

SOV/112-57-6-12288

Translation from: Referativnyy zhurnal. Elektrotehnika, 1957, Nr 6, p 87 (USSR)

AUTHOR: Abramyan, K. G., Grigoryan, E. V.

TITLE: Conditions for Operating a 3-Winding Transformer Economically
(Ekonomicheskiy rezhim raboty trekhobmotochnykh transformatorov)

PERIODICAL: Sb. nauch. tr. Yeravansk. politekhn. in-ta, 1956, Nr 12, pp 81-85

ABSTRACT: A formula has been derived for determining the points of equal, active and reactive, losses applicable to 3-winding transformers when the number of operating transformers (n) is stepped up to (n - 1)

$$W_{n(n+1)} = W_H \sqrt{n(n+1) \frac{\Delta p_c + k \Delta q_c}{m_a \Delta p_{MH} + k m_r \Delta q_{MB}}}$$

where W_H is the rated capacity of one transformer; Δp_c is the active losses in the transformer steel; Δq_c is the reactive transformer-magnetization losses;

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' Conditions for Operating a 3-Winding Transformer Economically

k is the economic equivalent; Δp_{mH} is the active losses in the windings of one transformer at rated load; Δq_{mB} is the reactive losses in the high-voltage winding at the rated load; m_a and m_r are factors depending on the relationship between the rated capacities of windings, their relative loads and short-circuit voltages. The above formula permits selecting optimum operating conditions for 3-winding transformers at a substation, and also permits comparing alternate projects of substation switching.

A.G.K.

Card 2/2

110-3-13/28

110-3-13/28

AUTHORS: Shayn, A.P., Candidate of Technical Sciences, and
Abramov, K.G., Candidate of Technical Sciences.

TITLE: Self-synchronization of low-power Diesel power Stations
(Sobiratsionizatsiya dizel'nykh elektrostaniy nyz'koy
mощности)

PERIODICAL: Vestnik Elektromekhaniki, 1978, Vol. 22, No. 5,
p. 60 - 67 (USSR).

ABSTRACT: Accurate methods of synchronization are difficult to apply to low-power diesel power stations and little data are available on the parallel operation of mobile diesel power stations. The article gives the results of investigations on the process of self-synchronization of an electric power station, type ДЭС-30. Usually when self-synchronization is used, at the instant of paralleling, the generator with the system the rotor circuit is connected to an automatic field suppression resistance, but diesel power stations, types ДЭС-30 and ДЭС-60 are made without automatic field suppression; it is, therefore, recommended instead to connect the rotor to the field circuit. It is not advised to check the slip before paralleling by means of a panel-mounted meter because this requires considerable rearrangement of the control panel. The slip is best checked by a panel-mounted frequency meter. The method

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110-5-13/28

Self-synchronisation of Low-power Diesel Power Stations

of carrying out self-synchronisation of these power stations is described. Tests results for synchronisation with an infinitely large system are given in Table 1. After being synchronised more than 1 000 times in this way, the generator was in good condition and no mechanical damage was observed. Fig.2 gives typical oscillograms of self-synchronisation of a diesel-electric power station, type D-50 with slips of zero and 4%.

Self-synchronisation between diesel power stations was investigated. The principal data for the most difficult case, when the two generators are of the same power, are given in Table 2. Tests made with no-load on the generators gave the typical oscillograms shown in Fig.4. Tests were also made with inductive and resistive loads. It will be seen from the data in Table 2 that with a resistive load, self-synchronisation is preferably made with a slip of - 0 - 0%.

The method of self-synchronisation is advisable for connecting mobile power stations for parallel operation with a system or with one another. The synchronising currents are not dangerous. Whenever diesel power stations are paralleled, it is desirable simultaneously to apply excitation to the synchronised generator

Card 2/3

110-3-13/22

Subject: Self-synchronization of Power Stations

Self-synchronization of power stations. Self-synchronization.
Self-synchronization of power stations.

ASSOCIATE: Yerevan Polytechnical Institute (Yerevanskiy
Politehnicheskii Institut)

AVAILABILITY: Library of Congress

Card 3/3 1. Frequency meters 2. Generators-Synchronization

ABRAHAM, E.S.; RYNGOLD, V.N.

Comparative characteristics of the submicroscopic structure of
nuclear membranes in some cells. Izv. AN Arm. SSR. Biol. nauki
18 no.6:87-92 Je '65. (MIRA 18:9)

1. Zoologicheskiy inatitut AN Armganskey SSR i Institut
poliomiylita i virusnykh entsefalitov AMN SSSR.

ABRAMYAN, K.S.; REZNICHENKO, V.N.

Electron microscopic study of the interaction of the virus of poliomyelitis and cytoplasm. Dokl. AN SSSR 161 no.6:1431-1433, 1964, 21 p., 1 fig. (PMID 14476)

1. Institut morfologii zhivotnykh im. A.N.Severtsova (Leningrad)
Institut poliomyelita i virusnykh entsfalitov AN SSSR. Submitted December 14, 1964.

ABRAMYAN, A.S., REYNGOL'D, V.N.

Study of the ultrastructural changes in the nuclear envelope during mitosis. Dokl. AN SSSR 269 no. 2:199-200 N 1975.

(MIRA 18:10)

1. Institut morfologii i fiziologii im. A.N. Severtseva AN SSSR
i Institut polimiyelita i khimicheskoy fiziki AN SSSR.
Submitted January 15, 1975.

ABRAMYAN, L.

Utilize the wastes of fur industries in the manufacture of
cardboard for shoe manufacture. Kozh.-obuv. prom. 7 no.4:
39-40 Ap '65. (MIRA 18:6)

TELUNTS, Ashot Matevosovich; ~~ABRAMYAN, I. A.~~, otv. red.; SHTIREN,
R.A., red. izd-va; GORDYAN, G.L., tekhn. red.

[Conditions and characteristics of the development of sci-
ence in a socialistic society] Usloviia i osobennosti raz-
vitiia nauki v sotsialisticheskome obshchestve. Erevan, Izd-
vo AN ArmSSR, 1963. 289 p. (MIRA 16:10)
(Communism and science)

ZHOLIK, A.P.; Lashko, I.O., *Int. J. Astron. Space Sci.* 1984, 1, 1.
AVSENY'IN, I.O.

Reviews and bibliography. *Int. J. Astron. Space Sci.* 1984, 1, 1.
(Int. J. Astron. Space Sci.)

L 23847-66

ACC NR: AP6015265

SOURCE CODE: UR/0298/65/018/006/0087/0092

AUTHOR: Abramyan, K. S.; Reyngol'd, V. N.

