

11-4-66, 1.1.

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USSR.

Selection of effective means for protecting buried cables from corrosion caused by stray currents from electric cars. F. Kh. Chirakhov and I. I. Ivanov. Sbornik Nauch. Trudov Leningrad. Elektrotekh. Inst. Tsukernyevsk. Zhurnal. Kbiel. 1934, No. 6, 175-82; Referat. Zhur. Kbiel. 1934, No. 23512. — The procedure for charting corrosion areas through which underground cables are laid is outlined. H. H. Horsch...

CHIRAKHOV, F.Zh., prof., kand. tekhn. nauk; IVANOV, I.I., assist.

Selecting efficient protection of underground cables from corrosion  
caused by stray currents occurring in electric traction circuits.  
Sbor. nauch. trud. LETIIZET no.5:175-182 '53. (MIRA 11:3)  
(Electric railroads--Wires and wiring) (Electrolytic corrosion)

*IVANOV, I. I.*

AID P - 3021

Subject : USSR/Electricity

Card 1/2 Pub. 27 - 8/33

Author : Ivanov, I. I., Kand. of Tech. Sci.

Title : ~~Scientific and technical problems of railroad electrification~~  
Scientific and technical problems of railroad electrification

Periodical : Elektrichestvo, 7, 36-42, J1 1955

Abstract : The author gives a short review of the development of electric traction in the USSR, and discusses programs of further development. Among these, the author investigates: the problem of use of one-phase current of commercial frequency; problems of further improvement of d-c current electric traction; requirements from the industry building the necessary equipment, and the need of improving methods of electrification of railroads.

IVANOV, I.I.

Single-phase electrification of railroads. Zhel. dor. transp.  
38 no.8:82-86 Ag '56. (MLRA 9:10)

1. Glavnyy inzhener glavnogo upravleniya elektrifikatsii i  
energeticheskogo khozyaystva Ministerstva putey soobshcheniya.  
(Railroads--Electrification)

ALFEROV, A.A.; ARTEMKIN, A.A.; ASHKENAZI, Ye.A.; VINOGRADOV, G.P.; GALEYEV,  
A.U.; GRIGOR'YEV, A.N.; D'YACHENKO, P.Ye.; ZALIT, N.N.; ZAKHAROV,  
P.M.; ZOBNIN, N.P.; IVANOV, I.I.; IL'IN, I.P.; KMETIK, P.I.; KUDRYA-  
SHOV, A.T.; LAPSHIN, F.A.; HOLYARCHUK, V.S.; PERTSOVSKIY, L.M.;  
POGODIN, A.M.; RUDOV, M.L.; SAVIN, K.D.; SIMONOV, K.S.; SITKOVSKIY,  
I.P.; SITNIK, M.D.; TETREEV, B.K.; TSETYHKIN, I.Ye.; TSUKANOV, P.P.;  
SHADIKYAN, V.S.; ADELUNG, N.N., retsenzent; AFANAS'YEV, Ye.V., retsen-  
zent; VLASOV, V.I., retsenzent; VOROB'YEV, I.Ye., retsenzent; VORO-  
NOV, N.M., retsenzent; GRITCHENKO, V.A., retsenzent; ZHEBEBIN, M.N.,  
retsenzent; IVLIYEV, I.V., retsenzent; KAPORTSEV, N.V., retsenzent;  
KOCHUROV, P.M., retsenzent; KRIVORUCHKO, N.Z., retsenzent; KUCHKO,  
A.P., retsenzent; LOBANOV, V.V., retsenzent; MOROZOV, A.S., retsen-  
zent; ORLOV, S.P., retsenzent; PAVLUSHKOV, E.D., retsenzent; POPOV,  
A.N., retsenzent; PROKOF'YEV, P.F., retsenzent; RAKOV, V.A., retsen-  
zent; SINEGUBOV, N.I., retsenzent; TERENIN, D.F., retsenzent; TIKHO-  
MIROV, I.G., retsenzent; URBAN, I.V., retsenzent; FIALKOVSKIY, I.A.,  
retsenzent; CHEPYZHEV, B.F., retsenzent; SHEBYAKIN, O.S., retsenzent,  
SHCHERBAKOV, P.D., retsenzent; GARNYK, V.A., redaktor; LOMAGIN, N.A.,  
redaktor; MORDVINKIN, N.A., redaktor; NAUMOV, A.N., redaktor; POBE-  
DIN, V.F., redaktor; RYAZANTSEV, B.S., redaktor; TVERSKOY, K.N.,  
redaktor; CHEREVATYY, N.S., redaktor; ARSHINOV, I.M., redaktor;  
BAHELYAN, V.B., redaktor; BERNGARD, K.A., redaktor; VYRSHINSKIY, S.V.,  
redaktor; GAMBURG, Ye.Yu., redaktor; DERIBAS, A.T., redaktor;  
DOMBROVSKIY, K.I., redaktor; KORNEYEV, A.I., redaktor; MIKHEYEV, A.P.,  
redaktor

(Continued on next card)

ALFEROV, A.A. ---- (continued) Card 2.

MOSEVIN, G.N., redaktor; RUBINSHTEYN, S.A., redaktor; TSYPIN, G.S.,  
redaktor; CHERNYAVSKIY, V.Ya., redaktor; CHERNYSHEV, V.I., redaktor;  
CHERNYSHEV, M.A., redaktor; SHADUR, L.A., redaktor; SHISHKIN, K.A.,  
redaktor

[Railroad handbook] Spravochnaia knizhka zheleznodorozhnika, Izd.  
3-e, ispr. i dop. Pod obshchei red. V.A.Garnyka. Moskva, Gos.  
transp.zhel-dor. izd-vo, 1956. 1103 p. (MLRA 9:10)

1. Nauchno-tekhnicheskoye obshchestvo zheleznodorozhnogo transporta.  
(Railroads)

*Тенной И.И.*  
 БЕНЕСШЕВИЧ, I.I., kandidat tekhnicheskikh nauk; BOGIN, N.N., kandidat tekhnicheskikh nauk; BYKOV, Ye.I., inzhener; VLASOV, I.I., kandidat tekhnicheskikh nauk; GRITSEVSKIY, M.Ye., inzhener; GRUBER, L.O., inzhener; GURVICH, V.G., inzhener; DAVYDOV, V.N., inzhener; YER-SHOV, I.M., kandidat tekhnicheskikh nauk; ZASORIN, S.N., kandidat tekhnicheskikh nauk; IVANOV, I.I., kandidat tekhnicheskikh nauk; KRAUKLIS, A.A., inzhener; KROTOV, L.B., inzhener; LAPIN, V.B., inzhener; LASTOVSKIY, V.P., dotsent; LATUNIN, N.I., inzhener; MARKVARDT, K.G., professor, doktor tekhnicheskikh nauk; MAKHAYLOV, M.I., professor, doktor tekhnicheskikh nauk; NIKANOROV, V.A., inzhener; OSKOLKOV, K.N., inzhener; OKHOSHIN, L.I., inzhener; PARFENOV, K.A., dotsent, kandidat tekhnicheskikh nauk; PERTSOVSKIY, L.M., inzhener; POPOV, I.P., inzhener; PORSHNEV, B.G., inzhener; RATHER, M.P., inzhener; KOSSIYEVSKIY, G.I., dotsent, kandidat tekhnicheskikh nauk; RYKOV, I.I., kandidat tekhnicheskikh nauk; RYABKOV, A.Ya., professor, dotsent, kandidat tekhnicheskikh nauk; RYABKOV, A.Ya., professor [deceased]; TAGER, S.A., kandidat tekhnicheskikh nauk; KHAZEN, M.M., professor, doktor tekhnicheskikh nauk; CHERNYSHEV, M.A., doktor tekhnicheskikh nauk; MDIN, L.Ye., professor, doktor tekhnicheskikh nauk; YURGENEV, B.N., dotsent; AKSENOV, I.Ye., dotsent, kandidat tekhnicheskikh nauk; ARKANGELSKIY, A.S., inzhener; BARTENEV, P.V., professor, doktor tekhnicheskikh nauk; BERNGARD, K.A., kandidat tekhnicheskikh nauk; BOROVOY, N.Ye., dotsent, kandidat tekhnicheskikh nauk; BOGDANOV, I.A., inzhener; BOGDANOV, N.K., kandidat tekhnicheskikh nauk; VILNICHENKO, N.G., dotsent, kandidat ekonomicheskikh nauk;  
 (Continued on next card)

BENESHEVICH, I.I.----(continued) Card 2.

