Minimum voltage protective circuits with time delay operated by a.c.

Fig.2. The advantage of these circuits is that the relay EN-500 works entirely without vibration. The way in which the circuit of Fig.2 may be used to supply the operating circuit of a circuit breaker is shown in Fig.3. Figs. 4, 5 and 6 show different methods of obtaining time delay. Fig. 4 shows a circuit employing relay type EV-100 which operates when voltage is removed from the winding. The circuit of Fig.5 uses time-relay type MKU-48 which can give time delays of up to 10 seconds. Fig.6 is based on other relays which can give time delays of up to 15 seconds. The circuits in Figs.7, 8 and 9 show different methods of group minimum voltage protection using the elements already described. The results of tests made with some of these relays are given. It is concluded that minimum voltage protection can easily be arranged for a.c. operating current. Circuits that use very little power for minimum voltage protection with time delay can be obtained by using relay type MKU-48

Minimum voltage protective circuits with time delay operated by a.c.

with capacitors.
There are 10 figures.

Card 3/3

NEPOROZHNIY, P.S. (Moskva); BELYAKOV, A.A. (Moskva); RUSSO, G.A. (Moskva); BOROVOY, A.A. (Moskva); NEKRASOV, A.M. (Moskva); MILOSLAVSKIY, N.A. (Moskva); ROKOTYAN, S.S. (Moskva); RAZGON, V.N., inzh.; TSVETAVA, G.K., inzh. (g.Boksitogorsk)

Principal trends in over-all electrification. Elektrichestvo no. 11:87-90 N '60. (MIRA 13:12)

1. Mosenergo (for Razgon).
(Electrification)

NEPOROZHNIY, P.S.; BELYAKOV, A.A.; VOZNESENSKIY, A.N.; GLEBOV, P.D.; KACHANOVSKIY, B.D.; BASEVICH, A.Z.; TARTAKOVSKIY, D.M.; VASIL'YEV, P.I.; ZARUBAYEV, N.V.; CHUGAYEV, R.R.; KOZHEVNIKOV, M.P.; KNOROZ, V.S.; IVANOV, P.L.; SHCHAVELEV, D.S.; OKOROKOV, S.D.; BELOV, A.V.; STAROSTIN, S.M.; YAGN, Yu.I.; IZBASH, S.V.

Ivan Ivanovich Levi; on his 60th birthday. Gidr. stroi. 30 no.9:61-62 S '60. (MIRA 13:9)
(Levi, Ivan Ivanovich, 1900-)

NEPOROZHNIY, P.S. (Moskva); BELYAKOV, A.A. (Moskva); RUSSO, G.A. (Moskva); BUROVOY, A.A. (Moskva); NEKRASOV, A.M. (Moskva); ROKOTYAN, S.S. (Moskva); MILOSLAVSKIY, N.M. (Moskva); SYROMYATNIKOV, I.A., doktor tekhn. nauk, prof.

Principal trends in the realization of over-all electrification. Elektrichestvo no.8:77-82 Ag '63. (MIRA 16:10)

BELYAKOV, A.A.

Determination of dinitrile of adipic acid (adiponitrile), hexamethylenediamine, ammonia, and dowtherm in air. Trudy po khim.i khim.tekh. no.1:139-143 '64.
(MIRA 18:12)

1. Submitted August 5, 1963.

BELYAKOV, A. A.

USSR/Chemistry - Nitrates Jan/Feb 52

"Microcrystalloscopic Reactions for Nitrate and Nitrites," I. M. Korenman, A. A. Belyakov, Gor'kiy Inst of Labor Hygiene

"Zhur Analit Khim" Vol VII, No 1, pp 52-55

A satd aqueous soln of 1,4-aminophenyl mercuriacetate was used as reagent. With aq solns of nitrates, it forms a characteristic ppt $H_2NC_6H_4HgNO_3$. The reagent can also be used for detecting nitrites, after the oxides given off from the acid soln have been oxidized to NO_3 in a gas chamber. Interfering

209T9

USSR/Chemistry - Nitrates (Contd) Jan/Feb 52

ions, such as Cl^-, Br^-, I^-, CN^-, CNS^-, S^{--}, SO_3^{--}, SO_4^{--}, are eliminated by silver or lead acetate. NO_2^- ions are masked by the addn of ortho- or metanitroaniline. The sensitivity is 0.3 μg NO_3^-.

209T9

LIPINA, T.G.; BELYAKOV, [redacted]

Individual determination of turpentine, gasoline & resin in air. Gig. sanit., Moskva no.4:47 Apr 1953. (CIML 24:4)

1. Of Gor'kiy Institute of Labor Hygiene and Occupational Diseases.

Belyakov, A.A.

Analytical Abst.
Vol. 1 No. 2
Feb. 1954
Inorganic Analysis

277. Microcrystalloscopic reactions for cyanides. I. M. Korenman and A. A. Belyakov (*Zavod. Lab.*, U.S.S.R., 1953, [illegible]). Cyanides can be detected from the form of their crystalline ppt. with 1:4-ethylbenzylaminophenylmercuriacetate, 1:4-dimethylaminophenylmercuriacetate and 1:2-toluidine-4:6-dimercuriacetate. Certain optical constants are given and photographs of the crystals are reproduced. The min. amount detectable is 0·03 μg of CN'. To detect CN' in solution the third reagent is used and under these conditions the min. amount detectable is 0·25 μg of CN'. The interference of S'' is prevented by addition of Pb acetate. Large amounts of Cl', Br', I', CNS', NO_3', and SO_4'' do not affect the reaction. G. S. SMITH

BELYAKOV, I.M.

Color reactions of some mercurated arylamines with nitrites. I. M. Korenman and A. A. Belyakov (Inst. Occupational Hyg., Gorki). *Zhur. Anal. Khim.* 9, 23-25(1954).—The reaction of Hg compds. with methyl-, ethyl-, dimethyl-, diethyl-, and ethylbenzylaniline and of the same compds. free of Hg with NO_2^- was studied in AcOH at 85–100°. The presence of Hg increased the sensitivity of the reaction 2.5-16 times. Halides, nitrates, sulfites, and sulfates did not affect the color. This reaction can be used also for detection of arylamines. The reagent used in this case was an AcOH soln. of Hg acetates and a soln. of $NaNO_2$. Aniline, alc., $MeCO_2$, and phenol did not interfere.

M. Hosch

Determination of [illegible]

[illegible] accuracy of [illegible] 8 per cent [illegible] ethanol. [illegible] and dichloro-ethanes, 2 ml of the ethanol solution are treated with [illegible] and 9 ml, respectively, of saturated ethanolic KOH. The solution is [illegible] an absorption tube joined with rubber tubing [illegible] absorption tube and both [illegible] rubber tubing and glass stoppers. The [illegible] turning the solution is heated in a [illegible] water bath [illegible] the [illegible] 2[illegible] [illegible] methane. The vessel is cooled and [illegible] air is passed through [illegible] then into [illegible]

BELYAKOV, A. A.

3388. Micro-synthesis and identification of certain mercurated arylamines. T. M. Cyanman and A. A. Belyakov (Gorki Sci. Res. Inst. for Occupational Diseases). *Zhur. Anal. Khim.*, 1956, 11 (1), 77–80. (Russian)

