 3 tables.

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ACCESSION NR: AP5009176

ENCLOSURE: 01

Table 1

Symbol of Heats	Content %						
	C	Mn	Si	P	S	Cr	Ni
M	0.018	0.60	0.60	0.020	0.007	25.14	21.00
R	0.030	1.60	0.41	0.005	0.008	24.90	18.90
Sh	0.045	1.54	0.60	0.008	0.016	23.95	19.94
P	0.055	1.50	0.91	0.011	0.006	24.90	16.65

TABLE 3

Designation of Samples	Time Before Appearance of Cracks
Sh	after 475 hours no cracks were found
P	after 475 hours no cracks were found
EI417	62 - 86

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ENCLOSURE: 02

Table 2

Symbol of Steels	Heat treatment of weld	Corrosion rate (mm/year) in HNO ₃	
		65% sol.	98% sol.
H	none	0.77	0.83
	650°C, 2 hrs.	1.40	1.21
R	none	0.53	0.47
	650°C, 2 hrs.	1.11	1.18
Sh	none	0.61	0.55
	650°C, 2 hrs.	1.32	1.47
P	none	0.35	1.19
	650°C, 2 hrs.	5.81	15.65
EI417	none	2.53	3.27
	650°C, 2 hrs.	38.85	28.00

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L 33544-65

ACCESSION NR: AP5009176

ASSOCIATION: none

SUBMITTED: 00

ENCL: 02

SUB CODE: MM, IE

NO REF SOV: 000

OTHER: 000

JPRS

Card 6/6

LUTSYUK-KHUDIN, V.A.; MEDOVAR, B.I., doktor tekhn. nauk, otv. red.

[New method of producing two-layer rolled plate for high-pressure vessels] Novyi sposob proizvodstva tolstolistovogo dvukhsloinogo prokata dlia sosudov vysokogo davleniia.
Kiev, Naukova dumka, 1965. 59 p. (MIRA 18:5)

KUMYSH, I.I., inzh.; LUTSYUK-KHUDIN, V.A., inzh.; SAYENKO, V.Ya., inzh.;
ANTONETS, D.P., inzh.

Automatic welding of girth joints of vessels made of two-layer
steel. Svar.proizv. no.2:6-7 F '64. (MIRA 18:1)

1. Institut elektrosvarki imeni Ye.O.Patona (for Sayenko). 2.
Zhdanovskiy zavod tyazhelego mashinostroyeniya (for Antonets.)

5

L 5019-66 EWT(m)/EWP(t)/EWP(k)/EWP(b)/EWA(c) JD/HW

ACC NR: AP5022041

SOURCE CODE: UR/0286/65/000/014/0113/0113

AUTHORS: Paton, B. Ye.^{44.55}; Dudko, D. A.^{44.55}; Medovar, B. I.^{44.55}; Khrundzhe, V. M.^{44.55}; Lutsyuk-Khudin, V. A.; Sayenko, V. Ya.; Dryapik, Ye. P.; Shekhter, S. Ya.; ⁵⁶OB

44.55 Salov, Ye. M.; Baranov, S. V. ^{44.55} ^{44.55} ^{44.55} ^{44.55}

ORG: none

TITLE: A method for obtaining two-layer rolling. Class 49, No. 173115 [Institute of Electric Welding im. Ye. O. Paton, AN UkrSSR (Institut elektrosvarki AN UkrSSR)]

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 14, 1965, 113

TOPIC TAGS: metal rolling, metal cladding, metal industry

ABSTRACT: This Author Certificate presents a method for obtaining two-layer rolling by lining a plate ingot with a solid plate. To produce proper adhesion between the layers, the plate ingot is lined with a plate of cladding metal to which is welded a plate of metal analogous in composition to the one being lined.

SUB CODE: IE, MM/ SUBM DATE: 04Jul63/ ORIG REF: 000/ OTH REF: 000

OC
Card 1/1

UDC: 621.771.8

09010723

1 23458-66 EWT(d)/EWT(m)/EWP(w)/EWP(v)/T/EWP(t)/EWP(k) IJP(c) ID/IM/EM

ACC NR: AP6006334 SOURCE CODE: UR/0413/66/000/002/0057/0057

AUTHOR: Paton, B. Ye.; Dudko, D. A.; Medovar, B. I.; Lutsyuk-Khulin, V. A.;
Sayenko, V. Ya.; Kumysh, I. I.; Andrianov, G. G.; Karpov, V. F.; Dovzhenko, N. F.;
Antonets, D. P.; Kuzema, I. D.

ORG: none

TITLE: Method of producing composite rolled stock. Class 21, No. 177985 [announced by Electric Welding Institute in. Ye. O. Paton (Institut Elektrosvariki)].

SOURCE: Izobreteniya, promyshlennyye obratzay, tovarnyye znaki, no. 2, 1966, 57

TOPIC TAGS: welding, metal rolling, sandwich rolling

ABSTRACT: An Author Certificate has been issued for a method of producing composite rolled metal by using a billet consisting of ingots or plates welded together by electroslag welding. ^{To save on stainless steel, lower the thickness of the clad} layer, and simplify the welding procedure, it is suggested that the process be begun with a heterogeneous plate made from prewelded and prerolled smaller billets having been a carbon steel and clad layer, and then adding additional ingots or plates to produce sandwich rolled stock. [LD]

SUB CODE: 13/1/20 SUBM DATE: 11Apr63 ORIG: none/ OTH REF: none/

Card 1/1 ULR UDC: 621.791.793:621.771.2-419.5

14543-66 EWT(m)/EPF(n)-2/EWP(v)/T/EWP(t)/EWP(k)/EWP(b) JD/WW/HM/HM/JG

ACC NR: AP6006309

SOURCE CODE: UR/0413/66/000/002/0013/0013

INVENTOR: Paton, B. Ye.; Medovar, B. I.; Puzrin, L. G.; Boyko, G. A.; Lutsyuk-Khudin, V. A.; Bondarchuk, O. P.; Timofeyev, D. I.; Dryapik, Ye. P.

