"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001756120014-4

TOLSTOV, V. (g.Sovetsk, Kaliningradskoy oblasti)

Only forward. Prom.koop. 13 no.9:28-29 S '59. (MIRA 13:1)

(Sovetsk--Manufactures)

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001756120014-4"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001756120014-4

TOLSTOV, V.

27-4-2/25

AUTHOR: Tolstov, V., Deputy Chief of Lugansk Regional Labor Reserves Administration

TITLE: Close Liaison with the Sovnarkhoz (Tesnaya Svyaz' s sovnarkhozom)

PERIODICAL: Professional'no-Tekhnicheskoye Obrazovaniye, 1958, # 4, p 3-4 (USSR)

ABSTRACT: The creation of sovnarkhozes has made it easier to solve many questions. In the Lugansk area such a committee was formed in June 1957. In August it issued a formal ban on the arbitrary requisitioning of school facilities by organizations; in certain cases the organization was made to provide new premises, or to create new schools. These councils also assist in placing school graduates in industry.

ASSOCIATION: Luganskoye oblastnoye upravleniye trudovykh rezervov (Lugansk Oblast Labor Reserves Administration)

AVAILABLE: Library of Congress

Card 1/1

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001756120014-4"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001756120014-4

TOLSTOV, V.

In the front ranks. Prom.koop. 14 no.4:8 Ap '60. (MIRA 13:6)

1. Spetsial'nyy korrespondent zhurnala "Promyslovaya kooperatsiya," Penza.

(Penza--Clothing industry)

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001756120014-4"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001756120014-4

TOLSTOV, V.

It was made by producers' cooperatives. Prom.koop.no.8:4-6 Ag '56. (MLRA 9:10)
(Moscow--Exhibitions)

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001756120014-4"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001756120014-4

TOLSTOV, V. F.

New methods of snow removal in railroad transportation Moskva, Transzheldorizdat, 1937. 99 p. (50-44174)

TF542.T63

1. Railroads - Russia - Snow protection and removal. 2. Railroads - Snowplows.

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001756120014-4"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001756120014-4

TOLSTOV, V. F.

Snegobor'ba na Tomskoi zheleznoi doroge. [Snow protection on the Tomsk railway]. Moskva [n. d.] 67 p. DLC: TF542.T65 Slav.

SO: Soviet Transportation and Communications, A Bibliography, Library of Congress, Reference Department, Washington, 1952, Unclassified.

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001756120014-4"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001756120014-4

Tolstov, V. F.

Novye metody snegobor'by na zheleznodorozhnom transporte. [New methods of fighting snow on railroads]. Moskva, Transzheldorizdat, 1937. 99 p. illus.
DLC: TF542.T63

SO: SOVIET TRANSPORTATION AND COMMUNICATIONS, A BIBLIOGRAPHY, Library of Congress Reference Department, Washington, 1953, Unclassified.

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001756120014-4"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001756120014-4

TOLSTOV, V.F.; PRUSOV, V.V., redaktor; KOVALIKHINA, N.F., redaktor

[Manual for the mechanic of stone-crushing equipment] Posobie mekhaniku kamnedrobil'nykh ustanovok. Moskva, Avtotransizdat Ministerstva avtomobil'nogo transporta i shosseinykh dorog SSSR, 1954. 120 p. (MLRA 7:10)

(Crushing machinery)

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001756120014-4"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001756120014-4

TOLSTOV, V. F.

Bor'ba so snezhnymi zanosami. 2. perer. izd., pod red. Ignatovich, A.G. [Fighting snow drifts. 2. ed.] Moskva, Transzheldorizdat, 1935. 177 p. illus., map.
DLC: TF 542.T6 1935

SO: SOVIET TRANSPORTATION AND COMMUNICATION, A BIBLIOGRAPHY, Library of Congress Reference Department, Washington, 1952, Unclassified

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001756120014-4"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001756120014-4

TOLSTOV, V.

Rol' transporta v Uralo-Kuznetskoi probleme. [The role of transportation in the Ural-Kuzentsk problem]. (Rekonstruktsiia transporta, 1931, no. 2, p. 5-6).

DLC: HE7.R4

SO: SOVIET Transportation and Communications, A Bibliography. Library of Congress Reference Department, Washington, 1952, Unclassified.

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001756120014-4"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001756120014-4

PROCESSES AND PROPERTIES INDEX

1st and 2nd orders

3rd and 4th orders

518.5 : 621.317.757 — 82 1385

A new electrical apparatus for harmonic analysis and synthesis. Tolstov, V. G. *Bull. Acad. Sci. URSS, Dep. Sci. Tech.* (No. 3) 389-400 (1946) *In Russian.*—[Abstr. B (1947)].

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001756120014-4"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001756120014-4

[illegible]

[illegible] Plat[illegible], [illegible] A.

TITLE: Device for measuring the parameters of reactive elements in the region of [illegible]

[illegible]

TOPIC TAGS: test instrumentation, superhigh frequency

ABSTRACT: This Author Certificate presents a device for measuring the parameters [illegible]

SUBMITTED: 20Apr64 ENCL: 01 SUB CODE: EC

NO REF SOV: 000 OTHER: 000

Card 1/2

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001756120014-4"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001756120014-4

ACCESSION NR: [illegible]

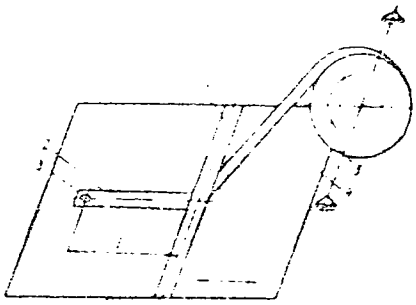

Fig. 1. 1- fixed strip (transmission line); 2- loop; 3- reactive element; 4- dielectric sheet with metallic coating; 5- drum

Card 2/2

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001756120014-4"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001756120014-4

1. TOLSTOV, V.K.

2. USSR (600)

4. Beets and Beet Sugar

7. Hill checking sugar beets with beet planters. Sakh. prom. 26 no. 11, 1952

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

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001756120014-4"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001756120014-4

1. TOLSTOV, V. K.

2. USSR (600)

4. Agricultural Machinery

7. Hill checking sugar beets with beet planters. Sakh.prom. 26 no. 11, 1952.

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

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001756120014-4"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001756120014-4

KORNILOV, Yu.G.; TOLSTOV, V.M.

Automatic control for deaerators. Avtomatyka no.3:85-90 '56. (MLRA 9:11)

1. Trest "Orgkomunenergo" Ministerstva komunal'nogo gospodarstva URSR.
(Feed-water purification)

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001756120014-4"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001756120014-4

TOLSTOV, V.N.

Q fever in West Kazakhstan Province. Zdrav. Kazakh. 21 no. 3:40-41 '61. (MIRA 14:4)

1. Iz Zapadno-Kazakhstanskoy oblastnoy bol'nitsy (glavnyy vrach - S.A. Temkin).

(WEST KAZAKHSTAN PROVINCE— Q Fever)

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001756120014-4"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001756120014-4

LAVRENT'YEVA, V.A.; ROY, V.A.; TOLSTOV, V.N.; FOKINA, V.I.; SHINGARKIN, S.M.

New advances in the treatment of multiple sclerosis, preliminary report. Zdrav. Kazakh. 21 no. 4:42-44 '61. (MIRA 14:4)

1. Iz Ural'skoy oblastnoy bol'nitsy.
(MULTIPLE SCLEROSIS)

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001756120014-4"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001756120014-4

TOLSTOV, V.N.; TOLSTOV, K.N.

Orientation method for the determination of blood sugar. Zdrav. Kazakh. 22 no.10:75-76 '62. (MIRA 17:5)

1. Iz Ural'skoy oblastnoy bol'nitsy.

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001756120014-4"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001756120014-4

TOLSTOV, V.N.

Method for determining cholesterol content in blood serum in the laboratories of rural district hospitals. Zdrav. Kazakh. 21 no.9: 69-71 '61. (MIRA 14:10)

1. Iz biokhimicheskoy laboratorii Zapadno-Kazakhstanskoy oblastnoy bol'nitsy (glavnyy vrach - S.A.Temkin).
(CHOLESTEROL) (SERUM DIAGNOSIS)

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001756120014-4"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001756120014-4

SOV-109-3-6-5/27

AUTHOR: Tolstov, V. V.