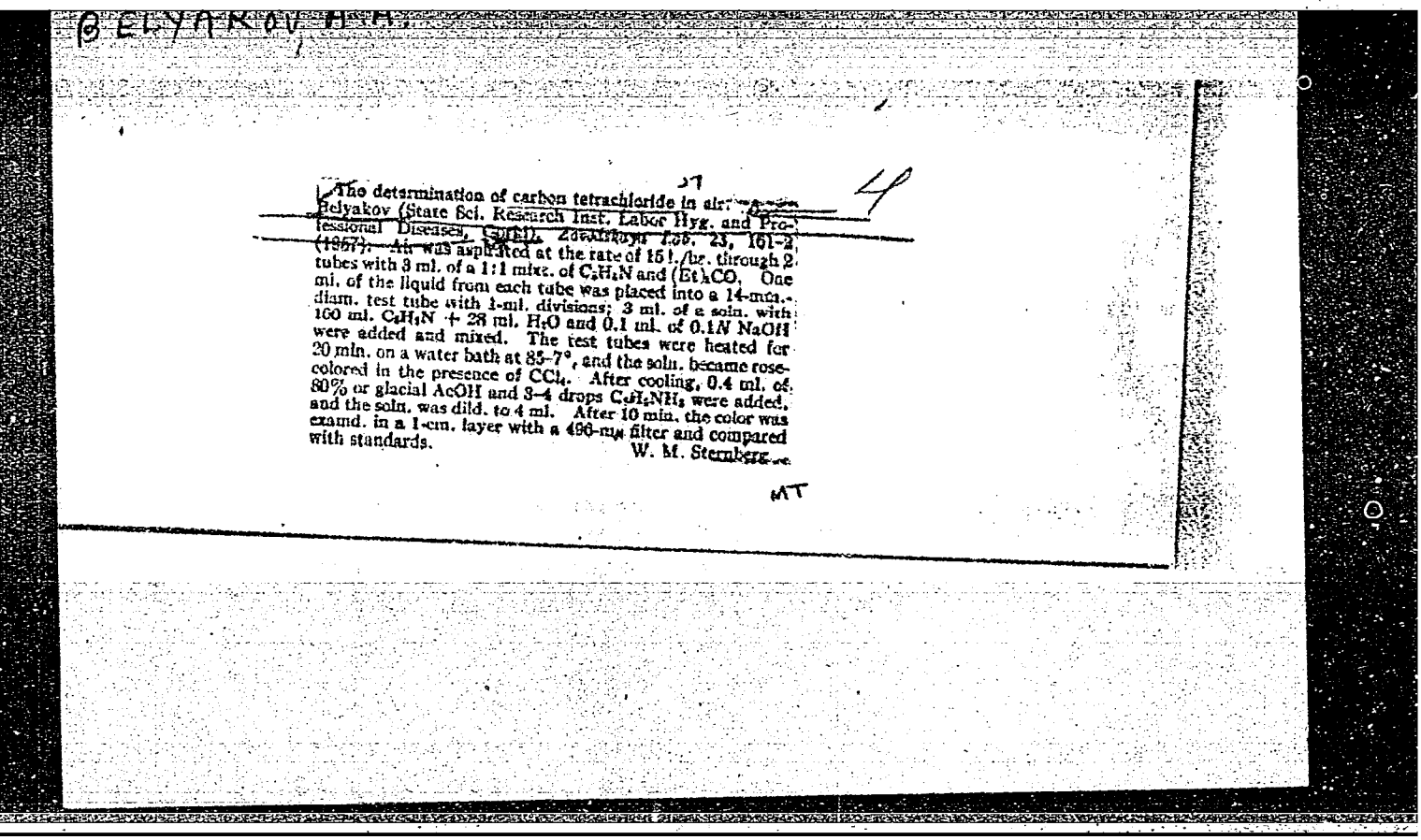
—Arylamines can be identified by the formation of mercurated compounds and examination of the crystals formed by these compounds with various salts, e.g., NaCl, $Na_2S_2O_3$, KCN. The mercury compounds are synthesised in micro amounts by means of a soln. of 1 g of mercuric acetate in 5 ml of water (or 10 ml of 50 per cent. ethanol) containing three to four drops of 25 per cent. acetic acid soln. This soln. is diluted two to five times with water or 50 per cent. ethanol. To a drop (25 μl) in a small test-tube is added a drop of the arylamine in 96 per cent. ethanol at room temp. (anilins requires heating). The crystals are examined on a microscope slide. The ppt. is separated and washed with water. It is then heated with 5 to 7 ml of water or 7 to 10 per cent. acetic acid until dissolved and a drop of the solution is mixed with NaCl or another salt. The crystals that separate are examined microscopically and the m.p. is determined. Data for identification purposes are given.

G. S. SMITH

BELYAKOV, A.A.; GORBYLEVA, N.V.

Determining microgram quantities of aniline, methylaniline, and dimethylaniline in their mixtures [with summary in English]. Zhur. anal.khim. 12 no.4:545-549 Jl-Ag '57. (MIRA 10:10)

1.Gor'kovskiy institut gigiyeny truda i profzabolevaniy.
(Aniline) (Photometry)



BELYAKOV, N. M.

27

4

The determination of carbon tetrachloride in air. [illegible] Belyakov (State Sci. Research Inst. Labor Hyg. and Professional Diseases, Gorki). *Zavodskaya Lab.* 23, 161–2 (1957). Air was aspirated at the rate of 15 l./hr. through 2 tubes with 3 ml. of a 1:1 mixt. of C_5H_5N and $(EtO)_2CO$. One ml. of the liquid from each tube was placed into a 14-mm. diam. test tube with 1-ml. divisions; 3 ml. of a soln. with 160 ml. C_5H_5N + 28 ml. H_2O and 0.1 ml. of 0.1*N* NaOH were added and mixed. The test tubes were heated for 20 min. on a water bath at 85–7°, and the soln. became rose-colored in the presence of CCl_4. After cooling, 0.4 ml. of 80% or glacial AcOH and 3–4 drops $C_5H_5NH_2$ were added, and the soln. was dild. to 4 ml. After 10 min. the color was examd. in a 1-cm. layer with a 496-mμ filter and compared with standards.

W. M. Sternberg

MT

80612

SOV/81-59-5-15065

5.5140

Translation from: Referativnyy zhurnal, Khimiya, 1959, Nr 5, p 125 (USSR)

AUTHORS: Korenman, I.M., Belyakov, A.A.

TITLE: The Microcrystalloscopic Reactions for Sulfides and Sulfites

PERIODICAL: Uch. zap. Gor'kovsk. un-ta, 1958, Nr 32, pp 93 - 96

ABSTRACT: A description is given of the new microcrystalloscopic reactions for the detection of S^{2-} using 3-nitro-1,4- aminophenylmercuracetate (I), and SO_3^{2-}, using quinolinemercuracetate (II), 2-aminopyridine-5-mercuracetate (III) and 1-methyl-4,2-aminophenylmercuracetate (IV). The reactions can be carried out on a microscopic slide as well as in the fume hood (in the latter case the sensitivity and the specificity of the reactions increase). I and IV are used in the form of saturated solutions in 20 - 30% CH_3COOH, and II and III in the form of saturated aqueous solutions. The microcrystalloscopic reactions are conducted in the usual way (1 drop of the solution to be analyzed on a slide is combined by means of a stick with a drop of the reagent); while working in a fume hood, one drop of 2 - 3% H_2SO_4 is added to one drop of the solution to be analyzed, which is

Card 1/2

The Microcrystalloscopic Reactions for Sulfides and Sulfites

placed at the bottom of the hood, the hood is covered with glass, at the lower surface of which 1 drop (2 - 3 mm^3) of the reagent solution is placed and observations are made, through the microscope, of the formation of a crystalline precipitate. The shapes of the crystals formed are described, and their microphotographs are submitted. The permissible limits of concentration of foreign ions are determined; these increase considerably when the reaction takes place in the fume hood and reach the following values: S^{2-}: Cl^-(Br^-, J^-, CNS^-, SO_3^{2-}, SO_4^{2-}) = 1 : 200 - 1 : 350, S^{2-} : $S_2O_3^{2-}$ = 1 : 140, S^{2-} : CN^- = 1 : 70, SO_3^{2-} : SO_4^{2-} ($S_2O_3^{2-}$) = 1 : 200 - 1 : 400, SO_3^{2-} : S^{2-} = 1 : 7 (with II) and 1 : 0.25 (with III and IV), SO_3^{2-} : Cl^- (Br^-, J^-, CNS^-) = 1 : 50 - 1 : 100, SO_3^{2-} : CN = 1 : 20. The detected minimum for S^{2-} is 0.035 γ in 2 mm^3 of solution (dilution limit being 1:57,000), and for SO^{2-} 0.03 γ (1 : 70,000) with II, 0.1 γ (1 : 12,000) with III and 0.2 γ (1 : 10,000) with IV.

Card 2/2

R. Motorkina

BELYAKOV, A.A.

Determination of microgram quantities of dinitrodiethylene glycol. Trudy kom. anal, khim. 11:430-437 '60. (MIRA 13:10)

1. Gor'kovskiy nauchno-issledovatel'skiy institut gigiyeny truda i professional'nykh bolezney.
(Ethanediol)

BELYAKOV, A.A.; GORBYLEVA, N.V.

Separate determination of microgram quantities of aniline, methylaniline, and dimethylaninline. Trudy kom. anal. khim. 11:438-446 '60. (MIRA 13:10)

1. Gor'kovskiy nauchno-issledovatel'skiy institut gigiyeny truda i professional'nykh bolezney.
(Aniline)

BELYAKOV, A.A.

Determination of microgram quantities of nickel, nickel tetracarbonyl, and its solid decomposition products in air. Zav.lab. 26 no.2:158-159 '60. (MIRA 13:5)

1. Gor'kovskiy institut gigiyeny truda i profbolezney.
(Nickel--Analysis)
(Nickel carbonyl)

BELYAKOV, A.A.

Microdetermination of quinone and hydroquinone present together. Trudy Kom.anal.khim. 13:405-411 '63. (MIRA 16:5)

1. Gor'kovskiy institut gigiyeny truda i professional'nykh bolezney.
(Quinones) (Hydroquinone)

BELJAKOV, A. D.

Modern aspects of blood transfusion in the Soviet Union.
Cas.lek. cesk. 90 no. 48:1414-1419 30 Nov. 1951. (CLML 21:3)

1. Of the Laboratory for Blood Preservation (Head--A.D. Belyakov) of Leningrad Scientific-Research Institute of Blood Transfusion (Director--A.J. Kiselev; Scientific Supervisor--Prof. A. N. Filatov).

BELJAKOV, A. D.

Organization of blood transfusion, blood plasma and erythrocytes in medical institutions; indications and contraindications for blood transfusion. Cas lek. cesk. 90 no. 48:1420-1425 30 Nov. 1951. (CIML 21:3)

1. Of the Laboratory for Blood Preservation (Head--A. D. Belyakov) of Leningrad Scientific-Research Institute of Blood Transfusion (Director--A.J. Kiselev; Scientific Supervisor--Prof.A. N. Filatov).

BELJAKOV, A. D.