VASIL'YEV, V.F.; GORCHAROV, H.G., inzhener; DEHIBAS, A.T., inzhener;  
DOBROSEL'SKIY, K.M., dotsent, kandidat tekhnicheskikh nauk; DLUGACH,  
B.A., kandidat tekhnicheskikh nauk; YEFIMOV, G.P., kandidat tekhnicheskikh nauk;  
ZEMBLINOV, S.V., professor, doktor tekhnicheskikh nauk; ZABELLO, H.L., kandidat tekhnicheskikh nauk; IL'IN, K.P., kandidat tekhnicheskikh nauk; KARZEMNIKOV, A.D., kandidat tekhnicheskikh nauk; KAPIUN, F.Sh., inzhener; KANSHIN, M.D.; KOCHNEV, F.P., professor, doktor tekhnicheskikh nauk; KOGAN, L.A., kandidat tekhnicheskikh nauk; KUGHURIN, S.F., inzhener; LEVASHOV, A.D., inzhener; MAKSIMOVICH, B.M., dotsent, kandidat tekhnicheskikh nauk; MARTYNOV, M.S., inzhener; MSDAL', G.M., inzhener; NIKITIN, V.D., professor, kandidat tekhnicheskikh nauk; PADNYA, V.A., inzhener; PANTELEYEV, P.I., kandidat tekhnicheskikh nauk; PSTROV, A.P., professor, doktor tekhnicheskikh nauk; POVOROZHENKO, V.V., professor, doktor tekhnicheskikh nauk; PISKAREV, I.I., dotsent, kandidat tekhnicheskikh nauk; SERGEYEV, Ye.S., kandidat tekhnicheskikh nauk; SIMONOV, K.S., kandidat tekhnicheskikh nauk; SIMANOVSKIY, M.A., inzhener; SUTAZOV, I.G., inzhener; TALDAYEV, F.Ya., inzhener; TIMONOV, K.K., kandidat tekhnicheskikh nauk; USHAKOV, N.Ya., inzhener; USPEBNSKIY, V.K., inzhener; FEL'DMAN, B.D., kandidat tekhnicheskikh nauk; FERAPONTOV, G.V., inzhener; KHOKHLOV, L.P., inzhener; CHERNOMORDIK, G.I., professor, doktor tekhnicheskikh nauk; SHAMAYEV, M.F., inzhener; SHAPIRKIN, B.I., inzhener; YAKUSHIN, S.I., inzhener; GRANOVSKIY, P.G., redaktor; TISHCHENKO, A.I., redaktor; ISAYEV, I.P., dotsent, kandidat tekhnicheskikh nauk, redaktor; KLIMOV, V.F., dotsent kandidat tekhnicheskikh

(Continued on next card)



BENESHEVICH, I.I.--- (continued) Card 3.

nauk, redaktor; MARKOV, M.V., inzhener, redaktor; KALININ, V.K.,  
inzhener, redaktor; STEPANOV, V.N., professor, redaktor; SIDOROV, N.I.,  
inzhener, redaktor; GERONIMUS, B.Ye., kandidat tekhnicheskikh nauk,  
redaktor; ROBEL', R.I., otvetstvennyy redaktor

[Technical reference manual for railroad engineers] Tekhnicheskii  
spravochnik zheleznodorozhnika. Moskva, Gos. transp.zhel-dor. izd-vo.  
Vol.10. [Electric power supply for railroads] Energosnabzhenie zhelez-  
nykh dorog. Otv.red. toma K.G.Markvardt. 1956. 1080 p. Vol.13.  
[Operation of railroads] Eksploatatsiia zheleznykh dorog. Otv. red.  
toma R.I.Robel'. 1956. 739 p. (MLRA 10:2)

1. Chlen-korrespondent Akademii nauk SSSR (for Petrov)  
(Electric railroads) (Railroads---Management)

IVANOV, I.I., kandidat tekhnicheskikh nauk.

All-Union scientific and technical conference on the electrification  
of railroads. Elektrichestvo no.1:91-92 Ja '56. (MLRA 9:3)  
(Railroads--Electrification)

*IVANOV, I. I.*

USSR/Corrosion - Protection From Corrosion

J.

Abs Jour : Referat Zhur - Khimiya, No 9, 1957, 33197

Author : Ivanov, I.I., Shtager, V.V.

Inst : Leningrad Institute of Railroad Transportation Engineers

Title : Experimental Studies of the Efficacy of Cathodic Protection From Corrosion Induced by Stray Currents

Orig Pub : Sb. Leningr. in-ta inzh. zh.-d. transp., 1956, No 151, 115-119

Abstract : Studies of the effects of stray currents on the effectiveness of cathodic protection of the Kokhtla - Yarve - Leningrad gas pipe-line, have revealed that this method of protection is not entirely adequate. Thus of the 6 points at which determinations were made, at 2 positive potential values were recorded during 13-15% of the period of observation, in spite of the switched on protection, as a result

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IVANOV, I.I., kandidat tekhnicheskikh nauk.

Problems of railway electrification. Elektrichestvo no.3:1-5 Mr '57.  
(MIRA 10:4)

1. Glavnoye upravleniye elektrifikatsii i energeticheskogo khozya-  
stva Ministerstva putey soobshcheniya SSSR.  
(Railroads--Electrification)

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IVANOV, I. I.

Develop the electric power facilities of the railroads. Elek. i  
tepl.tiaga no.7:12-14 JI '57. (MERA 10:9)

1. Glavnyy inzhener Glavnogo upravleniya elektrifikatsii i  
energeticheskogo khozyaystva Ministerstva putey soobshcheniya.  
(Electric railroads)

IVANOV, I.I.; VOROZHEYKIN, D.I.

~~Methods of economizing on electric power on the railroads. Zhel.~~  
dor. transp. 39 no.3:43-49 Mr '57. (MLRA 10:4)

1. Glavnyy inzhener Glavnogo upravleniya elektrifikatsii i energeticheskogo khozyaystva Ministerstva putey soobshcheniya (for Ivanov)
2. Glavnyy inzhener Elektrovesnogo upravleniya Glavnogo loksomotivnogo khozyaystva Ministerstva putey soobshcheniya (for Vorozheykin)  
(Electric railroads)

IVANOV, I. I., Cand Tech Sci -- (diss) <sup>effect</sup> "The ~~Role~~ of Voltage and  
Current Asymmetry <sup>upon selection</sup> ~~in the~~ Choice of <sup>the</sup> Type and Circuits of Trans-  
formers for Traction Substations of <sup>Monophase</sup> ~~One-Phase~~ 50-Cycle Current."  
Len., 1958, 8 pp (Acad. Sci. USSR. ~~Inst~~ Power Engineering Inst.  
imeni Academician G. M. Krzhizhanovskiy). 100 copies. (KL, 34-58, 100)

16



IVANOV, I.I.

A.c. electrification of railroads is a concrete task for the present day. Elek. i tepl. tiaga 2 no.10:1-3 0 '58.

(MIRA 11:11)

1. Glavnyy inzhener Glavnogo upravleniya elektrifikatsii i energeticheskogo khozyaystva Ministerstva putey soobshcheniya.  
(Railroads--Electrification)

IVANOV, I. I.

Electric power supply prospects for railroad transportation.  
Zhel. dor. transp. 40 no. 7:15-21 J1 '58. (MIRA 11:7)

1. Glavnyy inzhener Glavnogo upravleniya elektrifikatsii i  
energeticheskogo khozyaystva Ministerstva putey soobshcheniya,  
(Electric railroads)

IVANOV, I.I., kand.tekhn.nauk

Electronic integrator used for automatic measurement of  
potentials in underground cables. Sbor.LIIZHT no.161:212-218  
'58. (MIRA 11:12)  
(Electric cables) (Electronic measurements)

IVANOV, I.I.

Work of the Moscow Branch of the Scientific and Technical Society  
of the Power Industry. Elek.sta. 29 no.6:92-94 Je '58.

(MIRA 11:9)

(Power engineering--Societies, etc.)

GARRO, M. [Garreau, Marcel]; VISLOUKH, L.A., inzh. [translator]; TRAKHTMAN,  
L.M., kand.tekhn.nauk [translator]; IVANOV, I.I., kand.tekhn.nauk  
[translator]; ROZENFEL'D, V.Ye., prof., doktor tekhn.nauk, obshchiy  
red.; BOBROVA, Ye.N., tekhn.red.

[Electric traction] Elektricheskaya tiaga. Pod obshchei red.  
V.E.Rozenfel'da. Moskva, Gos.transp.zhel-dor.izd-vo, 1959. 386 p.  
Translated from the French. (MIRA 13:3)  
(Electric railroads)

12(3),8(6)

AUTHOR:

Ivanov, I. I., Candidate of  
Technical Sciences

SOV/105-59-1-2/29

TITLE:

Prospects for the Electrification of Railroads in 1959-65  
(Elektrifikatsiya zheleznykh dorog v perspektive 1959-1965 gg.)