TITLE: Horizontal Movements in the F-Region of the Ionosphere (Gorizontal'nyye dvizheniya v oblasti F ionosfery)

PERIODICAL: Radiotekhnika i Elektronika, 1958, Vol 3, Nr 6, pp 760-763 (USSR)

ABSTRACT: The measurements reported were carried out by means of a transmitter of the Ionospheric Station of the Kharkov Polytechnic Institute and by a special receiving equipment. The pulse power of the transmitter was about 10 kW, its repetition frequency was about 50 c/s and the duration of pulses was 100 μs. The frequency range was from 2-10 Mc/s. The reception of the signals reflected from the ionosphere was carried out by means of 3 dipoles situated at the apexes of a right-angled triangle, having sides $\xi = \eta = 80$ m (see Fig.1). The signals from the dipoles were applied to 3 receivers by means of coaxial cables. The receivers were in the form of superheterodynes having a gain of 10^6 and a bandwidth of 20 kc/s. The output signals of the receivers were applied to the

Card 1/3

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001756120014-4"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001756120014-4

Horizontal Movements in the F-Region of the Ionosphere

deflection plates of cathode ray tubes, where they were photographed on to a film moving at a velocity of 150 mm/s. A sample of the output signals as registered on the photographic film is shown in Fig.2. The measurements were carried out over a period of 7 months (beginning in October, 1955). The resulting photographic recordings were used to determine the drift velocity of the ionospheric layer and its direction (see Eqs.(1) and (2)). The results are illustrated by the histogram of Fig.3; from this it is seen that the drift velocities vary from 10 to 200 m/s and that the usual velocity is about 80 to 100 m/s. These results are in good agreement with the values obtained by the measurements in other countries (Germany, England, USA, Canada). The direction of the drift velocity was not constant. In the morning the drift had a westerly direction, while in the afternoon this was reversed. The measurements were also used to determine the ellipticity, p of the diffraction pattern of the ionosphere. It was found that p varied from 1 to 6 and that its average value was about 1.5; this result coincides with figures obtained in England and in USA. The paper

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001756120014-4"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001756120014-4

SOV-109-3-6-5/27

Horizontal Movements in the F-Region of the Ionosphere

contains 3 figures, 2 tables and 7 references, 3 of which are Soviet and 4 English.

SUBMITTED: February 21, 1957

1. Ionosphere - Motion 2. Ionosphere - Analysis 3. Ionosphere - Reflective effects 4. Ionosphere - Test results 5. Radio waves - Applications

Card 3/3

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001756120014-4"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001756120014-4

DUDNIK, B.S.; KASHCHEYEV, B.L.; LAGUTIN, M.F.; LYSENKO, I.A.; TOLSTOV, V.V.; DELOV, I.A.

Studying meteoric activity by means of radar on a frequency of 72 mc. Izv.vys.ucheb.zav.; radiofiz. 1 no.2:66-70 '58. (MIRA 11:11)

1. Khar'kovskiy politekhnicheskiy institut.
(Meteors) (Radar in astronomy)

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001756120014-4"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001756120014-4

TOLSTOV, V. V., Candidate Tech Sci (diss) -- "Investigation of the horizontal movements of ionization heterogeneities in the F-layer of the ionosphere". Khar'kov, 1959. 11 pp (Min Higher Educ Ukr SSR, Khar'kov Polytech Inst im V. I. Lenin), 120 copies (KL, No 23, 1959, 168)

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001756120014-4"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001756120014-4

RABINOVICH, I., inzh.-khimik; TOLSTOV, Ye., ekonomist (Leningrad)

New source of industrial fats. Prom. koop. 14 no.5:29 My '60.
(MIRA 13:12)

(Leningrad--Oils and fats)

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001756120014-4"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001756120014-4

M-5

USSR/Cultivated Plants - Commercial. Oil-Bearing. Sugar-Bearing.

Abs Jour : Ref Zhur - Biol., No 7, 1958, 29970

Author : Tolstov, Ye.P.

Inst : The Fruit and Vegetable Institute im. I.V. Michurin.

Title : The Double Stalk System of Raising the Tobacco, Nicotiana rustica L.

Orig Pub : Tr. Plodoovoshchn. in-ta im. I.V. Michurina, 1956, 9, 315-327.

Abstract : This method consists of removing the growing point of the seedlings upon planting in the ground or after the roots take hold, as a result of which there forms from the buds in the leaf axils a number of shoots, two of which remain for further cultivation; these consequently produce two solitary stems in which technical ripeness occurs at the same time. Three years of field tests with two varieties

Card 1/2

86-00513R001756120014-

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001756120014-4

GONTAYEV, A.F., kandidat sel'skokhozyaystvennykh nauk; TOLSTOV, Ye.P., kandidat sel'skokhozyaystvennykh nauk.

Seed corn production in new-corn growing areas. Nauka i pered. op. v sel'khoz. no.9:6 S '56. (MLRA 9:10)
(Corn(Maize))

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001756120014-4"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001756120014-4

TOLSTOV, YE. P.

TOLSTOV, YE. P. "New Method of Increasing the Yield of Makhorka by Raising Two-stem Plants." Min of Higher Education USSR, Voronezh Agricultural Inst, Voronezh, 1955 (Dissertations for Degree of **Candidate of Agricultural Sciences**)

SO: Knizhnaya Letopis' No. 26, June 1955, Moscow

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001756120014-4"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001756120014-4

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001756120014-4"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001756120014-4

1ST AND 2ND ORDERS

3RD AND 4TH ORDERS

PROCESSES AND PROPERTIES INDEX

B 64

A

A new electrical apparatus for harmonic analysis and synthesis. TOLSTOV, U. G. *Bull. Acad. Sci. URSS, Dep. Sci. Tech.* (No. 3) 389-400 (1946) *In Russian.*—The analyser-synthesiser consists of a number (36 in case of 36 ordinates per period, separated by 10°) of "multipliers," each being a transformer with a calibrated potentiometer across the secondary and an additional potentiometer with taps spaced according to values of sin 10°, sin 20°, etc., across the slider of the first potentiometer and one end of the secondary. The second multiplier is connected in series with the slider of the first and so on, a phase-reversing switch dealing with negative value ordinates. The operation, application and order of accuracy obtained are discussed. A. L.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001756120014-4"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001756120014-4

TOLSTOY, YU. G.

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001756120014-4"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001756120014-4

B 64

5★

Electrical apparatus for solution of linear homogeneous and non-homogeneous differential equations of higher order with constant coefficients yielding the solution in terms of a Taylor series. TOLMTOV, Y. G. *Bull. Acad. Sci. URSS, Dep. Sci. Tech.* (No. 3) 319-22 (1947). *In Russian.*—The apparatus is based on analyser, described in Abstr. 1453 (1947). Vertical and horizontal potentiometers work to three-figure accuracy, change of sign being affected by two double-pole change-over switches, and change of scale is obtained in a vertical direction by series resistances and in a horizontal direction by taps from the supply transformer. A. L.

Energetics Inst. im. G.M. Krzhizhanovskogo, AS USSR

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001756120014-4"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001756120014-4

TOLSTOV, Yu. G.

"The solution of problems in subterranean hydraulics with the aid of an electric integrator", by Candidate of Technical Sciences Yu. G. Tolstov, at the Power Engr. Inst. im KRUHIZHANOVSKIY of the Acad. Sce. USSR.

SO: Elektrichestvo, No 5, Moscow, May 1947 (U-5533)

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001756120014-4"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001756120014-4

TOLSTOV, YU. G.

PA 70T29

USSR/Electricity
Transformers
Magnetization

Apr 1948

"Operation of Direct Current Measuring Transformers During Active Loading," Yu. G. Tolstov, Power Engr Inst imeni G. M. Krzhizhanovskiy, Acad Sci USSR, 16 pp

"Iz Ak Nauk SSSR, Otdel Tekh Nauk" No 4

Cites results of study of subject operation. Treats in detail: ideal characteristic of magnetization, differential equations of measuring transformer, operation of measuring transformer with no load on the secondary circuit, and the effect of active load. Submitted Jan 1948.

70T29

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001756120014-4"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001756120014-4

TOLSTOV, YU. G.

PA 33/49T28

USSR/Electricity
Transformers, Current
Instruments, Measuring

Feb 49

"Measuring Transformers for Indirect Determination of Time-Constant Voltages," Yu. G. Tolstov, Power Eng Inst imeni G. M. Krzhizhanovskiy, Acad Sci USSR, 19 pp

"Iz Ak Nauk SSSR, Otdel Tekh Nauk" No 2

Discusses theory and use of constant-current transformers as measuring devices, giving magnetization curves, operation with wave forms other than sinusoidal, permissible variations in auxiliary voltage, and effect of initial deflection in the

33/49T28

USSR/Electricity (Contd)

Feb 49

magnetization curve. Submitted by Acad G. M. Krzhizhanovskiy, 8 Jul 48.