ORG: none

TITLE: Method of producing metal laminates. Class 7, No. 177824 [announced by the Electric Welding Institute im. Ye. O. Paton (Institut elektrosvarki)]

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 2, 1966, 13

TOPIC TAGS: metal, clad metal, metal laminate, metal rolling

ABSTRACT: This Author Certificate introduces a method of producing metal laminates by pack rolling with a low-melting vanishing insert placed between the metals to be bonded. To obtain a strong bond between dissimilar metals, the rolling is done with the insert in the liquid state. [ND]

SUB CODE: 11/ SUBM DATE: 29May64/ ATD PRESS: 4197

Cladding 18

PC
Card 1/1

L 32013-65 EWT(m)/EWA(d)/EWP(t)/EWP(k)/EWP(b) ^{PL-1 ASDM3 JD/RL/WB}
ACCESSION NR: AP4049134 8/0020764/15970017007270073

AUTHOR: Paton, B. Ye. (Academician); Medovar, B. I.; Kirde, I. V.;
Puzrin, L. G.; Boyko, G. A.; Lutsyuk-Khudin, V. A.

TITLE: Spontaneous cleaning of oxide films from metal surfaces

SOURCE: AN SSSR. Doklady, v. 159, no. 1, 1964, 72-73

TOPIC TAGS: carbon steel, chromium nickel steel, air oxidation,
oxide film, spontaneous film disappearance, steel self cleaning

ABSTRACT: Oxide films were observed to disappear spontaneously from the surfaces of many steels and alloys to which the access of air had been cut off. Thus, oxide films on the air-oxidized inner surface of a hermetically sealed container made of carbon or Cr-Ni steel completely disappeared when the container was heated at 1000 to 1300C for several minutes. A similar self-cleaning tendency was observed on carbon- or Cr-Ni-steel foil placed in such a container. The air pressure inside the container at first rises during the heating process and then drops abruptly to approximately 1 mm Hg.

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L 32013-65

ACCESSION NR: AP4049134

where it remains almost unchanged. It is difficult, as yet, to give an exact theoretical explanation for the phenomenon observed. It can only be assumed that at a high temperature the presence of atmospheric nitrogen and oxygen in a solid metal is thermodynamically more stable when these gases are dissolved in the metal than when they are in the form of oxides and nitrides on the metal's surface. The authors recommend a further study of this phenomenon. At present, it can be used in various fusionless welding methods for soldering under pressure, in the production of bimetallic parts by hot rolling, in descaling, etc. Orig. art. has: 3 figures.

ASSOCIATION: Institut elektrosvariki im. Ye. O. Patona AN UkrSSR
(Electric Welding Institute, AN UkrSSR)

SUBMITTED: 23Jul64

ENCL: 00

SUB CODE: MM, TD

NO REF SOV: 001

OTHER: 000

ATD PRESS: 3145

Card 2/2

LUTTA, A.S.
CA

PROCESSES AND PROPERTIES INDEX

Biochemical and morphological investigations of the anoxybiosis in parasitic worms. A. S. Lutta. *Voproski Sovremennoi Biol.* 12, No. 2, 317-35 (1940); *Khim. R. I. Zhur.* 1940, No. 0, 33. A review of anoxybiotic metabolism in parasitic worms from the point of view of the utilization of nutritive substances. The importance of glycogen as the basic substrate of anoxybiotic metabolism is emphasized and the connection between the degree of anaerobiosis and the amt. of glycogen in the tissues is discussed. Fat can be utilized as the source of energy in parasitic worms under aerobic and anaerobic conditions. The ability of endoparasites to utilize O and the possibility of such utilization under natural conditions is described.

115

ASB-51A METALLURGICAL LITERATURE CLASSIFICATION

GROUPS: A B C D E F G H I J K L M N O P Q R S T U V W X Y Z AA AB AC AD AE AF AG AH AI AJ AK AL AM AN AO AP AQ AR AS AT AU AV AW AX AY AZ BA BB BC BD BE BF BG BH BI BJ BK BL BM BN BO BP BQ BR BS BT BU BV BW BX BY BZ CA CB CC CD CE CF CG CH CI CJ CK CL CM CN CO CP CQ CR CS CT CU CV CW CX CY CZ DA DB DC DD DE DF DG DH DI DJ DK DL DM DN DO DP DQ DR DS DT DU DV DW DX DY DZ EA EB EC ED EE EF EG EH EI EJ EK EL EM EN EO EP EQ ER ES ET EU EV EW EX EY EZ FA FB FC FD FE FF FG FH FI FJ FK FL FM FN FO FP FQ FR FS FT FU FV FW FX FY FZ GA GB GC GD GE GF GG GH GI GJ GK GL GM GN GO GP GQ GR GS GT GU GV GW GX GY GZ HA HB HC HD HE HF HG HH HI HJ HK HL HM HN HO HP HQ HR HS HT HU HV HW HX HY HZ IA IB IC ID IE IF IG IH II IJ IK IL IM IN IO IP IQ IR IS IT IU IV IW IX IY IZ JA JB JC JD JE JF JG JH JI JJ JK JL JM JN JO JP JQ JR JS JT JU JV JW JX JY JZ KA KB KC KD KE KF KG KH KI KJ KL KM KN KO KP KQ KR KS KT KU KV KW KX KY KZ LA LB LC LD LE LF LG LH LI LJ LK LL LM LN LO LP LQ LR LS LT LU LV LW LX LY LZ MA MB MC MD ME MF MG MH MI MJ MK ML MN MO MP MQ MR MS MT MU MV MW MX MY MZ NA NB NC ND NE NF NG NH NI NJ NK NL NO NP NQ NR NS NT NU NV NW NX NY NZ OA OB OC OD OE OF OG OH OI OJ OK OL OM ON OO OP OQ OR OS OT OU OV OW OX OY OZ PA PB PC PD PE PF PG PH PI PJ PK PL PM PN PO PP PQ PR PS PT PU PV PW PX PY PZ QA QB QC QD QE QF QG QH QI QJ QK QL QM QN QO QP QQ QR QS QT QU QV QW QX QY QZ RA RB RC RD RE RF RG RH RI RJ RK RL RM RN RO RP RQ RR RS RT RU RV RW RX RY RZ SA SB SC SD SE SF SG SH SI SJ SK SL SM SN SO SP SQ SR SS ST SU SV SW SX SY SZ TA TB TC TD TE TF TG TH TI TJ TK TL TM TN TO TP TQ TR TS TT TU TV TW TX TY TZ UA UB UC UD UE UF UG UH UI UJ UK UL UM UN UO UP UQ UR US UT UY UZ VA VB VC VD VE VF VG VH VI VJ VK VL VM VN VO VP VQ VR VS VT VY VZ WA WB WC WD WE WF WG WH WI WJ WK WL WM WN WO WP WQ WR WS WT WY WZ XA XB XC XD XE XF XG XH XI XJ XK XL XM XN XO XP XQ XR XS XT XU XV XW XX XY XZ YA YB YC YD YE YF YG YH YI YJ YK YL YM YN YO YP YQ YR YS YT YU YV YW YX YY YZ ZA ZB ZC ZD ZE ZF ZG ZH ZI ZJ ZK ZL ZM ZN ZO ZP ZQ ZR ZS ZT ZU ZV ZW ZX ZY ZZ