Post-transfusional reactions; causes, prevention and therapy. Cas. lek. cesk. 90 no. 48: 1425-1428 30 Nov. 1951. (CIML 21:3)

1. Of the Laboratory for Blood Preservation (Head—A. D. Belyakov) of Leningrad Scientific-Research Institute of Blood Transfusion (Director—A. J. Kiselev; Scientific Supervisor—Prof. A. N. Filatov).

BELYAKOV, A.D.

"The Attainments of Science -- in Practice," by A. Belyakov, director of the Institute of Blood Transfusion, Ministry of Health RSFSR, Leningrad, Moscow, Meditsinskiy Rabotnik, 21 Dec 56

Methods have been developed at the Leningrad Scientific Research Institute of Blood Transfusion for the production of a series of therapeutic preparations, blood substitutes, and antishock fluids, and also substances for parenteral nutrition. Among the pharmaceuticals developed are the antianemic preparation, hemostimulin No 4; hemohormonostimulin; ferkoven; hemostatic sponges; dry thrombin; and thromboplastin; These preparations have been widely acclaimed by medical establishments and have received official approval but have not yet been mass-produced, the author complains.

Other preparations in short supply are the hydrolysates (hydrolysin, aminol'), aminokrovin [krov'mlansblood], and sinkol.

The Institute and the Leningrad City Division of Health have repeatedly complained of this situation to various organizations, including the Ministry of Health USSR and the Ministry of the Meat and Dairy Industry, but to no avail. (U)

SUM. 1322

BELYAKOV, A. D.
(from the Leningrad Scientific Research Institute of Blood Transfusion, of the Order of the Red Banner of Workers; Scientific Director, Corresponding Member of the AMN of the USSR, Prof. A. N. Filatov)

"Blood Cold Storage", Pato. Hematol. i Blood Transfus., No.1.1956

abstract--B-99405

BELYAKOV, A. D.

Stored cold-resistant blood. A. D. Belyakov. *Problemy Gematol. i. Perelivaniya Krovi* 1, No. 1, 35–8(1956).—Blood for purposes of transfusion was prepared to resist freezing and to remain in a fluid condition when stored at −4, −8, −12, and −16°. Such blood was stored for 50–90 days or longer at temp. below 0°. At the end of such periods only slight signs of hemolysis appeared. Substances which should be used in the prepn. of non-freezing blood for transfusion must be free from toxic effects, must assure a prolonged period of preservation of the blood free from hemolysis, and must be able to withstand autoclaving. Tests were made with org. and inorg. salts, carbohydrates, ales., and colloidal substances of animal and vegetable origin. Blood plasma was less cold resistant than blood serum, due primarily to the presence of fibrinogen. Phosphorylation in cold-resistant blood kept a 0° was markedly inhibited. Post-transfusion reactions were less frequent with the cold-resistant blood than with any other type of transfusion blood.

B. S. Levine

BELYAKOV, A.D.

USSR / Human and Animal Physiology. Blood. Form Elements. T

Abs Jour: Ref Zhur-Biol., No 22, 1958, 101793.

Author : Belyakov, A. D.
Inst : Not given.
Title : Obtaining and Testing Growth-Promoting Substances from the Blood of Donors and a Preparation of Growth-Promoting Glue.

Orig Pub: V sb.: Aktual'n. vopr. pereliv. krovi, Vyp. 5, L., 1957, 63-68.

Abstract: In the liquid phase of a leucocyte culture, growth-promoting substances (GPS) appeared in the first 24 hours; furthermore, their activity increased in the course of 3-7 days. The activity of GPS was judged according to their influence on the growth of cultures obtained from the heart of a chicken embryo. For the optimum increase of GPS activity,

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"New Solutions for Treating Patients with Purulent Septic Processes," by A. D. Belyakov, senior scientific associate, Leningrad Order of Red Banner of Labor Scientific Research Institute of Blood Transfusion (scientific director of the institute, Prof A. N. Filatov), Vestnik Khirurgii imeni I. I. Grekova, Vol 78, No 6, Jun 57, pp 69-74

Research on solutions effective in the therapy of patients with purulent septic processes was suggested by the Leningrad Institute of Blood Transfusion as a result of work on the preservation of blood by using antibiotics. It was thought necessary that such solutions have bacteriostatic and bactericidal properties, exert a tranquillising effect on the central nervous system, weaken excitatory processes, not be changed by sterilization in an autoclave, and not lose their therapeutic properties after long storage.

Two such solutions were prepared, i.e., solution No 22, and solution No 44, and their detailed compositions are as follows.

Solution No 22

Sodium chloride, 7.0 [gm]; 25% solution of magnesium sulfate (in ampoules for intravenous administration, 10.0 ml; sodium sulfacyl, 1.5 [gm]; furacilin, 0.02 [gm]; synthomycin, 0.03 [gm]; and freshly distilled water to make volume up to 1,000 ml. Solution No 22 is used both intravenously and subcutaneously in the treatment of purulent septic diseases. From one to 2 liters are used per day by the drip method at 40-60 drops per minute.

Solution No 44

Sodium chloride, 7.0 [gm]; glucose, 12.0 [gm]; 25% solution of magnesium sulfate (in ampoules for intravenous use), 10 ml,; sodium sulfacyl, 1.5 [gm]; furacilin, 0.1 [gm]; synthomycin, 0.07 [gm]; and freshly distilled water to make the volume up to 1,000 ml. Solution No 44 is also used intravenously and subcutaneously, especially in cases of purulent septic processes that are accompanied by weakened cardiac activity. Both solutions may be used for local treatment and in conjunction with other methods of therapy such as blood transfusion, plasma transfusion, therapeutic serum, or with antibiotics, especially in cases where penicillin and streptomycin prove ineffective.

Over a period of 4 years (1952-1956), 462 transfusions of these two solutions were administered to 174 patients at various therapeutic institutions of Leningrad. Results indicate definite therapeutic effects when these solutions were used both alone and in combination with other methods of treatment. (U)

Sum IN 1967

BELYAKOV, A.D., kand.med.nauk (Leningrad, Telezhnaya ul. d.26/28 kv.29)

Solutions for preservation of blood and tissue [with summary in English]
Vest.khir. 81 no.10:11-14 O '58 (MIRA 11:11)

1. Iz Leningradskogo ordena Trudovogo Krasnogo Znameni nauchno-issledovatel'skogo instituta perelvaniya krovi (nauchn. rukovod. - prof. A.N. Filatov).

(BLOOD PRESERVED,
preservants (Rus))
(TRANSPLANTATION,
tissue preservants (Rus))

ANTONOVA, Ye.V., starshiy nauchnyy sotrudnik; BELYAKOV, A.D., starshiy nauchnyy sotrudnik; ROZHDESTVENSKAYA, M.A., starshiy nauchnyy sotrudnik

Urgent problems in the preservation of blood. Akt.vop.perel.krovi no.7:80-83 '59. (MIRA 13:1)

1. Laboratoriya konservirovaniya krovi Leningradskogo instituta perelivaniya krovi.
(BLOOD--COLLECTION AND PRESERVATION)

BELYAKOV, A.F.

BELYAKOV, A. F.

Penicillin therapy of ocular diseases. Vest. oft. 29:6, Nov.-Dec. 50. p. 18-9

1. Of Borisoglebsk Municipal Polyclinic (Director -- Ya. L. Taitovskiy).

CLML 20, 3, March 1951

BELYAKOV, A. I.

Yakut Conference on the Protection of Nature. Izv.Sib.otd.AN SSSR no.8:154-155 '60. (MIRA 13:9)
(Yakutia--Wild life, Conservation of--Congresses)

BELYAKOV, A.I., inzh.; SEMENOV, V.I., inzh.

Shortcomings of large slabs to be used in roofing industrial buildings. Prom.stroi. 37 no.12:43-44 D '59. (MIRA 13:4)

(Concrete slabs) (Industrial buildings)

BELYAKOV, A.I.

Improving the flotation method for yeast preparation. Gidroliz. i lesokhim. prom. 14 no.6:23-24 '61. (MIRA 14:9)

1. Vyborgskiy sul'fitno-spirtovoy zavod.
(Vyborg--Yeast)
(Flotation--Equipment and supplies)

AUTHOR: Belyakov, A. I. (Central Works Laboratory). 130-5-10/22

TITLE: Production of cold-rolled transformer steel. (Proizvodstvo kholodnokatanoy transformatornoy stali).

PERIODICAL: "Metallurg" (Metallurgist), 1957, No.5, pp.22 - 24, (USSR).

ABSTRACT: Production of 0.35-0.50 mm thick cold-rolled transformer steel was adopted in the U.S.S.R. only in 1949. This article describes all stages from hot rolling of slabs to the final annealing, mention also being made of the advantageous replacement after 1951 of aluminium and 75% ferrosilicon by silicocalcium for deoxidation. The composition of the steel considered is C ≤0.05, Mn ≤0.15, Si 2.9-3.3, P ≤0.012, S ≤0.008, Cr ≤0.06, Ni ≤0.15 and Cu ≤0.2%. For the initial hot rolling carefully cooled slabs are reheated to 1180-1220 C and passed into a semi-continuous mill. The temperature after the roughing group is 1040-1080 C and after the finishing group is 780-830 C (and 780 - 800 C for steel with over 3.15% Si). The strip is coiled and annealed for 26-28 hrs in a still-air atmosphere at 800-830 C, after which the carbon content is down to 0.016-0.024%. This is followed by pickling

Card 1/2

BELYAKOV, A.I.