33/49T28

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001756120014-4"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001756120014-4

SA B 64

ELECTROMAGNETIC PROCESSES IN RECTIFYING PLANT AND NON-LINEAR ANODE CHOKES. Yu. G. Tolstoy. Izv. Akad. Nauk., SSSR, Otdel Tekh. Nauk (No. 2) 199-215 (Feb., 1950) In Russian.

Saturable chokes in anode circuits of rectifiers slow down the rate of increase of reverse voltage and insure good deionization of the inter-electrode space before the reverse voltage reaches high values. This reduces the likelyhood of arc-back. This is especially important when the rate of rise plays a more decisive part than the maximum value of the reverse voltage at the end of the commutation period. Use of saturable chokes results in the in an increase of the load capacity of rectifiers operating with large angles of regulation. This may be useful in reverseable equipment of rolling mills. Saturable chokes permit use of delayed grid control in ignitrons and lowering of internal voltage drop.

J. Lukaszewicz.

G.M. Krzhizhanovskiy Inst. Energetics, AS USSR

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001756120014-4"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001756120014-4

TOLSTOV, Yu. G.

Iemeritelnye Transformatory Postoiannogo Toka (Measuring Transformers for DC Current), 116 p., Moscow and Leningrad, 1951.

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001756120014-4"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001756120014-4

TOLSTOV, Yu. G.

USSR/Engineering - Electrical Engineering, Jul 51
Rectifiers

"Commutation Process in a Single-Phase Bridge Circuit With Very High Inductive Component," Yu. G. Tolstov, G. P. Mostkova

"Iz Ak Nauk SSSR, Otdel Tekh Nauk" No 7, pp 1004-1014

Analyzes electromagnetic processes in single-phase bridge circuits and discusses these processes and restoration of inverse voltage in application to individual cases such as dry rectifiers, kenotrons, gas-filled rectifier tubes and mercury-arc rectifier. Submitted by Acad A. V. Vinter 23 Dec 50.

205T14

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001756120014-4"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001756120014-4

TOLSTOV, Yu. G.

TOLSTOV, Yu.G., doktor tekhnicheskikh nauk [deceased]; KRUG, K.A., otvetstvennyy redaktor; MOSKVITIN, A.I., professor, otvetstvennyy redaktor; KUDASHEV, A.I., redaktor; ALEKSEYEVA, T.V., tekhnicheskiy redaktor.

[Contact converters] Kontaktnye preobrazovateli. Moskva, Izd-vo Akademii nauk SSSR, 1953. 131 p. (MLRA 7:9)

1. Chlen-korrespondent Akademii nauk SSSR. (for Krug)
(Electric current converters)

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001756120014-4"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001756120014-4

TOLSTOV, Yu. G., Dr.

Electric Engineering - Periodicals

Interpreting the physical aspect of a problem in a simpler manner, Elektrichestvo No. 1, 1953.

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

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001756120014-4"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001756120014-4

TOLSTOV, Yuriy Georgiyevich, professor, doktor tekhnicheskikh nauk; SHVETSOV, I.B., redaktor; DMITRIYEVA, R.V., tekhnicheskiy redaktor.

[Long distance transmissions of direct-current electric energy] Dal'nie peredachi elektricheskoi energii postoiannogo toka; po materialam "Voskresnykh chtenii" Politekhnicheskogo muzeia. Moskva, Izd-vo "Znanie," 1954. 31 p. (Vses. obshchestvo po rasprostraneniiu polit. i nauchn. znanii, ser.4, no.31) (MLRA 7:12)

(Electric power distribution--Direct current)

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001756120014-4"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001756120014-4

TOLSTOV, Yu.G. (Moskva); FILARETOVA, A.S. (Moskva).

Testing circuits for powerful electric control valves. Izv. AN SSSR. Otd. tekh. nauk. no.12:111-121 D '55. (MLRA 9:3)
(Electric current rectifiers)

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001756120014-4"

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TOLSTOV, Yu.G.

One hundredth anniversary of the birth of Nikola Tesla.
Vest. AN SSSR 26 no.10:76-77 O '56. (MLRA 9:11)

(Tesla, Nikola, 1857-1943)

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"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001756120014-4

105-9-20/32

AUTHOR: Tolstov, Yu.G., Doctor of Technical Sciences, Professor, (Moscow), Polovoy, I.F., Candidate of Technical Sciences, (Leningrad)

TITLE: On the Perspectives of the Application of Direct Current Lines in the Soviet Union (O perspektivakh primeneniya elektroperedach postoyannogo toka v Sovetskom Soyuze)

PERIODICAL: Elektrichestvo, 1957, Nr 9, pp 69-72 (USSR)

ABSTRACT: Comments on the article by N.M. Mel'gunov in Elektrichestvo, 1957, Nr 2.

Tolstov: The economic limit of an alternating current line for power outputs of from 700 to 800 MV is between 500 and 600 km. A power transfer over larger distances is, from an economic point of view, better carried out by means of a high voltage direct current. Mel'gunov underestimates the importance of intermediate consumption from the lines in question. It will hardly be the case that at a distance of thousands of km no current consumption takes place. The problem of the intermediate consumption from a direct current line has not yet been solved and its solution is not very easy. Mel'gunov makes no mention at all of the problem of the application of direct current lines for intermediate system connections. Such a connection with 100 MV direct current is now planned across the channel between England and France.

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105-9-20/32

On the Perspectives of the Application of Direct Current Lines in the Soviet Union

Besides, the now developing atomic energy must not be underrated. The costs for the transport of atomic fuel are very low and do not exercise any influence on the energy costs at all.

Polovoy: On the basis of a detailed investigation which is dealt with here, the use of direct instead of alternating current cannot offer any economical advantages. 5 to 10% may be saved on investments, but the annual cost of production will increase by 5 to 10% as a result of the more expensive and more complicated equipment and a higher expenditure of energy. It is more practical to use direct current only for special cases. There are 2 figures and 1 table.

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TOLSTOV, Yu. G.

105-7-21/29

AUTHOR TOLSTOV, Yu.G., D.tech. sc., SARKISOV, A.L., Cand. tech. sc.

TITLE On the Prospects of Rectifier Valves and Rectifiers (O perspektivakh dugovykh ventiley i o mekhanicheskikh vypryamitelyakh. Russian)

PERIODICAL Elektrichestvo, 1957, Nr 7, pp 82 - 85 (U.S.S.R.)

ABSTRACT This is the author's reaction to N.S. KLIMOV'S article in Elektrichestvo, 1956, Nr 12. The evaluation of the rectifier valve suggested by KLIMOV is irrationally optimistic. From his work we can not see in which field the polyphase rectifier valve should be used. First the suggestion to use the polygon scheme is criticised and the author shows that in the end it will be much more expensive than that with several bridges. Then the statement on the characteristics of rectifier valves are disproved of as well as the statement that the electrodes are less damaged. Based on a detailed criticism of KLIMOV'S suggestion the author shows that the polyphase rectifier valve proposed by KLIMOV in consequence of a number of serious deficiencies is a hopeless case (With 1 table, 1 illustration and 2 Slavic references).

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On the Prospects of Rectifier Valves and Rectifiers 105-7-21/29

ASSOCIATION "Krzhizhanovskiy" Institute for Energetics of the Academy of Sciences of the U.S.S.R.
(Energeticheskiy institut im. Krzhizhanovskogo Akademii nauk SSSR)

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KRZHIZHANOVSKIY, G.M.; VEYTS, V.I.; BAUM, V.A.; GORUSHKIN, V.I.; NEKRASOV, A.M.; MARKOVICH, I.M.; TOLSTOV, Yu.G.

V.I. Popkov. Elektrichestvo no.4:94 Ap '58. (MIRA 11:5)

1. Chlen-korrespondent Akademii nauk SSSR.
(Popkov, Valerii Ivanovich, 1908-)

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001756120014-4"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001756120014-4

NEYMAN, L.R.; TOLSTOV, Yu.G., doktor tekhn. nauk; PIMENOV, V.P., kand. tekhn. nauk; POSSE, A.V., kand. tekhn. nauk; SAKOVICH, A.A., kand. tekhn. nauk; BUTAYEV, F.I., kand. tekhn. nauk; MEL'GUNOV, N.M., inzh.; SONIN, M.R., inzh.

