

Л. С. Лившиц, Л. П. Бахрах,

AUTHORS: Livshits, L.S., and Bakhrakh, L.P.

SOV-125-58-10-10/12

TITLE: On the Relation Between the Hardness and the Microstructure of the Fusion of Austenitic Joint in Perlite Steel and the Chemical Composition of the Steel and Weld Joints (O svyazi mezhdv tvërdost'yu i mikrostrukturoy splavleniya austenitnykh shvov na perlitnykh stalyakh i khimicheskim sostavom stali i shvov)

PERIODICAL: Avtomaticheskaya svarka, 1958, Nr 10, pp 81 - 85 (USSR)

ABSTRACT: Problems relating to the transition of carbon in the fusion zone in solid condition, and the passage of metals in various structure classes are discussed. The microstructure and microhardness of the fusion zone in commercially pure iron (about 0.03% C), carbon steel (up to 22% C), and "12Kh5M" steel (up to 0.15% C, 5 - 6 % Cr, 0.45 - 0.65 % Mo) were investigated. It was proved that hardness and structure of the fusion zone in austenitic seams on perlitic steel can be controlled in a large range by changing the chrome and nickel content in the seams and the carbide forming elements in the base metal. It is concluded that hardness and probably also brittleness in the fusion zone

Card 1/2

SOV-125-58-10-10/12

On the Relation Between the Hardness and the Microstructure of the Fusion of Austenitic Joints in Perlite Steel and the Chemical Composition of the Steel and Weld Joints

are reduced by a smaller carbon content in the steel and chromium content in the austenitic seam, as well as by an increased content of nickel in the seam, and of elements forming in the base metal stabler carbides than chromium. To reduce hardness and improve homogeneity in the fusion zone, the use of "18 Cr-8 Ni" electrodes, which do not contain niobium, titanium, molybdenum and tungsten, is recommended for welding steel alloyed with molybdenum, tungsten and vanadium (separately or in combination) in quantities ensuring binding of the carbon into carbide. There are 5 microphotos, 1 graph and 7 references, 3 of which are Soviet and 4 English.

SUBMITTED: January 6, 1958

Card 2/2

1. Steel alloys--Arc welding
2. Arc welding--Metallurgical effects
3. Steel--Chemical properties
4. Welds--Chemical properties

SOV/135-59-1-6/18

AUTHORS: Livshits, L.S., Candidate of Technical Sciences,
and Bakhrakh, L.P., Engineer

TITLE: The Radiographic Investigation of Niobium Distribution in Stainless Steel (Radiograficheskoye issledovaniye raspredeleniya niobiya v nerzhavayushchey stali)

PERIODICAL: Svarochnoye proizvodstvo, 1959, Nr 1, pp 20-22 (USSR)

ABSTRACT: In connection with intercrystalline corrosion in the use of "18-9 Ti" and "18-9 Nb" stainless steels, it was assumed that the stabilizing effect of Nb and Ti depends on their condition in the alloy and that satisfactory corrosion resistance is obtained if Nb (or Ti) is present in the form of carbide, binding the contained carbon. Information is given on the effect of heating conditions for "18-9" grade stainless steel containing Nb, on the formation and dissolving of Nb-carbides, with the

Card 1/3

SOV/135-59-1-6/18

The Radiographic Investigation of Niobium Distribution in Stainless Steel

use of an Nb-95 radioactive isotope. The tests led to the following conclusions: to ensure intercrystalline corrosion resistance in heating up to temperatures of 550 - 650°C, the use of stainless steel with a higher Nb content

$$\left(\frac{\text{Nb}}{\text{C}} \approx 10 - 13\right)$$

is recommended. In hardening stainless steel with a reduced Nb content, heating over 1200°C must be avoided. In the case of heating up to 1300°C, zones adjacent to the weld are less resistant to corrosion than remote portions. Best results in raising corrosion resistance can be obtained, by heating up to 850 - 900°C for 3 hours, ensuring a satisfactory Nb carbide formation. Maximum temperatures for steels containing Ti are lower

Card 2/3

SOV/135-59-1-6/18

The Radiographic Investigation of Niobium Distribution in Stainless Steel

than for Nb-containing steels. There are 5 microphotos, 1 table and 4 references, 3 of which are Soviet and 1 English.

ASSOCIATION: VNIIST

Card 3/3

21,213
S/193/61/000/006/003/007
A004/A104

1-2300

AUTHORS: Bakhrakh, L. P., and Livshits, L. S.

TITLE: BC4-5 (VSN-5) electrodes for welding non-revolvle joints of X18H12M2T (Kh18N12M2T) steel pipes

PERIODICAL: Byulleten' tekhniko-ekonomicheskoy informatsii, no. 6, 1961, 23-24

TEXT: The VSN-5 electrodes were developed in 1960 by the Vsesoyuznyy nauchno-issledovatel'skiy institut stroitel'stva truboprovodov (All-Union Scientific Research Institute for the Construction of Pipelines) (see also Byulleten' tekhniko-ekonomicheskoy informatsii, 1961, no. 2, 23). The electrode has a Cv. 04X18H11M3 (Sv. 04Kh18N11M3) steel core and a coating consisting of 40 parts marble, 40 parts feldspar, 3 parts ferromanganese, 3 parts titanium dioxide, 3 parts ferrosilicon, 8 parts ferrocolumbium, 2 parts ferromolybdenum, 1 part aluminum, and 30-32 parts water glass. The VSN-5 electrode makes it possible to obtain a built-up metal of the following composition:

C	to 0.13	Ni	10 - 12
Si	0.5 - 0.8	Nb	0.9 - 1.2
Mn	0.5 - 1.5	Mo	2.3 - 2.6
Cr	17 - 19	S and P	not more than 0.035

Card 1/2

24243

S/193/61/000/006/003/007
A004/A104

BCH-5 (VSN-5) electrodes ...

The welded joints have the following mechanical properties: temporary tensile strength ≥ 60 kg/mm², relative elongation $\geq 24\%$, impact strength ≥ 7 kg/cm², bending angle of the welded joint: $\geq 50^\circ$. The joints are resistant to general and intergranular corrosion in various chemical media, which was proved by tests being carried out in different organic acids and in a solution of copper sulfate and sulfuric acid. The specimens were tested under laboratory conditions after the welding, after hardening at 1,050°C, stabilizing annealing at 850°C and provoking heating at 650°C. Heating the specimens to 650 and 850°C led to the formation of cracks, which are not of corrosion origin but the result of rapid embrittlement of the steel caused, obviously, by heating in the dangerous temperature range of 650-850°C. Therefore the service temperature for parts welded with VSN-5 electrodes should not exceed 350°C.

Card 2/2

LIVSHITS, Lev Semonovich, kand. tekhn. nauk. Prinimali uchastiye:
BAKURAKH, L.P., starshiy nauchnyy sotr.; PANICH, S.I., inzh.;
GRINBERG, N.A., asp.; KURKUMELLI, E.G., inzh.; KAVKOVA, V., red.

[Role of alloyed steel composition on the conservation of structural homogeneity, and the properties of welded joints during heat time] Rol' sostava legirovannykh staley v sokhraneni strukturnoi odnorodnosti i svoistv svarynykh soedinenii pri dli-
tel'nykh rabochikh nagrevakh. Moskva, VNIIST Glavgaza SSSR. Re-
daktsionno-izd. otdel, 1962. 56 p. (MIRA 15:11)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut po stroitel'-
stvu magistral'nykh truboprovodov (for Bakhrakh, Panich,
Grinberg, Kurkumelli).
(Steel—Welding) (Metals, Effect of temperature on)

43275

S/842/62/000/000/006/006
E191/E435

1.2300

AUTHORS: Livshits, L.S., Candidate of Technical Sciences,
Bakhrakh, L.P., Engineer

TITLE: The welding of alloy steel production plant pipework

SOURCE: Primeneniye svarki v stroitel'nykh konstruktsiyakh.
Vses. konfer. po prim. svarki v stroi. konstr., 1961.
Moscow, Gosstroyizdat, 1962. 344-350

TEXT: The main tasks in the welding of alloy steel pipes are enumerated. In manual arc welding, the development of new electrode material is reported with which certain alloy steels can be welded without subsequent heat treatment. The welding of pearlitic steels with austenitic electrodes is discussed generally. The presence of elements more similar to carbon than chromium is needed. This condition is fulfilled in steels with a high molybdenum content. Automatic and semi-automatic welding is discussed and recommendations for the necessary fluxes are given. There are 2 figures and 2 tables.

