

12

**S N.P. BEZKULBENKO**

APPARATUS FOR DETERMINING THE STRESS FOR DIFFERENT SCHEMES OF WORKING  
 A ROLLING MILL. N.P. Bezkulbenko Zavodskaya Laboratoriya 1949, vol. 15,  
 no. 1, pp 616-618. 1<sup>st</sup> Russian. A device is described for use together  
 with a tensile testing machine, by which the stresses on the rolls in  
 the rolling of flat specimens or tubes can be determined.

B-53

ASB 35A 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	00
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BEZLADNOV, N. L.

PA 65T104

USSR/Radio Broadcasting  
Radio, Wired

May 1948

"Wired Broadcasting in the USSR," N. L. Bezladnov,  
Candidate Tech Sci; B. Ya. Gertsenshteyn, Engr,  
2 pp

"Vest Svyazi - Elektro-Svyaz'" No 5 (98)

Briefly describes development and expansion of  
wired broadcasting in the USSR, with some notes  
on the progress of USSR technology in this field.

65T104

BEZLADNOV, N. L.

PA 36/49T104

USSR/Radio  
Amplifiers, Radio Frequency  
Vacuum Tubes

Jan/Feb 49

"Operating Conditions Necessary for Maximum  
Utilization of Output Tubes in Powerful Broadcast  
Amplifiers," N. L. Bezladnov, Cand Tech Sci, 11 pp

"Radiotekh" Vol IV, No 1

Applies simplified analytical method, based on  
ideal characteristics of tubes, to determine  
optimum operating voltages for powerful broadcast  
amplifiers (M-600, M-1,000, GK-3,000, G-431, etc).  
Submitted 17 Nov 48.

36/49T104

BEZLANOV, N. L.

"Stations of "ebroadcasting Systems," Svyaz'izdat, 1954

BEZLADNOV, Nikolay L'vovich; GLIKMAN, Semen Yevseyevich; POZDEYEV, Boris  
Georgiyevich; SAVINA, Nina Aleksandrovna; MASHAROVA, V.G., redaktor  
SOKOLOVA, R.Ya., tekhnicheskij redaktor

[Station apparatus for radio diffusion] Stantsionnye ustroistva  
veshchania po provodam. Moskva, Gos.izd-vo lit-ry po voprosam  
svyazi i radio, 1955. 491 p. (MIRA 9:2)

(Radio--Apparatus and supplies)

BEELADNOV, N. L.,

N. L. Beeladnov, in his paper, "Ways of Improving the Measurement Methods of Non-linear Distortions" noted the deficiencies of the applied methods of measurement and suggested to distinguish dynamic from static levels of loudness of nonlinear distortions. For this purpose, a device like an "artificial ear" has to be developed. The author proposed a block diagram and described in his paper the function of each block in detail.

Presented at the Eleventh Scientific and Technical Session of the Leningrad Section VTORE (Scientific and Technical Society for Radio and Electricity) in honor of A. S. Popov, dedicated to the celebration of Radio Day, Leningrad, 16-24 Apr 56.

**Radiotekhnika, No. 7, 1956**

BEZLADNOV, N. L.

"Improvement of Nonlinear Distortion Measuring Method," by  
N. L. Bezladnov, Elektrosvyaz', No 2, Feb 57, pp 10-19

Methods for obtaining maximum conformity between the measured values and the degree of subjective perception of nonlinear distortions are described. For this purpose measurements of relative levels of distortions taken in the process of reproduction of voice or during tests simulating transmission are recommended. This method takes into consideration the loudness distortion corrections, as well as their masking by the transmitted signal and the noises originating at the place of reproduction. The principles for the construction of measuring circuits are discussed.

The author expresses thanks to V. M. Vol'f and V. K. Ioffe for their assistance. (U)

SUM. 1322

BEZLADNOV, Nikolay L'vovich; GERTSENSHTEYN, Boris Yakovlevich; SAVINA,  
Nina Aleksandrovna; BASHCHUK, V.I., red.; KARABILOVA, S.F., ..  
tekh.red.

[Wire broadcast networks] Seti provodnogo veshchaniia. Moskva,  
Gos.izd-vo lit-ry po voprosam svyazi i radio, 1959. 371 p.  
(MIRA 12:9)

(Wire broadcasting)



*B. F. Z. A. D. N. O. V. V. 9/11*

BONDARENKO, I.P., inzh.; YEVDOKIMOV, G.N., inzh.; BEZLADNOV, V.Ya.

On the article "Increase cross sections of gangways." Bezop.  
truda v prom. 2 no.2:22-23 P '58. (MIRA 11:2)

1. Nachal'nik upravleniya Krivorozhskogo okruga Gosgortekhnadzora  
SSSR (for Bondarenko). 2. Glavnyy inzhener upravleniya Kazakh-  
stanskogo okruga Gosgortekhnadzora SSSR (for Bezladnov).  
(Mining engineering)

BEZLADNOV, V.Ya., inzh.

Preventing destructive effect of underground mining on surface  
buildings. Bezop. truda v prom. 3 no.6:38-39 Je '59.

(MIRA 12:10)

(Mining engineering--Safety measures)

ARTEM'YEV, V.V.; BEZLADNOVA, N.I.; ZAGORUL'KO, L.T., Zaveduyushchiy.

Electric reaction of the auditory area of the cortex of cerebral hemispheres  
in the formation of a conditioned defensive reflex. Trudy Inst.fiziol. 1:  
228-236 '52. (MLSA 6:8)

1. Laboratoriya fiziologii sritel'nogo analizatora.  
(Brain, Localization of function)

BEZIAJ, A.

BEZIAJ, A. New methods for testing cotton. p. 1118.

Vol. 4, no. 11, Nov. 1955

TEKSTIL

Zagreb, Yugoslavia

So: Eastern European Accession Vol. 5 No. 4 April 1956

EFZLAJ, A.

The development of Greek cotton. p. 612.

(TEKSTIL. Vol. 6, No. 6, June 1957, Zagreb, Yugoslavia)

SO: Monthly List of East European Accessions (EFAL) Lc. Vol. 6, No. 10, October 1957. Uncl.

← BEZLAJ, Jakov, ing., gradevinski savjetnik (Zagreb, Brescenskog 5/IV)

New method of filling canal locks from flood gates. Vodoprivreda Jug  
2 no.7/8:123-130 '59. (EEAI 10:1)

(Locks (Hydraulic engineering))

(Water) (Ships) (Sluice gates)

BEZLAJ, Jakob, ing. (Zagreb, Katanciceva 5)

— Navigational capacities for the works provided in the bill on Sava River.  
Brodarstvo 3 no. 8/9:317-323 J1-D 60.

1. Member of the Editorial Committee, "Brodarstvo."

BEZLEPKIN, B.; KHALTURIN, F.

We hold the way to communism. Voer, vest. 40 no. 3:7-8 Mr '61.  
(MIRA 14:2)

(Russia--Armed forces--Education, Nonmilitary)



DER-SHVARTS, G.V.; KUSHNIR, Yu.M.; ROZENFEL'D, L.B.; ZAYTSEV, P.V.; BEZLEPKIN,  
S.V.; TRUTNEVA, I.S.; BELEN'KIY, S.A.; TITOV, L.A.

Problems on reflective electron microscopy. Radiotekh. i elektron  
6 no.8:1358-1364 Ag '61. (MIRA 14:7)  
(Electron microscopy)

DER-SHVARTS, G.V.; KUSHNIR, Yu.M.; ROZENFEL'D, L.B.; ZAYTSEV, P.V.;  
BEZLEPKIN, S.V.

Modernizing the UEM-100 microscope. Izv.AN SSSR.Ser.fiz. 25  
no.6:721-724 Je '61. (MIRA 14:6)  
(Electron microscope)

L 19954-63

BDS

ACCESSION NR: AP3007823

S/0048/63/027/009/1184/1187 57

AUTHOR: Rozenfel'd, L.B.; Kushnir, Yu.M.; Zaytsev, P.V.; Titov, L.A.; Bezlepkin, S.V.; Polyak, E.V. 55

TITLE: Reflecting electron microscope adapted for examination of strained specimens /Report, Fourth All-Union Conference on Electron Microscopy held in Sumy\* 12-14 March 1963/ 14

SOURCE: AN SSSR, Izv.Ser.fizicheskaya, v.27, no.9, 1963, 1184-1187

TOPIC TAGS: electron microscopy, strain, strength of material

ABSTRACT: The paper gives the results of testing a reflecting electron microscope adapted for observation of strained specimens. A reflecting electron microscope described earlier (Radiotekhnika i elektronika, No.8, 1359, 1961 and Zavodskaya laboratoriya, 27, 1528, 1961) with a maximum tilt angle of 22° was modified for this purpose by provision of a special object holder and incorporation of a two-slit projector lens to provide better resolution over the entire field. The optimum shape for the specimens was found on the basis of extensive experimentation; this is shown in Figure 1 of the Enclosure. The specimen holder and straining de- 21

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2  
vice is shown in Figure 2. The strain is applied by means of a synchronous electric motor rotating the screw shaft. The deformation process was recorded by internal photography and by photography (still and motion picture) of a glass screen mounted in the bottom of the internal camera and viewed by means of a mirror. A series of four micrographs of the surface of a specimen of heat-resisting alloy, lightly etched before straining, is reproduced. The electron micrographs reveal some details not disclosed by an optical microscope. "In conclusion, the authors express their gratitude to G.V.Der-Shvarts and V.P.Rachkov for calculation of the two-slit achromatic projector lens." Orig.art.has: 4 figures.