[Long-distance high-voltage direct-current transmission] Peredacha energii postoiannogo toka vysokogo napriazheniia na dal'nie rasstoianiia. Pod red. L.R. Neimana. Moskva, 1958. 64 p. (MIRA 11:10)

1. Russia (1923- U.S.S.R.) Sovet Ministrov. Gosudarstvennyy nauchno-tekhnicheskiy komitet. 2. Chlen-korrespondent Akademii nauk SSSR (for Neyman).
(Electric power distribution)

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"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001756120014-4

SHINDEL'MAN, Rudol'f Isaakovich, inzh.; TOLSTOV, Yu.G., red.; VAGIN, A.A., red. izd-va.; ISLENT'YEVA, P.O., tekhn. red.

[Large-capacity mechanical rectifiers] Mekhanicheskie vypriamiteli bol'shoi moshchnosti. Moskva, Gos. nauchno-tekhn. izd-vo lit-ry po chernoi i tsvetnoi metallurgii, 1958. 156 p. (MIRA 11:12)
(Electric current rectifiers)

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"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001756120014-4

SOV/139-58-5-7/35

AUTHORS: Tolstov, Yu. G., Pirogova N. V., Kamenskaya, V. P.

TITLE: Certain Problems of Technology and the Volt-Ampere Characteristics of Germanium Power Rectifiers (Nekotoryye voprosy tekhnologii i vol't-ampernyye kharakteristiki silovykh germaniyevykh ventiley)

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, fizika, 1958, Nr 5, pp 35-40 (USSR)

ABSTRACT: This paper was presented at the Conference of Higher Educational Establishments on Dielectrics and Semiconductors, Tomsk, February, 1958. Preparation of germanium power diodes involves the following operations: 1) cutting of germanium monocrystals and polishing of the resulting plates; 2) etching and drying of the plates; 3) deposition of an indium layer; 4) alloying (production of a p-n junction); 5) assembly and attachment of contacts; 6) final assembly. To cut germanium monocrystals the authors used abrasive discs KZ-180 (dimensions 100 x 0.18 x 20 mm) produced by the Leningrad Experimental Abrasive Works. Monocrystals were cut at 3100 rpm of the abrasive disc; water was used as the coolant.

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SOV/139-58-5-7/35

Certain Problems of Technology and the Volt-Ampere Characteristics of Germanium Power Rectifiers

The abrasive disc thickness was 0.18 mm and the thickness of the cut was 0.2 mm. Surfaces of the resulting plates were so smooth that no polishing was necessary. This method of cutting made it possible to produce a plate of 20 mm dia in 2-3 min. The plates were etched in boiling hydrogen peroxide which had a few drops of KOH added to it. After etching the plates were washed 3 times in boiling distilled water and then dried at 60-70°C for 30 min to 1 hour. An indium layer was deposited in vacuo at 3×10^{-5} mm Hg (saturated vapour pressure of indium). Deposition took 2 hours and the indium temperature was 860°C. The edge of each germanium plate was shielded from the indium so as to form a ring of clear surface. The p-n junction was produced, using the apparatus shown in Fig.1. A tin plate 0.15 mm thick was placed at the bottom of a graphite cylinder. On top of the tin, a germanium plate (0.5 - 0.8 mm thick) was placed in such a way that its clear side (with no indium) was in direct contact with tin. A second graphite cylinder was then placed on top of the germanium plate; the walls of this cylinder were of such a thickness as to cover exactly the clear ring referred to above. Inside this second cylinder an indium plate was placed on top

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SOV/139-58-5-7/35

Certain Problems of Technology and the Volt-Ampere Characteristics of Germanium Power Rectifiers

of the germanium plate and it was pressed down with a press of stainless steel which produced a pressure of 10 g/cm^2. The whole assembly was placed in a vacuum chamber and heated by means of an electrical furnace. The thermal treatment consisted of the following cycles: a) heating from 20°C to 550-560°C in 30 to 40 min, b) two minutes at 550-560°C, c) cooling from 550°C to room temperature in about 6 hours. The next stage was the attachment of contacts and the assembly into a casing. This can be seen from Fig.2 which gives the cross-section of the complete rectifier. Base 3 and the upper contact 7 had Kovar plates attached to them; these plates were covered outside with an Sn-Pb-Bi 19-31-50% alloy which melts at 94.5°C. The upper contact 7 was connected with the upper terminal 1 by means of a spring 9 . The germanium rectifier plate was placed with its tinned side in contact with the base 3 . The upper contact 7 was placed

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Certain Problems of Technology and the Volt-Ampere Characteristics of Germanium Power Rectifiers

on top of the germanium plate and pressed down by means of the spring 9 . The whole assembly was heated to 95-100°C for a short time in order to solder the contacts 3 and 7 to the indium and tin electrodes of the rectifier. The rectifier assembly was then dried, a glass cylinder 8 was placed round it and the interior was filled with a silicon oil. A cover 2 was screwed on and a cooling plate 4 was attached. The complete rectifier is shown in Fig.3. The quality of the indium-germanium contact was studied by etching away the indium and examining the junction surface under a microscope. It was found (Fig.4) that alloying was not uniform but consisted of separate patches with a considerable portion of the junction area not wetted by indium. The forward and reverse volt-ampere characteristics of the power germanium diodes so produced were typical semiconductor curves. To obtain reliable volt-ampere characteristics, the rectifier was placed in a thermostat and only short voltage pulses were applied in the measurements (the upper curve in Fig.5). Application of a constant voltage even for a short time produced considerable amounts of heat inside the rectifier itself and this affected the results (the lower

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Certain Problems of Technology and the Volt-Ampere Characteristics of Germanium Power Rectifiers

curve in Fig.5). Figs.6 and 7 are oscillograms from which the volt-ampere characteristics were derived. A family of volt-ampere characteristics for rectifiers V-15, V-14 and V-13 is shown in Fig.8. There are 8 figures.

ASSOCIATION: Energeticheskiy institut imeni G. M. Krzhizhanovskogo AN SSSR (Power Institute imeni G. M. Krzhizhanovskiy, Academy of Sciences, USSR)

SUBMITTED: February 25, 1958.

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"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001756120014-4

SOV/24-58-5-3/31

AUTHORS: Li Sen-san, Tolstov, Yu. G. (Tashkent, Moscow)

TITLE: Compensation of the Reactive Power of Invertors by Means of Lines with Split Conductors (Kompensatsiya reaktivnoy moshchnosti invertorov pri pomoshchi linii s rasshcheplennymi provodami)

PERIODICAL: Izvestiya Akademii Nauk SSSR, Otdeleniye Tekhnicheskikh Nauk, 1958, Nr 5, pp 16-20 (USSR)

ABSTRACT: One of the possible methods of compensation of reactive power of invertors is considered and formulae are given for determining the optimum parameters of the circuit. Fig.1 shows the basic diagram of the circuit proposed for compensating the reactive power which is consumed by the invertor. The conductor of each of the d.c. poles is split into three wires which are fed by a 3-phase current from the invertor transformer or any other type of transformer which is connected to the supply system. This splitting does not influence the d.c. current to be inverted since from the point of view of the d.c. current all these represent a single pole. In the case of high voltage transmission lines, the splitting of the conductors is vital from the point of view of reducing the

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SOV/24-58-5-3/31

Compensation of the Reactive Power of Invertors by Means of Lines ·ith Split Conductors

corona losses and, therefore, fundamentally this method aims at additional utilisation of lines with split conductors. From the point of view of the alternating current, the equivalent input resistance of the line, which is short-circuited at the end will be capacitive if the line exceeds a quarter of the wave length; chokes are connected at the end of the line, the purpose of which will be dealt with later. This circuit arrangement is equivalent to connecting condensers to the tertiary windings of the invertor transformer, which brings about a reduction of the reactive power consumed by the invertor. The calculation carried out for a line with a distance between the conductors of 1300 mm indicates that the maximum negative angle of the input impedance (of the order of 70°) is obtained for a line length of 135°, i.e. 3/8 λ. However, the losses for such a line are so high that it would not be possible to use it for compensating the reactive power required by the invertor. There is a possibility of reducing these line losses and for this purpose it is obviously necessary to reduce the real length of the line and, in order to maintain the

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SOV/24-58-5-3/31

Compensation of the Reactive Power of Invertors by Means of Lines with Split Conductors

capactive character of the input resistance, it is necessary to increase the electrical length of the line, which is achieved by connecting an inductance at the line end as shown in Fig.1. On the basis of the results, graphed in Figs.3 and 4, it is concluded that the optimum line parameters are: conductor cross section 700 to 900 mm^2, conductor spacing 1500 to 3000 mm. The here described method of compensation of the reactive power of an invertor has the following advantages: the losses are many times lower than for a synchronous condenser; the service life is about twice as long as for synchronous condensers; no maintenance is required; in order to ensure the necessary compensation of the reactive power a relatively large choke has to be applied (5 to 10 Henry). However, in spite of this, the total first costs are very much lower than for a synchronous condenser of a corresponding rating. The here described method of compensation is suitable for long distance d.c. transmission lines.