LUTTA, A-S
 CA

11E

The role of vitamins in parasitic and infectious diseases.
 A. S. Lutta, *Prroda* 30, No. 7, 25-30 (1947).--Review;
 51 literature references. N. Thon

A S B . 5 5 A DETALLORICAL LITERATURE CLASSIFICATION
 FROM SOURCE

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

Lutta, A. S. "On the age resistivity of animals to parasitic worms",
Sbornik po zootekhnii i parazitologii, Tashkent. 1948, pp. 111-122, - Bibliog: 48 items.

SO: U-3261, 10 April 53 (Letopis 'Zhurnal 'nykh Statey No. 11, 1949)

LUTTA, A. S.

Lutta, A. S. "The effect of an incomplete feeding diet on the growth of chicks",
Doklady Akad. nauk UzSSR, No, 9, 1948, p. 30-33, (Resume in Uzbek).

SO: U-3042, 11 March 53, (Letopis'nykh Statey, No. 10, 1949).

LUTTA, A. S.

"Trypanosomiasis and its transmitters - horseflies".

Tashkent. Izd-vo Akademii Nauk, Uzbek SSR. 1952.

44 pages with illustration.

SO: Vet., Nov. 1952, Unclassified.

1. LUTTA, A. S.
2. USSR (600)
4. Parasites
7. Degeneration of Piroplasma bigeminum and Francaiella colchica.
Zool. zhur., 31 no. 6, 1952.

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

LUTTA, A.S.

LUTTA, A.S.; KHEYSIN, Ye.M.

Data concerning the role of different species of ticks in spreading babesiasis in the North. Zool.zhurn.33 no.1:65-68 Ja-F '54. (MLRA 7:2)

1. Parazitologicheskaya laboratoriya Instituta biologii Karelo-Finskogo filiala Akademii nauk SSSR i kafedra zoologii bespozvochnykh Karelo-Finskogo gosudarstvennogo universiteta.
(Ticks as carriers of disease)

NIH translation in /M.

~~LUTTA~~ A.S.; SHUL'MAN, R.Ye.

Western limit of distribution of *Ixodes persulcatus* in the
Karelo-Finnish S.S.R. Zool.zhur. 33 no.6:1231-1235 H-D '54.
(MIRA 8:2)

1. Sektor parazitologii Instituta biologii Karelo-Finskogo
filiala Akademii nauk SSSR.
(Karelia--Ticks)

LUPTA, A.S.

LUPTA, A.S.

Biology of blood parasites in cattle. Trudy Len. ob-va est. 72
no.4:81-102 '54. (MIRA 8:11)

1. Karelo-Finskiy filial Akademii nauk SSSR, Petrozavodsk
(Parasites--Domestic animals) (Cattle--Diseases and pests)

LUTTA, A.S.; SHUL'MAN-AL'BOVA, R.Ye.

Distribution and ecology of *Ixodes trianguliceps* Bir. in
the Karelo-Finnish S.S.R. Trudy Kar.-Fin. fil. AN SSSR
no.4:82-98 '56. (MLBA 10:2)

(Karelia--Ticks) (Parasites--Rodentia)
(Parasites--Insectivora)

LUTTA, A.S.; SHUL'MAN-AL'BOVA, R.Ye.

Research on the action of DDT and benzene hexachloride on the tick *Ixodes ricinus* under laboratory conditions and in agricultural practice. Trudy Kar.-Fin. fil. AN SSSR no.4: 99-115 '56. (MLBA 10:2)

(DDT (Insecticide)) (Benzene hexachloride)
(Ticks) (Parasites--Cattle)

LUTTA, A.S.

Individual protection against bloodsucking insects at
lumbering sites of the Karelo-Finnish S.S.R. Trudy Kar.-Fin.
fil. AN SSSR no.4:150-158 '56. (MLRA 10:2)

(Karelia--Diptera) (Phthalic acid)
(Insect baits and repellents)

Lutta, A.S.

Laboratory study of toxic action of DDT in all phases of development of *Ixodes ricinus*. A. S. Lutta and R. E. Shul'man. *Doklady Akad. Nauk S.S.S.R.* 108, 367-9 (1966).—Tests of 5% DDT oil soln. and 12% dust showed that DDT is toxic to this species in all stages of development but after satn. with blood of the host a resistance to DDT is developed. Larvae, nymphs, and adult males were most susceptible to DDT; hungry females were least affected. If DDT is applied on the parasites freshly admitted to the host, a 100% kill is readily attained. G. M. K.

Copy 2

LUTTA, A.S.