ASSOCIATION: VNIIST

Card 1/1

/ 2300

41882

S/135/62/000/011/001/006

A006/A101

AUTHORS: Iivshits, L. S., Candidate of Technical Sciences, Bakhrakh, L. P.,
Engineer

TITLE: Problems in the welding of steels of different structural classes

PERIODICAL: Svarochnoye proizvodstvo, no. 11, 1962, 8 - 10

TEXT: The authors investigated structural heterogeneity in the fusion zone of austenitic steel with steels of other structural classes. Table 2 shows the results of measuring the size of the decarbonization zone in non-alloyed steel, adjacent in the fusion zone to high-alloyed welds. These data make it possible to estimate the intensity of carbon transfer at 700°C. The structural heterogeneity in the fusion zone of the investigated steels may be caused by the mixing of dissimilar metals, the formation of intermediate martensite alloys in the weld, and carbon transfer from the ferrite-perlite steel into the austenite steel. If the content of carbon in the base and weld metals is low and if the carbon is not transferred during heating, the formation of martensite interlayers in the weld near the fusion line is not dangerous. The carbon transfer during

Card 1/12

Problems in the welding of...

S/135/62/000/011/001/006
A006/A101

heating of such welds entails carbonization of the martensite zone, sharp increase in hardness and brittleness so that the weld joints are not suitable for operation. Carbon transfer from perlite into austenite steel during heating is predetermined by the appearance of the gradient of its concentration in the ferrite and austenite solution near the fusion line. The C concentration of non-alloyed steel, subjected to welding, is 0.02% at 700°C. Knowing this value and using the data given in table 2, the carbon concentration in high-alloy welds at the same temperature can be calculated by a method developed by L. S. Livshits, which is based on the regularities resulting from the second law of diffusion. The calculation shows that at 700°C about 0.01455% C is dissolved in the austenite of Cr-Ni steels Kh18N8 and Kh25N20 and in the ferrite of Kh13 Cr-steel and that about 0.01728% C is contained in the solid solution of alloy Kh15N60. Calculation of the alloying of steels to be welded, by a method in which extended heating would not cause carbon transfer into the austenite metal, is recommended. There are 2 tables and 4 figures.

ASSOCIATION: VNIIST

Card 2/12

LIVSHITS, Lev Semenovich. Prinsipal uchastiye ~~BAKHRAKH~~, L.P., inzh.;
ALEKSEYEV, Ye.K., inzh., nauchnyy red.; PEREVALYUK, M.V., red.
izd-va; SHEVCHENKO, T.N., tekhn. red.

[Welding steel alloys in assembly work in construction]Svarka
legirovannykh stali na montazhnykh rabotakh v stroitel'stve.
Moskva, Gosstroizdat, 1962. 191 p. (MIRA 15:12)
(Steel alloys--Welding) (Building, Iron and steel)

LIVSHITS, Lev Semenovich, kand. tekhn. nauk; BAKHRAKH, Lidiya
Petrovna, inzh.; RAGAZINA, M.F., inzh., ved. red.; SHTERLING,
S.Z., dots., red.; SOROKINA, T.M., tekhn. red.

[Welding of EI578 and EI579 steel structures] Svarka konstruktsei
iz stali EI578 i EI579. Moskva, Filial Vses. in-ta nauchn. i
tekhn. informatsii, 1958. 9 p. (Peredovoi nauchno-tekhn. i pro-
izvodstvennyi opyt. Tema 12. No.M-58-281/24) (MIRA 16:3)
(Steel, Heat-resistant--Welding)

LIVSHITS, L.S., kand.tekhn.nauk; BAKHRAKH, L.P., inzh.

Welding steels of dissimilar structural groups. Svar.proisv.
no.11:8-10 N '62. (MIRA 15:12)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut tverdykh splavov.
(Steel—Metallography) (Steel—Welding)

S/125/63/000/003/011/012
A006/A101

AUTHORS: Livshits, L. S., Bakhrakh, L. P.

TITLE: Radiographical investigation of carbon migration in the fusion zone

PERIODICAL: Avtomaticheskaya svarka, no. 3, 1963, 90 - 93

TEXT: The process of carbon transfer beyond the fusion zone of the weld and base metal, depends considerably upon the peculiarities in the carbonized zone and higher alloyed steel. Experiments were carried out to study more precisely the regularities in the formation of a carbonized zone and its nature. Metal, containing radioactive carbon, was welded upon various steel grades. Two cases are investigated: 1) the weld and base metal are differently alloyed pearlite class steels; 2) the weld and the base metal are of different structural classes, i.e. pearlite and austenite. The radioactive isotope was introduced into electrode rods which were used to produce three layers of 12X5M (12Kh5M) steel (0.15% C); 1X18H9 (1Kh18N9) steel (0.12% C) and X15H60 (Kh15N60) alloy (0.12% C) on Armo-iron (0.04% C). The distribution of C in the fusion zone and the adjacent areas was studied by radiographical analysis of the

Card 1/3

Radiographical investigation of...

S/125/63/000/003/011/012
A006/A101

specimens in initial state and after heating at 700°C during 13 hours. Specimens with built-up 1Kh18N9 steel and Kh15N60 alloy were investigated after heating at 900 and 1,050°C for 2 hours. It was found that the introduction of alloying, carbide-forming components, to the built-up material caused the migration of C from one to another section of the joint, due to the different C concentration in the solid solution. The addition of carbide-forming components to a section where the carbon diffuses, increases sharply its C-concentration. The carbon, migrating beyond the fusion zone, is bound into carbides until all the components, able of carbide formation, have been bound into carbides. Then the C content in the solution increases slightly. The total C concentration is higher in alloyed than in non-alloyed steel. The degree of carbonization will be the higher the closer the alloying component is to carbon and the higher the C content in the carbides. In the second series of tests it was found that the intensity of C migration is determined by the gradient of its concentration in a solid solution. C concentration in Kh18N9 steel, heated to 700°C, is below 0.02% and lower than in a nickel-base alloy. In heating to 900°C the solid solution of austenite steel contains up to 0.05% C, and in heating to 1,050°C it contains 0.12% C. The fact that all the carbon (about

Card 2/3

Radiographical investigation of...

S/125/63/000/003/011/012
A006/A101

0.3%) of non-alloyed steel is in the solid solution, brings about the active migration of C from the carbon to the Cr-Ni steel. The C content in a Kh15N60 solid solution will be lower than in Kh19N9 steel. The reduced C concentration in solid solutions of Kh18N9 and Kh15N60 steel, is maintained during the process, due to a high chromium content. There are 4 figures.

Card 3/3

IVSHITS, L.S., doktor tekhn. nauk; BAKHRANII, L.P., inzh.

Technological characteristics of electric arc welding of
dissimilar steels. Vest. mashinost. 45 no.7:58-62. 11 '65.
(MJRA 18:10)

L.Ye.
BAKHRAKH, L.E.

USSR/Electronics - Magnetron

Jun 52

"Theory of the Multisegment Magnetron," L. E. Bakh-
rakh

"Zhur Tekh Fiz" Vol XXII, No 6, pp 1008-1015

The multisegment magnetron was investigated by V. Kalinin and I. Vasserman (cf. "Iz Ak Nauk SSSR Ser. Fiz" 10, 103, 1946). Author analyzes process of phase focusing of an electron beam and attempts to apply results obtained to clarification of processes of sustained oscillations of multisegment magnetron. In-
debted to P. V. Golubkov and B. M. Zamorozkov. Re-
ceived. 23 Jul 50.

219T18

BAKHRAKH, M.G. (Kuybyshev)

Asymptotic stability of the solutions to certain differential equations
with retarded arguments. Izv. vys. ucheb. zav.; mat. no. 4:15-19 '63.
(MIRA 16:10)

САХРААН, Н. П.