PERIODICAL:

Elektrichestvo, 1959, Nr 1, pp 4-9 (USSR)

ABSTRACT:

In the theses put forward in the report delivered by N. S. Khrushchev at the 21st Party Congress of the Communist Party of the USSR, the task was set for a technical reconstruction of the railroad system on the basis of electrification. It is planned to electrify about 20,000 km of railroad tracks which is more than double the electrified railroad network existing at present. In the coming 7 years, the following main tracks will be electrified: Moscow-Kuybyshev-Irkutsk-Far East, Moscow-Gor'kiy-Sverdlovsk, Moscow-Kazan'-Sverdlovsk, Karaganda-Magnitogorsk-Ufa, Moscow-Khar'kov-Rostov-Mineral'nyye vody. By 1965, 45 % of the whole freight traffic by railroad will be run by electric traction. Transport prime costs for 1 t/km were, according to a financial report of the railroads, 1.87 times smaller for electric traction than for steam traction last year. - Mainly the construction of thermal power

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Prospects for the Electrification of Railroads  
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stations on the basis of cheap coal, natural gas, and mazout is provided for. - A short survey is given on the electrification carried on between the two last - the 20th and 21st - Party Congresses. - In the coming 7 years, a reduction of prime costs will have to be attained. Some indications to this direction are given. - It was decided to introduce in railroads the new modern system of electric traction by alternating current with industrial frequency extensively. About 12,000 km will be electrified according to this new system, namely the Krasnoyarsk Railroad, sections of the East Siberian Railroad in 1959-60 already. Electric traction will be put into practice by a single-phase current of industrial frequency at a tension of 25 kv in the contact line. In 1959, the Novocherkasskiy elektrovoznny zavod (Novocherkassk Electric Locomotive Factory) will supply the railroads with 60 new alternating-current electric locomotives with 6 axles and a capacity of 4200 kw of the N-60 type. Besides, two experimental types of an electric locomotive with 8 axles for alternating current and 5600 kw are to be constructed in 1959.- A test of the electric locomotives N-60 on the test track

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Prospects for the Electrification of Railroads  
in 1959-65

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Ozherel'ye—Pavelets of the Moscow-Kursk-Donbass Railroads confirmed the superiority of tractive characteristics of these locomotives as compared to direct-current locomotives. The friction factor was 10-15 % higher than for equivalent direct-current locomotives. - The Rizhskiy vagonnyy zavod (Riga Railroad Car Factory) prepares experimental types of alternating-current electric trains ER-7 with ignitrons and ER-8 with slip-ring engines. - The Moskovskiy transformatornyy zavod (Moscow Transformer Plant) developed and delivered already the first high-voltage transformers with 31,500 kVA, at a voltage of 110/27.5 kV for the railroad substations with alternating-current. The "Ural-Electric-Apparatus" Factory developed and produced the experimental type of a single-phase feeder switch (VMO-35) for the alternating-current contact network. This device will be manufactured in series. The Vsesoyuznyy elektrotekhnicheskii institut im. Lenina (All-Union Institute of Electric Engineering imeni Lenin) developed a switch with 27.5 kV and 250 A for the alternating-current contact network, and dischargers for 27.5 kV. The "Armset" trust developed a new type of rod insulator for 27.5 kV. The "Azovkabel" works

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develop a special cable for lines to be electrified with alternating-current. In connection with the electrification scheme, some technical questions connected with the increase in efficiency of electric traction by means of alternating-current are pointed out here: more exact calculation methods for transforming power in the railroad substations, and methods for keeping transformers in reserve; the working out of more efficient measures for the limitation of current and voltage asymmetry (phase shifting); methods to improve the power factor; the most favorable methods for connections between sections electrified with direct-and alternating-current. In May 1958, the junction point park at the station of Ozherel'ye was put into operation. This is practically the first time that at such a complicated railroad junction a joint of sections electrified with different types of current was carried out. It would be convenient to use junction-point locomotives. The difficulties connected with the construction of such electric locomotives are pointed out. - Measures for raising the technical level of tracks electrified with direct current are pointed out:

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Prospects for the Electrification of Railroads  
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mercury-vapor and silicon-semiconductor rectifiers in the railroad substations, transition to one-stage transformation in the direct-current railroad substations, and utilization of the bridge and cascade scheme, recuperative braking will be extensively used. The importance of automatization and remote control of electric equipment is emphasized. Instead of the relay-contact system of remote control, a new system based on contactless relays and semiconductor apparatus will be used. This new system will be put into operation on the electrified tracks of the Kalinin, the Krasnoyarsk, and the East Siberian Railroads in 1959-60. In connection with the electrification of railroad tracks, the possibility of electrifying the areas along these tracks is pointed out.

ASSOCIATION:

Glavnoye upravleniye elektrifikatsii i energeticheskogo khozyaystva SPS (Chief Office of Electrification and Power Economy of the Ministry of Railroads)

Card 5/5

8(3)

AUTHOR:

Ivanov, I.I., Engineer

SOV/143-59-3-5/20

TITLE:

The Calculation of Secondary Voltage Asymmetry Factors of Two-Coil Transformers With Asymmetrical Load  
(Raschet koeffitsiyentov nesimmetrii vtorichnykh napyazheniy dvukhobmotochnykh transformatorov pri nesimmetrichnoy nagruzke)

PERIODICAL:

Izvestiya vysshikh uchebnykh zavedeniy - Energetika, 1959, Nr 3, pp 32-40 (USSR)

ABSTRACT:

When using single-phase, 50-cycle alternating current for the electrification of RR lines, adjacent rural areas may be supplied with electric power from the RR network. However, the single-phase traction load causes voltage asymmetry problems which require detailed investigation. The author mentions in this connection the works of A.A. Inogamov, L.Ye. Ebin, E.A. Meyerovich, V.I. Gorushkin and Z.B. Golembo, who performed calculations in the field of voltage asymmetry. Under guidance of Professor V.V. Bolotov, the author developed a calculation method for the

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SOV/143-59-3-5/20

The Calculation of Secondary Voltage Asymmetry Factors of Two-Coil Transformers With Asymmetrical Load

voltage asymmetry factors of two- and three-coil transformers (full-phase and V/V-12 networks) which feed simultaneously asymmetrical and symmetrical loads. Thereby, formulae were obtained for the general case of an asymmetrical load, taken into consideration the primary voltage asymmetry. In this article, the author explains a method for calculating the secondary voltage asymmetry factors of two-coil transformers, depending on magnitude and character of asymmetrical and symmetrical loads. For solving this task, the method of symmetrical components was used, which was also applied in the works of Meyero- vich, Gorushkin and Golebo. The transformer was considered as an element of an electrical network with a linear characteristic. For checking the correctness of the assumptions made for this investigation, experimental investigations were performed at the Kafedra obshchey elektrotekhniki LPI (Chair of General Electrical Engineering LPI), using model

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SOV/143-59-3-5/20

The Calculation of Secondary Voltage Asymmetry Factors of Two-Coil Transformers With Asymmetrical Load

transformers developed by Candidate of Technical Sciences V.S. Radonik. The author also investigated the local influence on the voltage asymmetry factor. For his calculations the author assumes that the single-phase traction load is connected with a 22 kv phase voltage, while rural, agricultural and other local loads are being fed with 35 kv line voltage. He produces a set of six equations based on the second Kirchhoff law, from which he derives formulae for the asymmetry factors for star, delta and V/V-12 connections of the secondary transformer coils. The voltage asymmetry factors are then used for comparing the different connection system of the secondary transformer coils (star, delta or V/V-12). Comparing two- and three-coil transformers, the author points out that three-coil transformers do not have any advantage over two-coil transformers judged by the voltage asymmetry factors. In the conclusions, the author states that the formulae developed by him are simple

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## The Calculation of Secondary Voltage Asymmetry Factors of Two-Coil Transformers With Asymmetrical Load

and convenient for practical use. They permit determining the secondary voltage asymmetry factor of transformers with asymmetric load and when feeding from them asymmetric and symmetrical loads simultaneously. A symmetric local load reduces the voltage asymmetry factor of a full-phase transformer network but increases the voltage asymmetry of V/V-12 transformers. In both cases the voltage asymmetry factor will be smaller, if there are asynchronous motors in the local load. Judging by the voltage asymmetry factor, delta or star connections of the secondary transformer windings are equivalent. The V/V-12 connection with a traction load on one phase has greater voltage asymmetry factors than the full-phase system. At equal loads on phases B and C, the asymmetry factor  $K_v(BC)$  may be smaller than  $K_\Delta$  and  $K_{y_0}$  with small

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local loads (shown by a graph in Figure 2). Such a

IVANOV, I. kand. tekhn. nauk; TIKHONOV, K., kand. tekhn. nauk; PETROV, D. inzh.;  
SHMYREV, A.

Let us urge the technical reconstruction of railroad transportation. MFO no.4:26-29 Ap '59. (MIRA 12:6)

*Chairman Section electrification & Oper. of the Central*  
1. Præsdatel' sektsii elektrifikatsii i energetiki TSentral'nogo  
*Chairman Sect. of Tech. Soc. of Railw.*  
pravléniya nauchno-tekhnicheskogo obshchestva zheleznodorozhnogo  
transporta (for Ivanov). 2. Chleny sektsii ekspluatatsii TSentral'-  
nogo pravléniya nauchno tekhnicheskogo obshchestva zheleznodorozhnogo  
transporta (for Tikhonov, Petrov). 3. Zamestitel' præsdatelya  
sektsii signalizatsii i svyazi TSentral'nogo pravléniya nauchno-tekhnicheskogo  
obshchestva zheleznodorozhnogo transporta (for Shmyrev).  
(Railroad research)

PHASE I BOOK EXPLOITATION

SOV/4172

Akademiya nauk SSSR. Institut elektromekhaniki

Sbornik rabot po voprosam elektromekhaniki, vyp. 3: Energeticheskiye sistemy, elektromashinostroyeniye, elektricheskaya tyaga, avtomatizirovannyy elektroprivod, avtomaticheskkiye i telemekhanicheskkiye sistemy, elektrosvarochnoye oborudovaniye (Collected Papers on Electromechanical Problems, no. 3: Power Systems, Electric Machinery Construction, Electric Traction, Automated Electric Drives, Automatic and Telemechanical Systems, Electric Welding Equipment) Moscow, Izd-vo AN SSSR, 1960. 314 p. Errata slip inserted. 5,000 copies printed.