ORG: Zoological Institute AN ArmSSR (Zoologicheskii institut AN ArmSSR); Institute of Polimyelitis and Viral Encephalitis AMN SSSR (Institut poliomielita i virusnykh entsefalitov AMN SSSR)

TITLE: Comparative characteristics of the submicroscopic structure of the nuclear membranes of certain cells

SOURCE: AN ArmSSR. Izvestiya. Seriya biologicheskikh nauk, v. 18, no. 6, 1965, 87-92

TOPIC TAGS: electron microscopy, histology

ABSTRACT: The article describes the results of study of the structure of the nuclear membrane cells of cultures of kidney tissues of the green African marmoset (*Cercopithecus aethiops*), cells of the salivary glands of the larva of *Chironomus tentans* and glial cells of the spinal ganglion of the rat. These cultures were studied with the electron microscope in connection with the general problem of comparative analysis of the ultrastructure of the nucleus and its interrelation with the cytoplasm. The study confirms earlier evidence that the nuclear membrane is double-layered. The number of pores varied, possibly in correlation with the function of the various cells studied. Photographs are given. Orig. art. has: 10 figures. [JPRS]

SUB CODE: 06 / SUBM DATE: 16Dec64 / ORIG REF: 003 / OTH REF: 020
Cord 1/1

ABRAMYAN, M.S.; ARAKELYAN, R.A.

~~Armenian S.S.R.~~
The Eocene stage in the Armenian S.S.R. Izv. AN Arm. SSR. Ser.
FMET 1 no.5:419-422 '48. (MLRA 9:8)

1. Institut geologicheskikh nauk Akademii nauk Armyanskoy SSR.
(Armenia--Paleontology, Stratigraphic)

ABRAMYAN, M.S.

New Brachiopoda species found in Famennian stage deposits in Armenia. Izv. AN Arm.SSR Ser. FMET nauk 7 no.2:65-71 Mr-Apr '54.
(MLRA 8:3)

1. Institut geologicheskikh nauk AN Armyanskoy SSR.
(Armenia--Brachiopoda, Fossil)

SAAKYAN-GRZALYAN, Nina Arkad'yevna; ABRAMYAN, M.S., otvetstvennyy red.;
KAPLANYAN, M.A., tekhn.red.

[Foraminifera of Tertiary deposits in the Erivan Basin] Foramini-
fery tretichnykh otlozhenii Erovenskogo basseina. Brevan, Izd-vo
Akad. nauk Armienskoj SSR, 1957. 139 p. (MIRA 11:5)
(Armenia--Foraminifera, Fossil)

ABRAMYAN, M.S.; BABAYEV, A.G., otvetstvennyy redaktor; KAPLANYAN, M.A.,
tekhnicheskiiy redaktor

[Brachiopoda of the Upper Famenian and Etroeung deposits of
Southwestern Armenia] Brakhiopody verkhnefamenskikh i etrenskikh
otlozhenii Iugo-Zapadnoi Armenii. Erevan, Izd-vo AN Armianskoi SSR,
1957. 141 p. (MLRA 10:7)
(Armenia--Brachiopoda, Fossil)

ABR/MYAN, P.S. (Syktyvkar)

Rare case of aspirat.on of a dental bridge into the bronchi,
Stomatologia 37 no.2:71-72 Mr-Ap '58. (MIRA 11:5)
(BRONCHI--FOREIGN BODIES)

ADRIAN, R.

"Excavations at the Carni Fortress," Kolyma State No. 1, 1952

11PA October 1952

ABRAMYAN, R.A.

Persian walnut tree (*Juglans regia* L.) on the coast of Lake Sevan.
Izv.AN Arm.SSR. Biol. i sel'khoz. nauki 1 no.1:91-93 '49.
(SEVAN REGION--WALNUT) (MIRA 9:8)

ABRAMYAN, R. A.

Abramyan, R. A. "Wild tree and scrub growth of the basin of Lake Sevan", Byulleten' (Yerevansk.) botan. sada, No. 7, 1949, p. 17-26, (Resume in Armenian), - Bibliog: 5 items.

SO: U-4630, 16 Sept. 53, (Letopis 'Zhurnal 'nykh Statey, No. 23, 1949).

ABRAMYAN, R.A.

Walnut cultivation in the Sevan Basin. Biul.Bot.sada [Eriv.] no.8:
27-31 '49. (MLRA 9:8)

(Sevan region--Walnut)

ABRAMYAN, R.A.

Willows and poplars in the coastal region of Lake Sevan. Biul.
Bot.sad [Priv.] no.8:33-35 '49. (MLRA 9:8)
(Sevan region--Willows) (Sevan region--Poplar)

ABRAMYAN, R.A.; TUMANYAN, B.Ye.

Ananii Shirakatsi's astronomical works. Ist.-astron. issl. no.2:239-
246 '56. (MLRA 10:6)

(Shirakatsi, Ananii, fl. 650-680)

ABRAMYAN, R.A.; GERICH, I.F.

Rosa damascena in the shore area of Lake Sevan. Izv.AN.Arm.SSR. Biol.
nauki 13 no.9:47-50 S '60. (MIRA 13:11)

1. Lesnaya opytnaya stantsiya Armyanskoy SSR.
(SEVAN REGION--ROSES)

ABRAMYAN, R.A.

Forests of the Gyumey shore in the basin of Lake Sevan. Izv. AN
Arm. SSR. Biol. nauki 14 no.6:39-50 '61. (MIRA 14:10)

1. Botanicheskiy institut AN Armyanskoy SSR.
(GYUMY REGION- FOREST ECOLOGY)

ABRAMYAN, R.A.; GURICH, I.F.

Ornamental trees and shrubs of Dilizhan. Izv. AN Arm. SSR.
Biol. nauki 16 no.5:49-53 My '63. (MIRA 17:6)

1. Nauchno-issledovatel'skaya lesnaya opyt'naya stantsiya
goroda Kirovakan.

ABRAMYAN, S.

BASKAKOV, P., (g. Gor'kiy); ABRAMYAN, S.; MURACHEV, I., predsedatel' soveta radiokluba; KOCHEGAROV, N., nachal'nik radiokluba; LATKIN, V., predsedatel' soveta radiokluba; SHISHUKOV, P., rukovoditel' konstruktorskoy sekti kluba; BARBIN, G., chlen radiokluba; BUDANTSOV, V., predsedatel' soveta radiokluba; GODUNOV, P., nachal'nik radiokluba; TEVELEV.

Provide parts for radio amateurs. Radio no.12:14-17 D '53. (MLRA 6:12)

1. Nachal'nik radiokluba Vsesoyuznogo dobrovol'nogo obshchestva sodeystviya armii, aviatsii i flotu (for Baskakov). 2. Nachal'nik Vil'nyus-skogo radiokluba Vsesoyuznogo dobrovol'nogo obshchestva sodeystviya armii, aviatsii i flotu (for Tevelev).

(Radio--Apparatus and supplies)

ABRAMYAN, S. A.

"An Appliance for Controlling the Quantity of Liquids," Zavodskaya Laboratoriya,
No 8, 1952, pp 1003-1004.

ABRAMYAN, S. A.

"An Automatic Pipette", Zavodskaya Laboratoriya, Vol. 10, No. 3, p 374, 1952.

SHAKHNAZAROV, Nikolay Samsonovich. Prinimeli uchastiye: ABRAMYAN, S.A.;
IBRAGIMOV, B.G.; KOCHAROV, S.S.; MARTIROSOV, G.A.; MKRTCHYAN,
R.A. MUSTAFAYEVA, S., red.; MIRKISHIYEVA, S., tekhn.red.