Assembling and inter-changeability in aeroplane construction. Moskva, Oborongiz, Glav.
red. aviatsionnoi lit-ry, 1946. 81 p. (50-18991)

TL671.1.B3

BOYTSOV, V.V.; BAKHRAKH, N.M., redaktor; ZUBAKIN, I.M., tekhnicheskii
redaktor

[Standardised appliances for assembling airplane units] Norma-
lizovannye prispособleniia dlia sborki agregatov samoleta.
Moskva, Gos.isd-vo oboronnoi promyshlennosti, 1955. 234 p.
(Airplane--Design and construction) (MLRA 8:10)

PROCESS AND PROPERTIES INDEX

E. SCHRAM, R.L.

CA

17

Synthesis of perfume. Preparation of the methylene ether of pyrocatechol. R. L. Bachrach. *Maschinen Zeitsung* Dtsch. No. 4, 49(1934); *Chemie & Industrie* 33, 187. — A study was made of the prepn. of the methylene ether of pyrocatechol by the action of CH_2Cl_2 (instead of CH_2I_2 , generally used) on an alk. salt of pyrocatechol. A soln. of 8 g. pyrocatechol, 8.4 g. CH_2Cl_2 , 1.8 g. NaOH, 0.7 g. H_2O and 9 g. KOH heated 18-19 hrs. on the water bath, yields a clear liquid contg. NaCl crystals. The liquid is steam-distd., the distillate extrd. with H_2O , the oil, washed with NaOH soln. and with H_2O and then dried, and the H_2O evapd. The amt. of NaOH used should be about 72% of that theoretically required to combine with the pyrocatechol; the best medium is 98% EtOH and the optimum temp. is 110-12°. Max. yield was 23.5% of theoretical. Preparation of dihydro-

methane. *Maschinen Zeitsung* Dtsch. No. 4, 49(1934); *Chemie & Industrie* 33, 187. — CH_2Cl_2 can be prepd. either by reduction of $CHCl_3$ (dissolved in 2-3 vols. H_2O) with fuming HCl and Zn or with 80% AcOH and Zn, the resp. yields being 10 and 30%. The necessary app. comprises a round-bottomed flask surmounted by a long rectifying column connected with a bulb condenser. The CH_2Cl_2 formed is entrained by a current of H_2 and the receiver consists of a series of Tschirba's flasks filled with ActiH. Since the reaction is strongly exothermic, the acid is added in small successive portions so that the temp. does not rise above 60°; reduction of 1 g. $CHCl_3$ requires about 8 hrs. Reduction proceeds further than CH_2I_2 , causing a loss of about 80% of the CH_2Cl_2 . A. Pupinac-Coutur.

A B S - I S A METALLURGICAL LITERATURE CLASSIFICATION

1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------

BAKHRAKH, Ts. and SEROVAYSKIY, Ye.

"Mounting, Adjustment, and Regulation of Fuel Pumps for Diesel Engines," ~~Tekhnika~~
Tekhsovety MTS, 13, No.23, 1952

BAKHRAKH, Ts.

"Control-Adjustment Testing of Fuel Pumps," Tekhsov. MTS, 13, No.29-30, 1952

18

~~BAKHIRAKH, E. A.~~
BAKHIRAKH, Ye. A.

ANHYDROUS IRON ALUMS. N. V. BASHKIN, E. A. BAKHIRAKH, A. V. SMIRNOVA and T. S. BODEVA. *Zh. Obshch. Khim.* 243, 226-8(1940).—*See C. A.* 34, 7548.
T. H. Dunkelberger

ABB-SLA METALLURGICAL LITERATURE CLASSIFICATION

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

VYEMINNOVA, N.K.; KONTORINA, A.A.; BAKHRAKH, Ye.E.

Characteristics of the polysaccharide fraction of *Pasteurella tularensis*. Zhur. mikrobiol. epid. i immun. 27 no.2:8-13 F '56
(MLRA 9:5)

1. Iz Instituta mikrobiologii i epidemiologii Yu.V. SSSR Mikrob.
(*PASTEURELLA TULARENSIS*, metab.
polysaccharide containing fraction, characteristics)

KOZAKEVICH, V.P.; DOMARADSKIY, I.V.; BAKHRAKH, Ye.E.; PASTUKHOV, B.N.,
red.; KARON, I.I., red.; ZUYEVA, N.K., tekhn.red.

[Poisons used to control hosts and carriers of highly dangerous
infections] IAdy, primeneniye dlia bor'by s khraniteliami i
perenoschikami osobo opasnykh infektsii. Pod red. B.N.Pastukhova.
Moskva, Gos.isd-vo med.lit-ry, 1958. 155 p. (MIRA 13:4)
(RODENTICIDES) (INSECTICIDES)

MAMEDOV, Z.M., professor; BAKHRAMI, M.

The fate of patients after appendicular abscess with limited peritonitis. Vest.khir. 76 no.7:134-135 Ag '55. (MLRA 8:10)

1. Iz kafedry obshchey khirurgii (sav.-prof. Z.M.Mamedov) Azerbaydzhanskogo meditsinskogo instituta

(APPENDICITIS, compl.

abscess & peritonitis, indic. for surg.)

(ABSCISS

appendix with peritonitis, indic. for surg.)

(PERITONITIS, etio. & pathogen.

abscess of appendix, indic. for surg.)

~~BAKHRAMOV A. B.~~

Effect of a growth-promoting substance of petroleum origin on the development and yield of the vetchling. Dokl. AN Azerb.SSR 13 no.3:321-324 '57. (MIRA 10:7)

1. Institut zemledeliya Akademii nauk Azerbaydzhanskoy SSR. Predstavleno akademikom Akademii nauk Azerbaydzhanskoy SSR A.I. Karayevym.
(Vetchling)
(Growth promoting substances)
(Petroleum industry--By-products)

МАШИНОСТРОЕНИЕ
МАШЕР, А.Я., инженер; БАЙДУКОВ, И.Я., инженер.

Machining the frames of induction motors of a standard series on
grouped machine tools. Vest. elektroprom. 27 no.9:41-44 5 '56.
(MLRA 10:9)

1. Giprenergoprom.
(Electric machinery industry) (Machine tools)

PHASE I BOOK EXPLOITATION 160

Boytsov, V.V.

Normalizovannyye prispособleniya dlya sborki agregatov samoleta
(Standardized Devices for Assembling Aircraft) Moscow,
Oborongiz, 1955. 234 p. Number of copies printed not given.

Ed.: Bakhrakh, N.M.; Tech. Ed.: Zudakin, I.M.

PURPOSE: The book is intended basically for designers of assembling equipment in the aircraft construction industry, but it may be helpful also to workers in other branches of machine building; it may also serve as a manual in training specialists.

COVERAGE: The book describes standardized assemblies and devices for assembling aircraft, methods of design and calculation, and special technological processes in mounting assembling devices. The author states that this book is the first work dealing with standardization of assembling equipment. He thanks A.A. Tselibeyev, V.P. Shatin, U.I. Govberg, B.A. Khropik and others who assisted him in the development of design standardization; he expresses his special

Card 1/5

Standardized Devices for Assembling Aircraft 160

gratitude to V.I. Tikhonov for valuable help in preparing the materials of the book. There are 5 Soviet references.

TABLE OF CONTENTS:

Preface	3
PART I. EQUIPMENT AND TECHNOLOGY FOR AIRCRAFT ASSEMBLY	
Ch. 1. Technology and Equipment for Assembling Aircraft	5
1. Basic assemblies and joints of aircraft	5
2. Brief data on technological processes in assembly operations	9
3. Instruments and equipment for assembly operations	16
Ch. 2. Technological Requirements and Purpose of Assembly Devices	21

Card 2/5

Standardized Devices for Assembling Aircraft	160
Ch. 3. Technical and Economic Value of Standardizing Assembling Devices	26
1. Basic aspects	
2. Technical and economic effectiveness of standardizing assembly equipment	31
PART II. PRELIMINARY DESIGN OF ASSEMBLY DEVICES	
Ch. 4. Design of Assembly Devices	37
1. Elements and standard joints of the basic structure of assembly devices	37
2. Clamps and positioning devices	63
3. Standard designs of assembly devices	80
4. Classification of assembly devices	92
Ch. 5. Auxiliary Equipment of Assembly Devices	102
1. Work areas	102
Card 3/5	