USSR/Diseases of Farm Animals - Diseases Caused by Helminths. R.
Arachno-Entoms.

Abs Jour : Ref Zhur - Biol., No 6, 1958, 26346

Author : ~~Lutta, A.S.~~

Inst : -

Title : To the Problem of Combatting Adult Gadflies [Oestridae]
in Large Horned Cattle.

Orig Pub : Veterinariya, 1957, No 3, 63-66

Abstract : The author believes that the destruction of female gadflies when they attack the animals is an important measure in combatting adult gadflies of large horned cattle. Fifty eight cows and 35 calves were used for the experiment. During the entire summer (beginning of June until the end of September) they were sprayed every five days with a five percent solution of DDT in solar oil [crude petroleum]. The dosage of the preparation used was 7.5 grams of DDT (150 milligrams of

Card 1/2

30

USSR/Diseases of Farm Animals - Diseases Caused by Helminths.
Arachno-Entoms.

R.

Abs Jour : Ref Zhur - Biol., No 6, 1958, 26346

solution) for each adult animal and five grams (100 milligrams of solution) for each calf. The result of the treatment were evaluated in the spring of the next year by means of examining the animals by palpation. The affliction of the cattle with *Hypoderma bovis* larvae decreased from 60.9 percent in 1950, to 47 percent in 1951, and to 35.8 percent in 1952. The average intensity of the affliction decreased from 9.4 larvae in 1950, to 2.6 larvae in 1951, and to 1.6 larvae in 1952. The differences in larvae affliction between experimental and control calves were found to be even more significant.

Card 2/2

LUTTA, A.S.

Selective infestation of cattle by the ox warble fly *Hypoderma bovis*
De Geer (Diptera, Hypodermatidae). Ent. oboz. 37 no.1:151-155 '58.
(MIRA 11:3)

1. Sektor parazitologii i gel'mintologii Instituta biologii Karel's-
kogo filiala AN SSSR, Petrozavodsk.
(Sortavala District--Warble flies) (Cattle--Diseases and pests)

LUTTA, A.S.; SHUL'MAN, R.Ye.

Effect of microclimatic conditions of meadows and forests on the
viability and activity of the tick *Ixodes ricinus* L. Zool.zhur. 37
no.12:1813-1822 D '58. (MIRA 12:1)

1. Institut of Biology, Kareliya Branch of the Academy of Sciences of
the USSR (Petrozavodsk).
(Lunkulansaari Island--Ticks)

LUTTA, A. S.

"Gonotrophic Cycle of the Karelian Tabanidae."

Tenth Conference on Parasitological Problems and Diseases with Natural Reservoirs, 22-29 October 1959, Vol. II, Publishing House of Academy of Sciences, USSR, Moscow-Leningrad, 1959.

Institute of Biology, Karelian Branch of the USSR Academy of Sciences,
Petrozavodsk

GRIGOR'YEV, S.V., kand.tekhn.nauk, zasluzhennyy deyatel' nauki Karel'skoy ASSR, otv.red.; PRAVDIN, I.F., doktor biolog.nauk, zasluzhennyy deyatel' nauki Karel'skoy ASSR, red.; ANDREYEV, I.F., kand.biolog.nauk, red.; LUTTA, A.S., kand.biolog.nauk, red.; LOBZA, P.G., kand.geograf.nauk, red.; SAVEL'YEV, M.M., red.; POD'YEL'SKAYA, K.M., tekhn.red.

[Transactions of the Syamozero Expedition] Trudy Siamozerskoi kompleksnoi ekspeditsii. Vol.1. [Hydrology and hydrochemistry] Hidrologiia i gidrokhimiia. 1959. 237 p.

(MIRA 13:6)

1. Syamozerskaya kompleksnaya ekspeditsiya, 1954-1956. 2. Rukovoditel' otдела gidrologii Instituta biologii Karel'skogo filiala AN SSSR (for Grigor'yev). 3. Rukovoditel' sektora zoologii Instituta biologii Karel'skogo filiala AN SSSR (for Pravdin). 4. Rukovoditel' laboratorii parazitologii Instituta biologii Karel'skogo filiala AN SSSR (for Lutta). 5. Rukovoditel' laboratorii gidrokhimii Instituta biologii Karel'skogo filiala AN SSSR (for Lobza).

(Syamozero region--Limnology)

LUTTA, A.S.

Distribution of horseflies in Karelia. Paras.sbor. 19:291-307
'60. (MIRA 13:8)

1. Karel'skiy filial Akademii nauk SSSR.
(Karelia--Horseflies)

LUTTA, Ayno Semenovna; PANKRASHOV, A.P., red.; POD"YEL'SKAYA, K.M.,
tekhn. red.

[Controlling bloodsucking dipterous insects in northern
regions] Bor'ba s gnusom - krovososushchimi dvukrylymi
nasekomymi v usloviakh Severa. Petrozavodsk, Gos.izd-vo
Karel'skoi ASSR, 1961. 45 p. (MIRA 15:2)
(Karelia--Insects, Injurious and beneficial)

LUTTA, A.S.

Parasitological research in Karelia. Trudy Kar. fil.
AN SSSR no.30:3-23 '61. (MIRA 15:9)
(Karelia--Parasitological research)

LUTTA, A.S.

Forests of Karelia as the breeding places and habitat of
horseflies. Trudy Kar. fil. AN SSSR no.30:161-185 '61.
(MIRA 15:9)

(Karelia--Horseflies)

(Kareli--Forest fauna)

LUTTA, A.S.

Behavior of horseflies during bloodsucking and the effect
of their saliva on man. Trudy ~~Mar.~~ fil. AN SSSR no.30:186-194
'61. (MIRA 15:9)

(Horseflies)

(Parasites—Man)

LUTTA, A.S.

Experiments in individual protection of forest workers from
bloodsucking insects in Karelia. Trudy Kar. fil. AN SSSR
no.30:195-209 '61. (MIRA 15:9)
(Karelia--Insect baits and repellents)

LUTTA, A.S.; KHEYSIN, Ye.M.; SHUL'MAN, R.Ye.