[The Nagorno-Karabakh Autonomous Province] Nagorno-Karabakhskaya
avtonomnaya oblast'. Baku, Azerbaidzhanskoe gos.izd-vo, 1960.
83 p. (MIRA 13:12)

1. Pervyy sekretar' Nagorno-Karabakhskogo obkoma Kommunisticheskoy
partii Azerbaydzhana (for Shakhnazarov).
(Nagorno-Karabakh Autonomous Province)

ABRAMYAN, SH. G.

ABRAMYAN, SH. G.- "Effect of Automatic Regulation of the Excitation of Synchronous Generators on the Dynamic Stability of Long-distance Electric Transmission." Min of Higher Education USSR, Leningrad Polytechnic Inst imeni M. I. Kalinin, Leningrad 1955 (Dissertations For Degree of Candidate of Technical Sciences)

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

ARMANTIAN, Dr. G.,

"Operating Conditions of a System for Controlling Excitation of Generators for Long-distance Transmission," with Gruzdev, I. A., Levinshteyn, M. L., page 111.

"Effect of Automatic Control of Generator Excitation on Dynamic Stability of Long-distance Transmission," with Gruzdev, I. A., and Levinshteyn, M. L., page 120.

High Voltage Technique, Moscow, Gosenergoizdat, 1958, 664pp
(Series: Its Trudy, No. 15)

This collection of articles sums up the principal results of investigations and studies made by Prof. A. A. Gorev, Dr. Tech. Sci., and his staff in the field of high voltage phenomena and techniques at LPI (Leningrad Polytech. Inst.). It was at this institute that Prof. Gorev completed his higher scientific education and then taught and carried on his investigations in the field until his death in 1951. In 1956, by decree of Min of Higher Education, the High-Voltage Lab. at LPI was named after A. A. Gorev.

ABRAMYAN, Sh.G.; GRUZDEV, I.A.; LEVINSHTEYN, M.L.

Working conditions of an excitation control system for generators
of long-distance electric power transmission. Trudy LPI no.195:
102-119 '58. (MIRA 11:10)
(Electric power distribution--Alternating current)
(Electric generators)

ABRAMYAN, Sh.G.; GRUZDEV, I.A.; LEVINSHTEYN, M.L.; SHCHERBACHEV, O.V.

Effect of automatic excitation control of generators on the
dynamic stability of long-distance electric power transmission.
Trudy LPI no.195:120-157 '58. (MIRA 11:10)
(Electric power distribution) (Electric generators)
(Automatic control)

ABRAMYAN, Sh.G., inzh.; GOLUBCHIK. G.Va., inzh.; MALYY. A.P., inzh.

Network for measuring the total active power of an electric power
plant. Elek. sta. 36 no.10:78-79 0 '65.

(MIRA 18:10)

ABRAMYAN, S.L., inzh.

Improving safety equipment used in geophysical prospecting.
Bezop. truda v prom. 1 no.12:24-26 D '57. (MIRA 12:3)

1. Trest Azneftegeofizika.
(Prospecting--Geophysical methods)

ABRAMYAN, S. L.

PHASE I BOOK EXPLOITATION SOV/5592

Vsesoyuznoye soveshchaniye po vnedreniyu radioaktivnykh izotopov i yadernykh izlucheniyy v narodnom khozyaystve SSSR. Riga, 1960.

Radioaktivnyye izotopy i yadernyye izlucheniya v narodnom khozyaystve SSSR; trudy Vsesoyuznogo soveshchaniya 12 - 16 aprelya 1960 g. S. Riga, v 4 tomakh. t. 4: Poiski, razvedka i razrabotka poleznykh iskopayemykh (Radioactive Isotopes and Nuclear Radiation in the National Economy of the USSR; Transactions on the Symposium Held in Riga, April 12 - 16, 1960, in 4 volumes. v. 4: Prospecting, Surveying, and Mining of Mineral Deposits) Moscow, Gostoptekhlizdat, 1961. 284 p. 3,640 copies printed.

Sponsoring Agency: Gosudarstvennyy nauchno-tekhnicheskyy komitet Soveta Ministrov SSSR. Gosudarstvennyy komitet Soveta Ministrov SSSR po ispol'zovaniyu atomnoy energii

Eds. (Title page): N. A. Petrov, L. I. Petrenko, and F. S. Savitskiy; ed. of this volume: M. A. Speranskiy; Scientific ed.: M. A. Speranskiy; Executive Eds.: N. N. Kuz'mina and A. G. Ionel';

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Radioactive Isotopes and Nuclear (Cont.)

SOV/5592

Tech. Ed.: A. S. Polosina.

PURPOSE : The book is intended for engineers and technicians dealing with the problems involved in the application of radioactive isotopes and nuclear radiation.

COVERAGE: This collection of 39 articles is Vol. 4 of the Transactions of the All-Union Conference of the Introduction of Radioactive Isotopes and Nuclear Reactions in the National Economy of the USSR. The Conference was called by the Gosudarstvennyy nauchno-tekhnicheskiy komitet Sovet Ministrov SSSR (State Scientific-Technical Committee of the Council of Ministers of the USSR), Academy of Sciences USSR, Gosplan USSR (State Planning Committee of the Council of Ministers of the USSR), Gosudarstvennyy komitet Soveta Ministrov SSSR po avtomatizatsii i mashinostroyeniyu (State Committee of the Council of Ministers of the USSR for Automation and Machine Building), and the Council of Ministers of the Latvian SSR. The reports summarized in this publication deal with the advantages, prospects, and

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Radioactive Isotopes and Nuclear (Cont.)

SOV/5592

development of radioactive methods used in prospecting, surveying, and mining of ores. Individual reports present the results of the latest scientific research on the development and improvement of the theory, methodology, and technology of radiometric investigations. Application of radioactive methods in the field of engineering geology, hydrology, and the control of ore enrichment processes is analyzed. No personalities are mentioned. There are no references.

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ABRAMYAN, S.L.; AKSEL'ROD, S.M.; ALEKSEYEV, F.A.; AL'TSHEL', S.A. [deceased].
BESPALOV, D.F.; GADZHI-KASIMOV, A.S.; ZHILIN, K.A.; LISTENGARTEN, B.M.;
ODINOKOV, V.P.; PUTKARADZE, L.A.; SHIMELEVICH, Yu.S.

Neutron-neutron pulse method for investigating wells and results of
its use in the Balakhan'-Sabunchi-Ramany field. Azerb. neft. khoz.
39 no.11:9-13 N '60. (MIRA 13:12)
(Apscheron Peninsula—Oil well logging, Radiation)

ABRAMYAN, S.L.

Geophysical studies of deep wells. Geol. nefti i gaza 6 no.6:43-49
Je '62. (MIRA 15:6)

1. Trest Azneftegoofizika.
(Azerbaijan--Oil well logging--Equipment and supplies)

ABRAMYAN, S.L.; AL'TSHEL', S.A.[deceased]; TER-GRIGORYAN, Yu.N.