Effect of peening the edges of cold rolled electric steel specimens for testing on electromagnetic properties. Stal' 17 no.2:185-187 F '57. (MLRA 10:3)

1. Novosibirskiy metallurgicheskiy zavod.
(Steel--Electric properties)

BELYAKOV, A.I.

AUTHORS: Belyakov, A.I. and Nefedov, A.A. 133-58-3-20/29

TITLE: Decarburisation During the Production of Cold Rolled Transformer Steel (Obezuglerozhivaniye pri proizvodstve kholodnokatanoy transformatornoy stali)

PERIODICAL: Stal', 1958, Nr 3, p 248 (USSR)

ABSTRACT: The decarburisation of transformer steel (improving its magnetic properties) at an intermediate manufacturing stage at a strip thickness of 2.5 mm, during annealing in vacuo-furnaces of the Novosibirsk Works with a residual pressure of 15 - 20 mmHg, as well as the usual annealing in electric furnaces operating without a protective atmosphere and with a protecting paraffin oil gas (the composition given) was studied. Chemical composition of heats used for the investigation - Table 1; the influence of atmosphere on decarburisation of transformer strip 2.5 mm thick during annealing - Table 2. Annealing of coiled transformer steel in cap furnaces without a protective atmosphere leads to a considerable decarburisation of steel, and an even higher degree of decarburisation is obtained on annealing in vacuo furnaces without pickling. If the strip is pickled and then annealed in vacuo or in paraffin oil gas, then the decarburisation is insignificant or totally absent. The above indicated the

Card1/2

Decarburisation During the Production of Cold Rolled Transformer Steel

importance of scale in the process of decarburisation. It is concluded that annealing of coiled transformer steel strip 2.5 mm thick should be carried out in furnaces without a protective atmosphere or in vacuo whereupon the metal should not be pickled before annealing. There are 2 tables.

ASSOCIATION: Novosibirskiy metallurgicheskiy zavod (Novosibirsk Metallurgical Works) and TsNIIChM

AVAILABLE: Library of Congress

SOV/133-58-11-19/25

AUTHORS: Rastorguyev, A.A., Candidate of Technical Sciences, Nefedov, A.A., Borzova, P.I., Belyakov, A.I. and Simakova, M.S., Engineers

TITLE: Low-texture Cold-rolled Electrotechnical Steel (Malotekstурovannaya kholodnokatanaya elektrotekhnicheskaya stal')

PERIODICAL: Stal', 1958, Nr 11, pp 1023 - 1029 (USSR)

ABSTRACT: According to new standards, anisotropy in respect of magnetic induction along and across sheets of low-alloy steel (E1100, E1200, E1300) should not exceed 1 300 Gauss and for higher alloy steel (E3100 and E3200) - 1 600 Gauss. Anisotropy of various types of cold-rolled transformer steel reached 3 000 - 5 000 Gauss. The problem of the formation of texture in this steel was investigated by TsNIIChM (Refs 1, 2) and the results then obtained were used as a basis of the present investigation of the production of low-texture steel carried out on the Novosibirsk Works. It was found that low-alloy silicon steel (about 1.5% Si) which passed cold rolling by the usual technology (with large reductions) and the highest recrystallisation annealing (at 1 000 °C) is characterised by a predominant orientation of crystallites with the edge

Card1/3

Low-texture Cold-rolled Electrotechnical Steel

of the cube along the direction of rolling. Low-alloy two-phase silicon steel with a comparatively small anisotropy can be obtained: a) by annealing at a comparatively low temperature (850 °C) during which neither a considerable crystal growth nor preferential orientation of crystals takes place; and b) by annealing above the critical temperature which leads to phase recrystallisation with the orientation of grains in various directions; whereupon an increase of the annealing temperature to 1 100 - 1 150 °C promotes an increase in the size of crystals and a decrease in specific losses. The ability of steel to the formation of texture depends on the content of silicon. At a constant degree of reduction in the last cold rolling stage, steel with a higher silicon content has a more sharply pronounced texture of recrystallisation than steel with a lower silicon content. Higher alloyed single-phase steel with a comparatively low anisotropy can be obtained by applying before the final high-temperature

Low-texture Cold-rolled Electrotechnical Steel SOV/133-58-11-19/25

annealing a small reduction (e.g. by reducing from a thickness of 0.54 mm to 0.50 mm). There are 4 figures, 6 tables and 4 references, 3 of which are Soviet and 1 English.

ASSOCIATIONS: TsNIIChM and Novosibirskiy metallurgicheskiy zavod (Novosibirsk Metallurgical Works)

Card 3/3

SOV/133-58-12-14/19

AUTHORS: Belyakov, A.I., Nefedov, A.A. and Simakova, M.S.

TITLE: Cold Rolled Electrotechnical Steel 1mm Thick (Kholodnokatanaya elektrotekhnicheskaya stal' tolshchinoy 1.0 mm)

PERIODICAL: Stal', 1958, Nr 12, pp 1128-1129 (USSR)

ABSTRACT: The production of cold rolled steel 1mm thick, containing 3% of silicon was tested under laboratory conditions in TsNIIChM and under works conditions in the Novosibirsk Works. The process was based on that of producing E310-E330 steels with some decrease in the degree of reduction during the first and second cold rolling. The main features of the technology are: a) hot rolling of slabs 150 x 620 x 2600 mm into strip 2.5 x 620 mm; b) decarburising annealing of coiled strip in electric furnaces at 830x800°C; c) pickling in an aqueous solution of sulphuric acid; d) cold rolling from 2.5 mm to 1 mm; e) cutting of coils into sheets 1.0x600x1500mm; f) covering with talc; g) final annealing of sheets in vacuo at 850°C. Electromagnetic properties of sheets

Card 1/2

Cold Rolled Electrotechnical Steel 1mm Thick

annealed at 850 - 1150°C are shown in the Table. Steel annealed at 850°C is practically isotropic with satisfactory electromagnetic properties. On annealing at higher temperatures anisotropy appears.

There are: 1 figure and 2 tables

ASSOCIATION: Novosibirskiy metallurgicheskiy zavod i TsNIIChM (Novosibirsk Metallurgical Works and TsNIIChM)

SOV/133-59-3-25/32

AUTHORS: Petrenko, A.G., Kurtova, L.A., Petlyakov, M.M. and Belyakov, A.I.

TITLE: Heterogeneity of Magnetic Properties of Cold-rolled Transformer Steel (Neodnorodnost' magnitnykh svoystv kholodnokatanoy transformatornoy stali)

PERIODICAL: Stal', 1959, Nr 3, pp 267 - 268 (USSR)

ABSTRACT: During the production of cold-rolled transformer steel on the Novosibirsk Works, some lots of sheets possessed unsatisfactory magnetic properties. On inspection of the surface of rejected sheets, zones with a fine-grain structure were noticed. Metallographic investigations indicated that in the fine-grain zones the edge of the cube [100] of nearly each individual grain formed an angle with the direction of rolling while in the remaining metal practically all grains were orientated along the rolling direction. The absence of the necessary texture was also confirmed by magnetic anisotropy (Figure 1). Re-annealing at 1 200 °C in hydrogen of faulty sheets did not improve their magnetic properties. The presence of the above fine-grain zones can be explained either by their higher carbon content (from traces of grease films from rolling which

Card1/2

Heterogeneity of Magnetic Properties of Cold-rolled Transformer Steel

carburised the affected spots) or small amounts of Mn, Cu, Ni or N or by the presence of non-metallic inclusions. It is concluded that in order to obtain good quality transformer steel without fine-grain zones, it is necessary to prevent the contamination of the metal and a more complete decarburisation of steel.
There are 2 figures, 1 table and 6 references, 5 of which are Soviet and 1 English.

ASSOCIATIONS: TsNIIChM and Novosibirskiy metallurgicheskiy zavod (Novosibirsk Metallurgical Works)

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000204520017-0"

S/133/60/000/008/011/013

AUTHORS: Belyakov, A. I. and Yaroshenko, Yu. N.