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Compensation of the Reactive Power of Invertors by Means of Lines with Split Conductors SOV/24-58-5-3/31

There are 4 figures and 3 references, all of which are Soviet.

SUBMITTED: March 4, 1958

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"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001756120014-4

SOV/139-58-4-5/30

AUTHORS: Tolstov, Yu. G., Kamenskaya, V. P. and Pirogova, N. V.

TITLE: Determination of the Operating Parameters of Germanium Power Rectifiers (Opredeleniye rabochikh parametrov silovykh germaniyevykh ventiley)

PERIODICAL: Izvestiya Vysshikh Uchebnykh Zavedeniy, Fizika, 1958, Nr 4, pp 37-42 (USSR)

ABSTRACT: Paper read at the Inter-University Conference on Dielectrics and Semi-conductors, Tomsk, February, 1958. Generally, the limit value of the permissible current and of the reverse voltage of a given rectifier in a rectifying circuit are determined purely experimentally. For germanium rectifiers, this method is not particularly suitable because it involves testing to destruction of a large number of rectifiers which is very expensive and, since the characteristics of germanium rectifiers show high degrees of scattering, such test results are not reliable enough. Therefore, it is of interest to develop a non-destructive method of determining the operating parameters of such rectifiers. In para.1 the authors deal with the temperature characteristics of such rectifiers. The loading is limited by the

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pn-transition temperature. The characteristics for the current flow in the reverse direction at various temperatures are graphed in Fig.1; for a given temperature the direct proportionality between the current and the voltage is disturbed from a certain voltage onwards and the curves form a bend beyond which operation is dangerous, since the slightest increase in voltage leads to a sharp increase of the reverse current which in turn causes intensive heating. Thus, on each curve a limit point can be marked off which corresponds to the bend of the reverse characteristic, by means of a method which is described in the paper; the curve which joins all these points is referred to as the curve of limit voltages at various temperatures. During normal operation with a given cooling system, the reverse current can be measured and the reverse voltage corresponding to this current. From such measurements and the family of curves of reverse current vs. reverse voltage for various temperatures, it is possible to determine the real temperature of the pn-transition and also to elucidate the dependence of this

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temperature on the intensity of the current in the direction of current flow, which fundamentally brings about the heating of the rectifier. This dependence can be calculated; the results of such calculations can be presented in the form of a graph, Fig.2, which is valid for any temperature of the cooling liquid. In para.2 the operating range is calculated and the results are graphed in Fig.5 ($I_{average}$ vs U_{max}) which also contains the optimum current and voltage values. In para.3 the problem of stability of the thermal state is analysed on the basis of the following assumptions: the pn-layer has a uniform thickness throughout the entire transition area; the heat is released solely in the pn-layer; heat conductivity is only through the surface of the base of elementary cylinders of a height h. The stability conditions are expressed in the form of the inequality (16) which determines those voltage values which are located on the curve of the limit voltages plotted in Fig.1. The critical current values can also be determined and these

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obviously depend on the cooling temperature. There is reason to assume that the critical current intensities at cooling temperatures above 0°C will be considerably higher than the fusion of the solder by means of which the current leads are soldered on and, therefore, determination of the critical current intensity according to the derived formulae has no practical importance. The derived relations permit determining the limit parameters of the rectifier. These relations are correct for the static conditions of operation of the valves. The variations in the current intensity with the progress of time is not taken into consideration and this is justified for very slowly varying currents and also for currents which change very rapidly when the average values have to be applied. If the speed of the thermal changes is commensurate with the speed of the changes of the current intensity, the time dependence of the current intensity has to be taken into consideration in the equations and this will complicate the equations. In this case the conditions of (static) stability cannot be justified, since

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Determination of the Operating Parameters of Germanium Power Rectifiers

the process of temperature rise may stop as a result of a rapid drop in the current intensity. In this case it will probably be necessary to introduce the concept of dynamic stability.
There are 5 figures.

ASSOCIATION: Moskovskiy energeticheskiy institut imeni G. M. Krzhizhanovskogo (Moscow Power Institute imeni G. M. Krzhizhanovskiy)

SUBMITTED: February 25, 1958

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"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001756120014-4

TOLSTOV, Yu. G.

AUTHOR: Kuchin, V. D., Candidate of Technical Sciences SOV/105-58-7-22/32

TITLE: Conference on Solid Dielectrics and Semiconductors (Konferentsiya po tverdym dielektrikam i poluprovodnikam)

PERIODICAL: Elektrichestvo, 1958, Nr 7, pp. 83 - 84 (USSR)

ABSTRACT: The intermediate university conference was held from February 3rd to 8th, 1958, in the Tomsk Polytechnical Institute (Tomskiy politekhnicheskiy institut). Representatives of 12 universities, 1o scientific research institutes, and 11 plants of 14 towns attended this conference. 83 reports were delivered. The work of the conference was carried out in 6 sections. In the section of semiconductors spoke: Professor Yu.G.Tolstov (ENIN AS USSR, Moscow) about a new method for the determination of the work parameters in germanium power valves without destruction of the latter. Docent A.F. Gorodetskiy and Docent S.S.Gutin (Novosibirsk) found a temporary instability of the resistance in thin tellurium layers and a satisfactory stability of the germanium-and bismuth resistance. Docent G.A.Katayev and L.N.Rozanov (Tomsk University) reported on the mechanism of heterogeneous reactions which occur

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under the participation of solid bodies. A.R.Zasypkina (SFTI) reported on the good rectifier properties of the silver-polystyrene varnish-germanium- and the mercury-KCl-germanium system. D.K. Vesnovskiy and others, Novosibirsk Institute of Electrical Engineering (Novosibirskiy elektrotekhnicheskiy institut) developed automatic semiconductor devices with flat germanium triodes and photoresistances as transmitters. V.F.Sinorov (SFTI) reported on the experiments which confirm the existence of the surface acceptor level and the surface conductivity in compounds of the type $A^{III} B^{IV}$. Ye.I.Cheglokov and A.M.Vaysberg (SFTI) investigated the "bond lattice" and found that the effective mass of the light hole increases with the increase of the ionic component in the bond and becomes anisotropic. V.N.Vertoprakhov (SFTI) reported on a new method for the detection of the crystallographic planes from the discharge figures on the germanium surface. A.P.Vyatkin (SFTI) investigated the rules governing the wetting of germanium with indium in dependence on the surface treatment of indium, the crystallographic orientation of germanium, and the heat maintenance in the case of melting. V.A.Chaldyshev investigated the energetic spectrum on the basis of a lattice model in connection with the

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sphalerite lattice. A.P.Izergin and others (SFTI) worked out a method for the breeding of germanium monocrystals with even distribution of the admixtures from the melt without melting pot. Yu.D.Lukantsever, Frunze Kirghiz Institute of Pedagogics (Kirgizskiy pedinstitut, Frunze)investigated the rules governing the dying down of the intensity of phosphorescence, photoconductivity, and the light sum in the phosphorus ZnS-Cu in an ideal crystal phosphorus. From an investigation of the temperature dependence of the photodielectric effect in the phosphorus ZnS-CuFe during excitation and in the case of long stages of dying down of the phosphorescence of the latter P.Ye.Ramazanov (SFTI) makes conclusions as to the relaxation character of the processes which cause this effect. I.G.Mel'nik, Novosibirsk Institute of Electrical Engineering, reported on a simple distribution chamber for a vacuum plant. Ye.I.Shuraleva,Irkutsk University (Irkutskiy universitet) reported on the investigation of the influence of the electric and thermal treatment in the case of pure rock salt crystals, as well as on the influence of different concentrations of an activator introduced into the phosphori NaCl.Ni according to the method of electrolysis on the formation processes of F-centers

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Conference on Solid Dielectrics and Semiconductors SOV/105-58-7-22/32

and the storing of light sums under the action of X-rays.

ASSOCIATION: Tomskiy politekhnicheskiy institut (Tomsk Polytechnical Institute)

1. Dielectrics--USSR 2. Semiconductors--USSR 3. Conferences

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TOLSTOV, Yu. G.