Standardized Devices for Assembling Aircraft	160	
2. Pneumatic equipment		109
3. Electrical equipment		112
Ch. 6. Methods of Designing Assembly Devices		115
1. Basic materials		115
2. Sequence of design		118
3. Selection of basic axes		119
Ch. 7. Rigidity Calculations		124
1. Distribution of applied loads		124
2. Rigidity calculation for beams and columns		127
3. Computation diagrams for normal beams and columns		130
4. Calculation examples for assembly devices		136
5. Conclusions		161
PART III. MOUNTING ASSEMBLY DEVICES		
Ch. 8. Basic Concepts for the Special Technology of Mounting Assembly Devices		163

Card 4/5

Standardized Devices for Assembling Aircraft	160
1. Special technological processes	163
2. Special equipment for mounting assembly devices	166
3. Controlling devices with precision optical instruments	177
Ch. 9. Interrelation of Assembly Devices	187
Ch. 10. Operation of Assembly Devices	194
Appendixes	
1-29 Rigidity calculation tables and diagrams for assembly devices	197
30 Form for specifications of an assembly device	228
31 Grading of rolled steel. Recommended terminology	232
Bibliography	233

AVAILABLE: Library of Congress

Card 5/5

IMS/ksv
7-29-58

PART I BOOK REFLECTIVE

007/5742

Moderniya nauk SSSR. Mezhdunarodnyy komitet po provedeniyu Mezhdunarodnogo geofizicheskogo goda. VIII razdel programy NII: Shiroty i dolgoty.

Preliminary results of investigations of latitude variations and migrations of the Earth's poles; Preliminary Data of Latitude Variations and Migrations of the Earth's Poles; Collected Articles. No. 1) Moscow, Izd-vo AN SSSR, 1980. 97 p. Errata slip inserted. 1,000 copies printed.

PURPOSE: This collection of articles is intended for astronomers, geophysicists, and other scientists concerned with the problem of latitude variations and the migration of the Earth's poles.

CONTENTS: Part I of the collection contains preliminary results of latitude observations from 1957.5 through 1959.0 made at IGY stations in the USSR network, including new stations in Siberia. Part II consists of articles describing new instruments, observational programs and methods, and procedures of processing the latitude observational data. With the larger number of stations and the use of new instruments it is anticipated that the final results will provide a more comprehensive study of anomalies and instrumental

Card 1/5

Preliminary Data of Latitude Variations (Cont.)

007/5742

errors in latitude observations than has been possible previously. No per-
sonalities are mentioned. English abstracts and references follow each article.

TABLE OF CONTENTS:

Preface

5

PART ONE

Bravinskaya, S. V., L. D. Kostina, and N. R. Andreyenko. Latitude
Observations at the Main Astronomical Observatory of the Academy
of Sciences USSR (Freyberg-Kondratyev Zenith-Telescope)

7

Yevshenko, Ye. I., I. F. Gerasimuk, and O. V. Chuprunova.
Observations of Malscott Pairs at the Poltava Gravitational
Observatory of the Ukrainian Academy of Sciences (Zeiss
Zenith-Telescope)

9

Petrov, N. A. Observations of Bright Zenith Stars at the Poltava
Gravitational Observatory of the Ukrainian Academy of Sciences
(Zeiss Zenith-Telescope)

13

Card 2/5

Preliminary Data of Latitude Variations (Cont.)

001/5742

PART TWO

- Belikov, V. I., and I. F. Korbut. The Determination of Pulkovo
Latitude Variations From Parallel Observations With Two Zenith Telescopes 34
- Belikov, A. M. Preliminary Results of Comparing Observations With Two
Zenith Telescopes of the Kitab Latitude Station During the Period 1957.5-
1959.0 43
- Chikhova, T. I., O. M. Zhukova, V. V. Kestrov, and Yu. I. Prodan.
Preliminary Results of Processing Observations With the Moscow Zenith
Telescope During 1950 47
- Evans, Kh. I., and V. A. Kharov. Theory and Method of Processing
Photographic Zenith Tube (IZT) Observations 56
- Fakhrali, H. H., and Kh. I. Potter. List of Stars on the Pulkovo
Photographic Zenith Tube (IZT) Program 63
- Rubashovskiy, A. A., and Ye. P. Fedorov. On the Question of Evaluating
the Accuracy of Latitude Observations 75

Card 4/5

1 (1)
 AUTHOR: Bakhrakh, S.M. 307/55-58-3-3/37

TITLE: Theory of Hypersurfaces of the Generalized Euclidean Space
 (Teoriya giperpoverkhnostey obobshchennogo evklidova prostranstva)

PERIODICAL: Nauchnyye doklady vysshey shkoly. Fiziko-matematicheskiye nauki,
 1958, Nr 3, pp 14-17 (USSR)

ABSTRACT: As a generalized Euclidean space H_n the author denotes a real
 affine n -dimensional space in which the scalar product of two
 vectors is defined with the aid of a bilinear function $\varphi(xy)$:
 $\varphi(xy) \equiv xy(xy \neq yx)$, $\varphi(xx) > 0$ for every $x \neq 0$.
 Let F be a hypersurface in the H_n : $z = z(u^1, \dots, u^{n-1})$ ($z_i \equiv \frac{\partial z}{\partial u^i}$
 are linearly independent). Let g_{ij} be the measuring tensor; p be
 a unit vector perpendicular to all vectors of the tangential
 plane; $b_{ij} = b_{ji}$ be the second fundamental tensor of the hyper-
 plane. In contradistinction to the usual Euclidean space, F is
 not determined except of motions by the g_{ij} and b_{ij} . The author
 introduces still the magnitudes $z_i p = \varphi_i$, then it holds:

Card 1/2

Theory of Hypersurfaces of the Generalized
Euclidean Space

SOV/155-58-1-3/37

Theorem: If between the points of two hypersurfaces F, F^* of the H_n a one-to-one relation can be established and the parametrization can be carried out so that the tensors g_{ij} and φ_i have the same values in the initial points and the tensors g_{ij}, b_{ij} in all corresponding points, then F and F^* can be brought to coincidence by a motion of the H_n .

The theorem gives necessary and sufficient conditions that given g_{ij}, b_{ij} and φ_i are the measuring tensor, the second fundamental tensor and covector of a surface in the H_n .

The third theorem contains the same assertion as theorem 2 but under changed assumptions.

There are 2 Soviet references.

ASSOCIATION: Yaroslavskiy pedagogicheskiy institut imeni K.D.Ushinskogo
(Yaroslavl' Pedagogical Institute imeni K.D.Ushinskiy)

SUBMITTED: April 18, 1958

Card 2/2

BAKHBAKH, S.M.

Theory of hyper-surfaces in generalized Euclidean space with
one singular direction. Nauch.dokl.vys.shkoly; fiz.-mat.
nauki no.3:3-6 '59. (MIRA 13:6)

1. Smolenskiy gosudarstvennyy pedagogicheskiy i uchitel'skiy
institut imeni Karla Marksa.
(Surfaces)

AUTHOR: Bakhrakh, S.M.

SOV/140-58-6-2/27

TITLE: Some Questions of Geometry of the n-Dimensional Generalized Euclidean Space (Nekotoryye voprosy geometrii n-mernogo obobshchennogo yevklidova prostranstva)

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Matematika, 1958, Nr 6, pp 7-16 (USSR)

ABSTRACT: A generalized n-dimensional Euclidean space H_n is a real oriented affine n-dimensional space in which the scalar product xy of the vectors x and y is defined with the aid of a generally not symmetric bilinear function $\varphi(xy)$: $xy \equiv \varphi(xy)$, where $\varphi(xx) > 0$ for every $x \neq 0$. Generally $xy \neq yx$. The author proves the existence of right-normalized bases which then are fundamental for the further investigations. The function φ is decomposed into a symmetric and a skew-symmetric part ($\varphi_+(xy)$ and $\varphi_-(xy)$). By the relation $\varphi_-(xy) = \varphi_+(xAy)$ a skew-symmetric linear operator is introduced which is essential for the further considerations. Necessary and sufficient conditions for the isomorphism of two H_n are given. Certain affine point transformations are denoted as motions in the H_n . The kind of possible motions depends on the

Card 1/2

Some Questions of Geometry of the n-Dimensional
Generalized Euclidean Space

SOV/140-58-6-2/27

structure of the operator A in the induced Euclidean space.
Finally the author formulates without proof some theorems
on the curves in the H_n .

There are 4 references, 3 of which are Soviet, and 1 German.