Distribution of ixodid ticks in Karelia. Trudy Kar.fil.AN SSSR
no.14:72-83 '59. (MIRA 15:12)

(Karelia—Ticks)

LUTTA, A.S.

Materials on the species and biology of horseflies (Tabanidae)
in the Karelian S.S.S.R. Trudy Kar.fil.AN SSSR no.14:84-109
'59. (MIRA 15:12)

(Karelia--Horseflies)

LUTTA, A.S.

Treatment of cattle with DDT and hexachlorocyclohexane as a
measure of a simultaneous control of blood-sucking Diptera,
ixodid ticks, and warble flies of cattle. Trudy Kar.fil.AN
SSSR no.14:124-137 '59. (MIRA 15:12)
(Karelia--Parasites--Cattle) (DDT)
(Benzene hexachloride)

LUTTA, A.S.

Ecologic and geographic features of the foci of tick-borne encephalitis in Karelia. Med. paraz. i paraz. bol. 32 no.3:
284-288 My-Je'63 (MIRA 17:3)

1. Iz Instituta biologii Karel'skogo filiala AN SSSR (dir. - S.N. Drozdov).

LUTTA, A.S., otv. red.

[Natural foci of parasitic and communicable diseases in Karelia] K prirodnoi ochagovosti parazitarnykh i transmissivnykh zabolevanii v Karelii. Moskva, Nauka, 1964. 184 p. (MIRA 18:1)

1. Akademiya nauk SSSR. Karel'skiy filial, Petrozavodsk.

LUPTA, A.S.

Physiological age of horseflies in Karelia. Med. paraz. i
paraz. bol. 33 no.1:44-46 Ja-F '64 (MIRA 18:1)

1. Institut biologii Karel'skogo filiala AN SSSR, Petrozavodsk.

LUTTA, A.S.

Horsefly larvae in the Amu Darya Delta and Syr Darya basin. Trudy
Inst. zool. AN Kazakh. SSR 22:184-191 '64.

(MIRA 17:12)

POLYANSKIY, Yu.I., otv. red.; GORDEYEV, O.N., red.; KUDERSKIY,
L.A., red.; LUTTA, A.S., red.; SOKOLOVA, V.A., red.

[Fauna of the lakes of Karelia; invertebrates] Fauna ozer
Karelii; bespozvonochrye. Moskva, Nauka, 1965. 323 p.
(MIRA 18:9)

1. Akademiya nauk SSSR. Karel'skiy filial, Petrozavodsk.
Institut biologii.

LIPTA, A.S.

Ecologic characteristics of the distribution of horseflies
(Diptera, Tabanidae) in Uzbekistan. Ent. oboz. 44 no.3:595-
604 '65. (MIRA 18:9)

1. Institut biologii Karel'skogo filiala AN SSSR, Petrozavodsk.

IMTTA, A.S.

Geographic cycle of horseflies in Karelia. Med. paraz. i paraz. bcl.
34 no.1219-32 4-F '69. (MIRA 18:8)

2. Institut biologii Karel'skogo filiala AN SSSR, Petrozavodsk.

SALEK, J.;TICHY, S.;LUTTENBERG, J.

Primary resection of the thoracic trachea for carcinoma. Rozhl.
chir. 39 no.3:150-154 Mr '60

I. II chirurgická klinika Karlovy university v Praze, prednosta
akademik J. Divis ORL klinika Karlovy university v Praze, prednosta
akademik A. Precechtel Anatomický ústav Karlovy university v Praze,
prednosta prof. MUDr. et RNDr. L. Borovansky.
(TRACHEA neoplasms)
(CARCINOMA surg.)

MARSALA, Josef; LUTTENBERG, Jaromir

The course and branching of commissural fibers in the frontal lobe cortex of the cat. Cesk. morf. 10 no.2:139-150 '62.

1. Anatomicky ustav lekarske fakulty university Karlovy v Praze,
prednosta prof. MUDr. et RNDr. Ladislav Borovansky.
(CEREBRAL CORTEX anat & histol)

MARSALA, Josef; LUTTENBERG, Jaromir

The progress and distribution of commissural fibres in frontal cortex of the cat. Cs morfologie 10 no.2:139-150 '62.

1. Anatomocky ustav lekarske fakulty university Karlovy, Praha.

*

LUTTENBERG, Jaromir; MARSALA, Josef

Localization of the commissural fibers in the corpus callosum of the cat's brain. Cesk. morf. 11 no.2:166-176 '63.

1. Anatomicky ustav lekarske fakulty University Karlovy v Praze, prednosta prof. MUDR. et RNDr. J̄adislav Borovansky, StDr. Katedra histologie a embryologie LFUPJS v Koscicich, vedouci z. doc. MUDr. Marsala.

(CORPUS CALLOSUM)

(HISTOLOGY)

LUTTENBERG, Jaromir

Number and distribution of fibers according to caliber in the corpus callosum in cats, dogs, rabbits and rats. Cesk. morf. 11 no.4:291-300 '63.

1. Anatomicky ustav fakulty vseobecneho lekarstvi University Karlovy v Praze, prednosta prof. MUDr. et RNDr. Ladislav Borovansky, DrSc.

(CORPUS CALLOSUM) (CATS) (DOGS)
(RABBITS) (RATS) (AXONS)

LUTTENBERG, Jaromir

Contribution to the question of the early development of the corpus callosum in man. Cesk. morf. 12 no.2:152-163 '64

1. Anatomicky ustav fakulty vseobecneho lekarstvi University Karlovy v Praze (prednosta: prof. MUDr. et RNDr. Ladislav Borovansky, DrSc.).

*

LUTTENBERG, J.

Contribution to the fetal ontogenesis of the corpus callosum
in man, II. Cesk. morf. 13 no.2:136-144 '65

1. Anatomical Institute of the Medical Faculty, Charles'
University, Prague.

LUTTER, Bela, Dr.