30-2-20/49

AUTHOR: Tolstov, Yu. G. , Doctor of Technical Sciences

TITLE: The Exhibition "Electricity and the Atom" in Denmark (Vystavka "elektrichestvo i atom" v Danii)

PERIODICAL: Vestnik Akademii Nauk SSSR, 1958, Nr 2, pp 35-86 (USSR)

ABSTRACT: This exhibition took place from October 18 - 27, 1957 in Kopenhagen. Electro- and radiotechnical products of Danish and a few other European firms were shown. The Danish scientific research institutions also showed a small number of exhibits. In the department for peaceful application of atomic energy models of nuclear reactors and of English atomic power plants with a power of 150000 to 500000 kW were shown. Posters and photographs showed schemes of atomic plants and their controlling, of chain reactions, as well as of the methods of applying radioactive isotopes in engineering, in medicine, agriculture and biology. Many firms exhibited indicators of radioactive radiation as well as different types of dosimeters and counters. The Dutch firm "Philipps" showed a com-

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The Exhibition "Electricity and the Atom" in Denmark 30-2-20/49

plete control board for atomic reactors, the firm L. Knudsen an oil contactor of a power up to 5 million kVA and the firm Bryuel' and Kjor a high frequency sound generator. The author in addition quotes a number of interesting apparatus and illuminators.

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1. Exhibitions-"Electricity and the atom"-Copenhagen 2. Electrical equipment-Applications 3. Electronic equipment-Applications 4. Atomic energy-Applications

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PHASE I BOOK EXPLOITATION SOV/5827

Moscow. Fiziko-tekhnicheskiy institut

Issledovaniya po fizike i radiotekhnike (Research in Physics and Radio Engineering) Moscow, Oborongiz, 1959. 170 p. (Series: Its: Trudy, vyp. 4) Errata slip inserted. 2,150 copies printed.

Sponsoring Agency: SSSR. Ministerstvo vysshego i srednego spetsial'nogo obrazovaniya.

Ed.: K.Ya. Zaytseva, Engineer; Ed. of Publishing House: S.D. Antonova; Tech. Ed.: L.A. Garmukhina; Managing Ed.: A.S. Zamovskaya, Engineer.

PURPOSE: This book is intended for scientific workers, students in advanced courses and engineers.

COVERAGE: This is a collection of 15 studies dealing with problems of radio physics, electronics, quantum physics, and aerodynamics. The studies examine the method of least squares as applied to the propagation of radio waves in the presence of a plane junction, the general conditions of stability of a random process at the output of a linear filter while a periodic unstable random process is supplied at the input of the filter, the results of experiments with a ferromagnetic specimen with large Barkhausen jumps as an explanation of the noise mechanism in ferromagnets at cyclic magnetization reversal, experiments for the determination of thermal characteristics and the results of an experimental study of a turbulent boundary layer in a supersonic flow. No personalities are mentioned. References accompany most articles.

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Tarbeyev, B.S., and V.P. Yakovlev. Similarity Between an Object and Its Optical Image 5

Conditions at which the image of an object produced by an optic system will resemble the structure of the object are determined. It is shown that for objects of finite range a similar image is impossible. The results obtained in this study define more accurately the conditions of L.I. Mandel'shtam.

Tolstov, Yu.G. [Doctor of Technical Sciences, Professor]. Germanium Power Rectifiers 29

Problems of manufacture and application of germanium power rectifiers are clarified. Methods of determining the operational parameters of germanium power rectifiers as well as control methods using saturable reactors for these rectifiers are studied. P. 29-48

Tolstov, Yu.G. [Doctor of Technical Sciences], G.K. Kartashov, [Candidate of Technical Sciences], and V.V. Pyrkov [Candidate of Technical Sciences]. Model of Electrotransmission of Direct Current 49

This model was designed at the Moscow Institute of Physics and Technology. The power and control systems of the model are briefly described. P. 49-61

Bondarenko, B.V. Temperature Dependence of the Work Function of Thermionic Cathodes 62

Reasons for the temperature dependence of the work function of various thermionic cathodes are investigated. The spot effect of the emitting surfaces of cathodes on the temperature coefficient values of the work function is shown. In the case of semiconductor cathodes the experimentally obtained values of temperature dependence $\Delta\Theta_T/\Delta T$ can be explained by the temperature variation of the electrochemical potential.

Bondarenko, B.V. Methods of Determining Thermionic Emission Constants of Semiconductor Cathodes 72

A combined method of measuring the thermionic emission constants Θ and A of semiconductor cathodes is described. This method permits measuring the work function (average for the flow and average for the surface) for the same cathode specimen, as well as determination of the temperature coefficients of the work functions, which facilitates interpretation of experimental results. Preliminary data on the energy levels of semiconductor cathodes can be obtained by making measurements over a wide temperature range.

Kiselev, A.B. Problem of Emission Decline (Fatigue) in an Oxide-Coated Cathode 85

Experimental results showing an increase in the work function and in the constant A of the oxide-coated cathode during a pulse are presented. The observed change in the work function is considered a verification of the mobile-donor hypothesis. The author thanks B.M. Tsar

Tolstov Yu. G.

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Tolstov, Yu. G.

14(6),8(0) PHASE I BOOK EXPLOITATION SOV/3071

Akademiya nauk SSSR. Energeticheskiy institut

Elektroenergetika, vyp. 1 (Electric Power Engineering, Nr 1) Moscow, Izd-vo AN SSSR, 1959. 159 p. Errata slip inserted. 2,800 copies printed.

Eds. of Publishing House: P. P. Ogarkov and Ye. N. Grigor'yev; Tech. Ed.: Ye. V. Zelenkova; Editorial Board: Yu. G. Tolstov, Doctor of Technical Sciences (Resp. Ed.), I. M. Markovich, Doctor of Technical Sciences, I. S. Stekol'nikov, Doctor of Technical Sciences, P. I. Zubkov, Candidate of Technical Sciences, V. I. Levitov, G. V. Mikhnevich, Candidate of Technical Sciences, and N. D. Bol'shov (Secretary) Candidate of Technical Sciences.

PURPOSE: This collection of articles is intended for specialists in the various fields of electric power engineering treated in it.

COVERAGE: The first issue of the collection of articles, "Elektroenergetika" appeared in April 1959. It is published by ENIN imeni G. M. Krzhizhanovskiy of the Academy of Sciences, USSR. The articles in this issue are based on research and work by the authors under the auspices of ENIN. The articles are on a high theoretical and technical level and represent original contributions to various present-day problems in electrical engineering. References are given after most of the articles.

TABLE OF CONTENTS:

Tolstov, Yu. G., and A. L. Sarkisov. Arc Rectifiers With Increased Pressure 3

In 1954 and 1955 several theoretical and experimental investigations were made at the Institute in order to determine the possibility of using hot-cathode arc rectifiers with increased pressure for long-distance d-c power transmission. The investigations were aimed at improving the parameters of E. Marx arc rectifiers produced in Germany before and during the war. The authors conclude that, despite improvements, modern mercury arc rectifiers are superior to the hot-cathode ones and recommend use of the former in long-distance d-c power transmission. The following organizations and scientific personnel participated in the investigations together with ENIN: IMYeT - D.A. Petrov, K. M. Korol'kov, E. L. Petrusevich; MGU - N. A. Kaptsov, M. Z. Khokhlov and the welding section; Academy of Sciences, USSR - N. N. Rykalin, Corresponding Member of the Academy, I. D. Kulagin, A. I. Pugin and others. There are 4 references: 3 Soviet and 1 German.

Neyman, L. R., Ye. G. Burtsev, and S. B. Cliternik. Model of D-C Electric Power Transmission System of the Power Engineering Laboratory imeni M. A. Shatelen, ENIN AN SSSR 12

This d-c high-voltage network analyzer (model) was built at the laboratory in 1952/53. The following investigations are being conducted with it: increase of reliability and stability of network operation and effect of d-c electric power transmission on the static and dynamic stability of an a-c power system. The investigations are being conducted under the supervision of L. R. Neyman, Corresponding Member of the Academy of Sciences, USSR. There are no references.

Kovalev, F. I., and G. P. Mostkova. High-Frequency Oscillations in Rectifying Units With Saturable Reactors 20

As a result of investigations conducted at the NIIPT, ENIN, and other organizations, methods were found for damping complex oscillations generated in converter installations. This was accomplished by switching a bypass circuit consisting of capacitances and resistances connected in series into the rectifier and power transformer phases. There are 6 references: 2 Soviet, 2 English, 1 German and 1 Italian.