ASSOCIATION: Yaroslavskiy pedagogicheskiy institut imeni K.D.Ushinskogo
(Yaroslavl' Pedagogical Institute imeni K.D.Ushinskiy)

SUBMITTED: December 4, 1957

Card 2/2

85923

16.5600

S/140/60/000/003/002/011
C111/C222

AUTHOR: Bakhrakh, S.M.

TITLE: The Theory of Hypersurfaces of the Generalized Euclidean^b Space and Generalized Riemannian Spaces of First Class

PERIODICAL: ^uIzvestiya vysshikh uchebnykh zavedeniy. Matematika, 1960, Nr.3, pp.54-61

TEXT: In (Ref.7,8) the author developed a general theory of generalized Euclidean spaces H_n . In the present paper, at first the most essential results of (Ref.7,8) are repeated and then it is shown that, for certain modifications of the arrangements, one obtains the same or analogous results. Then the generalized n-dimensional Riemannian space W_n is introduced as an n-dimensional manifold, on which the field of a generally not symmetrical tensor g_{ij} is given, where

(27) $g_{ij}x^i x^j > 0$

for every vector x^i different from zero.

Let g_{ij} be the symmetrical and g_{ij} be the skew-symmetrical part of g_{ij} .

Card 1/3

85923

S/140/60/000/003/C02/011
C111/C222

The Theory of Hypersurfaces of the Generalized Euclidean Space and Generalized Riemannian Spaces of First Class

Let S_{jkip} be the tensor of curvature.

Theorem III: In order that the generalized Riemannian space with the tensor S_{ij} is a generalized Euclidean space it is necessary and sufficient that

$$(28) \quad S_{ijkp} = 0$$

$$(29) \quad S_{ij|k} \equiv S_{ij|k} = 0.$$

W_n is of first class if in an H_{n+1} there exists a hypersurface the measure tensor of which is identical with the tensor S_{ij} of W_n . Then S_{ij} is called a tensor of first class.

Theorem IV: In order that a W_n with $S_{ijkp} = 0$ is of first class it is necessary and sufficient that $S_{ij|k} = 0$.

Theorem V: In order that a W_n with $S_{ijkp} = k(S_{ij}S_{kp} - S_{ip}S_{kj})$, where $k > 0$, is a space of first class, it is necessary and sufficient that

Card 2/3

85923

S/140/60/000/003/002/011
C111/C222

The Theory of Hypersurfaces of the Generalized Euclidean Space and Generalized Riemannian Spaces of First Class

(30)
$$\epsilon_{ijk} = \frac{1}{n-1} (\epsilon_{jk}\epsilon_{is|l}\epsilon^{sl} - \epsilon_{ik}\epsilon_{js|i}\epsilon^{sl}).$$

Theorems VI and VII give sufficient conditions that a tensor $\epsilon_{ij} \neq \epsilon_{ji}$ is of first class.

The author mentions A.P.Norden and thanks A.M.Lopshits. There are 8 references: 6 Soviet, 1 American and 1 Swedish.

[Abstracter's note: (Ref.7) concerns a paper of the author in *Izvestiya vysshikh uchebnykh zavedeniy. Matematika*, 1958, No.6, pp.7-16; (Ref.8) is a paper of the author in *Nauchnyye doklady vysshey shkoly. Fiziko-matematicheskiye nauki*, 1958, 3, pp.14-17]

ASSOCIATION: Smolenskiy pedagogicheskiy institut imeni K.Marksa (smolensk Pedagogical Institute imeni K.Marksa)

SUBMITTED: July 21, 1958

Card 3/3

BAKHRAKH, S. M., CAND PHYS-MATH SCI, "GEOMETRY OF GENERALIZED EUCLIDIAN SPACE^S". MOSCOW, 1961. (MOSCOW STATE PED INST IN V. I. LENIN). (KL, 2-61, 198).

BAKHRAKH, S.M.

Theory of surfaces in generalized Euclidian space. Uch. zap.
~~the~~ gos. ped. inst. no.34:7-16 '60. (MIRA 15:9)
(Surfaces)

BAKHRAKH, S.M.

Theory of the hypersurfaces of a generalized Euclidean space.
Uch. zap. Smol. gos. ped. inst. No.10:16-22 '62.
(MIRA 17:1)

BAKHRAKH, S.M. (Moskva)

Conformal Euclidean generalized Riemann spaces. *Izv.vys.*
ucheb.zav.; mat. no.6:23-26 '65. (MIRA 19:1)

1. Submitted June 4, 1964.

ACCESSION NR: AT4040507

S/0000/63/000/000/0031/0052

AUTHOR: Bakhrakh, V. P.; Roginskiy, B. Ya.

TITLE: Optimality criteria and approximation methods for spacing a fleet along a short coast

SOURCE: Konferentsiya po voprosam primeneniya matematiki v sotsialisticheskoy ekonomike. 1st, Leningrad, 1961. Matematiko-ekonomicheskiye problemy* (Problems in mathematical economics); trudy* konferentsii. Izd-vo Leningr. univ., 1963, 31-52

TOPIC TAGS: mathematical economics, economics, linear approximation, optimization, linear programming, linear function, approximation method, approximation calculation, ship, transportation, water traffic, marine transport

ABSTRACT: The continuous increase in the marine freight turnover rate, the development of ports, and the increase in the number of transport ships have seriously complicated the solution of many planning and dispatching problems and have made necessary an exact mathematical formulation of the problem. Hence, the use of mathematics and electronic computing machines in the planning of marine transport has become a necessity. Finding the best transportation system and spacing the ships in a suitable line occupies a central place in the planning work of a marine fleet. The problem of spacing the ships can perhaps

Cord 1/3

ACCESSION NR: AT4040507

only be solved on the basis of mathematical methods of optimization. The present paper is devoted to several of these problems. An analysis of the use of approximation methods for arranging a fleet showed that the most expedient means suggested for practical use are the method of maximal differences and the index method. However, it is still necessary to give a detailed development of all sides and all aspects of the application of these methods. There is no doubt that approximation methods are applicable to the operation of a marine transport fleet. However, the use of approximation methods also causes serious problems, the solution of which requires the help of the economist and the mathematician. First of all, the model of the arrangement of the fleet does not take into account many factors, including even some that are essential. Among these factors are the initial arrangement of the ships and the influence of complex kinds of transport. Thus, the basic problem consists of improving the model of the fleet arrangement. The authors conclude that it will be necessary to pay attention to many practical problems in addition to the theoretical questions in the use of approximation methods. These methods do, however, facilitate the solution of the defined problems and are important factors for improving the practical operation of a naval fleet. Orig. art. has: 16 formulas and 9 tables.

ASSOCIATION: none

Card 2/3

ACCESSION NR: AT4040507

SUBMITTED: 31Oct63

DATE ACQ: 12Jun64

ENCL: 00

SUB CODE: MA, GO

NO REF SOV: 002

OTHER: 001

Card 3/3

BAKHRAKH, Ya. Ia.

Method for the preparation of cystine. Izv. Irk. gos. nauch.-
issl. protivochim. inst. 18:125-126 '58. (MIRA 13:7)
(CYSTINE)

BAKHRAKH, Ya.L.

Significance of protein diets in fractures [with summary in English].
Vop.pit. 17 no.6:18-21 N-D '58. (MIRA 12:2)

1. Iz biokhimitseskoj laboratorii (zav. Ya.L. Bakhrah) i otdeleniya
travmatologii (zav. - dots. Ya.N. Rodin) Saratovskogo nauchno-issle-
dovatel'skogo instituta travmatologii i ortopedii.

(FRACTURES, therapy,

high protein diets (Rus))

(PROTEINS, ther. use,

fract., in high-protein diets (Rus))

(DIETS, in var. dis.

high-protein diet in fract. (Rus))

BAZILEVSKAYA, Z.V.; BAKHRAKH, Ya.L.

Influence of proteins in food on the processes of regeneration
in bone fractures. Vop. pit. 20 no.6:33-37 N-D '61. (MIRA 15:6)

1. Iz Irkutskogo nauchno-issledovatel'skogo instituta
travmatologii i ortopedii.

(PROTEINS--PHYSIOLOGICAL EFFECT)
(FRACTURES)

BAKHRAKH, Ye.E.; YEGOROVA, V.D.; DENISOVA, Ye.P.