Effect of gun perforating on the stability of casings. Neft.
khoz. 40 no.11:47-52 N 62. (MIRA 16:7)

(Oil well casing)

ABRAMYAN, S.L.; TER-GRIGORYAN, Yu.N.

Multichannel gun perforators. Azerb.neft.khoz. 41 no.3:40-42
Mr '62. (MIRA 15:8)
(Oil well shooting—Equipment and supplies)

GUSEYN, A., inzh.po izobretatel'stvu; ABRAMYAN, T., starshiy inzh.

We are improving compressors. Neftianik 6 no.7:20-21 J1 '61.
(MIRA 14:7)

1. Neftepromyslovoye upravleniye Azisbekovneft' (for Guseyn).
2. Normativno-issledovatel'skaya stantsiya Asnefti (for Abramyan).
(Compressors)

ABRAMYAN, T.

A collective of communist labor. Neftianik 6 no.9:8 S '61.
(Oil fields--production methods) (MIRA 14:10)

ABRAMYAN, T.

In the third field of the Lenin Petroleum Trust.
Neftianik 7 no.5:4 My '62. (MIRA 15:12)
(Azerbaijan--Oil fields--Production method)

ABRAMYAN, T.

Greater oil and gas production with lesser expenditures. Neftianik
7 no.4:3-4 Ap '62. (MIRA 15:11)

1. Starshiy inzh. normativno-issledovatel'skoy stantsii Gosu-
darstvennogo ob'yedineniya Azerbaydzhanskoy neftyanoy promyshlennosti.
(Azerbaijan--Oil fields--Production methods)

ABRAMYAN, T.

Scientific workshop. Neftianik 7 no.7:7-8 JI '62. (MIRA 16:3)
(Ordzhonikidze region (Azerbaijan)—Oil fields—Production methods)

SOV/92-58-1-8/22

AUTHORS: Lalayev, M. I., and Abramyan, T. Kh., Staff Members of NIS MNP
AzSSR

TITLE: Revision of the Flow Scheme for Furnaces in a Petroleum Processing
Unit (Izmeneniye skhemy dvizheniya syr'ya v pechaldi nefteperegonnoy
ustanovki)

PERIODICAL: Neftyanik, 1958, Nr 1, p. 12 (USSR)

ABSTRACT: The authors state that in the original scheme of the petroleum pro-
cessing unit "Sovetskaya Trubchatka" the flow of crude stock entered
side-chambers of the furnace in two streams, and the central con-
vection chamber in one stream. As a result, the pressure at the
outlet of the furnace pump was rising to 15-18 atm. (Fig. 1).
Since such pressure impaired operating conditions of the unit and
reduced its output, Engineers A. A. Kyazimov and A. A. Khidristanly
proposed that the original flow scheme of the unit be changed.
According to this new scheme, the crude stock from the primary
evaporator comes in two streams to the central section and side
sections of the convection chamber and then runs in two streams
through radiant tubes of the side bank and the ceiling bank. (Fig. 2)

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Revision of the Flow Scheme for Furnaces in a Petroleum Processing Unit

As a result of this modification, the furnace pump pressure dropped to 5-6 atm., operating conditions improved, and the consumption of fuel and steam decreased. Thanks to this suggestion an annual saving of 168,000 rubles was made. It is, therefore, recommended that other pipe stills also adopt the revised flow scheme. There are 2 drawings, one showing the original flow scheme and the other the revised scheme.

ASSOCIATION: NIS MNP AzSSR

- | | |
|------------------------|----------------------------|
| 1. Petroleum industry | 2. Petroleum--Processing |
| 3. Furnaces--Operation | 4. Fuel pumps--Performance |

Card 2/2

Al. Abramyan T. Kh.

92-2-13/37

AUTHORS: Lalayev, M.I., Abramyan, T. Kh., Stapp Fellows

TITLE: How to Remove the Sand Plug in an Oil Well Without
Using Flushing Equipment (Udalenie peschanoy probki bez
promyvochnogo agregata)

PERIODICAL: Neftyanik, 1958, Nr 2, pp 11-12 (USSR)

ABSTRACT: The authors state that the sand plug in the oil well shaft cannot easily be removed by a sand pump when the pressure in the productive formation is low. Removal is particularly difficult when the oil well shaft has some defects. In this case a flushing fluid has to be used. However, a considerable quantity of this fluid is adsorbed by the formation and as a result the operating conditions of the well are disrupted. Therefore, Agayev and Babazade, workers of the thirteenth oil field operating under the Petroleum Production Administration of the Ordzhonikidzeneft' organization, have proposed a new method of removing the sand plug in the oil well shaft without the use of special flushing equipment. They recommend a simple device lowered into the well by a 2 to 2 1/2-in. pipe. Water or oil is used as the flushing fluid. This device creates a jet

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How to Remove the Sand Plug in an Oil Well (Cont.)

92-2-13/37

which washes out the sand plug. When the flushing operation is completed, the pipe string is lifted and a deep well pump is inserted. Then the device can also serve to protect the pump from sand and gas. The method was applied in oil wells 700-750 m. deep and resulted in a saving of 46,610 rubles per year. There is one sketch of the proposed device.

ASSOCIATION: NIS MNP AzSSR (Scientific Research Department of the Ministry of the Petroleum Industry, Azerbaydzhanskaya SSR)

AVAILABLE: Library of Congress

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14(5), 28(1)

SOV/92-59-1-10/36

AUTHORS: Zaferman, N.I. and Abramyan, T.Kh., Senior Engineers

TITLE: Remote Control of Pressure Oil Wells (Dispetcherizatsiya nasosno-kompressornykh skvazhin)

PERIODICAL: Neftyanik, 1959, Nr 1, pp 15-17 (USSR)

ABSTRACT: The authors state that several telemechanical systems controlling oilfield operations exist at present in the Soviet Union. In their opinion the simplest and most dependable system designed to control deep pumped wells is the ChT-1 system introduced in the No 4 oilfield of the Ordzhonikidzeneft' Petroleum Production Administration. Its operational frequency is in the range from 40 to 380 cycles. The system can transmit signals on the continuity of oil well operation. It can also be used for telephonic communications, turning on or off an electric motor, emergency signaling, teledynamomentering of oil well operations, and for automatically measuring oil well flow. The author describes the equipment installed at each well and in the control room. The control panel has four two-wire outgoing lines, each of which can be connected with 24 deep pressure wells and with 3 oil gathering centers. Thus, the telemechanical system can control, in total, 96 deep pressure wells and 12 oil gathering centers. The teledynamomentering of a well is carried out with the aid

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Remote Control of Pressure Oil Wells

SOV/92-59-1-10/36

of a pressure pickup installed at the balance beam of a pumper. Its signals are transmitted to the control room, where they are amplified by a dynamoscope, and shown as a luminous pressure curve appearing on the panel board. From 2 to 3 minutes are needed to produce a dynamogram, so that within one hour it is possible to produce dynamograms of 20-30 oil wells. Fig. 1 shows the design of the unit used for the remote automatic gaging of the oil well flow. One measuring trap is used for eight oil wells and has therefore 8 distributing valves, each provided with a membrane mechanism. Fig. 2 shows the design of the pneumatic valve with its principal parts, and Fig. 3 the design of the electrically operated pneumatic valve. The author explains how this equipment works, and how the level of petroleum and water is automatically measured in a trap. In order to improve precision in determining the oil well flow all the wells are grouped into wells producing pure petroleum, wells producing petroleum with the water content under 90 percent, and wells producing petroleum with water content exceeding 90 percent. The automation of the equipment permits the control room operator to measure the oil well flow twice a day. There are 3 figures.