TITLE: Relation Between the Magnetic Induction of Cold-Rolled Transformer Steel and the Conditions of Final Annealing

PERIODICAL: Stal', 1960, No. 8, pp. 750-752

TEXT: The effect of final annealing of cold-rolled transformer steel in vacuum on magnetic induction in weak and medium fields is not sufficiently clear. Many steels with high induction capacity in strong fields display relatively low induction in weak and medium fields. In order to investigate this problem, tests were carried out with three kinds of steels: 6260 (Si:3.16%), 6247 (Si:3.23%) and 6230 (Si:3.10%). Until a 0.35 mm thickness of the sheet was obtained the technological process took place according to the conventional methods. Final annealing was carried out in vacuum electric furnaces up to 1,150°C for 30 hours. The metal was cooled by the furnace to 600°C, after removing the hood cooling was continued to 250°C under a muffle in a protecting gas medium. Test specimens (0.35 x 30 x 250 mm; 1 kg) were made of all three types of steel, the magnetic properties were determined by the

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Relation Between the Magnetic Induction of Cold-Rolled Transformer Steel and the Conditions of Final Annealing

Epshteyn ballistic method before and after the additional annealing which was the main feature of the new process. Type 6260 was cooled by the furnace between 600°C and 450°C to various degrees and the types 6247 and 6230 were tested in 6 charges, three of which were cooled by the furnace to 600°C and three to 450°C. The results obtained with the 6260 type specimens showed that in proportion to the decrease of the temperature, at which the hood is removed, the magnetic properties in weak and medium fields improve; magnetic induction $B_{0.002}$ increases from 1.25 to 1.82 gauss, $B_{0.008}$ from 10.11 to 25.10 gauss (Fig. 1A) and B_1 from 12,680 to 14,650 gauss; the coercive force H_c increases from 0.18 to 0.13 oersted, maximum magnetic permeability μ_{max} from 18,280 to 36,380 gs/oersted (Fig. 2), the plasticity of the metal increases from 2.7 to 18 bendings. This change in the magnetic and plastic properties can be explained by a more thorough distribution of the internal stresses upon the removal of the hood at a lower temperature with a corresponding re-distribution of the admixtures (Ref. 2). With additional annealing of the specimens at 750°C, in order to eliminate work hardening due to cutting, the

Relation Between the Magnetic Induction of Cold-Rolled Transformer Steel and the Conditions of Final Annealing

improvement of magnetic properties can be maintained. The results obtained with specimens of 6247 and 6230 type steels agree with the results of the 6260 type specimens. Generally, it was found that after the additional annealing of specimens to eliminate the work hardening due to cutting, the yield of products complying with ГОСТ (GOST) 802-58 increased from 40% (in the conventional cooling by furnace to 600°C) to 80%, when cooling with the furnace to 450°C. There are 2 figures, 2 tables and 2 Soviet references.

ASSOCIATION: Novosibirskiy metallurgicheskiy zavod (Novosibirsk Metallurgical Plant)

BELYAKOV, A.I.

Skilled workers in communist labor. Metallurg 5 no. 12:12-14 D '60. (MIRA 13:11)

1. Sekretar' partiynoy organizatsii domennogo tsekha Cherepovetskogo zavoda.
(Blast furnaces)

S/133/61/000/007/012/017
A054/A129

AUTHORS: Belyakov, A. I., Ivanov, F. D.

TITLE: The effect of slab-heating conditions on the electro-magnetic properties of transformer steel sheets

PERIODICAL: Stal', no. 7, 1961, 634 - 637

TEXT: Tests were carried out to establish the effect of slab heating before rolling on the electro-magnetic properties of cold-rolled transformer steel sheets. The study of the statistical data of quality control of E330 (E330), E320 and E310 grade steel sheets (partly 135 x 620 x 0.50 mm and partly 135 x 500 x 0.35 mm in size) heated for various periods (1 1/2 - 3 hours) show that by raising the heating period the yield of high-grade E330 type, 0.35-mm thick sheets increases, while no increase in output is observed for sheets 0.50 mm thick. The tests to establish the effect of temperature and heating on electromagnetic properties were made with five heats produced in the Chelyabinskiy metallurgicheskiy zavod (Chelyabinsk Metallurgical Plant), having the following composition:

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The effect of slab-heating conditions on the...

Heat	C	Mn	Si	P	S	Cr	Ni	Cu
28418	0.04	0.07	3.27	0.011	0.006	0.04	0.09	0.14
28438	0.045	0.07	3.04	0.008	0.005	0.04	0.10	0.14
28381	0.04	0.07	3.02	0.010	0.008	0.02	0.09	0.15
28421	0.035	0.08	3.29	0.012	0.006	0.03	0.08	0.13
28447	0.04	0.09	3.29	0.012	0.006	0.02	0.07	0.17

One part of the slabs was hot-rolled at a lower temperature than prescribed, the other part at a higher temperature. The average values obtained for the electromagnetic properties of the test-sheets proved that at higher heating temperatures (1,240 - 1,260°C) and by increasing the heating time from 100 to 120 minutes, the finished sheets display lower specific losses and higher magnetic induction than sheets heat-treated at 1,160 - 1,180°C. The high heating temperature yielded also more high-grade E330 steel; for the 0.50-mm thick sheets by 4 - 28% and for the 0.35 mm thick sheets by 11 - 96%. The new heating conditions completely eliminate waste in sheets 0.35 mm thick. The better results for specific losses and magnetic induction observed in thinner sheets as compared with those 0.50 mm thick must be put down to the more intensive decarbonization of the former after extended heating and to their greater ratio surface : volume. There are 4 tables and

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S/133/61/000/007/012/017
A054/A129

The effect of slab-heating conditions on the...

3 Soviet-bloc references.

ASSOCIATION: Novosibirskiy metallurgicheskiy zavod (Novosibirsk Metallurgical Plant)

Card 3/4

BELYAKOV, A.I., inzh.; BORZOVA, P.I., inzh.; NEFEDOV, A.A., inzh.; SIMAKOVA, M.S., inzh.

Properties of 1mm. thick cold-rolled electrical engineering steel. Elektrichestvo no.8:82-83 Ag '61. (MIRA 14:10)
(Steel)
(Electric engineering—Materials)

LAPOTYSHKIN, N.M., kand.tekhn.nauk; MIRONOV, L.V., kand.tekhn.nauk; KOROBOVA, N.A., inzh.; BARANOVA, N.A., inzh.; BELYAKOV, A.I., inzh.

Structure of cold-rolled transformer steel. Metalloved. i term. obr. met. no.12:26-29 D '62. (MIRA 16:1)

1. TSentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii, Ural'skiy nauchno-issledovatel'skiy institut chernykh metallov i Novosibirskiy metallurgicheskiy zavod.
(Steel--Magnetic properties)

NEFEDOV, A.A.; BELYAKOV, A.I.; YAROSHENKO, Yu.N.; DUKHNOVA, Z.I.

High-alloy, cold rolled, electrical steel with low anisotropy.
Stal' 22 no.4:349-351 Ap '62. (MIRA 15:5)

1. TSentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii i Novosibirskiy metallurgicheskiy zavod.
(Sheet steel) (Anisotropy)

PETROV, K.M.; DYAKONOV, V.I.; FADEYEV, I.G.; SEMENENKO, P.P.; KRYUKOV, L.G.; Prinimali uchastiye: PASTUKHOV, A.I.; SHISHKINA, N.I.; PAZDNIKOVA, T.S.; CHIRKOVA, S.N.; KAREL'SKAYA, T.A.,; LOPTEV, A.A.; DZEMYAN, S.K.; ISUPOV, V.F.; BELYAKOV, A.I.; GUDOV, V.I.; SUKHMAN, L.Ya.; SLESAREV, S.G.; GOLOVANOV, M.M.; GLAGOLENKO, V.V.; ISUPOVA, T.A.; ZYABLITSEVA, M.A.; KAMENSKAYA, G.A.; POMUKHIN, M.G.; UTKINA, V.A.; MANEVICH, L.G.

Vacuum treatment of alloyed open hearth steel. Stal' 22 no.2:113-117 F '62. (MIRA 15:2)

1. Ural'skiy nauchno-issledovatel'skiy institut chernykh metallov (for Pastukhov, Shishkina, Pazdnikova, Chirkova, Karel'skaya, Loptev, Dzemyan). 2. Metallurgicheskiy kombinat im. A.K. Serova (for Isupov, Belyakov, Gudov, Sukhman, Slesarev, Golovanov, Glagolenko, Isupova, Zyablitseva, Kamenskaya). 3. 6-y Gosudarstvennyy podshipnikovyy zavod (for Pomukhin, Utkina, Manevich).
(Steel—Metallurgy)
(Vacuum metallurgy)

NEFEDOV, A.A., inzh.; BELYAKOV, A.I., inzh.; YAROSHENKO, Yu.N., inzh.; DUKHNOVA, Z.I., inzh.

Cold-rolled 1 mm. thick electrical steel. Elektrichestvo no.1:75-77 Ja '63. (MIRA 16:2)
(Steel—Electric properties)

NEFEDOV, A.A., inzh.; BELYAKOV, A.I., inzh.; YAROSHENKO, Yu.N., inzh.; DUKHNOVA, Z.I., inzh.

Cold-rolled 0.35 mm thick generator steel. Elektrichestvo no.8: 70-72 Ag '63. (MIRA 16:10)

1. TSentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii (for Nefedov). 2. Novosibirskiy metallurgicheskiy zavod (for all except Nefedov).

ISUPOV, V.F.; BELYAKOV, A.I.

New developments in research. Stal' 23 no.7:671 Jl '63. (MIRA 16:9)

(Annealing of metals))(Drawing (Metalwork))

ISUPOV, V.F.; BELYAKOV, A.I.

New developments in research. Stal' 23 no.8:695 Ag '63. (MIRA 16:9)

(Blast furnaces)

ISUPOV, V.F.; BELYAKOV, A.I.

New developments in research. Stal' 23 no.8:761 Ag '63.
(MIRA 16:9)
(Metallurgical furnaces)

BELYAKOV, A.I., inzh.; NEFEDOV, A.A., inzh.

Effect of residual stress trails on the electrical properties of steel. Elektrichestvo no.3:86-88 Mr '64. (MIRA 17:4)

1. Novosibirskiy metallurgicheskiy zavod (for Belyakov).
2. TSentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii (for Nefedov).