Distribution of protein and polysaccharide in the cells of
the plague microbe grown at 28 - 37°. Zhur. mikrobiol., epid.
i immun. 41 no.10:135-139 '64. (MIRA 18:5)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut "Mikrob".

BAKHRAKH, Ye.B.; KOROBKOVA, Ye.I.; SHALAYEVA, A.F.

Chemical nature and serological properties of the specific
polysaccharide-containing fraction of the plague microbe.
Izv. Irk.gos.nauch.-issl.protivochnm.inst. 18:127-133 '58.

(MIRA 13:7)

(POLYSACCHARIDES) (PASTEURILLA PESTIS)

BAKHRAKH, Ye.E.; YEGOROVA, V.D.; FILIPOV, A.F.

Effect of the temperature regimen on the chemical composition of the plague microbe. Zhur. mikrobiol., epid. i immun. 40 no.1:29-32 N '63.

(MIRA 07112)

1. Iz Vsesoyuznogo nauchno-issledovatel'skogo instituta "Mikrob".

BAKHRACH, Ye.E.; DROZDOVSKAYA, F.K.

Isolation of the polysaccharide fraction from the plague microbe.
Izv.Irk.gos.nauch.-issl.protivochn.inst. 18:135-138 '58.

(NIRA 13:7)

(POLYSACCARIDES)

(PASTURELLA PESTIS)

KOROBKOVA, Ye.I.; PAVLOVA, L.P.; BAKHRAKH, Ye.E.

Intradermal allergic reaction as an indication of immunity to plague.
Zhur. mikrobiol., epid. i immun. 32 no.9:37-42 S '61. (MIRA 15:2)

1. Iz Gosudarstvennogo nauchno-issledovatel'skogo protivochumnogo
instituta mikrobiologii Yugo-Vostoka SSSR ("Mikrob").
(PLAGUE) (IMMUNITY)

BAKHRAKH, Ye.E.; DAVANKOV, A.B.; MARTENS, L.A.; LAUFER, V.M.; SOKOLOVA, N.M.;
OBUKHOVA, Z.A.; FILIPPOVA, N.Ye.

Cultivation of the plague microbe on media of acid casein hydrolysate
domineralized using an ion-exchange resin. Zhur.mikrobiol., epid. i
immun. 33 no.3:51-55 Mr '62. (MIRA 15:2)

1. Iz Gosudarstvennogo nauchno issledovatel'skogo instituta
mikrobiologii i epidemiologii Yugo-Vostoka SSSR "Mikrob".
(PASTEURELLA PESTIS) (CASEIN) (ION EXCHANGE RESINS)

MAMEDOV, Z.M., professor; BAKHRAMI, M.

The fate of patients after appendicular abscess with limited peritonitis. Vest.khir. 76 no.7:134-135 Ag '55.(MLRA 8:10)

1. Iz kafedry obshchey khirurgii (sav.-prof. Z.M.Mamedov) Azerbaydzhanskogo meditsinskogo instituta

(APPENDICITIS, compl.

abscess & peritonitis, indic. for surg.)

(ABSCESS

appendix with peritonitis, indic. for surg.)

(PERITONITIS, etio. & pathogen.

abscess of appendix, indic. for surg.)

MAMEDOV, Z.M., prof.; BAKHRAMI, M.M., assistent

Functional indices of the thyroid gland in the immediate and late postoperative periods. Azerb. med. zhur. no.6:13-19 Je '62.
(MIRA 17:8)

1. Iz kafedry obshchey khirurgii (zav. - chlen-korrespondent AN AzSSR, zasluzhennyy deyatel' nauki prof A.M. Mamedov) Azerbayzhanskogo gosudarstvennogo meditsinskogo instituta imeni N. Narimanova (rektor - zasluzhennyy deyatel' nauki, prof. B. A. Eyvazov).

BAKHRAMI, M.M.

Materials from examinations and a study of thyroid gland function
in foci of endemic goiter (Nukha, Kakhi, Zakataly, and Belokany).
Azerb. med. shur. no.6:37-42 Je '60. (MIRA 14:1)
(AZERBAIJAN—GOITER)

BAKHRAMI, M.M.

Functional state of the thyroid gland in the light of late post-operative results. Prc'il. endon. 1 gorm. 6 no.6:75-80 '60.

(MIRA 14:2)

(THYROID GLAND—SURGERY)

КУХАРЧАЙ, А. Д.

USSR/Cultivated Plants - Fodder.

M.

Abs Jour : Ref Zhur - Biol., No 4, 1958, 15692

Author : A.B. Bakhranov

Inst : -

Title : The Effect of Growth Substances Coming from Petroleum on Vetchling Development and Yields.
(Vliyaniye rostovogo veshchestva neftyanogo proiskhozhdeniya na razvitiye i urozhay chiny).

Orig Pub : Dokl. AN AzSSR, 1957, 13, No 3, 321-324.

Abstract : Experiments on the effect of growth substances obtained from petroleum on the development and yield of vetchling were made under field test conditions at the Kukharchay-skaya Zonal Experimental Station in 1956. The vetchling seeds were soaked for 3 hours in 0.05% and 0.005% aqueous solutions of growth substance, and the control in water. The growth substance isolated from petroleum had a favorable effect on the development and yield of vetchling

Card 1/2

107

USSR/Cultivated Plants - Fodder.

M.

Abs Jour : Ref Zhur - Biol., No 4, 1958, 15692

green stuff. The shooting, budding and flowering of the vetchling treated with the growth substance took place earlier than in the control. The vegetative period from sowing to flowering in the control lasted 43 days, on plots with seeds treated with a 0.05% solution of the growth substance it was 36 days, and with the 0.005% solution 33 days. The green stuff yield in the control was 104.3 centners per hectare and in the variations with growth substance 122.0 and 172.0 centners per hectare.

Card 2/2

← BAKHRAMOV, A.B., Cand Agr Sci--(diss) ¹⁹⁵⁸ "Dependence of pasture producti-
vity of ^{one-year} ~~one-year~~ horbaceous and bean fodder-crops ^{on the dates of planting} ~~on the periods of planting~~
and ^{dates} ~~time~~ of utilization for green fodder." Baku, Publishing House of the
Acad Sci AzSSR, 1958. 30 pp (Stalingrad Agr Inst of the Min of Agr RSFSR),
100 copies (KL, 30-58, 129)

-104-

BAKHRAMOV, A.B.

Effect of sowing time on seed yields of annual forage crops.
Trudy Inst. gen. i sel. AN Azerb. SSR 1:157-162 '59.
(MIRA 13:3)
(Azerbaijan--Grasses) (Seed production)

BAKHRAMOV, A.B.

Effect of irrigation on growth, development, and yields of forage
crops. Izv. AN Azerb. SSR. Ser. biol. i med.nauk no.5:43-48 '60.
(MIRA 14:9)

(AZERBAIJAN—FORAGE PLANTS—IRRIGATION)

BAKHRAMOV, A.B.

Effect of cultivation conditions on the biological and economic characteristics of different varieties of vetch. Izv.AN Azerb. SSR.Ser.biol.i med.nauk no.3:21-30 '62. (MIRA 15:9)
(APSHERON PENINSULA--VETCH--VARIETIES)

BAKHRAMOV, A.B.

Effect of cultivation conditions on the biological and
economic characteristics of sorghum in the Apsheron Peninsula.
Trudy Inst.gen.i sel.AN Azerb,SSR 2:130-138 '62.

(MIRA 16:2)

(Apsheron Peninsula--Sorghum)

BAKHRAMOV, A.B.; ABAZYAN, A.B.

Varietal characteristics of fodder pumpkin. Izv. AN Azerb. SSR.
Ser. biol. i med. nauk no.3:29-33 '63. (MIRA 16:6)
(Kazabakh Steppe--Pumpkin--Varieties)

BAKRAMOV, A.M.; YAZDOVSKIY, V.I.

Hermetic cabin for animals. Probl.kosm.biol. 1:289-298 '62.
(MIRA 15:12)
(ARTIFICIAL SATELLITES) (SPACE BIOLOGY--RESEARCH)

22970

S/166/61/000/002/001/006
B112/B217

5. 4500(B)

AUTHORS: Stapodubtsev, S. V., Member of the Academy of Sciences
Uzbekskaya SSR, Ablyayev, Sh. A., Bukhramov, F.,
Keitlin, L. G., Yusova, E. N.