Resp. Ed.: V.V. Sidel'nikov; Ed. of Publishing House: I.V. Suvorov; Tech. Ed.: R.A. Arons.

PURPOSE: This collection of articles is intended for scientific and technical personnel.

COVERAGE: This book is divided into sections according to the title. The scientific articles are preceded by a brief biography of Academician M.P. Kostenko, Lenin Prize Laureate, Director of the Institut elektromekhaniki AN SSSR (Institute of Electromechanics, Academy of Sciences USSR). References accompany most of the articles.

Card 1/13



Collected Papers (Cont.)

SOV/4172

Ivanov, I.I. Voltage Asymmetry of Transformers Supplying Three- and Single-Phase A-C Traction Loads

35

The author investigates problems of simultaneous electrification of the main railroad lines in the USSR and the adjacent agricultural and industrial areas. Twenty-five kv single-phase a-c current has been introduced recently for the electrification of railroads in the USSR. Power must be supplied to both the asymmetrical traction loads and the symmetrical industrial and agricultural loads from the same three-phase transformers or from systems of single-phase transformers connected in an open delta. The results of the work conducted at the laboratory of the ENIN AN SSSR show that for traction loads not exceeding the nominal phase power of the transformer the asymmetry factor of full-phase transformers lies within the permissible limits of 3.5 to 4% for voltages of 110 kv and of 4.5-5% for voltages of 220 kv.

Glebov, I.A. Reactive Power Control by Means of Phase-Controlled Rectifiers

The author investigates rectifier and rectifier-inverter systems with series capacitors, paying special attention to the problem of controlling the capacitive current. He concludes that while systems using phase-controlled rectifiers have a very high speed of action, they require much too high an installed capacity. Therefore, for practical purposes they should be used under short-term operating conditions only.

45

Card 3/13

IVANOV, Igor' Ivanovich; BELYAYEV, I.A., inzh., red.; VERINA, G.P.,  
tekhn.red.

[Operation of electric railroad stations] Eksploatatsiia  
zheleznodorozhnykh elektrostantsii. Moskva, Vnes.izdatel'sko-  
poligr.ob"edinenie M-va putei soobshcheniia, 1960. 390 p.  
(MIRA 13:5)

(Electric railroads--Stations)

LOGANOV, S.M.; RAVDORF, V.S.; IVANOV, I.I.

Basis for selecting the type of transformers and transformer circuits for traction substations electrified by single-phase 50 a.c. current. SI L. Ref. Ser. no. 2:170-189 '80.

(REF. 1:12)

(Electric railroads--Current supply)  
(Electric transformers)

IVANOV, I.I.

Nonsymmetry of transformer voltages feeding three-phase and single-phase a.c. traction loads. Sbor.rab.po vop.elektromekh. no.3:  
35-44 '60. (MIRA 13:8)  
(Electric railroads--Current supply)  
(Electric transformers)

INOZEMTSEV, A.I., inzh. (g.Angarsk); GAFNER, Ye.R. (g.Angarsk); KATRUKHA,  
V.V., inzh. (g.Krasnovodsk); IVANOV, I.I., kand.tekhn.nauk  
(Moskva); LEBED', A.G., inzh. (Moskva)

Principal trends in the plan for overall electrification.  
Elektrichestvo no. 12:82-84 D '60. (MIRA 14:1)  
(Electrification)

IVANOV, I. I.

Immediate problems in the electrification of railroads with a.c.  
Zhel.dor.transp. 42 no.12:8-14 D '60. (MERA 13:12)

1. Glavnyy inzhener Glavnogo upravleniya elektrifikatsii i energo-  
ticheskogo khozyaystva Ministerstva putey soobscheniya.  
(Railroads--Electrification)

S/196/62/000/001/008/013  
E194/E155

AUTHORS: Bolotov, V.V., and Ivanov, I.I.

TITLE: The economic current density for transmitting a.c. and d.c.

PERIODICAL: Referativnyy zhurnal, Elektrotehnika i energetika, no.1, 1962, 13, abstract 1E 87. (Sb. rabot po vopr. elektromekhan. In-t elektromekhan. AN SSSR, no.6, 1961, 60-69)

TEXT: The economic value of current density to be used in the conductors of d.c. and a.c. transmission lines can be determined by analysis of a general expression of calculated costs  $c$  in transmitting 1 kWh electric power:

$$c = \frac{a}{P} + \beta \frac{S}{P} + d \frac{P}{S} + \ell \quad \text{kop/kWh.} \quad (1)$$

Here:  $S$  - conductor section;  $P$  - power transmitted;  $a$ ,  $\beta$ ,  $d$  and  $\ell$  are coefficients which do not depend on the economic current density and which depend on the length and voltage of the

Card 1/3

The economic current density for ...

S/196/62/000/001/008/013  
E194/E155

transmission line, the structural costs of the line, sub-station and power-station, the compensating losses, the annual contributions to capital cost, the shape of the load curve of the transmission line, etc. The surface  $c = c(S,P)$  given by Eq.(1) has no extreme points. However, curves of  $c = c(S)$  when  $P = \text{const}$  and of  $c = c(P)$  when  $S = \text{const}$  each have a minimum point to which correspond two different values of economic current density  $j$ . The value of  $j_{ec}$  when  $P = \text{const}$  should not depend on the length of the transmission line; and when the line is longer than 1000 km the length of line has no appreciable influence on  $j_{ec}$  when  $S = \text{const}$ . In the general case, when  $S = \text{const}$   $j_{ec}$  is 15-20% greater than when  $P = \text{const}$ . Therefore, to each value of transmitted power, for example  $P_1$ , there corresponds one economic conductor section  $Sec_1$  for which the calculated cost of transmitting one kWh,  $c_1$  is minimum. However, if for the calculated value of  $Sec_1$  the transmitted power is increased to  $P_2$  corresponding to  $j_{ec}$  when  $S = \text{const}$ , the calculated cost is lower. However, the power  $P_2$  corresponds to an economic section  $Sec_2$  greater than  $Sec_1$ , etc. If there are no limitations on



Card 2/3



The economic current density for ... S/196/62/000/001/008/013  
E194/E155

S and on P the calculated costs are reduced as these characteristics are increased. For most design calculations when the transmitted power of the line and its operating conditions are given, the governing factor when selecting the conductor section is the economic current density  $j_{ec}$  when  $P = \text{const.}$  If it is a question of constructing one or several circuits of maximum capacity the calculation should be made for  $j_{ec}$  when  $S = \text{const.}$

[Abstractor's note: Complete translation.]

✓  
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Card 3/3

IVANOV, I.I.

Calculation of the coefficients of voltage nonsymmetry of substations with single-phase loads fed by a single power transmission line. Sbor. rab. po vop. elektromekh. no.6:165-179

'61.

(MIRA 14:9)

(Electric substations) (Electric railroads—Current supply)

GORSTKA, A.K., inzh.; IVANOV, I.I., nachal'nik thekha; SHILANOV, V.V., inzh.

Conversion of single-transformers to three-phase operation.

Energetik 10 no.5:27-28 My '62.

(MIRA 15:5)

(Electric transformers)

(Electric substations--Equipment and supplies)

IVANOV, I.I.; RAVDONIK, V.S.

Effect of intermediate substations on the efficiency of d.c. and a.c.  
power transmission systems. Sbornik rabot vob' elektromekhn. no. 8:8-17 '63.

(MIRA 16:5)

(Electric power distribution)

IVANOV, I.I., kand. tekhn. nauk; MEDVEDEVA, Ye.I., inzh.

High-frequency parameters of signal, control, and power cables. Avtom.,  
telem. i sviaz' 7 no.1:5-6 Ja '63. (MIRA 16:2)

(Electric cables)

(Coaxial cables)

SOKOLOV, S.D.; RUDNEV, V.N.; MOCHINOV, I.G.; TREYVAS, M.D., kand.  
tekhn. nauk, retsenzent; IVANOV, I.I., kand. tekhn. nauk,  
retsenzent; PETUSHKOVA, I.K., inzh., red.

[Inverter units of traction substations; characteristics  
of their operation and adjustment] Invertornye agregaty  
tiagovykh podstantsii; osobennosti raboty i naladki. Mo-  
skva, Transport, 1964. 45 p. (MIA 17:8)

KHAZEN, Moisey Mikhaylovich; IVANOV, Igor' Ivanovich; ARSHOVICH,  
Simon Savvich; YERMOLAYEV, A.A., kand. tekhn. nauk, dots.  
retsenzent; MEL'NIK, V.A., inzh., red.