ASSOCIATION: NPU Ordzhonikidzeneft' i NIS MNP AzSSR (The Ordzhonikidzeneft' Petroleum Production Administration, and the Scientific Research Department of the Ministry of Petroleum Industry of the Azerbaydzhan SSR)

Card 2/2

ABRAMYAN, T.Kh.; AKPER GUSEYN

Improving APR-2 and AD-25 automatic machines. Neftianik 5
no.2:20-21 F '60. (MIRA 14:10)
(Hoisting machinery--Electric driving)

ABRAMYAN, T.Kh.

Device for turning pipes. Neftianik 5 no.6:23 Je '60.
(MIRA 13:7)

1. Starshiy inzhener Nauchno-issledovatel'skogo sektora ob"yedineniya Azneft.'.

(Pipe)

GANICHKIN, V.V.; ABRAMYAN, T.Kh.

Work practices of N.Grigorian's crew. Neftianik 5 no.10:9-10 0 '60.
(MIRA 13:10)

1. Nachal'nik tekhotdela kontory bureniya Neftepromyslovogo upravle-
niya Azizbekovneft' ob"yedineniya Azneft' (for Ganichkin).
2. Starshiy inzhener Nauchno-issledovatel'skoy seksii ob"yedine-
niya Azneft' (for Abramyan).
(Azerbaijan--Cranes, derricks, etc.)

BRAMYAN, T.Kh.

Striving for the title of brigades of communist labor. Neftianik
5 no.11:4-5 N '60. (MIRA 13:11)

1. Starshiy inzhener Nauchno-issledovatel'skogo sektora Gosudar-
stvennogo ob"yedineniya Azerbaydzhanskoy neftedobuvayushchey
promyshlennosti.

(Efficiency, Industrial)

ABRAMYAN, T. Kh., inzh.; ISMAYLOV, S.N., inzh.

Mechanizing the installation of offshore platforms for oil
production. Mekh.i avtom.proizv. 14 no.2:50-51 F '60.
(Oil well drilling, Submarine--Technological innovations)

ABRAMYAN, T.Kh., starshiy inzh.

Mechanization of the oil filling process in lubricating gears
of pumping jacks. Neftianik 6 no.2:22 F '61. (MIRA 14:10)

1. Normativno-issledovatel'skaya stantsiya Azerbaydzhanskogo
soveta narodnogo khozyaystva.
(Lubrication and lubricants)

ABRAMYAN, T.,¹⁰⁰ starshiy inzh.

Giurgianneft' Oil Field Administration is an enterprise of communist labor. Neftianik 6 no.3:8 Mr '61. (MIRA 14:10)

1. Normativno-issledovatel'skaya stantsiya Gosudarstvennogo ob'yedineniya Azerbaydzhanskoy neftedobyvayushchey promyshlennosti.
(Neftyanyye Kamni region--Oil well drilling, Submarine)

ABRAMYAN, T.Kh., starshiy inzh.

Flushing sand. Neftianik 6 no.4:19 Ap '61. (MIRA 14:8)

1. NIS Azerbaydzhanskogo Soveta Narodnogo Khozyaystva.
(Sand)

ABRAMYAN, T.Kh., starshiy inzh.

Work practice of an oil well underground repair shop. Neftianik 6
no.7:12-13 J1 '61. (MIRA 14:7)

1. Normativno-issledovatel'skaya stantsiya ob'yedineniya Azneft'.
(Oil wells—Maintenance and repair)

ABRAMYAN, T.

Visiting the Baku oil workers. Neftianik 6 no.7:30 J1 '61.

(Baku region--Oil fields--Production methods) (MIRA 14:7)

ABRAMYAN, T.Kh., starshiy inzh.

Fire progressive workers of the oil field. Neftianik 6 no.8:6
Ag '61. (MIRA 14:10)

1. Normativno-issledovatel'skaya stantsiya ob"yedineniya Azneft'.
(Azerbaijan--Oil fields--Production methods)

ABRAMYAN, T.

Stand for pumps. Neftianik 7 no.2:23 F '62. (MIRA 15:2)
(Azerbaijan--Oil well pumps--Maintenance and repair)

ABRAMYAN, T.Kh., starshiy inzh.

In the fields of the Gyuregyan Petroleum Trust. Neftianik
6 no.11:10-11 N '61. (MIRA 14:12)

1. Normativno-issledovatel'skaya stantsiya ob'yedineniya
Azneft'.

(Gyurgyan region- Oil well drilling, Submarine)

ABRAMYAN, T., EASYUK, A.

Obligation fulfilled. Neftianik 6 no.12:5 D '61.

(MIRA 14.12)

(Kyurovdag Region--Oil fields--Production methods)

ABRAMYAN, T.Kh.

Ali Gusein Babaev's crew. Neftianik 7 no.9:6 S '62.

(MIRA 16:7)

1. Starshiy inzh. normativno-issledovatel'skoy stantsii
Gosudarstvennogo ob'yedineniya Azerbaydzhanskoy neftyanoy
promyshlennosti.

(Azerbaijan—Oil well drilling)

ABRAMYAN, T.Kh.

Aluminum-alloy valves. Mash. i نفت. obor. no.8:47-48 '63.
(MIRA 17:6)

1. Gosudarstvennoye ob'yedineniye Azerbaydzhanskoy neftyanoy
promyshlennosti.

ABRAMYAN, T.Kh.

Pins made of aluminum-antimony alloy for studying wells. Nefteprom.
delo no.9:33 '63. (MIRA 17:4)

1. Nauchno-issledovatel'skaya stantsiya Gosudarstvennogo
ob"yedineniya Azerbaydzhanskoy naftyanoy promyshlennosti.

ABRAMYAN, T.Kh.

Efficient method for investigating injection wells. Nefteprom.
delo no.10:23-24 '63. (MIRA 17:6)

1. Nauchno-issledovatel'skaya stantsiya ob"yedineniya "Azneft".

... ABRAMYAN, V. y inzh.

The "Izh" racing motorcycle goes in for a test. Za rul. 20
no.4:8b Ap '62. (MIRA 15:5)

1. Neshtatnyy korrespondent zhurnala "Za rulem".
(Motorcycles)

ROZHNOV, V., inzh. (Izhovsk); ABRAMYAN, V., inzh. (Izhevsk)

For those who drive the IZh-56 motorcycle. Za rul. 20 no.5:
24-25 My '62. (MIRA 16:4)

1. Nachal'nik Tsentral'noy laboratorii po ispytaniyu mototsiklov
(for Rozhnov). 2. Neshtatnyy korrespondent zhurnala "Za rulem"
(for Abramyan).