TITLE: Study of molecular conversions in a natural gas, produced
by high-frequency electric discharges

PERIODICAL: Izvestiya Akademii nauk UzSSR. Seriya fiziko-matematicheskikh
nauk, no. 2, 1961, 3-11

TEXT: The study of chemical conversions is to continue studies of
different radiation effects on methane. A high-frequency device of the
type ЛФЕ-35 (LGE-ZB) was used for heating the dielectric. The experi-
mental arrangement is schematically represented in Fig. 1: A is a gas
tank, B a rheometer, T a discharge tube, Л (L) a trap, P a reservoir, M a
manometer, H a bulb, and D₁ and D₂ are catarrhometers. The reaction
products were analyzed spectroscopically. The МКС-14 (IKS-14) spectro-
graph used has a measuring range of 600-10000 cm⁻¹ and prisms of LiF and

Card 1/5

22970

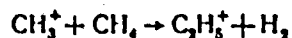
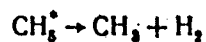
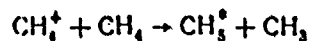
S/166/61/000/002/001/006
B112/B217

Study of molecular conversions in a...

KCl. The gas contained 98 % methane. The amount of energy absorbed on passage through the gas discharge tube was determined from the temperature difference $T_2 - T_1$ at the ends of the discharge tube.

$$E = 2.6 \cdot 10^{19} M C_p (T_2 - T_1) \text{ ev,}$$

where M is the mass of the gas, and C_p the specific heat at constant pressure. Fig. 2 shows the absorption spectrum of the gas. The dashed line (1) refers to a gas not subjected to electric discharge, whilst line (2) refers to a gas subjected to electric discharge. The effect of electric discharge on the gas resulted in the formation of liquid products which turned out to be derivatives of alkyl benzenes. The basic products are formed as follows:

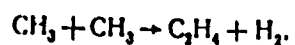
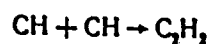
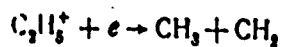


Card 2/5

Study of molecular conversions in a...

22970

S/166/61/000/002/001/006
B112/B217



There are 3 figures and 26 references: 8 Soviet-bloc and 18 non-Soviet-bloc. X

ASSOCIATION: Fiziko-tekhnicheskii institut AN UzSSR (Institute of Physics and Technology, Academy of Sciences Uzbekskaya SSR)

SUBMITTED: January 7, 1961

Card 3/5

STARODUBTSEV, S.V.; ABLIYAYEV, Sh.A.; BAKHRAMOV, F.; ZIYATDINOV, Sh.;
KEYTLIN, L.G.

Study of molecular transformations in a natural gas caused
by electrodeless high-frequency discharges. Part 2. Effect
of certain physical factors and impurities on electric
cracking. Izv. AN Uz. SSR. Ser. fiz.-mat. nauk 6 no.5:58-65
'62. (MIRA 15:11)

1. Fiziko-tehnicheskii institut AN UzSSR.
(Cracking process)

S/166/62/000/006/006/016
B101/B186.

AUTHORS: Starodubtsev, S. V., Ablyayev, Sh. A., Bakhranov, F.,
Ziyatdinov, Sh., Keytlin, L. G.

TITLE: Study of molecular conversions in natural gas under the
action of electrodeless high-frequency discharges. III.
Effect of the wattage of high-frequency discharges and
gas pressure in the discharge tube on electrocracking

PERIODICAL: Akademiya nauk Uzbekskoy SSR. Izvestiya. Seriya fiziko-
matematicheskikh nauk, no. 6, 1962, 53 - 60

TEXT: To clarify the basic mechanism of electrocracking, methane was
cracked at various wattages (20 - 180 w), pressures (20 - 60 mm Hg), and
contact times τ (0.01 - 2.4 sec); total cracking and the yields of ethane,
ethylene, acetylene, propane, propylene, butylenes, and hydrogen was deter-
mined. Total cracking increased with wattage; the rise was gradual up to
 ~ 30 w, $\tau = 0.05$ sec, steep between 30 and 100 w, and then gradual again.
The steep section of the curve corresponds to the range where a chain
mechanism operates. The threshold limit of the wattage at which the steep
rise sets in decreases with increasing τ . The yields of ethane and
Card 1/3

Study of molecular conversions...

S/166/62/000/006/006/016
B101/B186

ethylenes fall with increasing wattage for $\tau = \text{const.}$ No C_2H_6 or C_2H_4 is formed at 140 - 150 w. The yield of acetylene increases with the wattage, passes a maximum at a certain wattage depending on τ , and then falls steadily. The maximum C_2H_2 yield is 11% at 50 w and $\tau = 0.8$ sec, and 22.5% at 100 w and $\tau = 0.3$ sec. Diacetylene forms at low wattages. More and more liquids are formed with increasing wattage, and diacetylene disappears due to formation of cyclohydrocarbons. For propane and propylene, there is also a maximum at 50 w and $\tau = 0.4$ sec which vanishes at high wattages, probably being shifted toward very short τ . The yield maxima for C_3H_8 and C_3H_6 lie in the range where intense decomposition of C_2H_6 and C_2H_4 begins. Butylenes form only at low wattages, they are no longer detectable at 140 w. The hydrogen yield, however, rises continuously with w and τ . The specific energy consumption for a tube 2.5 cm in diameter and for $\tau = 0.3$ sec was 70 w·hr per mole of cracked CH_4 , and 280 w·hr per mole of resulting C_2H_2 . The corresponding values for a diameter of 9.1 cm and $\tau = 0.3$ sec were 65 and 260 w·hr. Increasing pressure has the same effect as increasing wattage on the cracking and the yield of decomposition products. Experiments with tubes of different diameters d showed that total cracking depends linearly

Card 2/3

Study of molecular conversions...

S/166/62/000/006/006/016
B101/B186

on the surface/volume ratio. Total cracking in two tubes of different d in proportional to d_2^2/d_1^2 , which may be explained by the termination on the walls of the tubes. Furthermore, the yield of the individual products depends on d , and this requires further investigation. There are 7 figures and 1 table.

ASSOCIATION: Fiziko-tehnicheskiy institut AN UssR (Physicotechnical Institute AS UssR)

SUBMITTED: July 13, 1962

Card 3/3

STARODUBTSEV, S.V.; ABLYAYEV, Sh.A.; BAKHRAMOV, F.; ZIYATDINOV, Sh.;
KEYTLIN, L.G.

Molecular transformations in a natural gas produced by
electrodeless high-frequency discharges. Izv. AN Uz. SSR. Ser.
fis.-mat. nauk 6 no.6:53-60 '62. (MIRA 16:2)

1. Fiziko-tehnicheskii institut institut AN UzSSR.
(Electric discharges through gases)
(Cracking process)

STARODUBTSEV, S.V.; ABLYAYEV, Sh.A.; BAKHRAMOV, F.; KEYTLIN, L.G.;
YUSOVA, E.N.

Study of the electrocracking of natural gas by the method of
vibrational spectra. Zav. lab. 29 no.6:707-708 '63.

(MIRA 16:6)

1. Fiziko-tekhnicheskiy institut AN UzbSSR.
(Gas, Natural—Absorption spectra)
(Cracking process)

SADYKOV, S.S.; BAKHRAMOV, K.B.

How growing conditions of parent plants affect the inheritance of morphological and economic signs in cotton. *Agrobiologiya* no.4:505-509 J1-Ag '61. (MIRA 14:7)

1. Institut genetiki i fiziologii rasteniy AN Uzbekskoy SSR, Tashkent.

(Cotton breeding)

BAKHRAMOV, Kuldash; RAKHMANOVA, R., red.

[Sun and the cotton plant] Solntse i khlopchatnik. Tashkent,
Uzbekistan, 1964. 18 p. (MIRA 18:3)

BAKHROMOV, N.R.