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8(3) SOV/29-59-4-9/26

AUTHOR: Tolstov, Yu., Professor, Doctor of Technical Sciences, Head of the Laboratory for Direct Current of the Power Engineering Institute, AS USSR

TITLE: Again - Direct Current (Snova - postoyannyy tok)

PERIODICAL: Tekhnika molodezhi, 1959, Nr 4, pp 10-13 (USSR)

ABSTRACT: The author of this article, Yuriy Georgieyevich Tolstov, is an outstanding Soviet scientist, who is concerned with the problems of the power supply systems for high voltage direct current. At the International Congress held in Yugoslavia on the occasion of the 100th anniversary of N. Tesla, Tolstov delivered a lecture dealing with the development of the power supply systems in the USSR. Since 1952 he is the head of the Laboratory for Direct Current imeni K. A. Krug at the Power Engineering Institute, AS USSR. Here he reports on long distance current supplies. The USSR already possesses the world's longest electric line Kuybyshev - Moscow, 900 km, which has a maximum voltage of 400 kv. It becomes, however, always more evident that the current costs strongly rise with the length of the distance. Already as far back as the 70's

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Again - Direct Current

SOV/29-59-4-9/26

in the past century the Russian scientist D. Lachinov had dealt with the economic aspect of the current supply. At that time it had already been found that a long distance current supply only pays with high voltage. A radical solution of this problem had been found by the Russian scientist M. O. Dolivo-Dobrovol'skiy, who in 1891 at the Exhibition of Frankfurt am Main demonstrated the method invented by him of conveying three-phase current over long distances, as well as the three-phase induction motor. Already in the thirties of this century it became necessary to draw on remotely situated power sources and to convey the current over distances of 100 - 200 km. Individual stations were linked together for the benefit of a smooth current supply. The USSR already possesses such power supply systems as Mosenergo, Uralenergo, Lenenergo, Yuzhnaya and others with a total capacity of several million kilowatts. The longitudinal compensation is used to secure the parallel work of the stations. The transverse compensation serves for releasing generators and transformers from capacitative currents. The line diameters are increased in order to decrease the corona losses. However, all these measures require additional investments. The direct

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Again - Direct Current

SOV/29-59-4-9/26

current line has been found to offer great advantages and virtually unlimited possibilities, inasmuch as the difficulties occurring with alternating current are avoided to a large extent. Direct current should, however, be employed only for long distance current supplies. Generation, distribution, and consumption will be, as before, with alternating current. The most important apparatus here is a controllable electrical valve, which is a device permitting the current to pass in only one direction. The construction of a powerful mercury valve for strong current and for high voltage simultaneously has proven to be a difficult task. Scientific research work conducted over many years has finally made it possible for the Vsesoyuznyy elektrotekhnicheskiy institut imeni V. I. Lenina (All-Union Electrotechnical Institute imeni V. I. Lenin) to construct a really powerful valve for 120 kv and 900 a, which meets the requirements of long distances. The conveyance of direct current has been calculated to become more economical at a distance of over 600 - 1200 km with open line and of over 40-60 km with cable line. The first industrial experimental direct current line was put into operation between Kashira and Moscow in 1950. It is 115 km long and has a capacity of

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Again - Direct Current SOV/29-59-4-9/26

30,000 kv. The erection of an industrial direct current line has now begun between the Stalingradskaya Hydraulic Power Plant and the Donbass. The capacity of this plant will amount to 750,000 kw and the voltage to 800,000 v. The distance between the two alternating current systems is of about 500 km. The erection of this line will create the prerequisites for the realization of the power supply system between Krasnoyarsk and Ekibastuz (Kazakhstan) prescribed in the 15-Year Electrification Plan. There are 4 figures.

ASSOCIATION: Energeticheskiy institut AN SSSR (Power Engineering Institute AS USSR)

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TOLSTOV, Yu. G.; BAKO, V.N.

Take-off of power from d.c. transmission lines. Elektroenergetika no.2:3-14 '60. (MIRA 14:3)
(Electric power distribution—Direct current)

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001756120014-4"

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BAUM, V.A., doktor tekhn.nauk, otv.red.; TOLSTOV, Yu.G., doktor tekhn. nauk, red.; PETROV, V.I., kand.tekhn.nauk, red.; KOLCHANOGOVA, I.P., kand.tekhn.nauk, red.; LIBKIND, M.S., kand.tekhn.nauk, red.; NABOKO, I.M., inzh., red.; BABURIN, B.L., inzh., red.; BOL'SHOV, N.D., red.; BURAKOV, S.Ye., tekhn.red.

[Proceedings of the Fifth Conference of Young Scientists] Trudy V konferentsii molodykh uchenykh. Moskva, Akad.nauk SSSR, Energ.in-t. Vol.1. 1960. 91 p. Vol.2. 1960. 79 p. (MIRA 14:3)

1. Konferentsiya molodykh uchenykh. 5th.
(Electric power distribution)

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"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001756120014-4

TOLSTOV, YU. G.

AUTHORS: Veyts, V. I., Popkov, V. I., Markovich, I. M., Zakharin, A. G., Tolstov, Yu. G., Nikitin, S. I., Karaulov, N. A., Teleshev, B. A., Gurevich, E. I., Lebedev, M. M., et al. S/105/60/000/04/022/024 E007/E008

TITLE: On the 70th Birthday of N. N. Krachkovskiy

PERIODICAL: Elektrichestvo, 1960, Nr 4, p 93 (USSR)

TEXT: Nikolay Nikolayevich Krachkovskiy is one of the oldest Soviet power engineers. He started his activities in 1916 after finishing his studies at the elektromekhanicheskoye otdeleniye Petrogradskogo politekhnicheskogo instituta (Department of Electromechanics of the Petrograd Polytechnic Institute). From 1922 he worked at the planning and construction of electric networks in the Volkhovstroy, Dneprostroy, and Sredvolgostroy. He worked as an engineer in a leading position in the eastern regions of the USSR from 1942 to 1944. From 1944 to 1946 he was Director of the sektor sistem Leningradskogo otdeleniya Gidroenergoproyekta (Sector of Networks of the Leningrad Branch of the All-Union Trust for the Design and Planning of Hydroelectric Power Plants and Hydroelectric Developments). His scientific and teaching activity began in 1930 at the Politekhnikum Putey soobshcheniya (Polytechnic Institute of Railroads), at the Leningradskiy politekhnicheskiy institut (Leningrad Polytechnic

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Institute), and the Akademiya nauk SSSR (Academy of Sciences of the USSR). Since 1950 he was in a leading position at a Planning Institute, directing simultaneously research work at the Energeticheskiy institut AN SSSR (Institute of Power Engineering of the AS USSR). Since 1954 he has devoted himself entirely to scientific work. He graduated as a Candidate in 1948. In 1953 he was approved as a Senior Scientific Collaborator of the Institute of Power Engineering of the AS USSR in the field of "Electric Networks". He published over 50 papers in the periodicals "Elektrichestvo", "Elektricheskiye stanteii", "Izvestiya AN SSSR", et al., and made a number of inventions. There is 1 figure.

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POPKOV, V.I.; TOLSTOV, Yu.G.; STEKOL'NIKOV, I.S.; MEYEROVICH, E.A.; MOSKVITIN, A.I.; TAFT, V.A.; GORUSHKIN, V.I.; SOVALOV, S.A.; LIBKIND, M.S.

Sixtieth birthday of I.M. Markovich. Elektrichestvo no.5: 87 My '61. (MIRA 14:9)
(Markovich, Isaak Moiseevich, 1901-)

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"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001756120014-4

LIBKIND, Mark Samuilovich; ~~TOLSTOV, Yu.G., prof.~~, doktor tekhn.nauk, otv.red.; GRIGOR'YEV, Ye.N., red.izd-va; MAKOGONOVA, I.A., tekhn.red.; RYLINA, Yu.V., tekhn.red.

[Regulated reactor for a.c. power transmission lines] Upravliaemyi reaktor dlia linii peredachi peremennogo toka. Moskva, Izd-vo Akad.nauk SSSR, 1961. 139 p. (MIRA 14:3)
(Electric power distribution)

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001756120014-4"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001756120014-4

POPKOV, V.I.; ZAKHARIN, A.G.; MARKOVICH, I.M.; TOLSTOV, Yu.G.; GUREVICH, B.A.; KRACHKOVSKIY, N.N.; LEBEDEV, M.M.; MIKHAYLOV, V.I.; DENISOV, V.I.; MOSKVITIN, A.I.; MEYEROVICH, E.A.; TELESHEV, B.A.; STEKOL'NIKOV, I.S.; LAPITSKIY, V.I.; KHEYSTER, I.M.