(Motorcycles)

ABRAMYAN, V., inzh.

The "Izh-IU piter power unit." Za rul. 21 no.2:20-21 F '63.
(MIRA 16:4)

1. Obshchestvennyy korrespondent zhurnala "Za rulem" na
Izhevskom mashinostroitel'nom zavode.

(Motorcycles--Engines)

L 10350-67 EWP(k)/EWT(m)/EWP(t)/ETI IJP(c) JD

ACC NR: AP601586

SOURCE CODE: UR/0167/65/000/006/0049/0051

AUTHORS: Yakunin, G. I.; Mirbatayev, V. A.; Abramyan, Ya. P.

33

ORG: Tashkent Polytechnic Institute (Tashkent⁺skiy politekhnicheskiy institut)

TITLE: Increasing the life of high temperature alloy cutting tools by introducing electric current and gaseous oxygen into the cutting region

SOURCE: AN UzSSR. Izvestiya. Seriya tekhnicheskikh nauk, no. 6, 1965, 49-51

TOPIC TAGS: cutting tool, thermoelectric cooling, steel alloy, tool alloy, metal cutting/ 5 steel alloy, VK8 tool alloy

ABSTRACT: Thermoelectric cooling of the cutting³ zone to increase tool life has been proposed and investigated by several authors (Tool Cooler. Mechanical Engineering, .. vol. 85, 1963, No. 2, for example). Since the thermoelectric e.m.f. in metal couples is small, the effects can be substantially increased by oxidizing the metals in the cutting region. Steel 5 specimens were turned at 91.5 m/min ($t = 1$ mm, $S = 0.2$ mm/rev) using a VK8 cutting tool ($\gamma = 10^\circ$, $\alpha = \alpha_1 = 12^\circ$, $\varphi = \varphi_1 = 45^\circ$). Tool wear under normal conditions was compared with tool wear when a current of 5 amps (2-volt source) was passed through the cutting region in the direction of the thermoelectric e.m.f. and opposite to the thermoelectric e.m.f. while a stream of oxygen (15--20 liter/min) was directed into the cutting region. It was found that tool wear was decreased by a factor of 8--10 due to the improved thermoelectric cooling resulting from the oxide thermoelectric couples. Orig. art. has: 3 figures.

Card 1/122 SUD CODE: 13/ SUDM DATE: 23Feb65/ ORIG REF: 003/ OTH REF: 001

ABRAMYAN, Ye.

Centralization of cement transportation to Erivan. Prom.Arm.4
no.4:18-20 Ap '61. (MIRA 14:6)

1. Otdel transporta Sovnarkhoza Armyanskoy SSR.
(Armenia--Cement--Transportation)

ABRAMYAN, Ye.

Efficiency of the consolidation and cooperation of transportation
units in Armenian enterprises. Prom.Arm. 4 no.5:31-34 My '61.
(MIRA 14:8)

1. Upravleniye transporta Sovnarkhoza Armyanskoy SSR.
(Armenia--Railroads, Industrial)

ABRAMYAN, Ye., inzh.

Regulate transportation conditions. Prom.Arm. 6 no.1:17-19
Ja '63. (MIRA 16:4)

1. Upravleniye transporta Soveta narodnogo khozyaystva
Armyanskoy SSR.

(Armenia--Transportation)

147000-55 EWT(m)/EFA(w)-2/EWA(m)-2 Pab-10 INF(c) GS

ACCESSION NR: AT5007321

S/2000/64/000/000/0274/0287

AUTHOR: Bayyer, V. N.; Dlinoy, G. A.; Bondarenko, L. N.; Yerozolimskiy, B. G.;
Korobeynikov, L. S.; Mironov, Ye. S.; Naumov, A. A.; Onuchin, A. P.; Panasyuk,
V. V.; Popov, S. G.; Sidorov, V. A.; Sil'vestrov, G. I.; Skrinakly, A. N.;
Zhabakhpashev, A. G.; Auslander, V. L.; Kiselev, A. V.; Kushnirenko, Ye. A.;
L'vshits, A. A.; Rodionov, S. N.; Synakh, V. S.; Yudin, L. I.; Abramyan, Ye. A.;
Vasserman, S. B.; Vecheslavov, V. V.; Dimov, G. I.; Papadichev, V. A.; Protopopov,
I. Ya.; Budker, G. I.

TITLE: Colliding electron-electron, positron-electron, and proton-proton beams

SOURCE: International Conference on High Energy Accelerators. Dubna, 1963.
Trudy. Moscow, Atomizdat, 1964, 274-287

TOPIC TAGS: high energy interaction, high energy plasma, particle physics, par-
ticle beam, charged particle beam

ABSTRACT: In the Institute of Nuclear Physics, Siberian Department, Academy of
Sciences SSSR, programs on high-energy particle physics are mainly concerned with
work on colliding charged particle beams. The Institute considers it unsuitable

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ACCESSION NR: AT5007921

for its purpose to install huge accelerators whose construction requires large resources outlaid and long time. For work on colliding electron-electron, positron-electron, and proton-proton beams, three installations are being built, which are in various stages of readiness. Work on colliding electron beams was conducted at the institute (then a laboratory of the Institute of Atomic Energy named I. V. Kurchatov) in the Fall of 1956, after Kerst's report on accelerators with colliding proton beams of the FFAG type. By that time Soviet scientists had already acquired some experience in obtaining large electron currents; in particular, the mentioned laboratory had installed and then abandoned a device for the spiral storage of electrons (G. I. Budker and A. A. Naumov, CERN Symposium, 1, 76 (1956)), by which, subsequently, circulating currents of the order of 100 amperes were obtained. In 1957 two variants of this device were considered at the same time. The first one consisted of two accelerators with spiral storage and subsequent transition of the particles to synchrotron state in comparatively narrow paths. The second one had storage rings with constant magnetic field and frequent external injection because of the damping of the oscillations under the action of radiation. The first variant was more cumbersome; the second variant contained an element not developed at that time, namely a 100-kilovolt commutator of 10 kilo-amperes with nanosecond front. At the end of 1957, the first positive results were obtained