[Heat and power systems] Teplosilovoe khoziaistvo. Moskva,  
Transport, 1964. 329 p. (MIRA 17:8)

1. Leningradskiy institut inzhenerov zheleznodorozhnogo trans-  
porta (for Yermolayev).

IVANOV, I.I.; KOROVKIN, B.F.; MARKELOV, I.M.; CHERNIYENKO, I.S.

Change in the enzymic activity of sarcoplasmatic proteins of  
heart muscle in experimental myocardial infarction. Ukr. biokhim. zhur.  
37 no.5:712-720 '65. (MIRA 18:10)

1. Kafedra biokhimi Voenno-meditsinskoy ordena Lenina akademii  
imeni S.M. Kirova.



IVANOV, Y. I.

Single-parameter problems for deriving equations of the first and  
second power. Uch. zap. Pskov.gos.ped.inst. no.21:5-24 '64.

(MIRA 18:10)

IVANOV, I.; GUMENSKIY, B.; ORNATSKIY, N.; BEZRUK, V.; PUZAKOV, N.;  
TULAYEV, A.

Veniamin Vasil'evich Okhotin; obituary. Avt.transp. 32 no.6:3  
of cover Je '54. (MLRA 7:9)  
(Okhotin, Veniamin Vasil'evich, 1888 ?- 1954)

IVANOV, I., inzhener; NASYTIN, D., tokar'.

Pneumatic grease pump. Avt.transp. 32 no.8:34-36 Ag '54. (MLRA 7:11)  
(Automobiles--Lubrication)

IVANOV, I., shofer.  
[REDACTED]

For further increasing the service life of an engine. Avt.transp.  
32 no.12:8-9 D '54. (MIRA 8:3)

1. 2-y avtobusnyy park Moskvyy.  
(Automobiles--Engines)

POLUNIN, Nikolay Ivanovich; IVANOV, I.I., redaktor; MAL'KOVA, N.V.,  
tekhnicheskiy redaktor

[Work organization of automobile transportation on an hourly basis]  
Organizatsiya raboty avtotransporta po chastovomu grafiku. Moskva,  
Nauchno-tekhn. izd-vo avtotransp. lit-ry, 1955. 42 p. (MLRA 9:10)  
(Transportation, Automotive)

IVANOV, I. I., Engineer

"Physical-Dielectric Properties of High-Frequency Plastics With  
Mica Filler." Sub 17 Jan 47, Moscow Order of Lenin Power Engineering  
Inst imeni V. M. Molotov *Cand Tech Sci*

Dissertations presented for degrees in science and engineering  
in Moscow in 1947

SO: Sum No. 457, 18 Apr 55

IVANOV, I. I.

Journal of Applied Chemistry  
Vol. 4 Feb. 1954  
Fibres

Method of determining the moisture absorption of laminated plastics. I. I. Ivanov (*Elektrichestvo*, 1953, No. 2, 45-47; *Elect. Engng. Abstr.*, 1953, 58, 652).—Data on water absorption of laminated plastics given in U.S.S.R. standards 4680-49 and 2718-50 are incorrect, especially for Hetinax. It was shown experimentally that the intensity of absorption is much greater at the end-faces of laminated materials than on the large planar faces; hence the specific absorption per unit vol. is greater for thick than for thin specimens. For a correct estimation of the absorption of Textolite and Hetinax, the % ratio of the areas of the end-faces to the total surface area should be considered. The method prescribed by the standards should be altered accordingly. Sci. Abstr. (C).

IVANOV, I. (Pervomaysk, Tambovskoy oblasti. Radiousel).

One of the reason of VG-129 gasotrons getting out of order. Radio no.11:56  
H '53. (MLRA 6:11)

(Electron tubes)



USSR/ Electronics - Magnetic heads

Card 1/1 : Pub. 89 - 23/28

Authors : Ivanov, I.

Title : Home-made magnetic heads

Periodical : Radio 1, 52-54, Jan 1954

Abstract : A few practical suggestions are given to radio-amateurs who might be interested in the home construction of a recording, playback, and erasing magnetic heads for magnetic recording devices. Diagrams.

Institution: .....

Submitted: .....

USSR/Electricity - Motors

Card 1/1 : Pub. 89 - 22/29

Authors : Ivanov, I.

Title : Remodeling of type "D0-50" Electromotor

Periodical : Radio 7, 43-45, July 1954

Abstract : The article describes the changes required in the Electromotor "D0-50" in order that it could be used as a rotary mechanism in sound recording. The technical details of replacing the bearings and the winding, and the motor-assembly are set forth. A table is given showing data of the new winding sections, type of wire used and the number of turns for both 1430 and 675 rpm. Information is also given on the type of insulation used, lubrication, as well as the preliminary testing and elimination of possible defects. Diagrams; table.

Institution : ...

Submitted : ...

IVANOV, I.I.

Review of N.M. Iziumov's book "Radio reception". Radiotekhnika 10  
no.10:72-73 0 '55. (MLRA 9:1)  
(Radio--Receivers and reception)

107-12-46/46

*Ivanov, I.*

AUTHOR: Ivanov, I. (Pskov)

TITLE: "Universal" Coil Winder (Stanok dlya namotki katushek "Universal")

PERIODICAL: Radio, 1956, Nrl2, inner page of the back cover (USSR)

ABSTRACT: A description of a simple wooden self-made winder for winding various radio coils of the "Universal" type is given. The winder is hand-driven.

Two figures in the article.

AVAILABLE: Library of Congress

Card 1/1

S/194/61/000/007/049/079  
D201/D305

AUTHOR: Ivanov, I.I.  
TITLE: Ultrasonic method cavitation testing  
PERIODICAL: Referativnyy zhurnal. Avtomatika i radioelektronika,  
no. 7, 1961, 19, abstract 7 E119 (V sb. Nauchno-  
tekhn. konferentsiya molodykh spetsialistov, 1959,  
61-63)

TEXT: A cavitation analyzer has been designed consisting of a barium titanate piezoelectric transducer and a frequency analyzer having five resonant circuits. The study of cavitation has been carried out in model installations and directly in the turbine chambers. Amplitude and frequency characteristics were obtained of cavitation noise (28 - 750 kc/s) units in the initial stage and in the process of its growth. [ Abstracter's note: Complete translation ]

Card 1/1

IVANOV, I.I., kandidat tekhnicheskikh nauk.

Electronic device for automatic measurement of potentials.  
Avtom., telem. i svyaz' no.6:32-34 Je '57. (MLRA 10:7)  
(Electric measurements)

ERZHEZYAK, Yuriy Davydovich; OVCHINNIKOV, I.N., inzh., retsenzent;  
IVANOV, I.I., inzh., retsenzent; ALEKSEYEV, N.I., nauchn.  
red.; OZEROVA, Z.V., red.

[Continuous flow line in the manufacture of flanges and  
rings] Potochnaia liniia izgotovleniia flantsev i kolets.  
Leningrad, Sudostroenie, 1964. 60 p. (MIRA 17:5)

IVANOV, I.I., kand. tekhn. nauk; TSIPULIN, I.P., inzh.

Manufacture of bimetal rods and wire of aluminum alloys. Trudy  
MATI no.57:25-26 '63. (MIRA 16:12)



IVANOV, I. I. (Aspirant)

"A Study of the Ductility and Nucleus of Deformation During the Rolling of Aluminum Alloys." Cand Tech Sci, Moscow Aviation Technological Inst, 30 Dec 54. (VM, 21 Dec 54)

Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (12)

SO: SUM No. 556, 24 Jun 55

KOLPASHNIKOV, A.I., kandidat tekhnicheskikh nauk, detsent.; IVANOV, I.I.,  
kandidat tekhnicheskikh nauk.

Placticity and deformation resistance diagrams for aluminum alloys.  
Trudy MATI no.28:5-16 '55. (MIRA 9:7)  
(Aluminum alloys) (Deformations (Mechanics))

KOLPASHNIKOV, A.I.; IVAHOV, I.I., kandidat tekhnicheskikh nauk.

Spreading of deformation in rolling. Trudy MATI no.28:26-40 '55.  
(Deformations (Mechanics))(Rolling (Metalwork)) (MIRA 9:7)

LIVANOV, V.A., kandidat tekhnicheskikh nauk, dotsent; KOLPASHNIKOV, A.I.,  
kandidat tekhnicheskikh nauk, dotsent; IVANOV, I.I., kandidat tekhnicheskikh nauk.

Thermal effect in aluminum deformation. Trudy MATI no.28:41-45 '55.  
(Deformations (Mechanics)) (Aluminum alloys) (MLRA 9:7)

KOLPASHNIKOV, A.I., kandidat tekhnicheskikh nauk, dotsent; IVANOV, I.I.,  
kandidat tekhnicheskikh nauk.