How the Azerbaijan party organization has carried out the directives of the 20th Congress of the CPSU relating to the petroleum industry. Trudy AzINSPTSEKHIM no.21:124-140 '69.
(MIRA 13:8)

(Azerbaijan--Petroleum industry)

S/865/62/001/000/016/033
E028/E185

AUTHORS: Bakhranov, A.M., and Yazdovskiy, V.I.
TITLE: A sealed capsule for housing animals
SOURCE: Problemy kosmicheskoy biologii. v.1. Ed. by
N.M. Sisakyan. Moscow, Izd-vo AN SSSR, 1962. 289-298
TEXT: A sealed cabin for housing animals during space flights is illustrated and described. It consists of a cylindrical capsule 64 cm in diameter and 80 cm long, made of 2 mm aluminium sheet and provided with a detachable lid containing a plastic inspection port 16 cm in diameter. The capsule resisted excess internal and external pressures up to 1.5 atm without structural damage or leaking, and also temperatures ranging from -40 to +50°C. The capsule is equipped internally with air conditioners and regenerators, automatic feeding and other apparatus, which are supported upon a metal frame. It was possible to maintain animals in a normal state of activity in the capsule for 20 days. There are 6 figures.

Card 1/1

BAKHRETDINOV, Sh.

Specialisation of yards for the receiving of processed cars
in section stations with a longitudinal arrangement. Trudy
TASHIIT no.18:39-40 '61. (MIRA 18:3)

BAKHROVSKIY, V.

Toward the mysterious "Noho." Nauka i zhizn' 28 no. 2:22-25
F '61. (NHV. 14:2)
(Earth--Internal structure)

BAKHREVSKIY, V.

Gitalovites. IUn. nat. no.8:13-15 Ag '62. (MIRA 15:9)
(Kamyshvatka--Agriculture--Study and teaching)

BEKHRIKH, S.G.; PEKHOROV, G.A.

System of controlling the flow of granular and lumpy materials
with the use of a radioisotope tracer. Nauch. trudy IternRUE
no.5:67-72 '69. (MIRA 18:3)

DAR H Ramsey, N.A.

28(1):25(1) PHASE I BOOK EXPLORATION 907/4931

Mekhanizatsiya i avtomatizatsiya proizvodstva i obrabotki metallov v litseynom proizvodstve (Mechanization and automation of labor-consuming processes in foundry production). Moscow, Nauka, 1979. 226 p. Krevets slip insertor. 4,000 copies printed.

Reviewers: E. N. Stokhlov, Candidate of Technical Sciences; Ed. (Title page); G. I. Lobylyanskiy (Dobruzh); Ed. (Inside book); G. E. Sobolov, Candidate of Technical Sciences; Tech. Ed.; O. V. Spivakova; Managing Ed. for literature on the Technology of Machinery Manufacture (Leningrad Division, Nauka); L. P. Kuznetsov, Engineer.

PURPOSE: The book is intended for technical personnel in foundries and machine shops engaged in the mechanization and automation of industrial processes. It may also be used by students of institutions of higher technical education.

CONTENT: The book deals with recent achievements in the mechanization and automation of time- and labor-consuming operations in foundries. Specific instances of mechanization and automation of foundry processes are described. The material presented in this book is divided into six parts, dealing with the following subjects: molding materials, molds and coremaking, casting methods, finishing of castings, and coremaking, casting presented by several authors. The application of automation ranges from the mechanization of molds and cores to the mechanization and streamlining of specialized casting methods, such as investment casting and shell molding. There are numerous diagrams showing automated and semi-automated installations in foundries. Most of the material is based on experiments and work done at the "Krasnyy Almaz" Plant. Some of the methods described appear to be in the experimental stage at the plant. The technical papers published in this book were originally presented at a technical conference of the Soviet machine industry in October 1977. No personalities are mentioned.

Mril'mitayn, L. N. Production of Sand Molds by Hydraulic Pressing	78
Elizaveta, V. A. Mold Making With a Sand Slinger in Steel Foundries	79
Yegorova, A. I. Transport and Distribution of Rapid-drying Water-glass Composites to Tanks	73
Solov'eva, P. I. Mechanization of Shell-mold Casting	212
Spiritskiy, G. M. Use of High-Frequency Electric Heating for Molding Shell Mold Molds	216
Prudnik, V. S. Overall Automation of Mixing Systems in Foundry Shops	80
Zaytsev, I. B.; G. N. Gruzdevich, and I. S. Gindalovich. Mechanization of Casting and Coremaking Operations in Iron Plants in Pneumatic Ramming	97
Kozlov, E. A. and M. A. Rukhmanov. Quick-change Equipment for Coremaking on Vibrating Molding Machines in Small-19t Production	101
Kritskiy, I. K. Mechanization of Mold Transfer from Assembly Line to Conveyor Belt	104
Zelichynskiy, G. S. Automated Lines for Molding and Shakeout in Foundry Shops	67
Porudnikov, Yu. S. Some Problems in the Automation of Charge Composing and Cupola Charging	106

ACC NR: AP5027043

SOURCE CODE: UR/0120/65/000/005/0233/0233

AUTHOR: Bakhromi, E.S.; Bogachkin, Yu. D.; Zaynutdinov, Kh.; Karimov, R.

41

ORG: Institute of Nuclear Physics, AN UzSSR, Tashkent (Institut yadernoy fiziki AN UzSSR)

TITLE: A simple circuit for the final stage of a high voltage pulse generator

25 B

SOURCE: Pribory i tekhnika eksperimenta, no. 5, 1965, 233

TOPIC TAGS: pulse generator, trigger circuit, thyatron, circuit design

ABSTRACT: Earlier papers described high voltage pulsed generator schemes which contained a separate delayed trigger channel for the cutoff thyatron and a high voltage divider diode in the grid circuit of the basic thyatron. The present authors give a modified scheme for the final stage of such a generator in which the diode in the Λ_1 thyatron grid circuit is replaced by an R_g (PE-75) 500-ohm resistor. Following a brief description of its operation, the authors note that the circuit has two shortcomings: 1) a change of the power supply voltage alters the duration of the pulse; and 2) the same happens if the output of the generator is connected to a load which significantly reduces the discharge time constant of the capacitor. Otherwise, the device can supply pulses 0.2-10 μ sec long with amplitudes up to 16kv. Orig. art. has: 1 figure.

Card 1/2

UDC: 621.373.432

2

BAKHITOV, K.

Effect of the conditions of environment on the nature of
inheritance of properties and characters in cotton hybrids.
Uzb. biol. zhur. 9 no. 6:61-66 '65 (MIRA 19:1)

1. Institut eksperimental'noy biologii rasteniy AN UzSSR.

DAKARUSHIN, A.B.

Tidal title of the East Atlantic Ocean, Operations 1-1979 in Eastern (See Malindi) by the Soviet Union, A. B. Gerasimov, A. I. Kuznetsov, and S. E. Kuznetsov (1979).

Tidal title of the East Atlantic Ocean, Operations 1-1979 in Eastern (See Malindi) by the Soviet Union, A. B. Gerasimov, A. I. Kuznetsov, and S. E. Kuznetsov (1979).

Results of Observations of Tidal Variations of the East Atlantic Ocean at a Hydrographic Station in the East Atlantic Ocean, 1977 by Soviet scientists, A. Gerasimov, A. Kuznetsov, and S. Kuznetsov (1977).

Observations of the Tidal Variations of the East Atlantic Ocean at a Hydrographic Station in the East Atlantic Ocean, 1977 by Soviet scientists, A. Gerasimov, A. Kuznetsov, and S. Kuznetsov (1977).

Tidal Variations of the East Atlantic Ocean at a Hydrographic Station in the East Atlantic Ocean, 1977 by Soviet scientists, A. Gerasimov, A. Kuznetsov, and S. Kuznetsov (1977).

Observations of Tidal Variations of the East Atlantic Ocean at a Hydrographic Station in the East Atlantic Ocean, 1977 by Soviet scientists, A. Gerasimov, A. Kuznetsov, and S. Kuznetsov (1977).

Papers Presented at First Meeting of Permanent Commission on Earth Tides, Trieste, Italy, 6-11 July 1979, under the sponsorship of the Int'l Union of Geodesy and Geophysics (IUGG).

BAKHRUSHIN, A.B.

Motion of a horizontal pendulum. Dokl. AN Tadzh. SSR 6 no.4:
20-22 '63. (MIRA 17:4)

1. Institut seymostoykogo stroitel'stva i seymologii AN
Tadzhikskoy SSR. Predstavleno avtorom-korrespondentom AN
Tadzhikskoy SSR O.V.Dobrovolskiy.