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L 47304-65

ACCESSION NR: AT5007921

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with a packing discharger of 100 kilovolts, and work stopped on the variant with storage rings. Originally it was proposed to set up two devices: VEP-1 of 2×130 Mev energy, and VEP-2 of 2×500 Mev energy. The VEP-1 was considered as an actual model of an accelerator and as a device for conducting initial experiments at low energies. After the Panofsky report in 1958 on his work with colliding electron beams conducted in his laboratory at Stanford, construction ceased on 500-Mev storage paths and work was continued on the 2×130 -Mev installation. Instead of work on colliding electron beams with energies of 500 Mev, work at the end of 1958 was conducted with colliding positron-electron beams and the planning of the VEPP-2 device was begun, whose main elements are a strong-current electron accelerator and a high-vacuum storage path of 700 Mev energy. At the present time the VEP-1 and VEPP-2 are installed in Novosibirsk. The VEP-1 is in a state of neglect, but at the end of 1964 experiments will be begun with it. Installation of the VEPP-2 has been completed. To obtain a marked effect from the application of colliding proton beams, an accelerator is needed with an energy of at least 10 Gev. Since the ordinary accelerator at such energies is a very bulky machine, it was decided to combine the idea of colliding proton beams with the creation of an iron-less impulse accelerator with very large fields and a neutralized central busbar. This latter work of creating such a machine was reported by the authors at a Moscow conference

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ACCESSION NR: AT5007921

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held in 1956. The presence of a field with two directions in an iron-less accelerator with central busbar permits the acceleration of protons toward opposite sides in one machine, which makes possible the collision of protons in case of a suitable race-track. At the present time the Institute is developing a proton device with a magnetic field of about 200 kilogauss and radius of 2 meters for a particle energy of 12 Gev in the beam (equivalent energy is around 300Gev). Tests are being conducted on models, and an effective method of injection by overcharging of negative ions is under study. Also under development are an impulse electric power supply system of 100 million joules capacity and an hf power supply. Since 1958 the Institute has been conducting theoretical investigations on the limits of applicability of quantum electrodynamics [V. N. Bayyer, ZhETF, 37, 1490 (1959), and UFN, 78, 619 (1962)] for the calculation of the radiational corrections to the electrodynamic cross-sections [V. N. Bayyer and S. A. Kheifets, ZhETF 40, 613-715 (1961) and Nuclear Physics (in print)], and on other problems of high-energy particle physics that are connected with the preparation of experiments on colliding beams [V. N. Bayyer, I. B. Khriplovich, V. V. Sokolov, and V. S. Synakh, in ZhTF, 1961]. The present report takes up under the mentioned three main headings the following pertinent topics: the accelerator-injection, storage paths, electron-optical channel,

Cord 4/5

L 47304-65

ACCESSION NR: AT5007921

Input and output system, experiments on storage, proposed work, experimental set-up, physical layout of magnets, power supply, etc. Orig. art. has: 8 figures.

ASSOCIATION: Institut yadernoy fiziki SO AN SSSR (Institute of Nuclear Physics, SO AN SSSR)

SUBMITTED: 26May64

ENCL: 00

SUB CODE: EE, NP

NO REF SOV: 012

OTHER: 003

ML
Card 5/5

L 4237-66 EWT(m)/EPA(w)-2/EWA(m)-2 IJP(c) OS
 ACCESSION NR: AT5007979 S/0000/64/000/000/1065/1072 51
 B41

AUTHOR: Abramyan, Ye. A.; Bender, I. Ye.; Bondarenko, L. N.; Budker, G. I.;
Glagolev, G. B.; Kadymov, A. Kh.; Neshkov, I. N.; Naumov, A. A.; Pal'chikov, V.
Ye.; Panasyuk, V. S.; Popov, S. G.; Protopopov, I. Ya.; Rodionov, Yu. I.;
Samoylov, I. M.; Skriskiy, A. N.; Yudin, L. I.; Kon'kov, N. G.; Mostovoy, Yu. A.;
Nezhevenko, O. A.; Ostreyko, G. N.; Petrov, V. V.; Sokolov, A. A.; Timoshin, I. Ya.

TITLE: Work on the strong-current accelerators¹⁹ of the Nuclear Physics Institute,
SO AN SSSR. (I) Strong-current pulse accelerators with spiral storage of the elec-
trons. (II) Strong-current accelerators with one-revolution capture of the in-
jected electrons

SOURCE: International Conference on High Energy Accelerators. Dubna, 1963. Trudy.
Moscow, Atomizdat, 1964, 1065-1072

TOPIC TAGS: high energy accelerator, electron accelerator, electron beam, betatron,
plasma

ABSTRACT: The work on developing strong-current electron ring accelerators
was begun in 1965 by the authors at the Nuclear Physics Institute, Siberian Depart-
ment, Academy of Sciences SSSR, with the object of studying the possibility of

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ACCESSION NR: AT5007979

forming relativistic stabilized beams. In the laboratories of the Institute experimental studies were carried out on the four methods for obtaining large ring currents of relativistic electrons: (1) spiral method of storing the electrons in installations of the betatron type with subsequent betatron synchrotron acceleration (Budker G. I. CERN Symposium 1, 68 (1956)); (2) obtaining of limiting electron currents by means of the injection of electrons from a strong-current linear accelerator into a ring chamber of large aperture with subsequent synchrotron acceleration; (3) storage of electrons in tracks (parking orbits) with constant magnetic field by means of the multiple injection of electrons from another less strong-current accelerator; this method is utilized for the storage of electrons and positrons in experiments with colliding beams (expounded in detail by G. I. Budker in the present collection, p. 274); (4) obtaining of large electron currents by means of the acceleration of electrons by a ring plasma. The present report discusses the first two methods under the following topics: (I) pulsed iron-less betatron with preliminary charge storage (B-2 device); strong-current pulsed synchrotron B-2S; pulsed strong-current betatron with spiral storage (B-3 device). (II) iron-less one-turn strong-current synchrotron (BSB); strong-current pulsed synchrotron B-3H. Orig. art. has: 7 figures.

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L 4237-66

ACCESSION NR: AT5007979

ASSOCIATION: Institut yadernoy fiziki SO AN SSSR (Nuclear Physics Institute,
SO AN SSSR)

SUBMITTED: 26May65

ENCL: 00

SUB CODE: NP.

NO REF SOV: 001

OTHER: 001


Card 3/3

TAGS: magnetic shield

ABSTRACT: Construction and design methods of shields capable of segregating

L 45454-65

ACCESSION NR: AP5007053

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practically impossible, design formulas are offered whose development is based on more or less crude models. The shielding factor estimated by these formulas

is not in good agreement with the authors with

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L 49253-65 EWT(m)/EPA(w)-2/EWA(m)-2 Pab-10/Pt-7 IJF(c)

ACCESSION NR: AP5010796

UR/0057/65/035/004/0605/0611

19
AUTHOR: A. A. Kuvshinov, I.V. Kurchatov Atomic Energy Institute, Moscow, U.S.S.R.

TITLE: A betatron with spiral accumulation of electrons

SOURCE: Zhurnal tekhnicheskoy fiziki, v. 35, no. 4, 1965, 605-611

TOPIC TAGS: betatron, space charge, electron trajectory, electron accumulation

ABSTRACT: The authors describe the B2 accelerator of the I.V.Kurchatov Atomic Energy Institute and report experiments performed with it from 1955 to 1957 for the purpose of obtaining large circulating currents. The results of the experiments are presented.

1. Introduction

2. Summary

3. Description of the system. A description of the system is given in the following. The system is a computerized system for the analysis of data from a satellite in orbit. The system is designed to process data from a satellite in orbit and to produce a report on the results of the analysis.