Ingot crazing in rolling aluminium alloys. Trudy MATI no.28:71-78  
'55. (MIRA 9:7)  
(Rolling (Metalwerk)) (Aluminum alloys)

*IVANOV, I. I.*

137-1958-1-41

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 1, p 8 (USSR)

AUTHOR: Ivanov, I. I.

TITLE: Effect of the Metal Content of Ore on the Extraction Thereof in the Concentrates (Vliyanie sodержaniya metalla v rude na izvlecheniye yego v kontsentratsii)

PERIODICAL: Kolyma, 1956, Nr 7, pp 29-32

ABSTRACT: The relationship of the problem of extraction of Pb and Zn to the content thereof in the ore is examined. Statistical data are elaborated by means of correlation analysis, permitting the establishment of an objective numerical index of the relationship between the two criteria (extraction of metal in the concentrate E in percent and content of the metal in ore  $\alpha$  in percent), the so-called correlation coefficient r, which determines the form of the relationship (i.e., the function  $E=f(\alpha)$  and its accuracy). On the basis of the formulas adduced, the true value of r is calculated as  $r = +0.75 \pm 0.048$  (for Pb) and  $r = +0.57 \pm 0.074$  (for Zn). After the nature of the relationship has been clarified, the form thereof may readily be determined on the basis of the equation thereof  $E_{Pb} = f(\alpha_{Pb})$ . Mathematical computations

Card 1/2

137-1958-1-41

Effect of the Metal Content of Ore on the Extraction Thereof (cont.)

are adduced. The investigations permit the following conclusions to be drawn. Extraction of tin and zinc in the concentrates is in direct relation to the richness of the ore therein, and varies linearly. In this connection, a diminution of the impoverishment of the ore is accompanied by a considerable increase in recovery of metal. The existence of similar relationships for other metals may be hypothesized

A. Sh.

1. Ores--Mathematical analysis
2. Lead ores--Evaluation--Statistical analysis
3. Zinc ores--Evaluation--Statistical analysis
4. Statistical analysis--Applications

Card 2/2

AUTHOR: Ivanov, I.I.

SOV/136-58-6-18/21

TITLE: Discussion at the Moscow Aviation-technological Institute of the Book by N.N. Kreyndlin and G.N. Krucher "Production of Sheets and Strip from Light Alloys" (Obsuzhdeniye v Moskovskom aviatsionno-tekhnologicheskome institute knigi N.N. Kreyndlina i G.N. Kruchera)

PERIODICAL: Tsvetnyye Metally, 1958, nr 6, pp 97 - 98 (USSR)

ABSTRACT: In April, 1958, an enlarged meeting of the "Tekhnologiya obrabotki metallov davleniyem" ("Technology of Working Metals by Pressure") Chair at the Moscow Aviation-technological Institute discussed the book, published by Metallurgizdat in 1957. Kreyndlin (Giprotsvetmetobrabotka) started the discussion by outlining the objects of the book and its subject matter. A.I. Kolpashnikov (MATI) considered the book valuable but having some shortcomings, among which is lack of sufficient information on recent work, particularly that carried out under the direction of K.S. Kirpichnikov on the rapid annealing of aluminium alloys. L. Ya. Shpolyanskiy (Giproaviaprom) suggested changes in the book, to take in recent advances (e.g. developments in rolling). V.V. Markov regretted that little

Card 1/2



SOV/136-58-6-18/21  
Discussion at the Moscow Aviation-technological Institute of the  
Book by N.N. Kreyndlin and G.N. Krucher "Production of Sheets and  
Strip from Light Alloys"

space is given to magnesium-alloy or bimetallic sheets. M.G. Feklisov pointed out some inaccuracies in the book and B.A. Kalachev (MATI) blamed the slowness of the publishers for some of the out-of-date material in the book, and I.I. Ivanov (MATI) also complained of omissions of the most recent developments. In conclusion, N.N. Kreyndlin said the authors would correct the faults noted, not all of which were their fault. The conference adopted a resolution in line with the above comments.

Card 2/2

IVANOV, I.I., assistant

Relation between the metal recovered and its content in the  
ore. Trudy NPI 49:185-191 '59. (MIRA 14:3)

1. Kafedra razrabotki rudnykh i nerudnykh mestorozhdeniy  
Novocherkasskogo politekhnicheskogo instituta.  
(Lead—Metallurgy)

ИВАНОВ, И.И.

PHASE I BOOK EXPLOITATION

SOV/4256

SOV/10-8-44

Moscow. Aviatsionnyy tekhnologicheskii institut

Voprosy obrabotki davleniyem legkikh splavov (Problems of Pressworking Light-Metal Alloys) Moscow, Oborongiz, 1960. 53 p. (Series: Its: Trudy, vyp. 44) 3,600 copies printed.

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

Ed. (Title page): V. M. Aristov, Candidate of Technical Sciences; Ed. (Inside book): T. M. Kunyavskaya; Tech. Ed.: V. I. Oreshkina; Managing Ed.: A. S. Zaymovskaya, Engineer.

PURPOSE: The book is intended for scientific workers and technical personnel in machine-building and for senior students of related departments.

COVERAGE: The collection of articles is concerned with problems of pressworking (rolling, extrusion, die-forming) of light-metal alloys.

Card 1/3

Problems of Pressworking Light-Metal (Cont.)

SOV/4256

Results are presented of investigations performed to improve the process of manufacturing aluminum and aluminum-alloy sheets, and to improve the formability of aluminum-magnesium alloys. Also explained is the effect of the configuration of the extruded shape on the "extrusion effect" (longitudinal work-hardening) of the D 16 and AB alloys. Determination of power consumption in extrusion of shapes and the possibility of cold volumetric deformation of the AK6 alloy are discussed. No personalities are mentioned. There are 6 Soviet references following Engineer Tsipulin's article.

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<u>Ivanov, I. I.</u> , and A. I. Kolpashnikov, Candidates of Technical Sciences. Deformation of Large-Size Aluminum Ingots by Rolling	5
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Problems of Pressworking Light-Metal (Cont.)

SOV/4256

Kolpashnikov, A. I., Candidate of Technical Sciences, and V. D. Korolev,  
Engineer. Certain Problems in Manufacturing Aluminum Alloy Sheets 39

Bobrov, N. N., Aspirant. Formability of Aluminum-Magnesium Alloys 47

AVAILABLE: Library of Congress

VK/rm/fal  
5/29/60

Card 3/3

IVANOV, I.I.

Effect of the depletion of mercury ores on metallurgical plant operations. Izv. vys. ucheb. zav.; tsvet. met. 3 no.5:137-140  
'60. (MIRA 13;11)

1. Novocherkasskiy politekhnicheskiy institut. Kafedra razrabotki rudynykh i neruinykh mestorozhdeniy.  
(Mercury ores) (Nonferrous metals---Metallurgy)

IVANOV, I.I., kand.tekhn.nauk; SOLOMONOV, S.A., kand.tekhn.nauk

Scientific workers in the institutions of higher education struggle  
for technological progress. Zhel.dor.transp. 45 no.8:31-35  
Ag '63. (MIRA 16:9)

1. Nachal'nik otdela vysshikh uchebnykh zavedeniy Glavnogo upravleniya  
uchebnymi zavedeniyami Ministerstva putey soobshcheniya (for  
Ivanov). 2. Starshiy pomoshchnik nachal'nika otdela vysshikh  
uchebnykh zavedeniy Glavnogo upravleniya uchebnymi zavedeniyami  
Ministerstva putey soobshcheniya (for Solomonov).  
(Railroad research)

KIRILLOV, Petr Georgiyevich; URUSOV, K.G., dots., kand. tekhn.  
nauk, retsenzent; IVANOV, I.I., dots., kand. tekhn. nauk,  
retsenzent; OVSYANNIKOVA, Z.G., red.

[Theory of metalworking by pressure] Teoriia obrabotki metal-  
lov davleniem. Moskva, Vysshaya shkola, 1965. 295 p.

(MIRA 18:10)

1. Vsesoyuznyy zaachnyy politekhnicheskii institut (for Urusov).



IVANOV, I. I.

PA 240T55

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USSR/Electricity - Insulating Materials      May 52  
Standards

"New Methods for Testing Varnished Cambrics," Cand  
Tech Sci I. I. Ivanov, Moscow Power Eng Inst imani  
Molotov

"Elektrichestvo" No 5, pp 72, 73

Demonstrates need for supplementing GOST 2214-46  
(on varnished cambric) with characteristic of re-  
sistivity of varnished cambric LSh-2 after it has  
become moist and characteristic of its resistance  
to tearing stresses. Cites procedure for appropri-  
ate tests. Submitted 28 Nov 51.

240T55

IVANOV, I.I.

Construction of a nomogram for determining the coefficient of nonsymmetry in balanced three-phase systems. Sbor. rab. po vop. elektromekh. no.10:112-119 '63. (MIRA 17:8)

*Ivanov, I.*

KOSHTOYANIS, Kh. S.; IVANOV, I.; KORZHUYEV, P. A.; MUZHEYEV, V. A.; OCHAKOVSKIY, S. G.