On sampling. Elelm ipar 15 no.4:106-111 Ap '61.

1. Megyei Minosegvizsgalo Intezet, Debrecen.

ROZHKOV, I.S.; LUTTS, B.G.

All-Union Conference on the Geology of Diamond Deposits.
Geol.rud.nestorozh. no.6:122-123 N-D '61. (MIRA 14:12)
(Diamonds)

ROZHKOV, I.S.; LUTTS, B.G.

All-Union Conference on the Geology of Diamond Deposits. Geol. i
geofiz. no.11:122-125 '61. (MIRA 15:2)
(Diamonds)

LUTTS, B.G.

Determining femic minerals of hornblendes in the rocks of granulitic
facies. Nauch.sob. IAFAN SSSR no.7:107-111 '62. (MIRA 16:3)
(Anabar shield--Hornblende)(Anabar shield--Ferromanganese)

LUTTS, B.G.; MOKSHANTSEV, K.B.; NIKOLAYEVSKIY, A.A.

Composition and structure of the basement of the eastern
Siberian Platform. Geol. i geofiz. no.8:41-50 '62. (MIRA 15:10)

1. Institut geologii Yakutskogo filiala Sibirskogo otdeleniya
AN SSSR.
(Siberian Platform—Rocks, Crystalline and metamorphic)

LUTTS, B.G.

Xenoliths in the kimberlite pipes in the Anabar Shield. Trudy
IAFAN SSSR. Ser.geol. no.8:87-109 '62. (MIRA 15:7)
(Anabar Shield--Xenoliths) (Anabar Shield--Kimberlite)

LUTTS, B.G.

Granites of the Anabar massif. Trudy IAFAN SSSR. Ser. Geol. no. 11:30-39
'62. (MIRA 15:7)

(Anabar shield—Granite)

LUTTS, I.A., inzh.

Precast concrete in the construction of navigational structures.
Energ. stroi. no. 42:48-52 '64. (MIRA 18:3)

KORNIYENKO, A.M.; SHTEL'MAKHOV, M.S.; GEYLER, Z.Sh.; BERESNEV, V.A.;
KOTLIK, S.B.; GORFINSKIY, Kh.M.; ZEL'DIN, Yu.R.; KURGIN, Yu.M.;
BELYAYEV, V.G.; ZAK, P.S.; ZAYTSEV, A.A.; LI, A.M.; SKVORTSOV, I.S.;
LUTTS, R.R.; KHVINGIYA, M.V.; NINOSHVILI, B.I.; SEMENCHENKO, D.I.;
SUKHANOV, V.B.

Soviet inventions in mechanical engineering. Vest.mashinostr.
45 no.11:87-88 N '65. (MIRA 18:12)

LUTTSAY, V.

New exhibits in a demonstration hall. Sov. targ. 34 no.6:53-
54 Je '61. (MFA 14:7)

(Retail trade--Equipment and supplies)

LUTTSAY, V. G.

AUTHORS

Luttsau, V.G., and Rovinskiy, B.M.

32-8-31/61

TITLE

The Construction of Relaxation Curves by the Method of Inverted X-Ray Photographs at Elevated Temperatures. (Polucheniye relaksatsionnykh ^{krivyykh} metodom obratnykh rentgenosnykh pri povyshennykh temperaturakh).

PERIODICAL

Zavodskaya Laboratoriya, 1957, Vol. 23, Nr 8, pp. 961 - 963 (USSR.).

ABSTRACT

The above-mentioned method is here compared to an earlier described method, where the first is based on the construction of relaxation curves of stresses according to the cross section of the samples and the second is performed by means of precise inverted X-ray photographs. In both cases the Mitchell apparatus is used, but in the second case the deformation is determined radiographically in a section lying close to the surface. A comparison of the relaxation curves obtained by both methods permits to determine several mechanical properties of the relaxation stresses. A description of the apparatus for obtaining the relaxation curves according to inverted X-ray photographs is given. In the section of the book entitled "Research results" examples are given and compared for the construction of relaxation curves of the elastic lattice deformation in pure copper and aluminum samples according to both methods. In the conclusion it is stated that the complete stability of the initial longitudinal deformation and the possibility to obtain additional data on structure modifications

Card 1/2

32-8-31/61

The Construction of Relaxation Curves by the Method of Inverted X-Ray Photographs
at Elevated Temperatures.

(recrystallization, phase transformations) in the stress relaxation process represent advantages of the radiographic method. A comparison of the relaxation curves obtained by both methods makes it possible to investigate the details of the mechanism of the relaxation process. (4 illustrations, 3 references).

ASSOCIATION Institute for the study of machines for the Academy of Sciences of the USSR
(Institut mashinovedeniya Akademii nauk SSSR.).

AVAILABLE Library of Congress.

Card 2/2

Card 2/2

MURATOV, Sergey Ivanovich; LUTSAU, V.K., red.; LYUDSKOV, B.P., red.;
EL'KINA, E.M., tekhn. red.

[Vending machines] Torgovye avtomaty. Pod red. V.K. Luttsau.
Moskva, Gos. izd-vo torg. lit-ry, 1961. 358 p.

(MIRA 14:4)

(Vending machines)

LUTTSEV, N.I.

Procedure in applying a penalty for violation of the veterinary regulations of the U.S.S.R. Veterinariia 36 no.7:30-31 J1 '59.
(MIRA 12:10)

1. Narodnyy sud'ya, Lameshkiyskiy rayon, Stalingradskoy oblasti.
(Veterinary hygiene--Law and legislation)

USSR / Farm Animals. The Honeybee.

Q

Abs Jour : Ref Zhur - Biologiya, No 2, 1959, No. 7409

Author : Luttso, V. P.