Veniamin Isaakovich Veits; obituary. Elektrichestvo no.4: 91-92 Ap '61. (MIRA 14:4)
(Veits, Veniamin Isaakovich, 1905-1961)

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001756120014-4"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001756120014-4

GORUSHKIN, V.I.; KOVAL'KOV, G.A.; KOZLOVSKIY, G.F.; LUTIDZE, Sh.I.; MARKOVICH, I.M.; MEYEROVICH, E.A.; MIKHNEVICH, G.I.; POPKOV, V.I.; STEKOL'NIKOV, I.S.; TAFT, V.A.; TOLSTOV, Yu.G.

Sixtieth anniversary of the birth of A.I. Moskvitin. Elektrichestvo no.4:94 Ap '62. (MIRA 15:5)

(Moskvitin, Anatolii Ivanovich, 1902-)

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"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001756120014-4

TOLSTOV, Yu.G.

Performance of a choke in the rectifying network of an electric locomotive (double half-wave network). Elektroenergetika no.5: 98-109 '62. (MIRA 15:4)

(Electric locomotives) (Electric current rectifiers)

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001756120014-4"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001756120014-4

TOLSTOV, Yu.G., doktor tekhn.nauk; SKOROVAROV, V.Ye., inzh.

Transducer for automatic controllers in d.c. systems.
Elektrichestvo no.4:63-65 Ap '62. (MIRA 15:5)

1. Moskovskiy fiziko-tekhnicheskiy institut.
(Electric power distribution--Equipment and supplies)

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001756120014-4"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001756120014-4

BESSONOV, L.A.; DOMANSKIY, B.I.; DROZDOV, N.G.; D'YACHENKO, N.Kh.; ZHEKULIN, L.A.; ZAYTSEV, I.A.; ZALESSKIY, A.M.; KAMENSKIY, M.D.; KOSTENKO, M.P.; LEBEDEV, A.A.; LOMONOSOV, V.Yu.; MITKEVICH, A.V.; SMIRNOV, V.S.; TOLSTOV, Yu.G.; USOV, S.V.; SHRAMKOV, Ye.G.

L.R. Neiman; on his 60th birthday and the 35th anniversary of his educational work. Elektrichestvo no.6:93-94 Je '62. (MIRA 15:6) (Neiman, Leonid Robertovich, 1902-)

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"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001756120014-4

TOLSTOV, Yu. G.

Principles of the calculation of the normal operating modes of a three-phase autonomous inverter. Elektroenergetika no.6: 56-72 '62. (MIRA 16:4)

(Electric current converters)
(Electric power distribution)

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9,2150

AUTHOR: Tolstov, J.G., Professor, Doctor of Technical Sciences

TITLE: A method of analyzing the operation of an independently operating inverter in equilibrium state

PERIODICAL: Elektrotechnický obzor, v. 51, no. 6, 1962, 260-265

TEXT: The article describes a method of analyzing the characteristics of an independently operating balanced inverter, the operation of which requires (a) stable a-c output frequency and symmetrical phase (b) sinusoidal output voltage, and (c) stable output voltage. The author describes the principle of energy balancing, calculates the energy characteristics of the inverter and the energy characteristics of the load. The operating characteristics are determined and a graphical analysis for the active and no-load output is given. A calculation of normal operating conditions as well as characteristics at a constant extinction angle are also given. The results of the analysis are evaluated as follows: (1) When anal-

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A method of analyzing ...

yzing and calculating an independently operating inverter with stabilized frequency and output filters, one can use the well-known equations for a grid-excited inverter. (2) The calculation is based on the assumption that active and no-load outputs of the inverter, the filters, and the load are balanced. (3) The described method of graphical analysis offers the possibility of determining operating conditions and controlling the extinction angle. (4) This method, however, is confined to an investigation of the stationary state only, since only under such conditions phase symmetry and frequency stability are guaranteed. There are 4 figures. (Technical editor: Engineer V. Kubec).

SUBMITTED: November 20, 1961

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"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001756120014-4

TOLSTOV, Yu.G.; MOSTKOVA, G.P.; KOVALEV, F.I.; TAFT, V.A., doktor tekhn. nauk, prof.; ZAVOZIN, L.F., red. izd-va; DOROKHINA, I.N., tekhn. red.

[Three-phaze semiconductor power rectifiers with magnetic amplifier control] Trekhfaznye silovye poluprovodnikovye vypriamiteli, upraviliaemye drosseliami nasyshcheniia. Moskva, Izd-vo Akad. nauk SSSR, 1963. 171 p. (MIRA 16:7)
(Electric current rectifiers)

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001756120014-4"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001756120014-4

TOLSTOV, Yu.G.

Three-phase inverter with electronic commutation. Elektro-energetika no.7:110-127 '63. (MIRA 16:9)

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"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001756120014-4

TOLSTOV, Yu.G., doktor tekhn.nauk, prof.

Some integral relationships in networks containing steel and rectifiers. Elektrichestvo no.10:89-91 O '63. (MIRA 16:11)

1. Energicheskiy institut imeni Krzhizhanovskogo.

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"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001756120014-4

TOLSTOV, Yu.G., doktor tekhn. nauk, prof., otv. red.; LEVITOV, V.I., kand. tekhn. nauk, red.; MARKOVICH, I.M., doktor tekhn. nauk, prof., red.; MIKHNEVICH, G.V., doktor tekhn. nauk, red.; MESHCHERYAKOV, P., kand. tekhn. nauk, red.; STEKOL'NIKOV, I.S., doktor tekhn.nauk, prof., red.

[Operating modes of electrical systems and regulation of synchronous machines] Rezhimy raboty elektrosistem i regulirovanie sinkhronnykh mashin. Moskva, Nauka, 1964. 150 p. (MIRA 17:9)

1. Moscow. Energeticheskiy institut.

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"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001756120014-4

TOLSTOV, Yu.G. (Moskva)

Semiconductor converting devices in power engineering. Izv. AN SSSR. Energ. i transp. no.5:543-559 S-O '64. (MIRA 17:12)

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"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001756120014-4

TOLSTOV, Yu.G., doktor tekhn. nauk, prof.; PRIDATKOV, A.G., inzh.

Problems governing the control of autonomous current inverters. Elektrichestvo no.11:56-59 N '65. (MIRA 18:11)

1. Moskovskiy fiziko-tekhnicheskiy institut.

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ALAD'YEV, I.T.; ALEKSANDROV, B.K.; BAUM, V.A.; GOLOVINA, Ye.S.; GOL'DENBERG, S.A.; ZHIMERIN, D.G.; ZAKHARIN, A.G.; IYEVLEV, V.N.; KNORRE, V.G.; KOZLOV, G.I.; LEONT'YEVA, Z.I.; MARKOVICH, I.M.; MEYEROVICH, E.A.; MIKHNEVICH, G.V.; POPKOV, Z.I.; POPOV, V.A.; PREDVODITELEV, A.S.; PYATNITSKIY, L.N.; STYRIKOVICH, M.A.; TOLSTOV, Yu.G.; TSUKHANOVA, O.A.; CHUKHANOV, Z.F.; SHEYNDLIN, A.Ye.

Lev Nikolaevich Khitrin, 1907-1965; obituary. Izv. AN SSSR. Energ. i transp. no.2:159-160 Mr-Ap '65. (MIRA 18:6)

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L 18800-66 EWT(1)

ACC NR: AP6029598 SOURCE CODE: UR/0281/66/000/003/0019/0027

AUTHOR: Stepanova, V. G. (Moscow); Tolstov, Yu. G. (Moscow)

ORG: none

TITLE: Three-phase-bridge inverter driven from the line with series-parallel capacitors in the converter circuit

SOURCE: AN SSSR. Izvestiya. Energetika i transport, no. 3, 1966, 19-27

TOPIC TAGS: electric capacitor, electronic circuit

ABSTRACT: The article describes a three-phase-bridge inverter with a combination of series and parallel capacitors connected directly to the terminals of the converter circuit. Such an arrangement offers the advantages of stability and of "instantaneous" current commutation, in addition to compensating for the reactive power in the transformer circuit. Voltage and current relations for the fundamental as well as for the harmonics are derived on basis of an equivalent circuit diagram showing the capacitors in the rectifier loops of the three phases. Also the operational characteristics are analyzed, especially stability, regulation and commutation; the performance with and without series capacitors is compared. Certain design aspects are discussed, namely the proper choice of reactances: i.e. the relative sizes of series and parallel capacitors, with emphasis on the advantages of having them connected in the rectifier loops. The last part of this article presents and

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discusses experimental results obtained in the form of oscillographs confirming a high stability and a small commutation angle in this type of inverter. Orig. art. has: 11 figures and 11 formulas. [JPRS: 37,061]

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"A simplified rotary single-stage shaking machine for the production of native forms of antibiotics"

Veterinariya, Vol. 38, no. 10, October 1961, pp. 76

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