"On the Question of Secretin Specification". Comparative-Physiological Research".  
(In German, "Zur Frage der Spezifitat des Sekretins. Vergleichendphysiologische Un-  
tersuchung." (K voprosu o spetsifichnosti sekretina. Sravnitel'no-fizio-logicheskiye  
issledovaniye).

Zs. f. vergl. Physiol., 1932, Bd. 18, H. 1, S. 112-115.

Also in Fiziol. zh., 1933, t. 16, v. 1, s. 216-218, tabl.

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

1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

*ca*

*117*

The action of monohaloacetic acids on the glycolysis and mobility of spermatozoa. I. I. Kuvshinov. J. Physiol. (U. S. S. R.) 18, 924-4 (1938). The initial mobility of bull and hog spermatozoa is maintained for several hrs. in the presence of 0.002 N BrCH<sub>2</sub>CO<sub>2</sub>H, 0.004 N ClCH<sub>2</sub>CO<sub>2</sub>H and 0.002 N ClCH<sub>2</sub>CO<sub>2</sub>H. Mobility does not depend, therefore, on glycolysis. H. Cohen

COMMON ELEMENTS

ASB-3LA METALLURGICAL LITERATURE CLASSIFICATION

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



1ST AND 2ND COLUMNS      PROCESSES AND PROPERTIES INDEX      12TH AND 13TH COLUMNS

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

*ca*

Participation of phosphocreatine in the metabolism of spermatozoa, and the possibility of esterification of phosphopyruvic acid and creatine in spermatozoa. 1. Ivamov. *Biochimiya* 2, 926-31 (1967).--The addition of phosphopyruvic acid and creatine to a spermatozoa suspension led to no esterification. The substitution of a dialyzed muscle ext. for the spermatozoa suspension readily produced the phosphagen synthesis. Inorg. P is easily detached from the added phosphopyruvic or phosphoglyceric acid in a spermatozoa suspension. This is apparently due to the action of "exogenic" enzymes found in the liquid part of the sperm. H. Cohen

117

Chair of Biological Chem. 1st, Moscow med. inst

ASB. 35.A METALLURGICAL LITERATURE CLASSIFICATION

FROM ANY RELATION      SUBJECT      TITLE      AUTHOR      PUBLICATION      DATE

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

PROCEDURES AND PROPERTIES INDEX

A-4

*BC*

**Abstract of cyanide poisoning. I. I. Jurev. (Biochem. 1943, 6: 536-545).** When  $CN^-$  is added to suspension of spermatozoa in saline in absence of sugar the cells very soon cease to react owing to inhibition of respiration which is the only source of energy under the given conditions. Respiration is not restored by addition of methylene-blue. Respiration of spermatozoa in presence of methylene-blue is stimulated by formal blue and the physiological significance and the energy of this respiratory chain is used by the cell for metabolic functions. In light respiration of spermatozoa proceeds chiefly through the uncoupled pathway and is aerobic. Methylene-blue results with accompanying loss of motility. Under aerobic conditions methylene-blue not only inhibits respiration but also inhibits to a considerable extent utilization of energy liberated in glycolytic oxidation-reactions. Reduced methylene-blue has no photodynamic effect on spermatozoa. There is no sound reason for the usual methylene-blue as an antidote in  $CN^-$  poisoning. J. N. A.

A.S.A. METALLURGICAL LITERATURE CLASSIFICATION

FROM DIVISION	BY	DATE	CLASSIFICATION	FROM BOMBIY

1ST AND 2ND ORDERS PROCESSES AND PROPERTIES INDEX

CA 11A

Cellular respiration after inhibition of succinodhydrogenase. I. I. Ivanov. *Biokhimiya* 7, 103-70(1942).— Malonates, which are specific inhibitors of succinodhydrogenase, practically do not decrease the respiration of freshly prepd. spermatozoa suspensions, even in the presence of glucose. Apparently, the oxidation processes in the spermatozoa cells can function with the succinodhydrogenase not participating. This is confirmed by expts. on the isolated cat and frog heart. The heart works well after perfusion with Ringer soln. contg. malonates in concn. sufficient to block respiration of minced muscle by 70%.  
H. Priestley

CHAIR OF BIOCHEMISTRY, KHIRGIZ STATE MEDICAL INSTITUTE, FRUNZE

ASB. 51.4 METALLURGICAL LITERATURE CLASSIFICATION

COMMON ELEMENTS

MATERIALS NOTE

DATE

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



PROCESSES AND PROPERTIES INDEX

11-2

Mobility and metabolism of *Trypanosoma equiperdum*.  
 I. I. Ivanov and V. G. Yakovlev. *Biokhimiya* 8, 229-33  
 (1943).—KCN, the respiratory inhibitor, in 0.001 N soln.  
 has no effect on the mobility of trypanosomes, for at least  
 an hr. The inhibitor of glycolysis, monochromic acid,  
 causes a cessation of mobility after several min.  
 Hence, the energy for movement is probably furnished the  
 trypanosomes by the breakdown of carbohydrates. If  
 the glucose content of the blood is lowered, as by insulin,  
 the mobility of the trypanosomes gradually falls off, and  
 after 20-40 min., entirely ceases. Sugars which yield  
 lactic acid may replace glucose. Glycogen is only slightly  
 effective  
 H. Priestley

CHAIR OF BIOCHEMISTRY , KIRGHIZ STATE MEDICAL INSTITUTE AND BIOCHEMICAL  
 LABORATORY OF THE EPIDEMIOLOGY AND MICROBIOLOGY, FRUNZE

ASB-5LA METALLURGICAL LITERATURE CLASSIFICATION

IVANOV, I. I.

"Metabolism and the Locomotion of Spermatozoa." (p. 627) by Ivanov, I. I. (Frunze)

SO: Advances in Modern Biology (Uspekhi Sovremennoi Biologii) Vol. 16, No. 6, 1973.

IVANOV, I.I.

USSR

INST. Epidemiology and Microbiology, (-1944-)

"A Method of Extraction of Antitoxic Globulins from the Clots of the Blood,"