ISUPOV, V.F., inzh.; NOSOV, V.A., inzh.; SUKHMAN, L.Ya., inzh.; SMIRNOV, L.A., inzh.; CHEPURNOVA, A.A., inzh.; Prinimali uchastiye: SEMENENKO, P.P.; GLAGOLENKO, V.V.; KOROSTELEV, S.K.; VOLOSNIKOV, B.M.; BELYAKOV, A.I.; FADEYEV, I.G.; ROMANOV, A.A.

Use of lightweight grog firebrick for the lining of riser heads. Stal' 22 no.6:517-518 Je '62. (MIRA 16:7)

1. Metallurgicheskiy kombinat im. Serova i Ural'skiy nauchno-issledovatel'skiy institut chernykh metallov.
(Steel ingots) (Refractory materials)

VISHNYAKOV, A.V., kand. tekhn. nauk; DANILOV, P.M., kand. tekhn. nauk; METALEVA, G.G., inzh.; PASHCHENKO, V.Ye., inzh.; KUZ'MENKO, V.S., inzh.; BELYAKOV, A.I., inzh.; SIMAKOVA, M.S., inzh.

Properties of transformer steel made of ingots with closed pipe. Stal' 24 no.9:812-814 S '64. (MIRA 17:10)

1. Sibirskiy metallurgicheskiy institut, Kuznetskiy metallurgicheskiy kombinat i Novosibirskiy metallurgicheskiy zavod.

20677
S/120/61/000/001/008/062
E032/E314

21.5300

AUTHORS: Belyakov, A.N., Vovenko, A.S., Kirillov, A.D., Kulakov, B.A., Lyubimov, A.L., Matulenko, Yu.A. and Savin, I.A.

TITLE: Gas-filled Threshold Cherenkov Counters for Accelerator Experiments

PERIODICAL: Pribory i tekhnika eksperimenta, 1961, No. 1, pp. 32 - 35

TEXT: The velocity analysis of fast particles ($\beta \sim 1$) by Cherenkov counters, using the dependence of the threshold or angle of Cherenkov emission on the velocity, is possible if the refractive index of the medium is close to unity. This condition is satisfied only by gaseous media. The present paper describes two gas-filled Cherenkov counters. One of them (supplied by Yu.A. Troyan, L.S. Okhrimenko and S.V. Mukhin) was an experimental counter which was used in studies designed to establish whether it is possible to separate out rare particles against a background of other particles. The second counter was designed for work in the

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E032/E314

Gas-filled Threshold ....

π^- and K-meson beams of the synchrophasotron of the Joint Institute for Nuclear Research. The first of the above counters is shown in Fig. 1, in which 1 - is the steel body, 2 - is a glass tube 30 mm in diameter and covered with a film of aluminium on the inner surface, 3 - is a hollow light pipe, 4 - is a perspex window and 5 - is an ФЭУ-33 (FEU-33) photomultiplier. Fig. 2 shows the second of the above counters, in which 1 is the steel body, 2 is a polished dural tube, 80 mm in diameter and coated with an organic film and then an aluminium film on the inner surface, 4 is a quartz window and 5 is an FEU-33 photomultiplier. The first counter (C_1) was used in the π^+ meson beam of the synchrocyclotron of the Joint Institute of Nuclear Research. The energy was 300 MeV. The second counter (C_2) was used in the beam of positive particles of the synchrophasotron of the above institute (largely π^--mesons and protons) the momentum being ~ 3 GeV/c. In both cases, the Cherenkov counter was

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Gas-filled Threshold ....

connected in coincidence with a scintillation monitor telescope whose counters had a diameter slightly smaller than the diameter of the Cherenkov counter. The Cherenkov counter was arranged as shown in Fig. 3. C in this figure represents the scintillation counters, YP-1a represent amplifiers, the rectangular block in the centre of the figure indicates the position of the Cherenkov counter and the three rectangular blocks on the righthand side of the figure are coincidence circuits with resolving times as indicated. In these experiments the ratio $m = N_2/N_3$ was measured. Fig. 4 shows the ratio m as a function of pressure in atmospheres for the C_1 counter (filled with air). Curve a refers to a kinetic energy $E_k^{\pi+} = 297$ MeV and Curve b to $E_k^{\pi+} = 280$ MeV. p_μ^a, p_μ^b, p_π^a, p_π^b indicate the threshold pressures of the a and b curves for μ - and π-mesons, respectively. Curve b was taken with a telescope containing a Cherenkov counter which was more sensitive to μ-mesons than π-mesons.

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Fig. 5 shows the ratio m as a function of pressure in atm. for the C_1 counter filled with ethylene ($E_k^{\pi^+}$ = 392 MeV). It is clear from Figs. 4 and 5 that it is possible to separate out μ-mesons in a beam of π-mesons. Fig. 6 shows the dependence of m on the pressure for the C_2 counter filled with air. This curve was obtained for a beam containing 40% π-mesons and 60% protons. p_μ and p_π show the threshold pressures for μ- and π-mesons. It is concluded that particle separation is possible with these counters. There are 6 figures and 1 non-Soviet reference.

ASSOCIATION: Ob'yedinennyy institut yadernykh issledovaniy (Joint Institute of Nuclear Research)

SUBMITTED: February 13, 1960

20677
S/120/61/000/001/008/062
E032/E314

Gas-filled Threshold ....

Fig. 1:

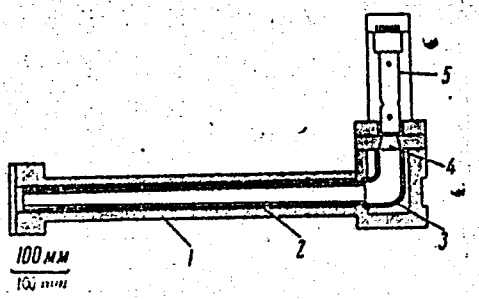
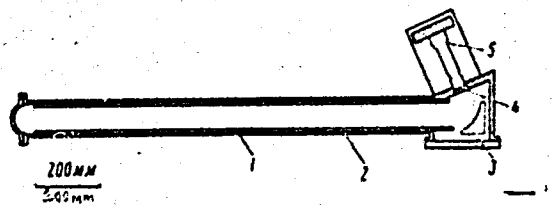


Fig. 2:



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20677
S/120/61/000/001/008/062
E032/E314

Gas-filled Threshold ....

Fig. 3:

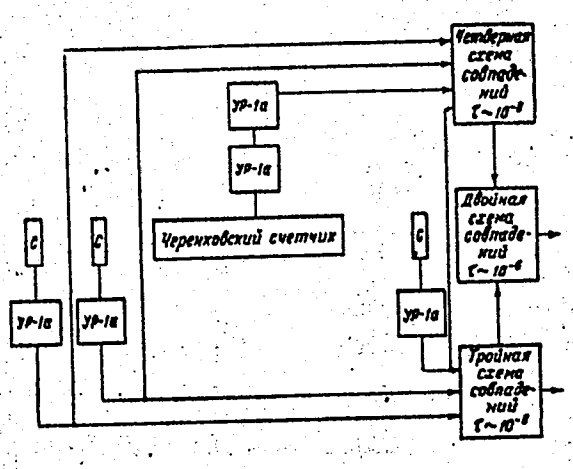

Fig. 4:

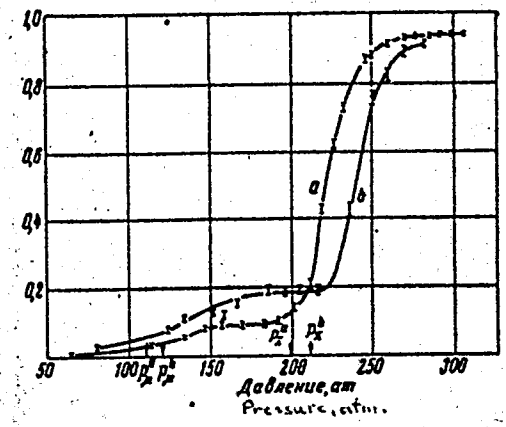

Fig. 2, 3, 4 см стр. 33

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Gas-filled Threshold ....

Fig. 5:

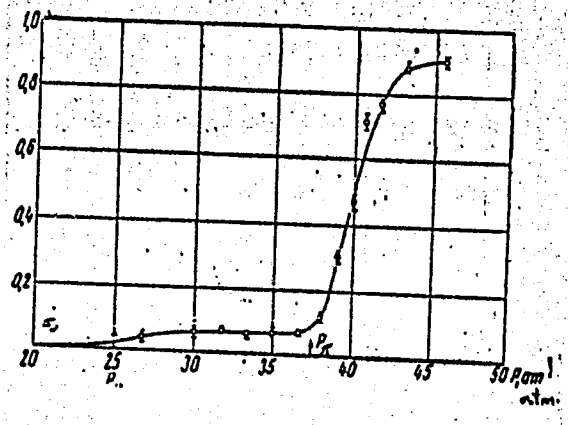
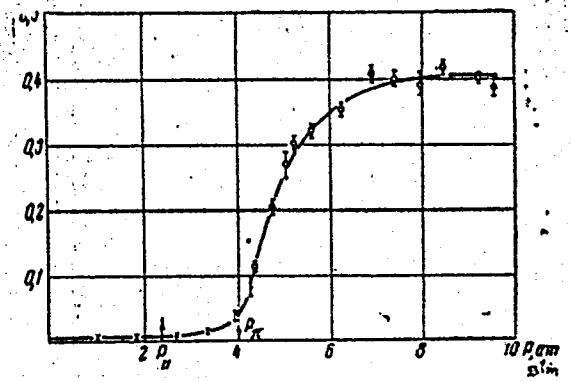


Fig. 6:



Card 7/7

L 13803-66 EWT(m)/EPF(n)-2 IJP(c)

ACC NR: AP6001799 SOURCE CODE: UR/0089/65/019/006/0535/0537

AUTHOR: Ryabukhin, Yu. S.; Vasil'yev, A. G.; Belyakov, A. N.