ASSOCIATION: none

SUBMITTED: OO

DATE ACQ: 07Oct63

ENCL: 01

SUB CODE: ML, SD

NO REF SOV: 002

OTHER: 000

Card2/07

BEZLER, F.I.

Seasonal changes in the chemical characteristics of water in  
Rybinsk Reservoir. Trudy Inst. biol. vodokhran. no.5: 329 -  
350'63. (MIRA 16:8)  
(RYBINSK RESERVOIR—WATER—COMPOSITION)

BUTORIN, N.V., kand. geogr. nauk; KURDIN, V.P., ml. nauchn. sotr.;  
MORDUKHAY-BOLTOVSKIY, F.D., doktor biol. nauk; ~~BEZLER,~~  
F.I., kand. biol. nauk; IL'INA, L.K., kand. biol. nauk;  
GONCHAROV, G.D., doktor biol. nauk; RYABCHENKOV, N.P.;  
PODDUBENYY, A.G., kand. biol. nauk; MIRASHEV, G., red.

[Fishery atlas of Rybinsk Reservoir] Rybopromyslovyi atlas  
Rybinskogo vodokhranilishcha. IArosavl', 1963. 20 p.  
(MIRA 18:9)

1. Akademiya nauk SSSR. Institut biologii vnutrennikh vod.
2. Institut biologii vnutrennikh vod AN SSSR (for all except Mirashev, Ryabchenkov).
3. Upravlyayushchiy Rybinskogo Gosudarstvennogo tresta rybnoy promyshlennosti (for Ryabchenov).

69461

8(6) 24.5200

S/143/60/000/02/009/018  
D043/D002

AUTHOR: Buznik, V.M., Candidate of Technical Sciences,  
Docent Bezlomtsev, K.A., Engineer

TITLE: A Generalized Equation of the Natural and Forced  
Convection With External Flow Around Bodies \

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Energetika,  
1960, Nr 2, pp 68-74 (USSR)

ABSTRACT: Based on an analysis of the heat exchange process and  
the basic assumptions of the hydrodynamic theory of  
heat exchange, experimental data on the heat exchange  
of a cylinder, a sphere and a plate are generalized  
within wide ranges of Reynold's and Grashof's num-  
bers. It is shown that the heat exchange of natural  
and forced convection is subjected to the same laws  
and that it is possible to establish this law with  
the aid of the Reynold's analogy. Equations for the

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S/143/60/000/02/009/018  
D043/D002

A Generalized Equation of the Natural and Forced Convection With External Flow Around Bodies

heat emission of a cylinder, a sphere and a plate are given. The heat exchange under conditions of natural and forced convection with external flow around bodies is satisfactorily determined by the

$$Nu = Nu_0 + 0.5 Re_s^{0.5} Pr^{0.25} + 0.01 Re_s^{0.8} Pr^{0.4} \quad (20)$$

where the Reynold's sum criterion  $Re_s$  is determined by the relationship

$$Re_s^2 = Gr + Re^2 \quad (10)$$

The analysis of the generalized heat exchange equation and experimental data show that the heat exchange depends to a considerable degree on the shape

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D043/D002

A Generalized Equation of the Natural and Forced Convection With External Flow Around Bodies

of the heated surface in the region of small values of Re and Gr numbers. In the region of Re or Gr 0.5 numbers  $> 10^2$  the shape of the body has an insignificant influence. Papers of M.A. Mikheyev [Ref. 1], B.D. Katsnel'son and F.D. Timofeyeva [Ref 2], S.S. Kutateladze [Ref. 5], L.I. Kudryashev [Ref 7], o.A. Gerashchenko [Ref. 10], A.A. Zhukauskas [Ref. 12], B.S. Petukhov, A.A. Detlaf and V.V. Kirillov [Ref 15] are mentioned and their experimental and theoretical data are compared graphically. There are 3 graphs and 15 references, 10 of which are Soviet, 3 English and 2 German.

ASSOCIATION: Nikolayevskiy korablestroitel'nyy institut imeni admirala S.O. Makarova (Nikolayev Ship Building Institute imeni Admiral S.O. Makarov)

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69461

S/143/60/000/02/009/018  
D043/D002

A Generalized Equation of the Natural and Forced Convection With  
External Flow Around Bodies

SUBMITTED: August 6, 1959, by the Kafedra teorii teplotekhniki  
i sudovykh parovykh kotlov (Department of the Theory  
of Heat Engineering and Marine Boilers)

Card 4/4

✓

VUTEV, Evg., inzh.; BEZLOV, D., inzh.; VASILEVA, M., inzh.; DRAGOMIROV, T.

Increasing durability of the guides of metal-cutting tools  
by surface hardening. Mashinostroene 12 no.6:17-22 Je'63.

ACCESSION NR: AR4041557

S/0274/64/000/004/A016/A017

SOURCE: Ref. zh. Radiotekhnika i elektrosvyaz'. Svodny\*y tom, Abs. 4A106

AUTHOR: Bezlov, Ye. F.; Nigmatullin, R. Sh.

TITLE: Frequency-response curves of series RC-line

CITED SOURCE: Tr. Kazansk. aviats. in-ta, vy\*p. 73, 1963, 57-63

TOPIC TAGS: frequency response curve, RC line, RC cable, boundary value problem

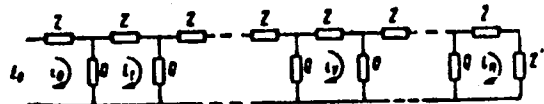
TRANSLATION: During solution of boundary value problems describing processes of diffusion and non-stationary heat transfer with help of electrical models there arises necessity of use of semi-infinite RC-cable. Frequency characteristics of modulus and argument of such cable can be obtained from expression of operational conductivity:

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ACCESSION NR: AR4041557

$$y(p) = \sqrt{\frac{C}{R}} \cdot p \tag{1}$$

Physical realization of RC-cable involves certain difficulties. Possibility is shown of replacement of cable in given frequency range by series RC-line, opened at the end. There is considered a series line consisting of impedances  $z$ ,  $Q$ ,  $z'$



(see Figure 1). On the basis of Kirchhoff's laws there is composed a system of equations for it in operator form. System is solved by method proposed by Carlow-Jaeger ("Operation Methods in Applied Mathematics," Publishing House of Foreign Literature, 1948). For RC-circuit when  $z' = \infty$ ,  $z = R$ ,  $Q = 1/pC$ , operational conductivity of series line is equal to:

$$y(p) = pC \left\{ \frac{[\sinh nQ]}{[\sinh (n+1)Q - \sinh nQ]} \right\}, \tag{2}$$

where  $\cosh Q = 1 + (RC/2)p$ . Taking in (2)  $p = j\omega$ , there can be found frequency-response curves of modulus and argument of admittance:

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$$|V(\omega)| = \omega C \sqrt{\frac{K^2 + L^2}{M^2 + N^2}} \quad (3)$$

$$\varphi = \arctan \left\{ \frac{KM + LM}{KN - LM} \right\} \quad (4)$$

where

$$K = \cos \alpha \cdot \sinh \gamma, \quad L = \sin \alpha \cdot \cosh \gamma,$$

$$M = \cos \beta \cdot \sin \delta - \cos \alpha \cdot \sinh \gamma, \quad N = \sin \beta \cdot \cosh \delta - \sin \alpha \cdot \cosh \gamma,$$

$$\alpha = n \arctan A/2, \quad \beta = (n+1) \cdot \arctan A/2,$$

$$\gamma = n \ln B, \quad \delta = (n+1) \ln B,$$

$$A = \sqrt{\frac{\omega^2 \tau^2}{2} + \frac{\omega \tau}{2} \sqrt{16 + \omega^2 \tau^2}},$$

$$B = \frac{\omega \tau + A}{2A} \sqrt{4 + A^2}, \quad \tau = RC.$$

Comparison of curves constructed from (3) and (4) for  $\tau = 0.75 \times 10^{-5}$ , with frequency responses determined by (1) shows that decrease of  $\tau$  improves frequency-response curves in region of high frequency, and increase of  $n$  leads to their

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ACCESSION NR: AR4041557

decrease in region of low frequency. For high frequency, where  $\gamma \gg 3$ , formulas (3) and (4) can be simplified considerably. Bibliography: 3 references.

SUB CODE: EC, MA

ENCL: 00

Card 4/4

BEZLUTSKIY, G.S.  
BEZLUTSKIY, G.S.

Combined laryngocele. Vest.oto-rin. 19 no.4:104 J1-Ag '57.  
(MIRA 10:11)  
1. Iz khirurgicheskogo otdeleniya Borovskoy bel'nitsy, Molotov-  
skoy oblasti.  
(NECK--TUMORS)



BEZLUTSKIY, G.S.

A case of biliary peritonitis in closed rupture of the liver.  
Sov.med. 22 no.8:138-137 Ag '58 (MIRA 11:10)

1. Iz khirurgicheskogo otdeleniya (zav. A.A. Kholkin) Ugleural'skoy  
gorodskoy bol'nitsy No.1 Orenburgskoy oblasti (glavnyy vrach V.D.  
Shpakovskiy).

(LIVER,rupt.

closed, causing biliary peritonitis (Rus))

(PERITONITIS, etiol. & pathogen.

biliary, caused by closed liver rupt (Rus))

P-

BEZLYAK, V.V., inzh.

Smooth blasting in surface rock excavation sites. Energ. stroi.  
no.4:43-46 '65. (MIRA 18:12)

SOV/118-58-1-3/16

AUTHORS: Bezlyud'ko, A.I. and Novikov, I.A., Engineers

TITLE: To Step-Up the Drifting of Horizontal Mine Workings (Uskorit tempy prokhozheniya gorizontalnykh gornnykh vyrabotok)

PERIODICAL: Mekhanizatsiya trudoyemkikh i tyazhelykh robot, 1958, Nr 1, pp 11-14 (USSR)

ABSTRACT: This is a detailed description of a new set of highly efficient ore mining machines produced by Giprorudmash, capable of performing 200 to 250 m of horizontal drifting per month. The following machines are mentioned and described: a BKM carriage equipped with six drilling machines of the type KS-50, which can be operated simultaneously; high speed percussion drilling machines of the type PRSZM and PRT constructed for drilling with supporting pneumatic props of the type KPP-4 and KPP-5; a loading installation of the type P-1, equipped with a conveyor and driven by two electric motors of the type F2-AC51-4, each of 4.5 kw; 10-ton mine cars of the type MFO-10 and VOK-10, which are unloaded through hinged side walls. Giprorudmash has developed a circular dumping mechanism of the type OPE-2 for the unloading of 10-ton mine cars equipped with rotating couplings;

Card 1/2

SOV/118-58-1 3/16

To Step-Up the Drifting of Horizontal Mine Workings

two experimental models have been produced by the "Kommunist" Plant and have been in operation since February 1957 in the mine imeni Sergo Ordzhonikidze of the Leninrud Trust. They have proved suitable for use in mines of the Krivorozhskiy Basseyn (Krivoy Rog Basin). There are 4 photographs, 2 sets of diagrams, and 4 tables.

1. Mining engineering---USSR
2. Drilling machines---Operation
3. Cargo vehicles---Loading
4. Materials---Handling

Card 2/2

BEZLYUD'KO, A. I.

127-58-4-2/31

AUTHORS: Bezlyud'ko, A.I. and Solov'yanov, L.N., Engineers

TITLE: Reserves to Increase the Speed of Preparation of New Levels and to Reduce the Sinking and Drifting Costs in the Mines of the Krivoy Rog Basin (Rezervy povysheniya skorosti podgotovki novykh gorizontov i snizheniya stoimosti prokhodki v shakhtakh Krivo-rozhskogo basseyna)

PERIODICAL: Gornyy Zhurnal, 1958, Nr 4, pp 3-8 (USSR)

ABSTRACT: The authors are concerned with the non-execution of the plan by many mines of the Krivoy Rog Basin and describe the causes of this delay. The main cause is the untimely preparation for exploitation of new levels in working mines, which is explained by the ineffective organization of sinking and drifting works, lack of mechanization and the low quality of preparatory works. The authors propose the following measures to correct this problem: 1 - improve the quality of sinking and drifting works and not allow larger sectional areas than those fixed by the plan; 2 - introduce a modernized system of shoring; 3 - introduce the most modern mechanized machines for this purpose. The authors describe different systems and machines used in shoring.

Card 1/2

127-58-4-2/31

Reserves to Increase the Speed of Preparation of New Levels and to Reduce the Sinking and Drifting Costs in the Mines of the Krivoy Rog Basin

There is 1 photo, 1 graph, and 1 Soviet reference.

ASSOCIATION: Institut Giprorudmash (The Giprorudmash Institute)

Card 2/2 1. Mining engineering - USSR 2. Mines - Operation

MELESHKIN, S.M.; VARICH, M.S.; BERLYUD'KO, A.I.; SOROKIN, Ye.A.;  
Yagupov, A.V.

Flame-throwing drill for drilling blastholes in pits.  
Biul.tekh.-ekon.inform. no.2:4-6 '60. (MIRA 13:6)  
(Boring machinery)

BEZLYUD'KO, A.I., gornyy inzh.; SOROKIN, Ye.A., gornyy inzh.; YEFREMOV,  
V.S., gornyy inzh.

Plans for over-all mechanization of the "Gigant" Mine. Gor. zhur.  
no. 1:54-59 Ja '61. (MIRA 14:1)

1. Giprorudmash, Krivoy Rog.  
(Krivoy Rog Basin--Iron mines and mining)  
(Mining machinery)



BEZLYUD'KO, A.I.

High-speed and safe machinery for miners. Bezop.truda v prom.  
5 no.10:7-9 0 '61. (MIRA 14:10)

1. Direktor instituta Giprorudmash.  
(Mining machinery)

SUPRUNOV, N.N.; BESPAL'CHIK, L.M.; TIMOFEYEV, V.M.; BEZLYUD'KO,  
A.I., otv. red.; YEROKHIN, G.M., ved. red.; NESTERENKO,  
V.I., red.; KUNIN, I.K., red.;

[Jet boring; studies] Termicheskoe burenie; sbornik trudov. Moskva, Nedra, 1965. 162 p. (MIRA 18:12)

1. Krivoy Rog. Institut "Giprorudmash."

LEONT'YEV, M.N.; prinimali uchastiye: BAKINA, K.V.; KISELEVA, O.M.;  
KRAVETS, Ye.A.; KARLOVA, S.A.; DUBNOVA, S.S.; SEMENYAKO, A.G.;  
ZAMORINA, Z.T.; MILANINA, Ye.F.; KOZEL'SKAYA, O.P.; VASIL'KOVA,  
Z.I.; ZOTOV, S.N.; YERMOLOV, A.I.; BEZLYUDNAYA, V.V.; NAZAROV,  
B.A.; ASHIKHMINA, V.M.; ASYAKINA, A.N.; TROITSKAYA, B.I.;  
SKVORTSOV, A.V., red.; LESHAKOV, I.T., tekhn. red.

[The economy of Orlov Province; a statistical manual] Narodnoe  
khoziaistvo Orlovskoi oblasti; statisticheski sbornik. Orel,  
Gosstatizdat, 1960. 281 p. (MIRA 14:5)

1. Orel(Province) Statisticheskoye upravleniye. 2. Zamestitel'  
nachal'nika statisticheskogo upravleniya Orlovskoy oblasti  
(for Leont'yev). 3. Statisticheskoye upravleniye Orlovskoy ob-  
lasti (for all except Leshakov) 4. Nachal'nik statisticheskogo  
upravleniya Orlovskoy oblasti (for Skvortsov )  
(Orlov Province—Statistics)

BEZLYUDNYY, A. S.

USSR/Mathematics - Approximations 21 Jul 51

"Approximation of Continuous Periodic Functions of Two Variables Satisfying the Lipschitz Condition by Means of Interpolational Trigonometrical Polynomials,"  
P. T. Bugayets

"Dok Ak Nauk SSSR" Vol LXXIX, No 3, pp 381-384

Current article is devoted to an extension of S. M. Nikol'skiy's results (cf. *ibid.* 31, Vol XXXI, No 3, 1941; "Trudy Matemat Inst imeni Steklov," 15, 1945) to the 2-dimensional case. A. S. Bezlyudnyy (cf. "Dok Ak Nauk SSSR" Vol LXV, No 3, 1949) extended his results to the 2-dimensional case for a special class of functions  $f(x,y)$  satisfying certain Lipschitz inequalities. Bugayets demonstrates a certain theorem concerning  $f(x,y)$ . Submitted by Acad A. N. Kolmogorov 19 May 51.

PA 211761

BEZLYUDNYI, A. S.

Bezlyudnyi, A. S. The approximation of periodic function of two variables by interpolatory trigonometric polynomials. Doklady Akad. Nauk SSSR (N.S.) 65, 257-260 (1949). (Russian)  
 Let  $H_{2n}$  be the class of functions  $f(x, y)$  of period  $2\pi$  in each variable and satisfying

$$\frac{|f(x_1, y_1) - f(x_2, y_2)|}{|\Delta f(x_1, x_2, y_1, y_2)|} \leq M \frac{|x_1 - x_2| + N|y_1 - y_2|}{|x_1 - x_2| + |y_1 - y_2|},$$

where

$$\Delta f(x_1, x_2, y_1, y_2) = f(x_1, y_2) + f(x_2, y_1) - f(x_1, y_1) - f(x_2, y_2)$$

Let  $S_{2m}(x, y)$  denote the interpolating polynomial of order  $m, n$  in  $x$  and  $y$ , respectively, coinciding with  $f(x, y)$  at the points  $(2k\pi/(2m+1), 2l\pi/(2n+1))$ ,  $k=0, \pm 1, \dots, \pm m$ ;  $l=0, \pm 1, \dots, \pm n$ . It is shown that

$$\sup_{|x| \leq \pi} |f(x, y) - S_{2m}(x, y)| \leq \frac{M \log m}{\pi^{1-1/(2m+1)}} |\sin(m+\frac{1}{2})x| + \frac{N \log n}{\pi^{1-1/(2n+1)}} |\sin(n+\frac{1}{2})y| + O(m^{-\alpha}) + O(n^{-\beta})$$

$$+ O\left(\frac{\log m \cdot \log n}{m^{\alpha} n^{\beta}}\right)$$

A. Zygmund (Chicago, Ill.)

*SAWYER*  
*[Signature]*

Source: Mathematical Reviews,

Vol 10 No. 8

LUPKIN, V.M.; BEZLYUDOV, V.L.

Study of transformer networks with high-voltage regulation for single-phase electric rolling stock. Sbor.rab.po vop.elektromekh.no.8:350-363 '63.

(MIRA 16q5)

(Electric railroads—Current supply) (Electric transformers)

BEZLYUDOV, V.L. (Leningrad)

Choice of methods for voltage regulation in a.c. electric  
locomotives. Izv. AN SSSR, Energ. i transp. no.5:608-611  
S-0 '63. (MIRA 16:11)

BEZLYUDOVA, M.M.

Critical wavelength of waveguide-type oscillations in transmission lines with rectangular cross section of internal and external conductors. Radiotekh. i elektron. 8 no.11:1842-1848 N '63. (MIRA 17:1)



L 19023-65 EWT(1)/EEC-4/EWA(h) Feb RAEM(a)/ASD(a)-5/AFETR/ESD(c)/ESD(t)

ACCESSION NR: AP5000454

S/0109/64/009/012/2133/2139

AUTHOR: Bezlyudova, M. M.

TITLE: Calculation of the input impedance of a coaxial-to-waveguide junction with a dielectric-coated probe

SOURCE: Radiotekhnika i elektronika, v. 9, no. 12, 1964, 2133-2139

TOPIC TAGS: waveguide, waveguide junction,<sup>25</sup> coaxial to waveguide junction

ABSTRACT: A theoretical analysis of a coaxial-to-rectangular-waveguide junction is presented; mode  $H_{10}$  is propagating in the waveguide, and its exciting probe is coated with a cylindrical dielectric. The principle of superposition and the method of specular reflection of the probe in the metal walls of the waveguide are used in the analysis. Formulas (7, 8) for the coaxial-input impedance of the junction are developed. Also, formulas for a semi-infinite waveguide and for a short-circuited waveguide are derived. Calculations have shown that the

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ACCESSION NR: AP5000454

dielectric coating permits matching of the junction up to a voltage-SWR of 1.2 or 1.3 in the rated wavelength band of the rectangular waveguide. Orig. art. has: 6 figures, 23 formulas, and 1 table.

ASSOCIATION: none

SUBMITTED: 09Sep63

ENCL: 00

SUB CODE: EC

NO REF SOV: 004

OTHER: 001

Card 2/2

BEZMAN, D.B.

BEZMAN, D.B., inzhener; KIRBYEV, A.P., inzhener.

Safety measures for prospecting drilling. Bezop.truda v prom. 1  
no. 34-35 S '57. (MIRA 10:9)

(Mining engineering--Safety measures)

BEZMAN, D.B.; VASIL'YEV, M.I.

Using MG-410 self-recording hydraulic manometers in test boring.  
Biul. TSIIN tsvet. met. no.24:8-9 '57. (MIRA 11:5)  
(Manometer) (Boring)

*BEZMAN, D. B.*

**AUTHOR:** Bezman, D.B., and Vasil'yev, M.I.

132-1-9/15

**TITLE:** Experiments with Automatic Recording Hydraulic Manometers of the Type MG-140 Used at Test Drilling Operations (Ob opyte izpol'zovaniya samopishushchikh gidravlicheskikh manometrov tipa MG-410 na razvedochnom burenii)

**PERIODICAL:** Razvedka i Okhrana Nedr., 1958, # 1, pp 49-50 (USSR)

**ABSTRACT:** Equipping hydraulically operated drill migs of the types "3ИФ-300 " " 3ИФ-650A " and " 3ИФ-1200 A " with the automatically recording manometer " МГ-410 " made it possible to use the device for recording the pressure on the face from the start of drilling operations. Oil from the hydraulic system of the boring machine, conducted into " МГ-410 ", passes through a safety valve, which precludes pressures in excess of 25 atm. The device keeps control of the different stages of work and records the time required.

There is 1 figure.

**ASSOCIATION:** Trest "Uraltsvetrazvedka"

**AVAILABLE:** Library of Congress

Card 1/1

BEZMAN, D. Ya.

"Some Data on Typhus Recurrens," Klin. Med., 26, No. 6, 1948  
Zhmerinsk Inter-Rayon Hosp. im. V. I. Lenin

BEZMAN, D. Ya.

"'Erysid' in Treatment of Cardio-Vascular Insufficiency," Klin. Med., Vol.33,  
No.2, 1955

Zhmerynka County Hospital, Ukrainian Republic.

Comments K-3546, 13 Jul 55

BEZMAN, D.Ya., rayonny terapevt (Zhmerinka)

Conferences on theory and practice for nurses. Med.sestra 16 no.5:  
26-27 My '57. (MLRA 10:7)  
(NURSES AND NURSING)



BEZMAN, D.Ya. (Zhmerinka)

Kardoside therapy of patients with circulatory insufficiency.  
Klin.med. 37 no.7:127-130 J1 '59. (MIRA 12:10)

1. Iz terapevticheskogo otdeleniya (zav. D.Ya.Bezman) Zhmerin-  
skoy rayonnoy bol'nitsy imeni V.I.Lenina (glavny vrach A.A.  
Yakovlev).

(CARDIAC GLYCOSIDES ther.)

PASHKOV, A.I.; KARATAYEV, N.K., doktor ekon.nauk; POLYANSKIY, F.Ye., doktor istor.nauk; TSAGOLOV, N.A., doktor ekonom.nauk; BEZMAN, R.R., kand.ekonom.nauk; PRIKAZCHIKOVA, Ye.V., kand.ekonom.nauk; SHUKHOV, N.S. Primali uchastiye: KOSHELEVA, Ye.F., mladshiy nauchnyy sotrudnik; KHUTORNA, V.F., mladshiy nauchnyy sotrudnik; CHIZHOVA, L.G., mladshiy nauchnyy sotrudnik; VILENSKAYA, V.S., starshiy nauchno-tehnicheskoy sotrudnik. ZHUK, I., red.; MOSKVINA, R., tekhn.red.

[History of Russian economic thought] Istoriia russkoi ekonomicheskoi mysl. Pod red. A.I.Pashkova i N.A.TSagolova. Moskva, Izd-vo sotsial'no-ekon.lit-ry. Vol.2. [Epoch of premonopolistic capitalism] Epokha domonopolisticheskogo kapitalizma. Pt.2. 1960. 676 p.  
(MIRA 13:11)

1. Akademiya nauk SSSR. Institut ekonomiki. 2. Chlen-korrespondent AN SSSR (for Pashkov). 3. Institut ekonomiki AN SSSR (for Kosheleva, Khutorna, Chizhova).

(Economics)

BEZMAN, Ya.D., student

Phonendoscope for school use. Vrach.delo no.6:637 Je '58 (MIRA 11:7)

1. Vinnitskiy meditsinskiy institut.  
(PHONENDOSCOPE)

L 4032-66 ENT(m)/EWA(h) DM  
ACCESSION NR: AP5027962

UR/0089/65/019/001/0062/0063

AUTHOR: Krasnov, N. N.; Dmitriyev, P. P.; Sevast'yanov, Yu. G.; Bezzatarnykh, A. S.

TITLE: Production of sup 26 Al during irradiation of Mg with 20-Mev deuterons

SOURCE: Atomnaya energiya, v. 13, no. 1, 1965, 62-63

TOPIC TAGS: aluminum, radioisotope, irradiation, magnesium, deuteron, gamma spectrum, deuteron beam, isotope separation

56  
B

ABSTRACT: High specific-activity sup 26 Al was obtained in the reactions sup 25 Mg(d,n) and sup 26 Mg (d,2n) by irradiating Mg with a 20-Mev deuteron beam. The steps involved in the separation of the radiochemically pure Al are listed. The sup 26Al gamma spectrum, measured on a scintillation spectrometer, is presented. The activity of the sup 26 Al source was measured by comparison of the 511-kev gamma line intensity with a sup 22 Na standard and of the 1830-kev intensity with a sup 88 Y standard. "The authors thank Z.P. Dmitriyeva for the carrying-out of the measurements on the spectrometer." Orig. art. has: 1 graph and 1 table.

ASSOCIATION: none  
SUBMITTED: 20Jul64

ENCL: 00  
OTHER: 004

SUB CODE: NP  
NA

NO REF SOV: 002

Card 1/1 DP

L 6170-66 EWT(m)/EPF(c)/ETC/EPF(n)-2/EWG(m)/EWA(d)/EWP(t)/EWP(z)/EWP(b) IJP(c)  
ACCESSION NR: AP5019815 MJW/JD/DM UR/0089/65/019/001/0063/0064  
541.15

AUTHOR: Sevast'yanov, Yu. G.; Bezmaternykh, A. S.

TITLE: Separation of  $Na^{22}$  from a magnesium target bombarded by deuterons

SOURCE: Atomnaya energiya, v. 19, no. 1, 1965, 63-64

TOPIC TAGS: magnesium, sodium, deuteron bombardment, deuteron interaction, isotope separation/ MAB

ABSTRACT: In view of the fact that existing separation methods require large quantities of washing solutions and consume much time, the authors propose a method for dumping the bulk of the magnesium (94--97%) by precipitating it in the form of magnesium sulfate from water-acetone solutions. The subsequent purification of  $Na^{22}$  is by ion exchange. A rotating target of MAB alloy (~95% Mg) was used with a hemispherical head bombarded in the internal beam of a cyclotron with 20-Mev deuterons (300  $\mu$ a current). The experiments aimed at choosing the right solvent and the solution technique, as well as the final procedure developed, are described briefly. "The authors thank P. P. Dmitriyev for help and consultations during the radiometric measurements and B. S. Kir'yanov and V. P. Sharov for participating in a discussion of the results." Orig. art. has: 3 tables.

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0701 14-4

L 6470-66

ACCESSION NR: AP5019815

ASSOCIATION: none

SUBMITTED: 14Aug64

NR REF SOV: 003

ENCL: 00

OTHER: 004

SUB CODE: NP

PC

Card 2/2

GROZIN, I.V.; BEZMATERNYKH, L.N.

Investigation of disruptive discharges in wave guides at a frequency  
of 9,300 mc. Izv.vys.ucheb.zav.; radiofiz. 1 no.4:111-115 '58.  
(MIRA 12:5)

1. Sibirskiy fiziko-tekhnicheskii institut pri Tomskom univer-  
sitete.

(Electric discharges) (Wave guides)

9.1300

29311  
S/109/61/006/010/012/027  
D201/D302

AUTHOR: Didenko, A.N., and Bezmaternykh, L.N.

TITLE: Design of rectangular waveguides loaded by dielectric diaphragms

PERIODICAL: Radiotekhnika i elektronika, v. 6, no. 10, 1961,  
1670 - 1676

TEXT: In the present article, the authors give the basic theory of rectangular waveguides loaded by dielectric diaphragms. The analyzed system is the rectangular waveguide of height  $a$  and width  $b$ , which has at its interval walls dielectric diaphragms of thickness  $L_2$  and height  $h$ , spaced by a distance  $l_1$  from each other. The diaphragms are made of isotropic dielectric with large  $\epsilon$ . The dispersion equations are obtained for the waves, existing in the given system. In the absence of central irises in the dielectric and it is known that if the fields depend on both transversal coordinates only hybrid waves are possible. It is necessary, therefore, to obtain dispersion equations for TE- and TM-waves simultaneously

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which exist in waveguides with solid diaphragms. For thin and closely spaced diaphragms ( $P_1 L_1 \ll 1, P_2 L_2 \ll 1$ )

$$\left(\frac{\pi}{a}\right)^2 + (\Gamma^e)^2 = \frac{\epsilon(L_1 + L_2)}{\epsilon L_1 + L_2} k^2 - \frac{\epsilon(L_1 + L_2)^2}{(L_1 + \epsilon L_2)(\epsilon L_1 + L_2)} k_3^2, \quad (3)$$

and

$$\left(\frac{\pi}{a}\right)^2 + (\Gamma^m)^2 = \frac{\epsilon(L_1 + L_2)}{\epsilon L_1 + L_2} k^2 - \frac{L_1 + L_2}{L_1 + \epsilon L_2} k_3^2 \quad (4)$$

are obtained, where

$$k_3 = \frac{\omega}{v_g} = \frac{2\pi}{\lambda_g}; \quad L = L_1 + L_2; \quad p_1^2 = k^2 - \Gamma^2 - \left(\frac{\pi}{a}\right)^2; \quad p_2^2 = \epsilon k^2 - \Gamma^2 - \left(\frac{\pi}{a}\right)^2$$

and  $\Gamma^e$  and  $\Gamma^m$  - the transverse wave numbers for the TM- and TE waves in the y-direction. The TM- and TE- wave components are obtained

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ned in the same manner. When the waveguide is filled by dielectric having central irises, one TE- or one TM-wave only can no longer satisfy the boundary conditions and only hybrid waves are possible. Their field components may be determined from the electric and magnetic Hertzian vectors

$$\vec{E} = \text{grad div } \vec{\Pi}_e - \Delta \vec{\Pi}_e + ik \text{ rot } \vec{\Pi}_m \quad (5)$$

and

$$\vec{H} = -ik \text{ rot } \vec{\Pi}_e + \text{grad div } \vec{\Pi}_m - \vec{\Pi}_m \quad (6)$$

and assuming that, as usual, vectors  $\vec{\Pi}_e$  and  $\vec{\Pi}_m$  have only the Z-components the following expressions are obtained for the components of the in phase hybrid wave within the interaction region

( $0 \leq y \leq \frac{b}{2} - h$ )

$$E_x = \sin \frac{\pi}{a} x \sum_{n=-\infty}^{\infty} \text{ch } k_{v,n} y (-i\beta_n Q_n^{(1)} A_n + Q_n^{(2)} B_n) e^{i\beta_n z},$$

$$E_y = \cos \frac{\pi}{a} x \sum_{n=-\infty}^{\infty} \text{sh } k_{v,n} y (i\beta_n Q_n^{(3)} A_n - Q_n^{(4)} B_n) e^{i\beta_n z}, \quad (7)$$

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$$E_z = \cos \frac{\pi}{2} x \sum_{n=-\infty}^{\infty} \text{ch } k_{y,n} y A_n e^{i\beta_n z},$$

$$H_x = \cos \frac{\pi}{4} x \sum_{n=-\infty}^{\infty} \text{sh } k_{y,n} y (-Q_n^{(2)} A_n + i\beta_n Q_n^{(1)} B_n) e^{i\beta_n z}$$

$$H_y = \sin \frac{\pi}{4} x \sum_{n=-\infty}^{\infty} \text{ch } k_{y,n} y (-Q_n^{(4)} A_n + i\beta_n Q_n^{(3)} B_n) e^{i\beta_n z},$$

$$H_z = \sin \frac{\pi}{8} x \sum_{n=-\infty}^{\infty} \text{sh } k_{y,n} y B_n e^{i\beta_n z}.$$

where

$$\begin{aligned} Q_n^{(1)} &= \frac{\frac{\pi}{a}}{\left(\frac{\pi}{a}\right)^2 - k_{y,n}^2}; & Q_n^{(2)} &= \frac{ik_{y,n}}{\left(\frac{\pi}{a}\right)^2 - k_{y,n}^2}; \\ Q_n^{(3)} &= \frac{k_{y,n}}{\left(\frac{\pi}{a}\right)^2 - k_{y,n}^2}; & Q_n^{(4)} &= \frac{ik \frac{\pi}{a}}{\left(\frac{\pi}{a}\right)^2 - k_{y,n}^2}; \end{aligned} \quad (8)$$

$$-k_{y,n}^2 = k^2 - \beta_n^2 - \left(\frac{\pi}{a}\right)^2;$$

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and  $\beta_s$  - propagation constant of the S-th space harmonic related to the fundamental by  $\beta_s = \beta_0 + \frac{2\pi s}{L}$ . For the other region ( $\frac{b}{2} - h \leq y \leq \frac{b}{2}$ ) the hybrid field components are expressed by

$$\begin{aligned}
 E_x &= \sin \frac{\pi}{a} x \sum_{r=-\infty}^{\infty} e^{i\beta_s z} \sum_{r=-\infty}^{\infty} \left[ -R_r^{(1)} a_r \operatorname{sh} \Gamma_r^s \left( y - \frac{b}{2} \right) T_{r,s}^s + \right. \\
 &\quad \left. + R_r^{(2)} b_r \operatorname{sh} \Gamma_r^m \left( y - \frac{b}{2} \right) S_{r,s}^m \right], \\
 E_y &= \cos \frac{\pi}{a} x \sum_{r=-\infty}^{\infty} e^{i\beta_s z} \sum_{r=-\infty}^{\infty} \left[ R_r^{(3)} a_r \operatorname{ch} \Gamma_r^s \left( y - \frac{b}{2} \right) T_{r,s}^s - \right. \\
 &\quad \left. - R_r^{(4)} b_r \operatorname{ch} \Gamma_r^m \left( y - \frac{b}{2} \right) S_{r,s}^m \right], \\
 E_z &= \cos \frac{\pi}{a} x \sum_{r=-\infty}^{\infty} e^{i\beta_s z} \sum_{r=-\infty}^{\infty} a_r \operatorname{sh} \Gamma_r^s \left( y - \frac{b}{2} \right) S_{r,s}^s.
 \end{aligned} \tag{16}$$

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$$\begin{aligned}
 H_x &= \cos \frac{\pi}{a} x \sum_{r=-\infty}^{\infty} e^{i\beta_s z} \sum_{r=-\infty}^{\infty} \left[ -R_r^{(s)} a_r \operatorname{ch} \Gamma_r^s \left( y - \frac{b}{2} \right) \tilde{S}_{r,s}^s + \right. \\
 &\quad \left. + R_r^{(1)} b_r \operatorname{ch} \Gamma_r^m \left( y - \frac{b}{2} \right) T_{r,s}^m \right], \\
 H_y &= \sin \frac{\pi}{a} x \sum_{r=-\infty}^{\infty} e^{i\beta_s z} \sum_{r=-\infty}^{\infty} \left[ -R_r^{(s)} a_r \operatorname{sh} \Gamma_r^s \left( y - \frac{b}{2} \right) \tilde{S}_{r,s}^s + \right. \\
 &\quad \left. + R_r^{(s)} b_r \operatorname{sh} \Gamma_r^m \left( y - \frac{b}{2} \right) T_{r,s}^m \right],
 \end{aligned} \tag{i6}$$

$$H_z = \sin \frac{\pi}{a} x \sum_{r=-\infty}^{\infty} e^{i\beta_s z} \sum_{r=-\infty}^{\infty} b_r \operatorname{ch} \Gamma_r^m \left( y - \frac{b}{2} \right) S_{r,s}^m,$$

in which

$$S_{r,s}^s = \frac{1}{L} \int_0^L e^{-i\beta_s z} W_r^s(z) dz = \frac{1}{L} (S_{r,s}^{s(1)} + S_{r,s}^{s(2)}); \tag{17}$$

$$\tilde{S}_{r,s}^s = \frac{1}{L} \int_0^L e^{-i\beta_s z} W_r^s(z) dz = \frac{1}{L} (S_{r,s}^{s(1)} + e S_{r,s}^{s(2)}); \tag{18}$$

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$$T_{r,s}^e = \frac{1}{L} \int_0^L e^{-i\beta_s z} \frac{dW_r^e(z)}{dz} dz = \frac{1}{L} (T_{r,s}^{e(1)} + T_{r,s}^{e(2)}); \quad (19)$$

$$S_{r,s}^{e(1)} = -\frac{1}{p_1^2 - \beta_s^2} \left\{ e^{-i\beta_s L} \left[ i\beta_s W_r^e(L) + \frac{dW_r^e(L)}{dz} \right] - \left[ i\beta_s W_r^e(0) + \frac{dW_r^e(0)}{dz} \right] \right\}; \quad (20)$$

$$S_{r,s}^{e(2)} = -\frac{1}{p_2^2 - \beta_s^2} \left\{ e^{-i\beta_s L} \left[ i\beta_s W_r^e(L) + \frac{dW_r^e(L)}{dz} \right] - e^{-i\beta_s L} \left[ i\beta_s W_r^e(L) + \frac{dW_r^e(L)}{dz} \right] \right\}; \quad (21)$$

$$T_{r,s}^{e(1)} = -\frac{1}{p_1^2 - \beta_s^2} \left\{ e^{-i\beta_s L} \left[ i\beta_s \frac{dW_r^e(L)}{dz} - p_1^2 W_r^e(L) \right] - \left[ i\beta_s \frac{dW_r^e(0)}{dz} - p_1^2 W_r^e(0) \right] \right\}; \quad (22)$$

$$T_{r,s}^{e(2)} = -\frac{1}{p_2^2 - \beta_s^2} \left\{ e^{-i\beta_s L} \left[ i\beta_s \frac{dW_r^e(L)}{dz} - p_2^2 W_r^e(L) \right] - e^{-i\beta_s L} \left[ i\beta_s \frac{dW_r^e(L)}{dz} - p_2^2 W_r^e(L) \right] \right\}. \quad (23)$$

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By equating the respective harmonics of tangential components of (7) and (16) and disposing of  $A_s$  and  $B_s$  the following two infinite systems of linear equations with respect to  $a_r$  and  $b_r$ , are obtained determining the dispersion properties of the in-phase wave of the waveguide with dielectric diaphragms

$$\begin{aligned} & \sum_{r=-\infty}^{\infty} a_r [Q_s^{(2)} S_{r,s}^e \operatorname{th} k_{y,s} y_0 \operatorname{sh} \Gamma_r^e h + R_r^{e(2)} S_{r,s}^e \operatorname{ch} \Gamma_r^e h] + \\ & + b_r [i\beta_s Q_s^{(1)} S_{r,s}^m \operatorname{ch} \Gamma_r^m h - R_r^{m(1)} T_{r,s}^m \operatorname{ch} \Gamma_r^m h] = 0, \\ & \sum_{r=-\infty}^{\infty} a_r [i\beta_s Q_s^{(1)} S_{r,s}^e \operatorname{sh} \Gamma_r^e h - R_r^{e(1)} T_{r,s}^e \operatorname{sh} \Gamma_r^e h] + \\ & + b_r [Q_s^{(2)} S_{r,s}^m \operatorname{cth} k_{y,s} y_0 \operatorname{ch} \Gamma_r^m h + R_r^{m(2)} S_{r,s}^m \operatorname{sh} \Gamma_r^m h] = 0. \end{aligned} \tag{24}$$

in which  $-\infty \leq s \leq +\infty$ . The analysis of Eq. (24) is rather difficult. The approximate equations are, therefore, of interest. They can be obtained assuming that the field distribution in the second region is adequately described by functions  $W_0^e$  and  $W_0^m$  and

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by their derivatives. Then the higher space harmonics can be evaluated by the approximate method of lacing together partial powers. The method consists of evaluating partial powers for the I and II region over one period  $L$  of the structure and adding them at the boundary

$$p_1^I = p_1^{II}, \quad p_2^I = p_2^{II}$$

where

$$p_1 = \frac{c}{8\pi} \int_0^L E_z^* H_x dz; \quad p_2 = \frac{c}{8\pi} \int_0^L E_z^* H_z dz. \quad (25)$$

This gives an equation which has two solutions, one of which describes the dispersion properties of a quasi-TE-wave. Further simplification is possible if within the I and II region only the zero-th harmonic is considered, giving the solution for the symmetrical quasi-TE- and quasi-TM-waves. There are 4 references: 3 Soviet-bloc and 1 non-Soviet-bloc. The reference to the English-language publication reads as follows: R.B. Shersby-Harvie, L.B.

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Design of rectangular waveguides ... S/109/61<sup>29314</sup>/006/010/012/027  
D201/D302

Mullet, W. Walkinchaw, S. Bell. G. Loach, Proc. I.E.E., 1957, 104B, 273. +

SUBMITTED: January 21, 1961

Card 10/10

S/109/62/007/006/009/024  
D271/D308

9,1300

AUTHOR: Bezmaternykh, L. N.

TITLE: Some electrodynamic characteristics of rectangular waveguides loaded by dielectric diaphragms

PERIODICAL: Radiotekhnika i elektronika, v. 7, no. 6, 1962, 995-1001 ✓B

TEXT: A waveguide is considered with thin, densely positioned diaphragms which can be regarded as containing anisotropic dielectric. The general dispersion equation is written out and the following cases are discussed: waveguide with isotropic dielectric diaphragms, waveguide filled with anisotropic dielectric, and waveguide formed by two infinite planes with anisotropic dielectric layers. The second case is chosen as the basis of mode classification; waves which become TM when interaction spaces tend to zero are called quasi-TM; waves which correspond to TE waves in a waveguide filled with anisotropic dielectric are called quasi-TE. The relation between the diaphragm height and the delay is dis-

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BEZMATERNYKH, L.N.

Calculation of the dispersion of rod systems using a variational  
method. Radiotekh. i elektron. 8 no.9:1558-1566 S '63.  
(MIRA 16:9)  
(Microwaves) (Wave guides)

L 25067-65 EWT(1)/EWT(m)/EPA(w)-2/EWA(m)-2/EWA(h) Pab-10/Pt-10/P1-4/PeB  
ACCESSION NR:AR4045746 IJP(c) S/0275/64/000/007/A051/A052 40  
B

SOURCE: Ref. zh. Elektronika i yeye primeneniye. Svodnyy tom, Abs. 7A299

AUTHOR: Bezmaternykh, L. N.; Didenko, A. N.

TITLE: Feasibility of using an interdigital <sup>25</sup> delay system in waveguide cyclic accelerators 19

CITED SOURCE: Sb. Elektron. uskoriteli. M., Vyssh. shkola., 1964, 97-102

TOPIC TAGS: cyclic accelerator, waveguide cyclic accelerator

TRANSLATION: Characteristics of an interdigital delay system and its efficiency in waveguide cyclic accelerators are considered. A dispersion equation is set up whose analysis shows that the system possesses a sufficiently wide passband in the desirable frequency range. A calculation of the shunt resistance per unit length ( $r = 0.15 \text{ Mohms/cm}$ ) corroborates the possibility of using such a system in the accelerating devices operating at a wavelength of 10 cm and a lead-in height of 3 cm.

SUB CODE: Nf, Ec

ENCL: 00

Card 1/1

ACCESSION NR: AP4039734

S/0141/64/007/002/0338/0342

AUTHOR: Vorob'yev, A. A.; Bezmaternykh, L. N.; Didenko, A. N.; Lisitsyn, A. I.; Ol'shanskiy, A. P.

TITLE: Laminated dielectric coatings with large reflection coefficients

SOURCE: IVUZ. Radiofizika, v. 7, no. 2, 1964, 338-342

TOPIC TAGS: dielectric coating, reflection coefficient, cavity resonator, microwave equipment, dielectric permittivity

ABSTRACT: In view of various applications of laminated dielectric coating with large reflection coefficients, their reflecting properties are analyzed on the basis of a calculation of the reflection coefficient from a semi-infinite periodic medium, comprising an infinite waveguide of arbitrary cross section, one half of which is filled with dielectric layers. Such a representation neglects the reflection from the second boundary of the layer and is justified at the frequencies considered. The field outside the outermost layer is then described as a sum of incident and reflected waves, and inside the layer by a wave traveling inside the dielectrics. Calculations show that for a given reflection coefficient the dimensions of the laminated coating decrease sharply with increasing dielectric con-

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ACCESSION NR: AP4039734

stant of the layers, and in the case of large dielectric constants (e. g., barium titanate), such layers can be used not only in the optical but also in the micro-wave bands. It is shown that a frequency exists at which the tangential electric field on the surface of the laminated medium vanishes, making it possible in some cases to replace metallic walls of cavity resonators by laminated dielectrics without distorting the field structure in the cavity. Tests of laminated dielectric consisting of alternating layers of paraffin and foamed plastic placed in a rectangular waveguide confirmed this assumption, and the cavity produced by shorting the ends of this waveguide had approximately the same Q as a metal cavity. Slight deviations from theory are explained. The use of dielectrics with large permittivities ( $10^2$  --  $10^3$ ) will make it possible to reduce the total thickness of the sandwich to 1 -- 2 cm in the 10-cm band and to several tenths of a millimeter in the millimeter band. Orig. art. has: 2 figures and 11 formulas.

ASSOCIATION: None

SUBMITTED: 20May63

ENCL: 02

SUB CODE: EM, MT

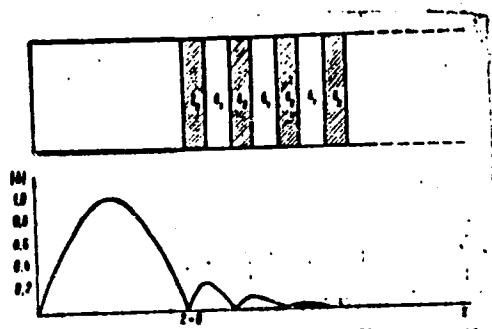
NR REF SOV: 003

OTHER: 04

Card 2/4

ACCESSION NR: AP4039734

ENCLOSURE: 01

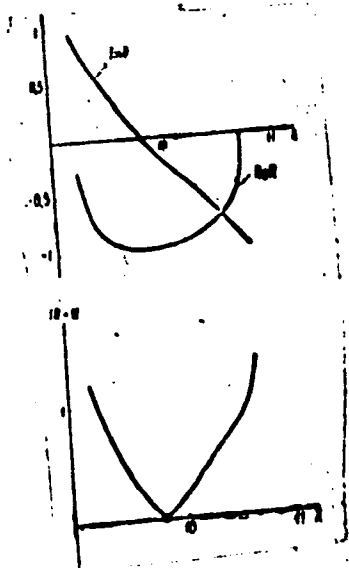


Distribution of electric field in a stratified medium, for  $R = 1$ ,  $\lambda = 10$  cm,  $\epsilon_2 = 10$ ,  $\epsilon_1 = 1$ ,  $L_2 = 1.2$  cm (H<sub>oi</sub> mode). (R - reflection coeff.,  $\lambda$  - wavelength,  $\epsilon$  - dielectric const., L - thickness)

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ACCESSION NR: AP4039734

ENCLOSURE: 02



Dependence of the reflection coefficient on the wavelength within the rejection band, at  $\epsilon_2 = 2$ ,  $\epsilon_1 = 1$ ,  $L_2 = 2.8$  cm,  $L_1 = 2$  cm,  $a = 7.2$  cm ( $H_{01}$  mode).  
( $a$  - width of waveguide)

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L 53820-65 EWT(1)/EWA(n) Pr-4/Feb/Pi-4

ACCESSION NR: AP5013348

UR/0109/65/010/005/0947/0949  
621.385.6.032.266

AUTHOR: Gos'kov, P. I.; Bezmaternykh, L. N.

TITLE: Experimental investigation of an "opposing rows of rods" [delay] system

SOURCE: Radiotekhnika i elektronika, v. 10, no. 5, 1965, 947-949

TOPIC TAGS: waveguide delay line, dispersion property, comb structure

ABSTRACT: Dispersion properties of a waveguide delay system using opposing rows of rods are studied. Theoretical and experimental dispersion curves plotted on the assumption that the wave field in a homogeneous region has a TEM character were compared. Experiments were conducted by the small-disturbances method on a model of a six-period system consisting of two F-shaped halves (see Fig. 1 of the Enclosure). From the dispersion curves shown in Fig. 2 of the Enclosure, it follows that the consideration of end capacitances not only leads to a strong shift of the dispersion curves into the long-wave region, but at the same time causes an appreciable increase in the passband and alters the character of the dispersion of the "cophasal  $\cos +$  antiphasal  $\sin$ " wave. Experimental dispersion curves are in good agreement with the theoretical curves calculated by taking into account the end capacitances,

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I 53820-65  
ACCESSION NR: AP5013348

especially for  $\Psi \rightarrow \Pi$ . In this system, the dispersion of "cophasal cos + antiphasal sin" and "cophasal sin + antiphasal cos" waves has the same character. The "cophasal cos + antiphasal sin" oscillations differ from the "cophasal sin + antiphasal cos" oscillations in that a longitudinal component of the electric field is present on the system's axis in the former case, while in the latter case there is none. The experiments show that in delay systems of "opposing rows of rods" it is necessary to take into account the end capacitances when calculating dispersion. Orig. art. has: 2 figures. [JR]

ASSOCIATION: none

SUBMITTED: 10Jul64

ENCL: 02

SUB CODE: EC

NO REF SOV: 001

OTHER: 000

ATD PRESS: 4022

Card 2/4

HEZMATERNYKH, L.N.

Reflection of electromagnetic waves from multiple-layer  
dielectric structures. Radiotekh. i elektron. 10 no.11:  
2053-2055 N '65. (MIRA 18:11)

ACC NR: AT7003994 SOURCE CODE: UR/0000/66/000/000/0075/0082  
AUTHOR: Vorob'yev, A. A.; Bazmaternykh, L. N.; Didenko, A. N.; Filatova, R. M.  
ORG: Scientific Research Institute of Nuclear Physics, Electronics, and  
Automation, Tomsk Polytechnic Institute (Nauchno-issledovatel'skiy institut  
yadernoy fiziki, elektroniki i avtomatiki pri TPI)  
TITLE: Waveguide accelerating systems with walls not shielding the control  
magnetic field  
SOURCE: Mezhvuzovskaya konferentsiya po elektronnyim uskoritelyam. 5th,  
Tomsk, 1964. Elektronnyye uskoriteli (Electron accelerators); trudy konferentsii.  
Moscow, Atomizdat, 1966, 75-82  
TOPIC TAGS: waveguide, ~~accelerator~~, cyclic accelerator, particle acceleration  
ABSTRACT: A multilayer-dielectric coating similar to that used in Fabry-Perot  
interferometers (W. Gulshaw, Proc. Phys. Soc., London, v. 66, sec. B, 597, 1953)  
and in lasers (J. Franklin Inst., 273, 177, 1962) is proposed for the walls of  
waveguide-type accelerators. Uniformly bent smooth and septate closed

Card 1/2

ACC NR: AT7003994

rectangular waveguides with multilayer-dielectric walls are theoretically and experimentally investigated. Formulas for the rejection frequency of a periodic multilayer structure, for attenuation, and for the total electromagnetic-wave losses due to reflection from a multilayer dielectric are derived. A length of standard 72 x 34-mm waveguide whose ends were closed by multilayer-dielectric walls was excited by TE<sub>101</sub> -mode at  $\lambda = 10,182$  cm; at room temperature,  $Q = 1800$ . Findings: (1) At a fixed frequency, the field structure in the above system does not differ from that in an all-metal system; (2) Use of TE-modes is preferable; inside the multilayer wall, the field attenuates rapidly; with proper selection of wall parameters, no hazard of dielectric breakdown by SHF high power will exist; (3) The above multilayer-dielectric walls are feasible if Sr and Ba titanates are used as materials (see R. O. Bell et al., IRE Trans., MTT-9, 239, 1961). Orig. art. has: 3 figures, 15 formulas, and 1 table.

SUB CODE: 09 / SUBM DATE: 06Mar66 / ORIG REF: 001 / OTH REF: 003

Card 2/2

BEZMATERNYKH, M.F.

Determining inaccessible distances. Geod. i kart. no.9:35-36  
S '64. (MIRA 17:12)

KUZNIK, I.A., kand. geog. nauk; BEZMENOV, A., otv. za vypusk

[Defining more precisely the parameters of simplified formulas of the State All-Union Scientific Research Institute for Roads for determining maximum discharges from storm and mixed runoff in the Volga Valley] Utochnenie parametrov uproshchennykh formul Soiuzdornii dlia rascheta maksimal'nykh raskhdov po livnevomu i smeshannomu stoku v Povolzh'e. Saratov, M-vo avtomobil'nogo transporta i shosseinykh dorog RSFSR, 1961. 34 p.  
(MIRA 15:1)

(Volga Valley--Hydrology)

1. BEZMENOV, A. I., Eng.
2. USSR (600)
4. Irrigation
7. Increasing the efficiency coefficient of an irrigation network. Gidr. i mel. 4 no. 11  
1952.

9. Monthly List of Russian Accessions, Library of Congress, March 1952. Unclassified.



BEZMENOV, A. I. Cand Agr Sci -- (diss) "Study of various methods of sowing,  
planting, and ~~watering~~ vegetable crops in the trans-Volga region of Saratovskaya  
Oblast." Saratov, 1959. 19 pp with illustrations (Min of Agr RSFSR. Saratov  
Agr Inst), 150 copies (KL, 41-59, 105)

KUZNIK, I.A.; BEZMENOV, A.I.

Infiltration of snow waters into the frozen soil. Pochvovedenie  
no.7:59-66 J1 '63. (MIRA 16:8)

1. Saratovskiy sel'skokhozyaystvennyy institut Ministerstva  
sel'skogo khozyaystva,  
(Frozen ground) (Soil moisture)

ROZIN, V.A., kand. tekhn. nauk; BEZMENOV, A.I., kand. sel'khoz.  
nauk; LUGANSKIY, V.D., inzh.; YELIZAVETSKAYA, G.V., red.

[Agricultural melioration] Sel'skokhoziaistvennye melioratsii.  
Moskva, Kolos, 1965. 471 p. (MIRA 18:8)

L 39300-65 EWT(m)/EPF(c)/EPR/EWP(j) Pc-4/Pr-4/Ps-4 RPL WW/RM  
 ACCESSION NR: AP5008111 S/0062/65/000/002/0355/0357

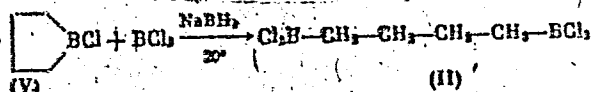
AUTHOR: Mikhaylov, B. M.; Kozminskaya, T. K.; Bezmenov, A. Ya.

TITLE: Chlorine- and ethylmercaptoderivatives of boracyclopentane and butane-1,4-diboric acid

SOURCE: AN SSSR. Izvestiya. Seriya khimicheskaya, no. 2, 1965, 355-357

TOPIC TAGS: heteroorganic compound, organoboron compound, alkylboric acid, boracyclopentane derivative, ethylmercaptan derivative, boron trichloride, ethylthioborate

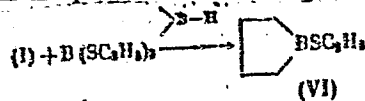
ABSTRACT: The reaction of an isomeric mixture of di (1-boracyclopentyl)-alkanes having the formula  $C_{12}H_{24}B_2$  (I) with boron trichloride and with ethylthioborate was studied. The mixture I, obtained as the hydroboration product of 1,3-butadiene (Dokl. AN SSSR v. 155, 1964, 141) gave 1,4-bis (dichloroboryl)-n-butane (II), 2,4-bis (dichlorobutyl)-butane (III) and 3,4-bis (dichlorobutyl) butane (IV) at room temperature with an excess of  $BCl_3$  in the presence of  $NaBH_4$ ; II was also prepared by the reaction of 1-chloroboracyclopentane (V) under similar conditions:



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L 39300-65  
 ACCESSION NR: AP5009111

The reaction also proceeded in the opposite direction, as shown by the reaction of I at room temperature with  $\text{BCl}_3$  in the presence of  $\text{NaBH}_4$ , giving V and isomeric cyclic products. I and ethylthioborate in the presence of  $\text{NaBH}_4$  and  $\text{BF}_3$  etherate gave ethylmercaptoboracyclopentane (VI)



and isomeric products. With an excess of ethylthioborate, VI gave tetraethyl-butane-1,4-dithioborate,



Orig. art. has: 4 formulas.

ASSOCIATION: Institut organicheskoy khimii im. N.D. Zelinskogo Akademii nauk SSSR (Institute of Organic Chemistry, Academy of Sciences, SSSR)

SUBMITTED: 10Jun64

ENCL: 00

SUB CODE: OC

NO REF SOV: 004

OTHER: 003

Card 2/2 30

ACC NR: AP6011658

SOURCE CODE: UR/0020/66/167/003/0590/0593

AUTHOR: Mikhaylov, B. A.; Bezmenov, A. Ya.; Vasil'yev, L. S.

39  
B

ORG: Institute of Organic Chemistry im. N. D. Zelinskiy, Academy of Sciences, SSSR  
(Institut organicheskoy khimii Akademii nauk SSSR)

TITLE: The process of hydroboronating butadiene-1,3

SOURCE: AN SSSR. Doklady, v. 167, no. 3, 1968, 590-593

TOPIC TAGS: butadiene, diborane, organic synthetic process, reaction mechanism

ABSTRACT: Elsewhere the present authors and V. G. Kiselev report the analysis of products of a diborane reaction with butadiene-1,3 (DAN, 155, 141 (1964)). In the present paper the authors synthesized 1-(butene-3-yl) borocyclopentane (compound V) and 1-crotylborocyclopentane (compound VII) to clarify the structure of the 1-aklenyl borocyclopentane fraction obtained

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UDC: 542.91+547.244

ACC NR: AP6011658

in that reaction. Both compounds were then hydroboronated with diborane. The experimental procedure is detailed. The results indicate that fraction C<sub>8</sub>H<sub>15</sub>B is almost entirely in the form of VII. This is attributed to the verified much faster rate of hydroboration for V than VII. Participation of the two compounds in the formation of isomeric butanediols during the oxidation of product mix resulting from hydroboration of butadiene-1,3 was 78% for V and 22% for VII. A schematic representation of the process of mono-hydroboration, given in the report, negates assumptions by H. C. Brown and associates that diborane is capable of attachment to butadiene-1,3 in the 1,4 position. The paper was presented by Academician B. A. Kazanskiy 26 June 65.

SUB CODE: 07/ SUBM DATE: 21May65/ ORIG REF: 002/ OTH REF: 003

Card 2/2 *plus*

TARASOV, Sergey Vasil'yevich; ~~BEZMENOV, A.Ye.~~, kandidat tekhnicheskikh nauk, retsenzent; PRIZENT, D.I., inzhener, redaktor; POLYAKOV, G.F., redaktor izdatel'stva; POPOVA, S.M., tekhnicheskiy redaktor

[The technology of clock manufacturing] Tekhnologiya chasovogo proizvodstva. Moskva, Gos. nauchno-tekhn. izd-vo mashinostroit. lit-ry, 1956. 480 p. (MLRA 9:8)

(Clockmaking and watchmaking)



DUNIN-BARKOVSKIY, I.V.; YAKUSHEV, A.I., doktor tekhn. nauk, prof.,  
retsenzent; BEZMENOV, A.Ye., kand. tekhn. nauk,  
retsenzent; KARELIN, N.M., doktor tekhn. nauk, prof., red.

[Principles of interchangeability and technical measurements]  
Osnovy vzaimozameniaemosti i tekhnicheskie izmereniia. Mo-  
skva, Izd-vo "Mashinostroenie," 1964. 304 p. (MIRA 17:6)

BEZMETNOV, A.Ye.

Diffraction of electromagnetic waves by a semi-infinite grid.  
Izv.vys. ucheb. zav.; radiotekh. no.3:271-287 My-Je '58.

(MIRA 11:7)

1.Rekomendovana kafedroy radiopere dayushchikh ustroystv Moskovskogo  
ordena Lenina aviatsionnogo instituta im. Sergo Ordzhonikidze.  
(Electric waves)

SINITSYN, Pavel Prokof'yevich; BEZMENOV, A.Ye., dotsent, kand.tekhn.nauk,  
retsenzent; GRIGOR'YEV, I.A., kand.tekhn.nauk, red.; SHEYNFAYN,  
L.I., izdat.red.; ROZHIN, V.P., tekhn.red.

[Principles of interchangeability and technical measurements]  
Osnovy vzaimozameniaemosti i tekhnicheskikh izmerenii. Moskva,  
Gos.isd-vo obror.promysh. 1959. 246 p. (MIRA 12:6)  
(Mensuration) (Interchangeable mechanisms)

MIKHAYLOV, B.M.; BEZMENOV, A.Ya.; VASIL'YEV, L.S.; KISELEV, V.G.

Cyclic compounds of boron formed during hydroboration of  
1,3-butadiene. Dokl. AN SSSR 155 no.1:141-144 Mr '64.

(MIR' 17:4)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR.  
Predstavleno akademikom B.A.Kazanskim.