Inst : Moscow Academy of Agriculture imeni K. A. Timiryazev

Title : The Pollination of Long-Staple Flax by Honeybees

Orig Pub : Dokl. Mosk. s.-kh. akad. im. K. A. Timiryazeva, 1957, vyp. 30, ch. 2, 327-331

Abstract : As fields sown with flax were pollinated by bees, the seed yield was raised by 29 percent; the quantity of seeds in one seedball was by 18 percent higher, and the weight of 1000 seeds by 11 percent larger than when compared to fields with crops not pollinated

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77

LUTUGIN, Leonid Ivanovich; SHVETS, I.T., redaktor; GAPEYEV, A.A., doktor geologo-mineralogicheskikh nauk, professor, redaktor; NOVIK, Ye.O., redaktor; YAVORSEKIY, V.J., doktor geologo-mineralogicheskikh nauk, professor, redaktor; ANISIMOV, Yu. A., kandidat tekhnicheskikh nauk, redaktor; KAZANTSEV, P.A., redaktor; RAKHLINA, N.P., tekhnicheskiy redaktor.

[Selected works on the geology of the Donets Basin] Izbrannye trudy po geologii Donetskogo basseina. Otv.red.I.T.Shvets. Kiev, Izd-vo Akademii nauk USSR, 1956. 216 p. (MLRA 9:5)

1.Akademik AN USSR (for Shvets).2.Chlen-korrespondent AN USSR (for Novik)
(Donets Basin--Geology)

LOTUS INK/N.V.

1742

The dependence of the efficiency of a packed column on pressure. I. N. Bushmakina and N. V. Lutugina (State Univ., Leningrad). *Zhur. Priklad. Khim.* 29, 1167-8 (1958); cf. *C.A.* 44, 1217e. — The efficiency of separ. of benzene-CCl₄ solns. was measured at 100 mm. and 760 mm. Hg pressure. At a distn. rate of 0.5 ml./min.-sq. cm. the no. of theoretical plates was 22.8 at 760 mm. and 18.7 at 100 mm. At 1.3 ml./min.-sq. cm. the theoretical plates numbered 19.7 at 760 mm. and 20.0 at 100 mm. The efficiencies were con-

R. D. Much

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Chem

7
 ✓ Liquid-vapor equilibria for the acetic acid-water and
 butyl acetate-acetic acid-ethyl acetate systems
 Bushmakm and N. V. Lutugin, Leningrad Univ. Chem. ~~1950~~
 Zhur. Priklad. Khim. 29, 1100 (1956) 49.
 5144f The equil. were studied by means of an app. des-
 cribed earlier (C.A. 44, 6252) for systems in
 used to det. the effectiveness of a fractionating column.
 The following systems were studied: HOAc-H₂O; HOAc-
 BuOAc; HOAc-EtOAc. For the first 2 systems the column
 efficiency did not depend on the concn. For the last system
 the no. of stages was so small that the relation of efficiency to
 concn. could not be detd.
 I. Kovtar Leach

2

PM

LOTUGINA, N. V.

Abstract The dependence of the efficiency of a packed column on pressure. L. N. Bushun'kin and N. E. Lutagina. *J. Appl. Chem. U.S.S.R.* 29: 1281-1284 (1956) (English translation).—See *CA* 51, 8487c.

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MT

AUTHORS: Buahnakin, I.N., Lutugina, N.V.

54-10-2-7/16

TITLE: The Equilibrium Liquid-Liquid and Liquid-Vapor in the System Water-Acetic Acid-n-Butylacetate (Ravnovesiya zhidkost'-zhidkost' i zhidkost'-par v sisteme voda-ukusnaya kislota-n-butilatsetat)

PERIODICAL: Vestnik Leningradskogo Universiteta, Seriya fiziki i khimii, 1958, Vol. 10 Nr 2, pp. 75-83 (USSR)

ABSTRACT: Among the methods of dehydrating diluted solutions of acetic acid which are obtained by the separation of wood distillation products, the method of azeotropic rectification has recently been steadily gaining ground. In the present paper the authors deal with the results of the investigation of the equilibrium liquid-liquid in the ternary system as well as the distribution of distillation lines and vapor lines on the triangle of the compositions isothermal lines - isobars. For the purpose of explaining the behavior of the systems in the case of open evaporation and rectification, in which components cannot be completely mixed, data concerning the equilibrium liquid-liquid at boiling temperature of the solution separated into layers are necessary. The results obtained by these experiments are given (table 1). At the same time the authors

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The Equilibrium Liquid-Liquid and Liquid-Vapor in the
System Water-Acetic Acid-n-Butylacetate

54-10-2-7/16

determined the position of the binodal points on the triangle of the composition at 18° (room temperature) with accuracy. The latter data facilitate determination of gross compositions of heterogeneous liquids, which are necessary for the investigation of distillation lines. The boiling temperatures of the binary solutions n-butylacetate-acetic acid are shown (table 2). The boiling temperatures of the heteroazeotrope obtained by checking the data given by Khennot (Ref 13) amount to 91.04°C - according to Khennot - 90.2°C. The boiling temperatures of the ternary system were investigated according to 4 secants in Gibbs' triangle, which correspond to the 4 series of solutions with constant correlations of molar parts of water and n-butylacetate (e.g. 0,4; 1,1; 5,3; 11,5). According to these data as well as to those of binary systems the isotherms-isobars (fig. 2) were obtained. With a changing solution by evaporation also the vapor, which is in equilibrium with it, changes according to the line of the vapor. As starting point for the distillation- and vapor lines the heteroazeotrope water-n-butylacetate was used. The course taken by 5 lines of open evaporation and the corresponding vapor lines were investigated. Results are graphically represented (fig. 4). It is seen

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The Equilibrium Liquid-Liquid and Liquid-Vapor in the System Water-Acetic Acid-n-Butylacetate

54-10-2-7/16

that all lines of open evaporation begin in the immediate vicinity of the heteroazeotrope "water-n-butylacetate", that they rise up to the point "acetic acid", after which, without reaching this destination, they turn off in the direction "acetic acid-n-butylacetate". It is known from the thermodynamic theory that the distillation lines continue farther along the side "acetic acid-butylacetate (approaching it asymptotically) and must end at the point "butylacetate". The course taken by the distillation lines along the side of the triangle which corresponds to the binary system acetic acid-n-butylacetate can, however, not be determined experimentally as they approach too close to the latter. There are 4 figures, 2 tables, and 17 references, 6 of which are Soviet.

SUBMITTED: December 25, 1957

AVAILABLE: Library of Congress

Card 3/3

1. Acetic acid-n-butylacetate-water systems--Equilibrium
2. Acetic acid-n-butylacetate-water systems--Thermodynamic properties

Lutugina, N.V.

58

8/032/60/026/04/40/046
8010/0006

AUTHORS: 1) Ivanov, E.A., 2) Konstantinov, Y.A., 3) Gatschenko, Ye.F.,
Shepelov, P.V., 4) Arayev, V.V., 5) Kakhov, L.A., Shestichuk, V.P.,
6) Lutugina, E.Y.

TITLE: News in Brief

PERIODICAL: Zavodskaya laboratoriya, 1960, Vol. 26, No. 4, pp. 504-506

TEXT: 1) The author reports on the development of X-ray apparatus for measuring stresses of first order in welded designs. The apparatus (Fig., photograph) comprises a switchboard, high voltage transformer, X-ray tube (in a casing), a stand for the latter, a chamber, and mechanisms for vibrating and rotating the specimen. P.M. Lebedev and P.V. Shepelov collaborated in designing the chamber and the stand. A brief description of the apparatus is given. 2) The author recommends the use of an attachment (Fig.) for taking photographs of coarse-crystalline specimens by the 1-KHOS camera. The specimen which is fixed by a holder, is shifted by means of a cam which has the shape of opposite Archimedean spirals. Cam rotation shifts the specimen by $\sin^2 \alpha$, where α - angle

Card 1/2

of specimen displacement vertical to the incident X-ray. 3) The authors describe a dismountable vacuum tube (Fig.) for X-ray structural analysis. The tube casing has three openings for the X-rays and one for evacuation. The copper anode has a titanium mirror, the construction of which is described. 4) The author briefly describes a simple device (Fig., photograph) for lowering the chamber of the ISF-72 quartz spectrograph. 5) The authors describe a simple apparatus for sampling gas under reduced pressure. The apparatus (Fig., diagram) consists of two absorbers, a rheometer, and a vacuum pump. A short explanation of the diagram is given. 6) The author discusses the application of somewhat modified Taylor condensers for investigating rectification processes of ternary systems in the distillates of which denatizing occurs. The mode of operation of the condensers is described by means of a diagram (Fig.). There are 6 figures and 1 reference.

ASSOCIATION: 6) Leningradskiy gosudarstvennyy universitet (Leningrad State University)

Card 2/2

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77538
SOV/80-33-1-47/49

AUTHOR: Lutugina, N. V., Tavastsherna, K. S., Kalyuzhnyy,
V. M.

TITLE: Brief Communications. Investigation of Triple System
Methyl Acetate-Chloroform-Water by Rectification

PERIODICAL: Zhurnal prikladnoy khimii, 1960, Vol 33, Nr 1, pp
248-251 (USSR)

ABSTRACT: In the previous work the isotherm-isobars of the
above triple system were investigated. In the
present work the process of rectification of 10
solutions was investigated and changes of components
of distillate and of the liquid in still were studied.

Card 1/3

Brief Communications.

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Course of rectification in the system methyl acetate-chloroform-water.

a	b			f			d			t				
	c			c			e			c				
	d	e	f	h	d	e	f	h	d	e	f	d	e	f
1	10.7	48.7	40.6	56	0.3	83.8	15.9	60	35.2	45.2	19.6	10.9	12.1	77.0
2	16.7	61.1	22.2	56	0.6	84.0	15.4	60	35.7	45.3	19.0	28.4	37.9	33.7
3	25.5	24.6	49.9	56	90.1	1.5	8.4	60	35.1	45.8	19.1	—	—	~100
4	40.3	20.6	39.1	56	90.7	0.6	8.7	60	35.6	44.5	19.0	13.2	14.8	72.0
5	23.3	62.9	13.8	56	0.8	84.0	15.2	60	35.1	45.4	19.5	35.5	64.5	—
6	30.0	58.0	12.0	56	0.1	83.5	16.4	60	35.7	44.4	19.9	35.7	64.3	—
7	49.2	40.4	10.4	56	90.0	1.3	8.7	60	36.0	44.4	19.6	36.3	63.7	—
8	50.7	39.0	10.3	56	89.1	0.7	10.4	60	35.7	44.6	19.7	36.0	64.0	—
9	12.9	81.8	5.3	56	1.0	83.8	15.2	61	—	~100	—	35.6	64.4	—
10	80.8	5.0	5.2	56	90.7	0.6	8.7	57	100.0	—	—	—	—	—

a = Number of solution; b = starting solution;
 c = Content (in mole/%)
 d = methyl acetate;
 e = chloroform; f = water; g = 1-st fraction;
 h = temperature; i = 2-nd fraction;
 j = liquid residue in still

Card 2/3

Brief Communications. Investigation
of Triple System Methyl Acetate-
Chloroform-Water by Rectification

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SOV/80-33-1-17/111

There is 1 figure; 1 table; and 4 Soviet references.

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SUBMITTED: January 29, 1959

Card 3/3

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 1, 217-48/1956; (English summary) - A steel contg. C 0.34
 S 0.02, P 0.02, Cr 1.46, Ni 1.40, Mn 0.20, Si 0.25 and Mn
 0.55% was subjected to "intermediate homogenization",
 i.e., diffusion-annealing of pieces after preliminary plastic
 deformation in the course of forging or rolling. The de-
 gree of microsegregation decreased by about 30% after the
 homogenizing annealing of steel from 1200 to 1250°; the
 decrease was very slow after 6-8 hrs. Homogenized forg-
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 50%), in strength (about 35%), and in elongation (about
 20%).
 Werner Jacobson

4

P.D.

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Experiences in a Polish steel foundry, Stalowa Wola, are
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