ORG: none

TITLE: The uniform irradiation of surface objects by a pulsed electron beam

SOURCE: Atomnaya energiya, v. 19, no. 6, 1965, 535-537

TOPIC TAGS: electron bombardment, irradiation apparatus, irradiation intensity

ABSTRACT: The authors investigate the conditions for the uniform irradiation of plane objects by means of electron accelerators, assuming that the surface under exposure is much larger than the cross section of the stationary electron beam. An analysis of the results shows that maximum permissible beam intensity increases with the value of the beam repetition time, the mean surface absorption dose, and the standard deviation of electrons from the axis of the beam, because each of the quantities contributes to an increase in the uniformity of irradiation. A brief discussion of the various methods of scanning is also given. Authors thank A. Kh. Breger for participating in the discussion of the results. Orig. art. has: 14 formulas and 2 figures.

SUB CODE: 18 / SUBM DATE: 26Aug64 / ORIG REF: 002 / OTH REF: 002

Card 1/1 UDC: 539.107

AUTHOR: Belyakov, P.S.; Dmitriyeva, M.I.; Kirillova, T.V. SOURCE CODE: UR/0299/65/000/015/R039/R039

ORG: none

TITLE: Physiological and biochemical characteristic of vegetable cell response reactions under the sustained influence of high temperatures

SOURCE: Ref. zh. Biologiya, Abs. 8R262

REF SOURCE: Sb. Kletka i temperatura sredy. M.-L., Nauka, 1964, 194-196

TOPIC TAGS: cell physiology, high temperature effect, biology

TRANSLATION: Barley srrouts or fragments of coleoptile were removed from their optimal temperatures (17-18°) to a medium with a 44° temperature. The physiological processes were studied from the starting moment of thermal effect to the moment of complete destruction of the cells. By using a comparatively simple viscous mass for changing the permeability of the protoplasm (P), it was established that both at the beginning and at the end of the thermal effect, P had a weak power for the retention of water-soluble matter, such as monosaccharides, amino acids and cells. A description is given of the "history of thermal disease." The double-phase and wave-like changes with time in P under the thermal effect were clarified. Under the effect of

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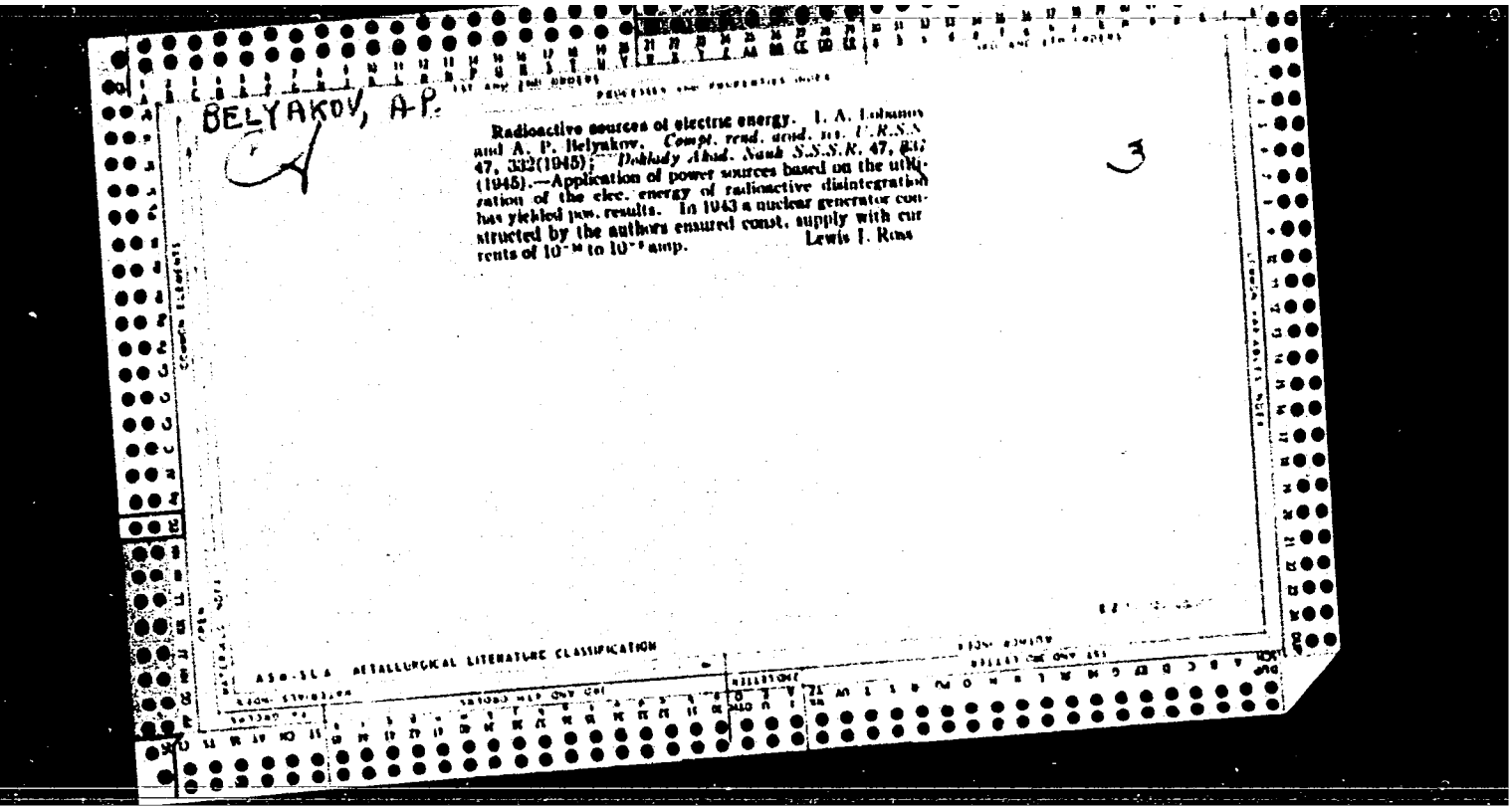
UDC: 577.3

Card 2/2



BELYAKOV, A.P.

Radioactive sources of electric energy. I. A. Lukanov and A. P. Belyakov. *Compt. rend. acad. sci. U.R.S.S.* 47, 332(1945); *Doklady Akad. Nauk S.S.S.R.* 47, [illegible] (1945).—Application of power sources based on the utilization of the elec. energy of radioactive disintegration has yielded pos. results. In 1943 a nuclear generator constructed by the authors ensured const. supply with currents of 10^{-10} to 10^{-9} amp. Lewis J. Rims

ASD-SLA METALLURGICAL LITERATURE CLASSIFICATION

BELYAKOV, A. P. and LOBANOV, I. A.

"Radioactive Sources of Electric Energy," Dokl. AN SSSR, 47, No.5, p. 337, 1947

BELYAKOV, A. P.

USSR/Electricity Jun 48
Electrodes
Capacitance

"Capacity and Resistance to Current Flow in Spherical or Cylindrical-Shaped Electrodes in a Homogeneous Medium," A. P. Belyakov, Cand Tech Sci, Sci Res Inst, Ministry of Elec Industry USSR, 2 pp

"Elektrichestvo" No 6

Capacity between electrodes and electrostatic field can be expressed by formula

$$C = \frac{\varepsilon}{9 \times 10^{11} \times P} F,$$

where ε = dielectric permeability of medium, and P = position coefficient. Tabulates values of P for five cases. Resistance is calculated in a similar manner.

[redacted] 17/49T16

BELYAKOV, A. P.

"Proportions for Determining the Values of Capacitance and Resistance to CurrentFlow Between Electrodes in Heterogeneous Medium," Elektrichestvo, No.5, 1949

PA 167T31

BELYAKOV, A. P.

USSR/Electricity - Systems of Units Aug 50

"Scales for Electrotechnical Quantities," A. P. Belyakov, Cand Tech Sci, Moscow

"Elektrichestvo" No 8, pp 78-79

Suggests making a scale like the well-known scale for electromagnetic waves to represent range of changes in any physical, especially electrotechnical, quantity, which determines specific property or state of various substances. Presents scale of electrical charge.

167T31

BELYAKOV, L.P.

Elektrichestvo vokrug nas.-
(Electricity all around us) (Moskva) Detgiz, 1951

USSR/Electricity - Energy, Electric
Electromagnetic Waves

Jan 51

"An Energy Scale," A. P. Belyakov, Cand Tech Sci, Moscow

"Elektrichestvo" No 1, pp 57-59

Presents scale covering various concns of energy (in kwh). Scale begins with quanta of energy assocd with electromagnetic waves of infra-low frequencies, radio waves, light waves, X-ray waves, gamma rays, etc., and ends with energies released in nuclear reactions, energy radiated by the sun, etc.