4. Description of the system. A description of the system is given in the following. The system is a computerized system for the analysis of data from a satellite in orbit. The system is designed to process data from a satellite in orbit and to produce a report on the results of the analysis.

5. Description of the system. A description of the system is given in the following. The system is a computerized system for the analysis of data from a satellite in orbit. The system is designed to process data from a satellite in orbit and to produce a report on the results of the analysis.

6. Description of the system. A description of the system is given in the following. The system is a computerized system for the analysis of data from a satellite in orbit. The system is designed to process data from a satellite in orbit and to produce a report on the results of the analysis.

7. Description of the system. A description of the system is given in the following. The system is a computerized system for the analysis of data from a satellite in orbit. The system is designed to process data from a satellite in orbit and to produce a report on the results of the analysis.

8. Description of the system. A description of the system is given in the following. The system is a computerized system for the analysis of data from a satellite in orbit. The system is designed to process data from a satellite in orbit and to produce a report on the results of the analysis.

9. Description of the system. A description of the system is given in the following. The system is a computerized system for the analysis of data from a satellite in orbit. The system is designed to process data from a satellite in orbit and to produce a report on the results of the analysis.

10. Description of the system. A description of the system is given in the following. The system is a computerized system for the analysis of data from a satellite in orbit. The system is designed to process data from a satellite in orbit and to produce a report on the results of the analysis.

Card 2/2

ERT(-)/EPA(w)-2/EHA(m)-2 Pab-10/Pt-7 IJP(c)

UR/0057/65/035/004/0612/0617

ACCESSION NR: AP5010797

AUTHOR: Abranyan, Ye.A.; Bender, I.Ye.; Budker, G.I.; Kadymov, A.Kh.; Naumov, A.A.;
V.G.

TOPIC PAGE: Electron accelerator, synchrotron

The authors briefly describe the construction and operation of an iron-
po fizike vysokikh energii, M., 1956; L'Age Nucleaire, No. 1, 1956). The principal
feature of the design was the use of a single-turn shaped conductor magnet under
conditions in which the skin depth was small compared with the dimensions of the
to 2 MeV, and were used for the acceleration of electrons by betatron action
synchrotron. The instrument was designed to produce 200 MeV electrons in a magnetic

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ACCESSION NR: AP5010797

Card 2/2

L 04-75-67 FWT(m) 101(c)
ACC NR: AP6018348 SOURCE CODE: UR/0089/66/020/005/0385/0392

AUTHOR: Abramyan, Ye. A.; Gaponov, V. A.

ORG: none

TITLE: Strong-current accelerator based on a transformer

SOURCE: Atomnaya energiya, v. 20, no. 5, 1966, 385-392

TOPIC TAGS: focusing accelerator, particle accelerator component, pulse transformer/
ELT-1.5 accelerator

ABSTRACT: The article describes the operating principle of a direct-action accelerator, constructed at the initiative of G. I. Budker at the Institute of Nuclear Physics of the Siberian Department AN SSSR, and designated ELT-1.5 (electronic transformer for acceleration of electrons up to 1.5 Mev energy) (Fig. 1). The average beam power reaches 25 kW, and the efficiency approximately 90%. The electron-current pulse duration is adjustable from 0 to 5 msec, and the repetition frequency is adjustable to 50 cps. The average current (17 mA) can reach 1/6 the maximum pulsed current. Magnetic lenses installed inside the tube make it possible to raise the current to 100 mA in a beam of 5 mm diameter. Shields made of heavy metal, located near the tube axis, protect the gas gaps and other electrically charged parts against radiation. Detailed descriptions are presented of the operating principle and features of the transformer, the installation parameters, the automatic control system, and the preliminary experimental results. The beam sweep was in two directions, at angles $\pm 2.5^\circ$ and $\pm 25^\circ$. The maximum short-duration average power was ~ 30 kW. The test results confirmed the cor-

Card 1/3

UDC: 621.384.60

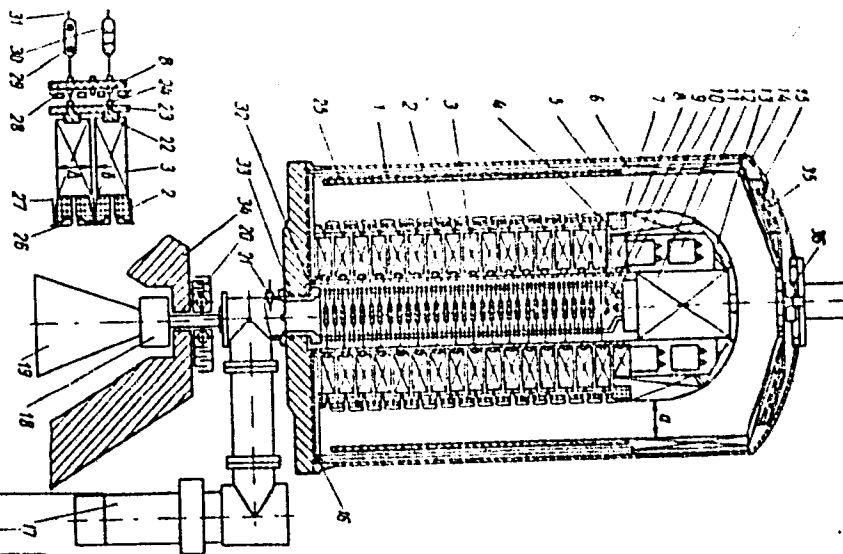
L 04675-6
ACC NR: AF6018348

Fig. 1. Diagram of apparatus. 1,2 - Transformer windings, 9 - control electrode, 10 - injector.

rectness of the design. Ways of improving the efficiency and increasing the electron energy are discussed. The authors thank the staff members of the Institute of Nuclear physics of the Siberian Department AN SSSR

for taking part in the construction and adjustment of the apparatus, namely engineers G. Kraynov, V. Nikolayev, and I. Shalashov, mechanics V. Biryukov, G. Balykov, M. Voronov, M. Gubin, Yu. Yefremenko, A. Kosachev, and M. Stepanov, and technician V. Kirov. Orig. art.

Card 2/3



L 04675-67
ACC NR: AF6018348

has: 6 figures and 5 formulas.

SUB CODE: 20/ SUBM DATE: 24Jan66/ ORIG REF: 001/ OTH REF: 001

kh

Card 3/3

ABRAMYAN, Ye. A.

Institute of Nuclear Physics, Siberian Division,
Academy of Sciences USSR, Novosibirsk.

(Source: Works of the International Conference on
Accelerators, Dubna, 21-27 August 1963)

ABRAMYAN, Ye.L.

Possibilities of cutting the idle time of freight cars on tracks
of enterprises administered by the economic council. Zhel.dor.
transp. 43 no.3:78 Mr '61. (MIRA 14:3)

1. Nachal'nik zheleznodorozhnogo otdela sovnarkhoza Armyanskoy
SSR. g. Yerevan.

(Armenia--Railroads, Industrial)