Zhur. Mikrobiol., Epidemiol. i Immunobiol., No10-11, 1944

Oct 22, 1951

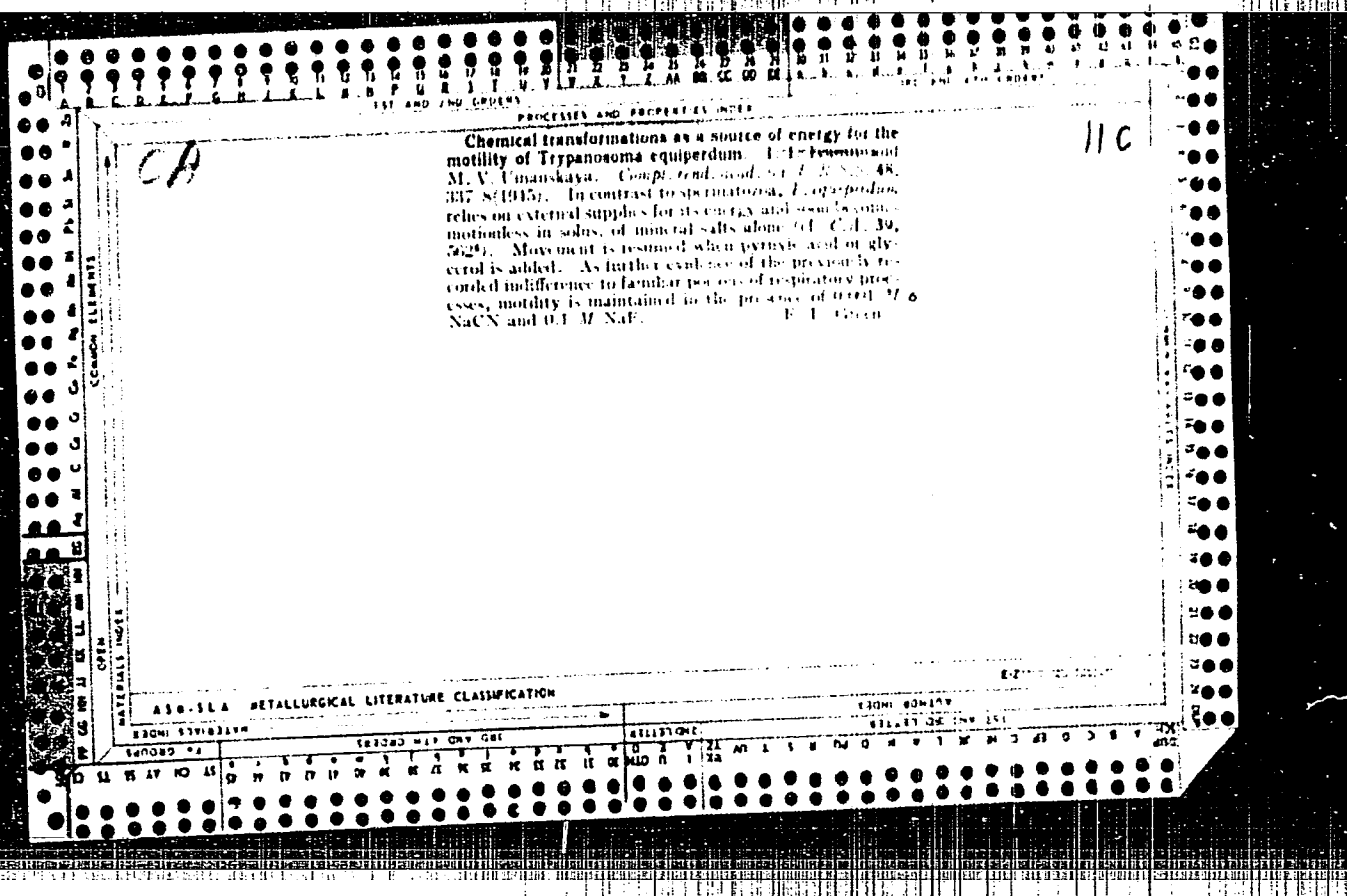
A-4

Physiological significance of some oxidoreduction systems in the chain of respiratory synthesis. I. L. Ivanov, G. A. Burnasheva, K. I. Kanigina, E. T. Imantina, and L. E. Kabanova (Biochimia, 1948, 19, 268-275). — The effect of various substances on  $O_2$  consumption and motility of ram spermatozoa was used in investigating the relation between respiratory activity ( $O_2$  consumption) and physiological function (sperm motility). Thionine, which is less toxic to sperm movements than methylene-blue, partly restored the  $O_2$  consumption of CN-poisoned spermatozoa, but it did not restore motility. *p*-Phenylenediamine added to spermatozoa increases the  $O_2$  consumption, but lowers the R.Q. In spite of increased respiration it stops the motility, even in the presence of glucose, presumably by lowering the intensity of glycolysis, which normally is able to supply energy for motility. It is concluded that oxidoreductions occurring at the cytochrome and dehydrogenase parts of the respiratory chain do not liberate energy which can be used for mechanical activity, and the energy must be transferred to mechanisms at some other part of the chain. D. H. S.

BIOCHEMICAL LABORATORY OF THE KIRGHIZ BRANCH OF THE ACADEMY OF SCIENCES, USSR, AND CHAIR OF BIOCHEMISTRY OF THE MEDICAL INST., FRUNZE, KIRGHIZ

ASB-31A METALLURGICAL LITERATURE CLASSIFICATION

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

Effect of certain inhibitors of metabolism on motility, respiration, and glycolysis of spermatozoa. T. I. Ivanov, K. I. Kazhina, and M. V. Umanitskaja (Comp. Rend. Acad. Sci. U.R.S.S., 1948, 68, 430-433).—In media free from glucose, or in those containing mono-bromacetate, the motility of spermatozoa usually ceased 5-10 min. after addition of NaCN (0.001M), but when malonate (0.2%) was added instead of CN, the motility continued for about as long as in the controls; a decrease in motility 45-60 min. after addition of the malonate was due to excess  $\text{CO}_2$ . The respiration rate of the spermatozoa was little affected by malonate, the reduction being less than 10%. Under anaerobic conditions in solutions containing glucose and NaF, addition of pyruvate (0.4%) resulted in the motility for approx. 60 min. only if the concn. of NaF was small (0.01M); lactic acid was formed.

R. H. Ft.

ASS-114 METALLURGICAL LITERATURE CLASSIFICATION

DATE	AUTHOR	TITLE	ABSTRACT	INDEXED	FILED

PROCESSES AND PROPERTIES INDEX

1ST AND 2ND GROUPS      3RD, 4TH, 5TH GROUPS

A 11

**Aerobic enzymatic synthesis of certain substituted benzothiazine derivatives of oxitiaz and thiaz.** I. L. Gerasimov and E. A. Shumakova (Comput. rend. Acad. Sci. U.R.S.S., 1964, 68, 231-232). Ground or intact segments of *Thiazospora* spores rapidly oxidized  $\beta$ -phenylethylamine and  $\gamma$ -aminobutyrate. The rate of decolorization of methylindole blue was greatly increased in presence of Na succinate by a prep. of the ground segments under aerobic conditions. The results support the view that the microbial parasites have developed from free-living forms. R. H. H.

A 11-51.4 METALLURGICAL LITERATURE CLASSIFICATION

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

11/8

PROPERTIES AND PREPARATION

Adenosine triphosphate in mammal sperm. I. I. Ivanov, and K. I. Kanygina. *Doklady Akad. Nauk S.S.S.R.* 50, 301-2(1945). Sperm of the ram, dilut. by 0.9% NaCl and treated with 4 mg. sugar per 1 ml. of suspension (contg. 0.2-0.25 g. spermatozoal mass) in aerobic conditions (open beaker), contains adenosine triphosphate (ATP) at a level of 8-30 mg. labile P per 100 g. (i.e. 12-30 mg. ATP proper). If aeration is restricted, the ATP level is lowered; addn. of KCN gives a sharp drop of ATP accompanied by drop of mobility of spermatozoa. This effect is particularly sharp in specimens preliminarily treated with 0.0005 M bromacetate (glycolysis inhibitor), in anaerobic conditions. In the latter case labile P drops to 0.2 mg. %, with mobility being weak at 2-3 mg. % and absent with the lower figures. G. M. Kozlovoff

ADD NEW REFERENCE TO LITERATURE CLASSIFICATION



IVANOV, I. I. (Moscow)

"Contractile Proteins in Motile Cells" (p.99) by Ivanov, I. I.

SO: Advances in Modern Biology (Uspekhi Sovremennoi Biologii) Vol XXI, No. 1, 1946

PROCESSES AND PROPERTIES INDEX

11 F

*cu*

The mechanism of adaptation of animals to low partial oxygen pressures. I. I. Ivanov (Kirghizian Branch of the Academy of Sciences of the U.S.S.R.). *Compt. rend. acad. sci. U.S.S.R.* 51, 613-14(1946).—Earlier investigators assumed, the ability of animals to adapt themselves to life under conditions of rarefied atm. to a no. of physiol. mechanisms promoting a better supply of the tissues with O<sub>2</sub>. This was supposed to be effected by a faster pulse rate and an increase of the circulation intensity, by increasing the no. of red blood corpuscles and augmenting the blood's O capacity. Those assumptions, however, were not borne out by expts. The hemoglobin content and no. of red blood corpuscles in humans living at high altitudes were not necessarily higher than when they arrived there. In most cases no increase in carbonic anhydrase was observed. The authors postulate that the tissues of aerobic animals compensate for the insufficient liberation of energy in the course of oxidizing processes by an increase in the splitting of carbohydrate accompanied by a production of lactic acid and by a more complete utilization of the energy liberated anaerobically. There was found an actual and steady increase of lactic acid in animals and humans dwelling at high altitudes.

Werner Baumgarten

A5B-15A METALLURGICAL LITERATURE CLASSIFICATION

A5B-15A METALLURGICAL LITERATURE CLASSIFICATION										LIGHT SOURCE																			
SUBGROUPS										SUBGROUPS																			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30

11A

CA

PROCESSES AND PROPERTIES INDEX

**Adenosinetriphosphate in mammalian spermatozoa.**

I. Ivanov, B. S. Kassavina, and L. D. Pomenko (First Medical Inst.). *Nature* 158, 624(1946).--Adenosinetriphosphate isolated from pig spermatozoa provokes a marked contraction (40-60%) of the actomyosin thread in a saline medium. If a soln. of muscle adenosinetriphosphate is added to spermatozoa obtained from the epididymis which have lost their motility under anaerobic conditions, no resumption of the movements of the spermatozoa is observed.

E. D. Walter

METALLURGICAL LITERATURE CLASSIFICATION

GROUP	CLASS	INDEX	SYMBOL	DESCRIPTION
1	2	3	4	5

ca

PROCESSES AND PROPERTIES INDEX

Adenosinetriphosphate in spermatozoa of mammals, and its effect on actomyosin. I. I. Ivanov, B. S. Kasavina, and L. D. Fozrenko (First-Moscow-Med. Inst.). *Biohimiya* 12, 497-506(1947); cf. *C.A.* 37, 2790; 42, 3043b.—Adenosinetriphosphate (ATP) isolated from spermatozoa appears to be identical to ATP of muscle. Actomyosin threads are shrunk to the same extent, and the decrease in viscosity of actomyosin solns. is the same for both types of ATP. On combining the actin of the rabbit with the myosin of the dog, or rabbit myosin with dog actin, active actomyosin is obtained. In the presence of phenylethylamine, the spermatozoa lose their motility, although the normal level of ATP in the cells may be maintained. The loss in motility is not directly proportional to the decompn. of ATP.

*11-f*  
*Chair of Biochem.*

OPEN COMPON. LETTERS  
MATERIALS INDEX  
ASTM-31A METALLURGICAL LITERATURE CLASSIFICATION  
MATERIALS INDEX  
ASTM-31A METALLURGICAL LITERATURE CLASSIFICATION  
OPEN COMPON. LETTERS  
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