MANUKYAN, A.A.; GLUSHKOV, V.P.; SHVEDKOVA, V.M.; SVIRIDOVA, Z.P.; CHEBOTAREVA, Ye.A.; SHUMILIN, V.I.; PUDINA, K.V.; BRAGINA, N.M.; LUTSKAYA, Ye.Ye.; KODACHENKO, A.S.; KOSOVA, V.A.; MOKLYARSKIY, B.I.; GRECHIKHIN, A.A.; KULIKOV, N.I.; RYDVANOV, N.F.; BEL'CHUK, A.I.; VINTSER, Yu.I.; ROZENTAL', Ye.I.; BELOUS, T.Ya.; SIDOROV, V.F.; ZHDANOVA, L.P.; ALEKSANDROVSKAYA, L.I.; KOVAL', V.V.; KHAVINSON, Ya.S., glavnyy red.; SOKOLOV, I.A., zam.glavnogo red.; ALEKSEYEV, A.M., red.; ARZUMANYAN, A.A., red.; BELYAKOV, A.S., red.; BECHIN, A.I., red.; VARGA, Ye.S., red.; LEMIN, I.M., red.; LYUBIMOVA, V.V., red.; SKOROV, G.Ye., red. V redaktirovanii uchastvovali: SHAPIRO, A.I., red.; TATISHCHEV, S.I.. KOVRIGINA, Ye., tekhn.red.

[Economic conditions of capitalistic countries; review of business conditions for 1958 and the beginning of 1959] Ekonomicheskoe polozhenie kapitalisticheskikh stran; kon"iunkturnyi obzor za 1958 g. i nachalo 1959 g. Moskva, Izd-vo "Pravda," 1959. 127 p. (Prilozhenie k zhurnalu "Mirovaia ekonomika i mezhdunarodnye otnosheniia," no.8, avgust 1959 g.) (MIRA 12:9)

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BELYAKOV, A.S.; KABYSH, L.K.

Automatic control of gas combustion in burners of blast furnace air preheaters. Stal' 22 no.4:303 Ap '62. (MIRA 15:5)

1. Zavod "Zaporozhstal'".
(Air preheaters) (Automatic control)

L 00682-67 EWT(1)

ACC NR: AP6005306 SOURCE CODE: UR/0413/66/000/001/0040/0041

AUTHORS: Saprykin, V. S.; Baranov, Yu. V.; Belyakov, A. S.; Leont'yev, M. Ya.; Polyakov, V. V.; Potrevskiy, A. M.; Morozkin, B. S.

30
B

ORG: none

TITLE: A coaxial switch. 15 Class 21, No. 177478

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 1, 1966, 40-41

TOPIC TAGS: electronic switch, coaxial cable

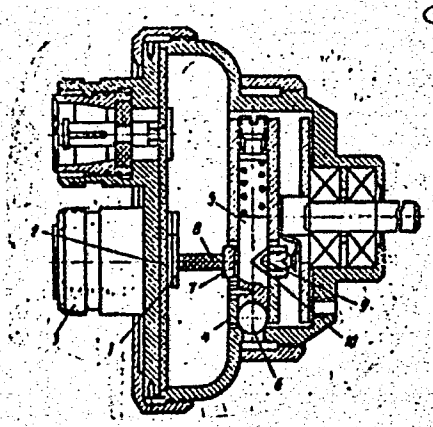
ABSTRACT: This Author Certificate presents a coaxial switch fitted with connectors mounted in the front part of the switch casing. These connectors are used for connecting the coaxial lines which are switched. The switch also contains an element connected with the switching mechanism and with the catches of the switch operating positions. The design increases the quality of the connecting contacts. An ungrounded section of a nonsymmetrical strip line is used as the switching element. This ungrounded section rests on the contact disks connected with the central pin of the connectors. The switching mechanism is fitted with a ring containing a spring-loaded rod which rests on one of the small balls of the catch. A bushing is mounted on the rod and is rigidly connected to the dielectric holder of the switching mechanism (see Fig. 1). A second spring-loaded small ball of the catch is mounted

Card 1/2 UDC: 621.316.544.9

L 00682-67

ACC NR: AP6005306

Fig. 1. 1 - ungrounded section of a nonsymmetrical strip line; 2 - contact disks; 3 - connector; 4 - ring; 5 - spring-loaded rod; 6 - small ball of the catch; 7 - bushing; 8 - dielectric holder; 9 - spring-loaded small ball; 10 - triangular groove



in the radial channel of the ring. This ball enters in the triangular groove located on the lateral surface of the rod. Orig. art. has: 1 figure.

SUB CODE: 09/ SUBM DATE: 16Sep64

Card 2/2 fv

BELIAKOV, AIEKSANDR VASIL'EVICH.

BELIAKOV, AIEKSANDR VASIL'EVICH.
....Iz Moskvy v Ameriku cherez Severnyi polius.
/Moskva/ Izd-vo TSK VLKSM,
Molodaia gvardiia, 1938. 214 p.
The story of the first trans-Polar flight by the three Soviet aviators,
Beliakov, Chkalov and Baidukov, from Moscow to Portland, Oregon, in June 1937.
DLC: TL721.C55B4
ICU

SO: L.C, Soviet Geography, Part I, 1951, Uncl.

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America via the North Pole. Kyiv, Molodyi bil'-shovyk, 1938. 235 p.

Cyr.4 G37G38

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Dva pereleta. [Two flights]. Moskva, Gos. voen. izd-vo 1939. 102 p. illus. ports., maps.
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DLC: TL721.C55B39

Iz Moskvy v Ameriku cherez Severnyi polius. [From Moscow to America via North Pole]. Moskva, Izdatel'stvo TSK VLKSM, Molodaia gvardiia, 1938. 214 p. front. (group port.) illus., plates, fold. map., facsim.
The story of the first trans-Polar flight by the three Soviet aviators Beliakov, Chkalov and Baidukov, from Moscow to Portland, Oregon, in June 1937.
CtY ICU

DLC: TL721.C55B4

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Belyakov, A. V.

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Shturmanskii bortovoi zhurnal samoleta No. 25. Pervyi besposadochnyi perelet Moskva-Severnyi polius-SSHA, 18-20 iunia 1937 goda. Moskva, Iskusstvo, 1940. facsim. (32 p.) 2 maps.

Title tr.: Navigator's log book, airplane no. 25. First non-stop flight Moscow-North Pole-U. S. A., June 18-20, 1937.

In portfolio with the English translation.

TL721.C55A3

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BELYAKOV, A.V., geroy Sovetskogo Soyuza general-leytenant aviatsii.

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(MLRA 10:8)

(Aeronautics--Flights)

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[Airborne radio navigation apparatus]Radiotekhnicheskie sredstva navigatsii letatel'nykh apparatov. [By]G.P.Astaf'ev i dr. Moskva, Sovetskoe radio, 1962. 962. (MIRA 16:3)
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Heat treatment of bore rods made of U7 and 55C2 steel. Izv.vys. ucheb.zav.; chern.met. 4 no.9:138-142 '61. (MIRA 14:10)

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Technology of compressor construction Moskva, Gos. nauch.-tekhn. izd-vo mashinostroit. lit-ry, 1949. 367 p. (50-24771)

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Technology of compressor construction

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GALITSKIY, Boris Akimovich; BELYAKOV, Boris Ivanovich; UDYMA, P.G., inzh., retsenzent; VASILENKO, A.N., red.; CHERNOVA, Z.I., tekhn.red.

[Technological processes in the manufacture of compressors] Tekhnologiia kompressorostroeniia. Izd.3., perer. i dop. Moskva, Gos.nauchno-tekhn.izd-vo mashinostroit.lit-ry, 1961. 525 p.

(MIRA 14:5)

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BELYAKOV, B I.

PHASE I BOOK EXPLOITATION SOV/5558

Galitskiy, Boris Akimovich, and Boris Ivanovich Belyakov

Tekhnologiya kompressorostroyeniya (Manufacturing Processes in Compressor Construction) 3rd ed., rev. and enl. Moscow, Mashgiz, 1961. 525 p. Errata slip inserted. 10,000 copies printed.

Reviewer: P. G. Udyma, Engineer; Ed.: A. N. Vasilenko; Tech. Ed.: Z. I. Chernova; Managing Ed. for Literature on Chemical- and Textile-Machine Manufacture: V. I. Rybakova, Engineer.

PURPOSE: This book is intended for technical personnel in industrial enterprises, design bureaus, and scientific research institutes concerned with compressor manufacture and in enterprises employing compressor equipment. It may also be used as a textbook by students in mechanical engineering schools of higher education and tekhnikums.

COVERAGE: The characteristic features of the construction of compressors are stated with particular attention given to machining and assembly departments. The technical and engineering-economic specifications for process planning in compressor manufacture are reviewed. Manufacturing processes of basic com-

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pressor parts are described, and compressor assembly methods are given. Chapters I, III, VI, VII, X, XII, and XVII were written by B. I. Belyakov, and Chapters II, IV, V, VIII, IX, XI, XIII, XIV, XV, and XVI were written by B. A. Galitskiy. No personalities are mentioned. There are no references.

TABLE OF CONTENTS: