KOP'YEV, S. F. 18G51

USSR/Thermal Elec Power System 4501.0102 Nov 1947

"Progress of Soviet Thermal Installation," S. F. Kop'yev, Candidate Tech Sci, M. B. Perlin, N. N. Romanov, Engineers, 7 pp

"Elek Stantsii" Vol XVIII, No 11

Discusses progress being made in construction and operation of thermal stations. Includes comprehensive statistical data and diagrams, and data on individual named plants.

LC 18G51

USSR/Engineering - **Heating** Nov 49
Power Supply

"Preparation of Water for District Heating and Power Supply Systems With Direct Water Tapping," Prof S. F. Kop'yev, 4 pp

"Elek Stants" No 11

PA156T22

Describes superior type of residential hot-water system eliminating necessity for auxiliary boiler (usual system). New method uses district heating main but presents need for purer water in main to avoid scale formation in pipes, corrosion, poisoning

156T22

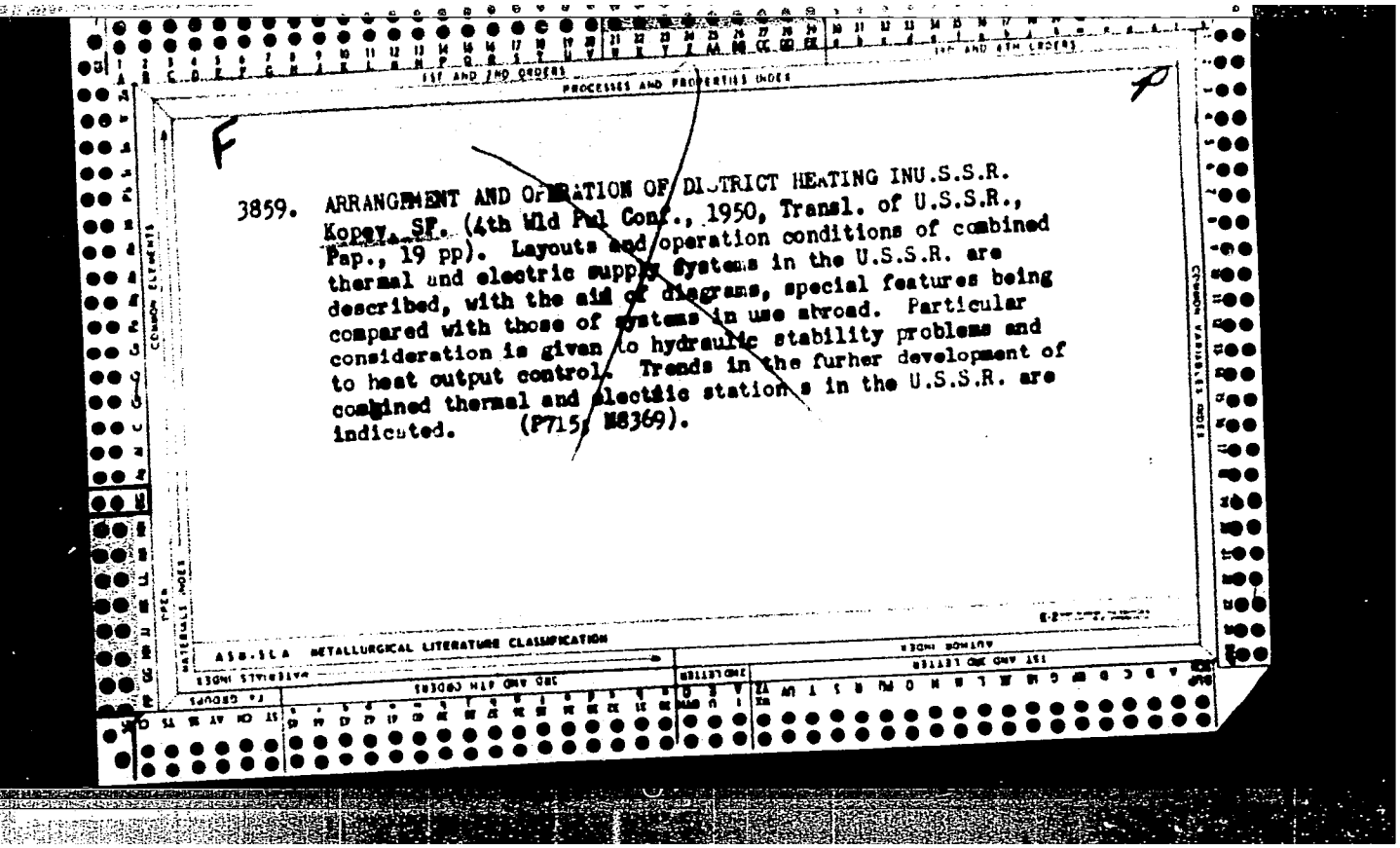
[redacted]

USSR/Engineering - Heating (Contd) Nov 49

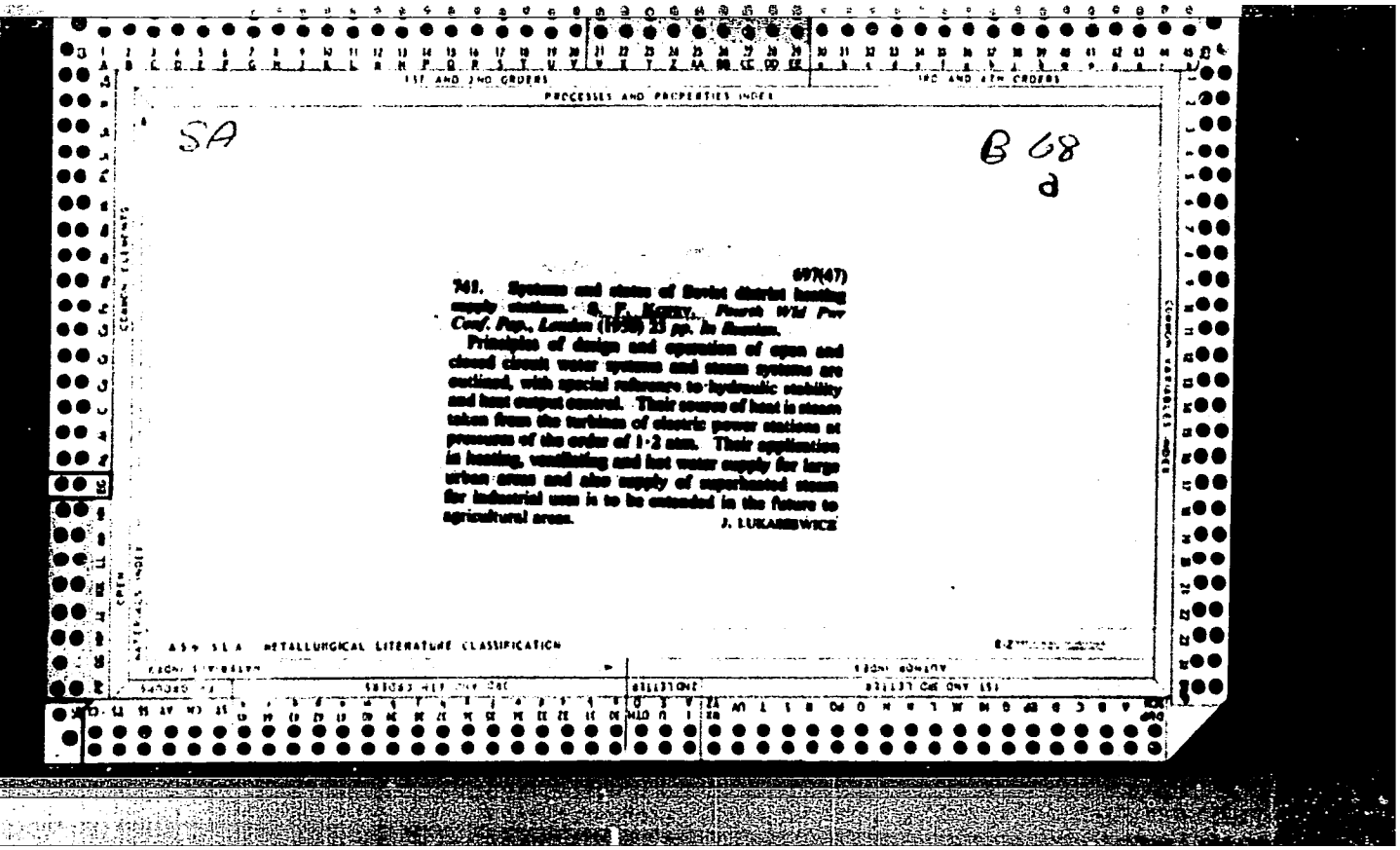
of consumers, etc. Describes own method for purifying water. Work on its practical application is in progress. Includes four diagrams.

156T22

KOP'YEV, S.F. [redacted]



3859. ARRANGEMENT AND OPERATION OF DISTRICT HEATING IN U.S.S.R. Kopev, SF. (4th Wld Pwr Conf., 1950, Transl. of U.S.S.R., Pap., 19 pp). Layouts and operation conditions of combined thermal and electric supply systems in the U.S.S.R. are described, with the aid of diagrams, special features being compared with those of systems in use abroad. Particular consideration is given to hydraulic stability problems and to heat output control. Trends in the furher development of combined thermal and electric stations in the U.S.S.R. are indicated. (P715, 28369).



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697(47)

741. Systems and status of Soviet district heating supply stations. S. P. Kozyrev. *Fourth Wld Pwr Conf. Pap., London* (1950) 25 pp. In Russian.

Principles of design and operation of open and closed circuit water systems and steam systems are outlined, with special reference to hydraulic stability and heat output control. Their source of heat is steam taken from the turbines of electric power stations at pressures of the order of 1-2 atm. Their application in heating, ventilating and hot water supply for large urban areas and also supply of superheated steam for industrial uses is to be extended in the future to agricultural areas.

J. LUKASIEWICZ

ASM SLA METALLURGICAL LITERATURE CLASSIFICATION

KOP'YEV, S.F., professor, doktor tekhnicheskikh nauk.

Methods of further development in Moscow's central heating system.
Gor.khoz.Mosk. 25 no.3:22-25 Mr '51. (MLRA 7:10)
(Moscow--Heating from central stations) (Heating from central stations--Moscow)

KOP'EV, S. F. Prof; GUSEV, Yu. L.; MYAKISHEV, I. S.

Moscow - Heating from Central Stations

Rational systems for district heat supply of the city. Gor. khoz. Mosk. 26, no. 9, 1952.

Monthly List of Russian Accessions, Library of Congress, December 1952. Unclassified.

KOP'YEV, S.F.

KOP'YEV, S.F., professor, doktor tekhnicheskikh nauk; SOKOLOV, Ye.Ya., professor, doktor tekhnicheskikh nauk, retsenzent; LITVIN, A.M., dotsent, kandidat tekhnicheskikh nauk, retsenzent.

[Heating] Teplosnabzhenie. Moskva, Gos. izd-vo lit-ry po stroitel'-stvu i arkhitekture, 1953. 495 p. (MLRA 7:5)

1. Kafedra teplotekhniki Kiyevskogo inzhenerno-stroitel'nogo instituta (for Sokolov). (Heating from central stations)

KOP'IEV, S.F.

KOP'IEV, S.F., professor, doktor tekhnicheskikh nauk.

Development of systems of heating from central stations. Trudy Stroi.inst. Mosgorispolkoma no.4:73-83 '53. (MLRA 8:3)
(Heating from central stations)

KOP'YEV, S.F., professor, doktor tekhnicheskikh nauk; AYZENSHTAT, I.I., redaktor; VORONIN, K.P., tekhnicheskiy redaktor.

[Auxiliary equipment in machine shops of electric power stations] Vspomogatel'noe oborudovanie mashinnykh tsekhov elektrostantsii. Moskva, Gos. energ. izd-vo, 1954. 295 p. (MLRA 7:12)
(Electric power plants) (Steam engineering)

KOP'YEV,S.F.

Basic trends in the development of heating from central stations in the U.S.S.R. Vod. i san. tekh. 1 no.1:8-10 Ap'55. (MLRA 8:11)
(Heating from central stations)

KOP'YEV, S.F.

1019. TECHNICAL AND ECONOMIC PRINCIPLES OF LONG DISTANCE HEAT SUPPLY; Kop'yev S.F. (Teploenergetika [illegible])

[illegible] large hot water accumulators. (L).

Dr. Tech. Sci.

Power-Engr. Inst. AS USSR

FILIPPOV, Ye.; KOP'YEV, S., kandidat tekhnichwkikh nauk.

Institute for innovators in Gorkiy. Stroitel' 2 no.4-5:28 Ap-My '56.
(MLRA 10:1)

1. Predsedatel' soveta instituta novatorov, Gor'kiy (for Filippov).
(Gor'kiy--Building trades--Study and teaching)

AID P - 4999

Subject : USSR/Engineering

Card 1/2 Pub. 110-a - 1/17

Author : Kop'yev, S. F., Prof., Dr. Tech. Sci.

Title : Technical and economic fundamentals of district heating from remote power plants.

Periodical : Teploenergetika, 9, 3-10, S 1956

Abstract : The economic advantages of district heating from power plants located beyond the city boundaries are here analyzed. Problems are examined for increasing the economic efficiency of district heating by using local low-grade fuels in suburban power plants and by building boiler houses in the cities for the coverage of peak heat loads. The author shows the expediency of a single-pipe system for district heating from remote power plants, and the advantages of locating hot-water reservoirs of large capacity in the cities. 2 tables, 5 diagrams.

Inst. Power Engr. AS USSR

KOP[illegible] [illegible] rofe[illegible]

Utilization of waste heat in open district heating systems.
Prom.energ. 11 no.3:7-11 Mr '56. (MIRA 9:7)
(Heating from central stations)

14(6) SOV/112-59-1-338

Translation from: Referativnyy zhurnal. Elektrotekhnika, 1959, Nr 1, pp 45-46 (USSR)

AUTHOR: Kop'yev, S. F.

TITLE: Moisture Protection of Heat-Insulating Structures of Underground Pipelines

PERIODICAL: Tr. Nauchno-tekhn. soveshchaniya po proyektir. i str-vu teplovykh setey. M.-L., Gosenergoizdat, 1956, pp 60-65

ABSTRACT: According to ORGRES data, in about 50% of cases, moisture gets into the insulation of underground heating pipelines. This can be controlled by using an absolutely hermetical outer coating, or by a water-repellent insulator, or by some design provision. The first method is efficient; however, it requires an adequate quantity of the outer conduit. The second method is inapplicable because of the lack of industrial production of a water-repellent heat insulator. The most suitable is the method of structural protection from moisture; drainage is the only reliable method of controlling the ground water. Protection from surface water is possible by drainage measures and by

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Moisture Protection of Heat-Insulating Structures of Underground Pipelines

controlling the surface profile. With a porous subsoil, it is sufficient to provide an impervious cover for the sloping pipeline. Cases are on record of moisture pervading the heat insulator with a normal soil moisture content and with no ground or surface water. Dripping from the conduit vault is the reason in such cases. Moistening of idle pipelines during the summer period is due to sweating of the pipe walls having soil temperature. The conduit vault must be smooth and must have a slope to divert the dripping to the side wall. External air should not be admitted into the tunnels, particularly during the summer period. The tunnel bottom may be used for draining the ground and surface waters so that the flowing water will not contact the heat insulator. In case of a ductless pipeline, moistening from the top is the most hazardous; hence, protection against contact with the wet soil should be provided primarily on the structure top. Large-pore materials that do not have considerable capillarity are preferable for ductless and packed tunnel structures.

M.L.Z.

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SOV/112-59-3-4543

Translation from: Referativnyy zhurnal. Elektrotekhnika, 1959, Nr 3, p 37 (USSR)

AUTHOR: Kop'yev, S. F.

TITLE: Modern Problems in Central Heating of Cities
(Sovremennoye sostoyaniye voprosa o teplofikatsii gorodov)

PERIODICAL: V sb.: Kompleksnoye energosnabzheniye gorodov. Minsk, 1957, pp 60-74

ABSTRACT: The efficiency of fuel utilization for heat supply to residential and industrial areas is 60%. Heat supply from district boiler plants can result in a fuel saving of about 30%, and from heating-and-electricity stations, about 50-60%. Heat supply in the USSR requires 2.5-3 times as much fuel as heating-and-electricity stations. Data on heat consumption and central heating in the USSR for 1955 and 1960 is presented. In 1955, 38% of industrial plants and 8% of residential areas had central heating. In many cases, due to different calendar schedules of starting operation of power plants and heat consumers, the

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temporary boiler plants have to be constructed. Recently, in connection with larger district condensation electric power plants and smaller heating-and-electricity plants, the economic effect of central heating began to fall off; thus it has become necessary to reconsider the schemes and modes of operation of central heating systems. Formulae are presented for determining fuel economy due to central heating, specific electric-energy production on the basis of heat consumption, and specific fuel consumption in electric-energy production. An analysis is presented of the effect of initial parameters, number of hours of turbine-extraction utilization, and central-heating coefficients on the fuel savings. A formula is given describing additional expenses due to central-heating systems; these expenses are determined by the thermal capacity of the station and the district boiler plants, by the average capacity of condensation-type stations of the power system, by the coefficients of central heating, and by initial steam parameters at the heating-and-electricity station. A formula

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is presented describing annual operating expenses for the cases of district heat supply and of central heat supply. It is pointed out that evaluation of the central-heating economy can be performed by determining the time period during which the additional capital investment would pay for itself. The methods are illustrated by an example. Fuel-cost reduction provokes the growth of the heating load and improvement in the central-heating economy. The main trend in developing central heating of cities includes larger electricity-and-heating power plants, larger steam-supplying turbines, and higher initial steam characteristics at the plant. If the construction of a large heating-and-electricity plant is impossible in the city, it should be built in a suburb, and in some cases at the site of local fuel. To take peak heating load, inexpensive steam or hot-water boilers operating on liquid fuel or gas should be used. To level off the hot-water peak loads, high-capacity no-head accumulators should be used. In all cases, use of open heat-supply systems

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is expedient. Back-pressure turbines should be widely used; small and medium-size turbines should be improved and their initial parameters stepped up. Timely planning and development of schedules for the future are important factors in increasing the effectiveness of city central heating systems.

M.L.Z.

KOPIEV, S.; SHCHGLIAIEV, S.

"Present conditions in long-distance heating and its perspectives for development in the Soviet Union."

p. 559 (Energia Es Atomtechnika) Vol. 10, no. 8/10, Dec. 1957
Budapest, Hungary

SO: Monthly Index of East European Accessions (EEAI) LC. Vol. 7, no. 4, April 1958

KOP'YEV, S.F.; LIVCHAK, I.F.

Some characteristics of solutions of sanitary engineering problems which are used in France. Vod. i san. tekh. no.6:32-36 Je '58. (MIRA 11:5)

(France--Sanitary engineering)

KOP'YEV, S.P.

SOV/96-58-11-18/21

AUTHOR: Leont'yeva, T.K., Candidate of Technical Science
Monastyrskaya, A.R., Engineer

TITLE: An All-Union Conference on the Future Development of District Heating in the USSR (Vsesoyuznoye soveshchaniye po voprosam dal'neyshego razvitiya teplofikatsii SSSR)

PERIODICAL: Teploenergetika, 1958, Nr 11, pp 90-92 (USSR)

ABSTRACT: On the 11th - 13th July, 1958, there was held in Moscow an All-Union Congress on the Further Development of District Heating in the Soviet Union, organised by the Moscow Directorate of the Scientific Technical Society of the Power Industry and the District Heating Section of the High Temperature Steam Commission of the Power Institute, Academy of Sciences (USSR). The Conference was attended by 240 representatives from 16 cities. Design, Scientific research, teaching and other organisations, heat and electric power stations, GOSPLAN USSR and Councils of National Economy were represented. Chinese and Polish power engineers also participated. Reports

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were read on the future development of district heating for 1959-65, on the effectiveness of district heating and its main lines of development, on reducing the construction cost of district heating equipment and on related topics. Engineer B.I.Duba of the Ministry of Electric Power Stations, reviewed the present state of heat supply, its expected development and the tasks of research and design organisations in this matter. S.F.Kopyev, Doctor of Technical Science of the Power Institute, Academy of Sciences USSR, stated in his report that in the USSR district heating is the main method of heat supply to industry and towns. There is considerable lag in the application of district heating in some of the older towns. With increased availability of large power stations, freer supply of gas oil and cheap fuel, district-heating schemes are no longer so easy to justify. The Power Institute, Academy of Sciences USSR, has made a technical economic analysis of the subject based on determinations of the pay-off

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time of the capital expenditure. The conclusions are presented and it is considered that district heating is still to be advised even when large power systems are available. Data are given about the smallest sizes of power station in which district heating is advisable. The report indicates the main lines of development of heat- and electric-power stations. L.A. Melent'yev Doctor of Economic Science of the Leningrad Engineering Economic Institute and the Leningrad Laboratory of the Power Institute, Academy of Sciences USSR, described the great increase in district heating during 1950-1957. Much can still be done to make district heating more economic. In a number of existing power stations, little benefit is obtained from combined power- and heat-supply because of delays in the construction of heating networks and excessive cost of district-heating equipment. The utilisation of heat in industry is increasing very

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rapidly by approximately 50% in five years and it is therefore, important to avoid the use of uneconomic industrial boiler houses. During the next seven years it will be necessary to increase the output of heat for industrial use from heat and electric-power stations by a factor of at least 2 1/2. A.A.Nikolayev, Engineer of Teploelektroproyekt, in his report considered the main methods of reducing the cost of construction of district-heating stations and heating systems. Power stations can be made larger by supplying both domestic and industrial heat requirements. Water-heating and low-pressure steam boilers should be used to cover peak loads. A.I.Lozhkin, Doctor of Technical Science of the Central Boiler Turbine Institute, pointed out that with the increased importance of gas as a power fuel it was becoming possible to construct heat and electric power-stations with combined steam/gas installations and that by using the steam/gas cycle the amount of electricity generated in connection with heat supply could be

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increased by 30 - 50%. The most important part of the discussion in the conference was on the papers of Kop'yev and Melent'yev. The Conference noted the achievements in district heating during the last 34 years but listed a number of defects. The Conference agreed with the proposed rate of increase of heat supply from heat and electric power-stations. The importance of building larger stations and avoiding the construction of industrial boiler houses was emphasised. Recommendations were made on the design of rational types of district-heating turbines and boilers for regional and peak boiler houses. The conference asked GOSPLAN and the Sovnarkhozy (Councils of National Economy) to plan the development of power

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for the economic regions with proper allowance for combined electricity, heat and gas supply for industrial, domestic and agricultural requirements.

SOV/96-59-4-1/21

AUTHOR: Kop'yev, S.F., Doctor of Technical Sciences

TITLE: The Development of Heat and Electric Power Stations in Large Power Systems with High Output Condensing Power Stations of High and Super-high Pressure (Razvitiye TETS v krupnykh energosistemakh s moshchnymi kondensatsionnymi elektrostantsiyami vysokogo i sverkhvysokogo davleniy)

PERIODICAL: Teploenergetika, 1959, Nr 4, pp 3-10 (USSR)

ABSTRACT: At the present time Soviet Power Stations are becoming larger and the type of fuel used is changing in favour of gas, fuel oil and cheap open-cast coals. Because of these factors the capital and operating cost of generating heat and power are falling. As condensing power stations become larger and the boiler-turbine unit becomes the main type of equipment they become considerably cheaper, thus with sets of 200 MW the cost falls to 800-900 roubles/kW and with sets of 300-500 MW the cost drops to 600-700 roubles/kW. With the new large sets using high steam conditions and a high degree of automation thermal efficiency is greater and the number of staff required is proportionately small. The cost of boiler houses for centralised heat supply is reduced by about 30% when gas

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or fuel oil firing is used and their operating efficiency rises to 80-90% against 65-75% when operating on solid fuel. It is sometimes considered that as the separate generation of heat and power becomes more efficient and cheaper, combined generation of heat and power with district heating should no longer play a leading part. A careful analysis of this problem has been made by a number of leading institutes and specialists and shows that these doubts are unfounded and the economic advantages of combined heat and power generation remain, despite the new conditions. Formula 4 gives the cost of heat and electric power stations and it shows that the way to make these stations cheap is to use large turbine sets and not to increase the number of turbine sets, as is sometimes done because of delays in the production of large turbines. As a general rule heat and electric power stations should have two or three sets and sometimes one set only. Figures are given to show that in the USSR, the heat load is

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concentrated in a relatively small number of large centres. It is stated that in the USSR, there are hardly more than 12-15 towns for which the construction of more than one large heat and electric power station would be justified. Table 1 gives the results of calculations of the economics of district heating in a town with a heat consumption of 1,200 Mk cal/hour with different sizes of heat and electric power stations. The data given in this table and also in Fig.1 show that the increase in the cost of the heating systems when the heat and electric power stations are made larger is covered by the decreased cost of the stations. In order to make heat and electric power stations large it is necessary to combine industrial and communal heat supply. The ratio of heat to power supply is then discussed at some length with economic calculations, the results of which are given in Table 2 and Fig.2, Table 3 and Fig.3. The importance of using the heat supply pass outs on the turbines for a considerable proportion of the year is emphasised. In particular

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seasonal peak thermal loads on heat and electric power stations should not be covered by the power boilers as has been done hitherto. Instead low pressure heating boilers should be used. The use of these low pressure boilers for peak heat loads is discussed at some length as is the use of reheat in heat supply turbines. The use of heat accumulators to cover daily peaks is recommended. Reasons are given which suggest that in the great majority of heat and electric power stations in the European part of the USSR, the principal fuel will be gas whilst in the majority of condensing stations the main fuel will be coal. In Siberia both types of station will mainly work on cheap brown coal obtained from open cast workings. Since gas cannot be stored full advantage can only be obtained from the construction of the gas pipe lines if they are very fully used. In order to stimulate the uniform use of gas a differential tariff should be established depending on the number of hours of

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utilisation. Consumers who can take gas at times of off-peak load should get special cheap rates. Gas is a particularly convenient fuel for urban heat and electric power stations. In some cases there are economic advantages in constructing heat and electric power stations some tens of kilometers outside the town. It is concluded that in the immediate future the development of the national economy of the USSR will create favourable conditions for the growth and concentration of heat loading both for industrial and domestic use. Because of this more than half of the heat and electric power stations brought in during the period 1959-65 can be made with sets of 50 MW and more and pressures of 130 atm and higher. It will accordingly be necessary to increase the output of heat supply turbines with outputs of 50, 100 and 150 MW for pressures of 130 atm and more. It is also necessary to accelerate the modernisation of medium output turbines and to extend the application of 90 atm pressure for heat supply turbines with outputs up to 6 MW. It is

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necessary to increase the output of water-heating peak and low pressure boilers with outputs of 15, 25, 50, 100 and 200 Mkcal/hour. In order to reduce the cost of heat and electric power stations the practices of holding main boilers for reserve or for covering peak heating loads should be abandoned. Such loads should be covered by low pressure water heating and steam boilers, whilst daily peaks should largely be covered by heat accumulators. Greater use should be made of back-pressure turbines in general and in industrial heat and electric power stations. In order to increase the thermal efficiency of heat and electric power stations it is necessary to raise the maximum number of hours of use of heat supply pass outs and back pressure turbines to 5,000 hours and more per year. The initial steam conditions of heat and electric power stations should also be increased as far as possible, whilst the steam conditions in the pass out should be reduced. In gas-fired heat and electric power stations,

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seasonal heating load peaks should be covered by fuel oil or solid fuel so that full use can be made of the gas wells and long-distance pipe lines. Heat and electric power stations should be made well outside the cities when fuels of high sulphur content or peat are used. The construction of industrial boiler houses for heat supply instead of heat and electric power stations should be forbidden when there is a heat load of more than 35-60 Mkcal/hour in which case the separate generation of heat and electric power is obviously not profitable. There are 3 figures, 4 tables and 1 Soviet reference.

ASSOCIATION: Moskovskiy institut inzhenerov gorodskogo stroitel'stva (Moscow Institute of City Construction Engineers)

SOV/96-59-6-16/22

AUTHOR: Kop'yev, S.F. (Doctor of Technical Sciences)

TITLE: A Procedure for Determining the Economic Effectiveness of District Heating in Large Power Systems (Metodika opredeleniya ekonomicheskoy effektivnosti teplofikatsii v moshchnykh energosistemakh)

PERIODICAL: Teploenergetika, 1959, Nr 6, pp 80-86 (USSR)

ABSTRACT: There is an editorial note that although the material given in the article is of interest, the actual procedure for determining the economic justification of district heating in large power systems requires further development. In particular there is the need to allow for the conditions in which heat and electric power stations are used in power systems; and some of the methods used in the article are questioned. The economic justification of providing heat supply in connection with large power systems has recently been cast in doubt because of increases in the size of power systems, the use of higher steam conditions, and alterations in the fuel balance in favour of gas, fuel oil and cheap open-cast coal. A correct approach to this question requires a unified procedure to determine the economic effectiveness of district heating under modern conditions. This

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article attempts to provide such a method and is based on work by the Power Institute AS USSR and the State Scientific Technical Commission of the Council of Ministers of the USSR. Fundamentally, the method is the well-known one of setting-off reduced operating costs against increased capital costs for the different variants considered. The method may be expressed analytically by formula (1), which for convenience of calculation may be rewritten as (2) or (3). The various formulae required are then determined and Table 1 gives typical thermal characteristics of heat and electric power stations and condensing power stations, for the determination of fuel consumption and thermal loading. Capital costs are then considered in more detail. Typical capital costs of large regional condensing stations burning coal, as a function of the output of the turbines and boilers, are derived from the design studies of Teploelektroproyekt and presented in Table 2. Typical costs of gas-turbine power stations and steam-turbine stations burning gas are given in Table 3, and it will be seen that for medium

outputs gas-turbine stations are competitive with steam in respect of cost and economy. Typical costs of heat and electric power stations are given in Table 4. It should be borne in mind that the use of the regular boilers to cover peaks in the seasonal heating load of heat and electric power stations, or to provide reserve process steam in industrial stations, can increase the cost of a heat and electric power station by 30% or more. It is much cheaper to use special peak-load boilers. Boiler costs calculated by formulae (16) and (17) are given in Table 5. Table 6 shows typical costs of heating systems laid in a large town and also gives the total cost of heating systems and regional boilers, to indicate the best size for such boilers. This table clearly shows that it is unprofitable to use small boilers and that there is a wide range of boiler output which gives total capital costs only a little greater than the minimum values. Operating costs are then considered in more detail. Fuel costs and corresponding capital outlay figures are given for a number of varieties of coal, oil, peat and gas in

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Table 7. Data about the cost of transporting fuel, including capital cost, are in Table 8. A comparison is made for supply of heat to a town using heat and electric power stations, or condensing stations with separate generation of heat in district boiler houses and the results are given in Table 9. The comparison is made for two kinds of coal and for natural gas fuel. The method of calculating the fuel cost is explained and the data are given in Table 10. On the basis of the given example it is concluded that: heat and electric power stations operating on solid fuel are absolutely justified if the output is 150 MW or more; the pay off time of smaller heat and electric power stations depends on the fuel cost and thermal loading. If the thermal loads are less than 35 Mkcal/hr in a region of expensive fuel, or 60 Mkcal/hr in a region of cheap fuel, combined heat and electric supply is less economic than the separate supply of heat

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and electric power. These conclusions are only approximate, because a great deal may depend on local circumstances.
There are 10 tables, no references.

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KOP'YEV, S.F.

Development of heat-supply systems in cities. Vod.i san.tekh. no.6:5-9 Je '60. (MIRA 13:6)
(Heating from central stations)

KOP'YEV, S.F., doktor tekhn.nauk

Concerning the problems of the conversion of heating systems to electric power production. Tepolenergetika 8 no.1:82-83 Ja '61. (MIRA 14:4)

(Electric power production)
(Heating from central stations)

DZHAMALOV, O.B., doktor ekon. nauk; GUSEV, Yuriy L'vovich, dots., kand. tekhn. nauk; KOP'YEV, Sergey Fedotovich, prof., doktor tekhn. nauk; ALEKSANDROVICH, Yu.B., retsenzent; FEDOROV, M.N., starshiy inzh., retsenzent; OSENKO, L.M., red. izd-va; RODIONOVA, V.M., tekhn. red.

[Boiler systems and thermal networks]Kotel'nye ustanovki i teplovye seti. Moskva, Gosstroiizdat, 1962. 310 p. (MIRA 16:1)

1. Gosudarstvennyy komitet Soveta Ministrov SSSR po delam stroitel'stva (for Aleksandrovich). 2. Nauchno-issledovatel'skiy institut sanitarnoy tekhniki Akademii stroitel'stva i arkhitektury SSSR (for Fedorov).
(Boilers) (Heating from central stations)

KOP'YEV, S.F., doktor tekhn. nauk, prof.

Profit margin of central heating systems. Teploenergetika 10 no.7:82-84 Jl '63. (MIRA 16:7)

(Heating from central stations)

KOP'YEV, Sergey Fedotovich, prof., doktor tekhn. nauk; KACHANOV, Nikolay Filippovich, inzh.; ZAMYSHLYAYEVA, I.M., red.

[Principles of heat supply and ventilation] Osnovy teplogazosnabzheniia i ventiliatsii. Moskva, Stroiizdat, 1964. 227 p. (MIRA 17:8)

AFANAS'YEV, A.F., inzh.; KOP'YEV, S.F., doktor tekhn.nauk; ROMIN, M.M., inzh.

Increase in the efficiency of large industrial thermal electric power plants. Teploenergetika 11 no. 1:85-91 Ja '64. (MIRA 17:5)

1. Moskovskiy inzhenerno-stroitel'nyy institut i Vsesoyuznyy gosudarstvennyy proyektnyy institut stroitel'stva elektrostantsiy.

(1. St. Republic Dept. of Planning Commune Electric Power Stations, Min. Commune Economy RSFSR

A-U State Planning Dept. Construction Electric Stations-

ADAMOVICH, P.V.; BATURIN, V.V.; VAKHVAKHOV, G.G.; VAYNGAUZ, L.G.; VILENSKIY, Ye.Ya.; GAMBURG, P.Yu.; DAVYDOV, Yu.S.; KARPIS, Ye.Ye.; KUZNETSOVA. Z.I.; KOP'YEV, S.F.; LIVCHAK, I.F.; LOBACHEV, P.V.; LEV, G.M.; NOTKIN, Ye.M.; PIRUMOV, A.I.; POLIKARPOV, V.F.; PROTOPOPOV, A.P.; REPIN, N.N.; SLADKOV, S.P.; TALIYEV, V.N.; TROITSKAYA, F.B.; FEDOROV, M.N.; SHEVELEV, F.A.; SHKABEL'NIKOVA, L.P.; SHCHUTSKIY, A.I.; SMIRNOV, L.I., inzh., nauchnyy red.; SMIRNOVA, A.P., red. izd-va; MOCHALINA, Z.S., tekhn. red.; RODINOVA, V.R., tekhn. red.

[Present level and prospects for the development of sanitary engineering and the production of sanitary engineering equipment] Sovremennyi uroven' i perspektivy razvitiia sanitarnoi tekhniki i proizvodstva sanitarno-tekhnicheskogo oborudovaniia. Moskva, Gosstroiizdat, 1962. 283 p. (MIRA 15:8)

1. Akademiya stroitel'stva i arkhitektury SSSR. Institut sanitarnoy tekhniki.

(SANITARY ENGINEERING)

KOP'YEV, S.F., doktor tekhn. nauk; LIVCHAK, I.F., doktor tekhn. nauk; NASONOV, Ye.A., inzh.

Using the heat of thermal waters for heating. Vod. i san. tekh. no.6:1-6 Ja '64 (MIRA 18:1)

KOP'YEV, S.F., doktor tekhn. nauk, prof.

Problem of direct-flow heat supply of cities. Teploenergetika 11 no.8:57-62 Ag '64. (MIRA 18:7)

1. Moskovskiy inzhenerno-stroitel'nyy institut imeni Kuybysheva.

KOP'YEV, S.F., doktor tekhn. nauk

Operation of open heat supply systems and a new method for calculating them. Vod. i san. tekh. no.9:14-20 S '64. (MIRA 17:11)

YERSHOV, V.S., st. prepod.; KOP'YEV, S.I., otv. za vypusk

[redacted]

[Design of a polyspast] Raschet polispasta; uchebnoe posobie k raschetno-graficheskoi rabote po kursu "Detali mashin." Gor'kii, Gor'kovskii inzhenerno-stroit. in-t im.V.P.Chkalova, 1962. 26 p. (MIRA 16:8)
(Pulleys)

KOP'YEV, S. I.

KOP'YEV, S. I. "Basic Problems of Organizing Regional Open-pit Mines for non-metallic Building Materials." Min Higher Education USSR. Moscow Order of Labor Red Banner Construction Engineering Inst imeni V. V. Kuybyshev. Moscow-Gor'kiy, 1956. (Dissertation for the Degree of Doctor in Technical Science)

So: Knizhnaya Letopis', No. 19, 1956.

KOP'YEV, S.A., kandidat tekhnicheskikh nauk.

Determining the optium output for pits producing non-mineral materials. Stroi.mat., izdel. i konstr. 2 no.2:18-19 F '56. (MLRA 9:6)
(Quarries and quarrying)

KOP'YEV, S., kand.tekhn.nauk.

Slag silicate products. Stroi. mat. 4 no.1:6-8 Ja '58. (MIRA 11:2)

(Gorkiy--Building blocks)
(Silicates)

KOP'YEV, S.I., kand.tekhn.nauk

Modern methods for extracting and processing rock materials.
Mekh. stroi. 17 no.7:3-8 Jl '60. (MIRA 13:7)
(Quarries and quarrying--Equipment and supplies)
(Sand and gravel plants--Equipment and supplies)

KOP'YEV, S.I., kand. tekhn. nauk

Beneficiation of crushed stone and gravel in heavy suspensions.
Mekh. stroi. 18 no.11:10-11 N '61. (MIRA 16:7)

(Stone, Crushed) (Sand and gravel industry)

POLYAKOV, R. M., KULIKOV, A. V., KOP'YEV, V. YA.

Mining Engineering - Leninogorsk

Work of combined crews at the Leninogorsk combine, Gor. zhur, no. 7, 1952.

9. Monthly List of Russian Accessions, Library of Congress, October, 1952 1953. Unclassified.

KOP'YEV, V.YA.

KULIKOV, A.V.; KOP'YEV, V.Ya.; PRITYKIN, M.I.; PLATONOV, V.I.; FILIMONOV, M.I.

Adopting practices of the Zolotukhino mine innovators. Gor.zhur. no.2: 15-19 F'55. (MLRA 8:7)
(Zolotukhino—Mine management)

KOP'YEV, V.Ya., inzh.

Maintenance of abandoned workings and liquidation of voids in mines. Bezop.truda v prom. 3 no.3:25-26 Mr '59.
(MIRA 12:4)
(Mining engineering)

IOFIN, S.L.; SKHARPETIN, V.V.; DRONOV, N.V.; KOP'YEV, V.Ya.; IVANOV, V.A.

Efficiency of mining systems in mines of the East Kazakhstan Economic Region. Gor. zhur. no.7:26-33 Jl '62. (MIRA 15:7)

L. Vsesoyuznyy nauchno-issledovatel'skiy institut tsvetnykh matallov, g. Ust'-Kamenogorsk.
(East Kazakhstan Province—Mining engineering)

KOP'YEV, V.Ya.

Working the Dzhenichka deposit. Sbor. trud. VNIITSVETMET no.4: 37-46 '59. (MIRA 16:8)

(Dzhenichka region—Mining engineering)

L 10218-66 EWT(d)/FSS-2 RB

ACC NR: AP5028464 SOURCE CODE: UR/0286/65/000/020/0030/0030

AUTHORS: Rzhevskiy, V. V.; Kop'yev, V. Ya.; Korenberg, Ye. B.; Orlovskaya, E. D.

ORG: none

TITLE: A method for angular-traverse radio communications in branching underground mining excavations. Class 21, No. 175536 [announced by Moscow Institute of Electronics and Mining Electromechanics (Moskovskiy institut radioelektroniki i gornoy elektromekhaniki)]

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 20, 1965, 30

TOPIC TAGS: microwave communication, radio relay, centimeter wave, electromagnetic energy

ABSTRACT: This Author Certificate presents a method for angular-traverse radio communications in branching underground mining excavations. It employs the channeling properties of the excavations. To increase the range of radio communications, electromagnetic energy of the centimeter range is radiated at small glancing angles at the places where the traverses bend. This results in

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UDC: 621.396.4

KOP'YEV, V.Ya., kand.tekhn.nauk

Planning of radio telemetering setups. Trudy VZEI no.9:215-218 '58. (MIRA 12:10)
(Telemetering)

40925

S/025/62/000/009/001/002
D268/D307

27.4000 4312

AUTHORS: Zhukov-Vereshnikov, N. N., Professor, Active Member of the AMN SSSR and Kop'yev, V. Ya., Docent

TITLE: Biology and cosmic flights

PERIODICAL: Nauka i zhizn', no. 9, 1962, 15 - 19

TEXT: Biological conditions of planetary flight are discussed in general terms with special reference to the danger of contamination of the earth by pathogenic micro-organisms introduced by returning ships. As a first step in prevention, study of the surface of the planets by automatic biological probes is advocated. In this context bioelements of the Academy of Medical Sciences capable of automatic recording of the reproduction of micro-organisms and the transmission of appropriate signals to earth were carried by the second Soviet space ship. They consisted of a vessel, usually a metal cylinder, divided into 2 chambers by a glass membrane, one containing spores of butyric fermentation micro-organisms, and the other nutrient

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Biology and cosmic flights

S/025/62/000/009/001/002
D268/D307

medium. Spores are sown to the medium when the membrane is broken by earth signal or a programming device on the rocket. Reproduction is accompanied by the formation of gases operating a pressure transmitter through which a signal is sent to earth by radiotelemetric apparatus. These or similar bioelements could be used to determine experimentally whether life is possible under conditions of long-distance flight at velocities approaching that of light with prolonged exposure to acceleration. They might also be used for biological verification of the theory of relativity. There are 6 figures.

Card 2/2

ZHUKOV-VEREZHNIKOV, N., prof.; KOP'YEV, V., dotsent; MAYSKIY, I., prof.;
PEKNOV, A., doktor biolog.nauk; TRIBULEV, G., dotsent;
YAZDOVSKIY, V., prof.

Biological aspects of the theory of relativity. Av.i kosm. 45
no.2:13-35 F '63. (MIRA 16:2)

1. Deystvitel'nyy chlen AMN SSSR (for Zhukov-Verezhnikov).
(Space biology)

KOP'YEV, Ye. I.

99-1-8/10

AUTHOR: Kop'yev, Ye. I., Engineer

TITLE: Self-Propelled Mole-Track Ditcher (Navesnoy krotovatel')

PERIODICAL: Gidrotekhnika i Melioratsiya, 1958, # 1, pp 54-58 (USSR)

ABSTRACT: The Laboratory for Mechanization of the All-Union Scientific-Research Institute for Hydraulic Engineering and Melioration has developed an experimental model of a mole-track ditcher mounted on the tractor "ДТ-54". This implement is used for making subsurface ditches for underground irrigation. The machine was tested in 1956 on a collective farm of the Rostovskaya Oblast'. The subsurface mole-track ditches have a diameter of 86 mm. the depth ranges between 40 and 55 cm. The machine made more than 400 km of subsurface ditches without a breakdown, and 20 km of subsurface ditches reinforced with concrete. Complete technical data on the machine is given in the article. It is recommended to use the mole-track ditcher in the clayey black soils of the Rostov Oblast' when the soil is moist (16 - 22% above the weight of dry soil) during the spring fall, and then not to irrigate before the next spring.

There are 2 figures, 3 tables, 3 Russian and 1 German references.

AVAILABLE: Library of Congress

Card 1/1

KOP'YEV, Ye.I., inzh.

The KN-700 tractor-mounted mole plow. Gidr.i mel. 12 no.7:43-46 Jl '60. (MIRA 13:7)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut gidrotekhniki i melioratsii.
(Drainage) (Plows)

KOP'YEV, Ye.I., inzh.

Hydraulic work regime of irrigation mole drains. Trudy VNIIG&M 35:120-129 '60. (MIRA 14:9)
(Irrigation)

TOMIN, Ye.D., kand. tekhn. nauk; ZHILIN, G.V., inzh.; KOP'YEV, Ye.I., inzh.

Machines for cleaning shallow drainage canals. Gidr. i mel. 17 no.7:30-38 Jl '65. (MIRA 18:12)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut gidrotekhniki i melioratsii.

SHAUMYAN, V.A., doktor tekhn. nauk, prof., otv. red.; BOKHIN, F.I., kand. sel'khoz. nauk, zam. otv. red.; KOKOVIN, Ye.V., kand. tekhn. nauk, red.; KOP'YEV, Ye.I., inzh., red.; POPOVA, V.Ya., kand. tekhn. nauk, red.; SAMSONOVA, N.P., kand. tekhn. nauk, red.; CHICHASOV, V.Ya., kand. tekhn. nauk, red.; RODIN, Ya.S., red. izd-va

[Mechanization of irrigation and drainage work and use of plastic materials in irrigation and drainage construction; materials]Mekhanizatsiia gidromeliorativnykh rabot i ispol'zovanie plastmass v gidromeliorativnom stroitel'stve; materialy Mezhdunarodnogo nauchno-metodicheskogo soveshchaniia. Moskva, Izd.VNIIGiM, 1962. 242 p. (MIRA 15:12)

1. Nauchno-metodicheskoye i koordinatsionnoye soveshchaniye nauchno-issledovatel'skikh uchrezhdeniy sotsialisticheskikh stran po mekhanizatsii stroitel'nykh i ekspluatatsionnykh gidromeliorativnykh rabot i ispol'zovaniyu plastmass v gidromeliorativnom stroitel'stve, Moscow, 1960. 2. Vsesoyuznyy nauchno-issledovatel'skiy institut gidrotekhniki i melioratsii im. A.N.Kostyakova (for Shaumyan).

(Irrigation—Congresses) (Drainage—Congresses)

TOMIN, Ye.D., kand.tekhn.nauk; KOP'YEV, Ye.I., inzh.

Mounted cutting machine for developing land covered with bushes. Gidr. i mel. 14 no.8:42-46 Ag '62. (MIRA 15:9)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut gidrotekhniki i melioratsii.

(Clearing of land)

VINOGRADOVA, T.V., dotsent; KOP'YEVA, I.A.

Organizing and conducting planned sanitation of the oral cavity in schoolchildren. Trudy TSIU 64:4-10 '63. (MIRA 17:5)

Mor., Leningrad State University, and Radium Institute, Acad. Sci., -1946-

"The β-Ray Spectrum of K^{40}," Dok. AN, 52, No. 2, 1946

KOP'YEVA, M.

PROCESSES AND PROPERTIES INDEX

β-Ray spectrum of K^{40}. B. S. Dzhelepov, M. Kop'eva, and E. Vorob'ev (Univ. Leningrad, Leningrad, U.S.S.R.). *Phys. Rev.* 69, 538 (1946). The β spectrum of the reaction $K^{40} \to Ca^{40}$ has an upper limit of 1.350 ± 20 e.kv., and a single max. at about 400 e.kv. A special magnetic spectrometer with 7 counters is described. G. M. P.

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

KUSHNIR, Yu.M.; ROZENFEL'D, A.M.; ZAYTSEV, P.V.; KOP'YEVA, N.A.; ROZENFEL'D, L.B.

Attachment for the EEM-50 emission microscope for studying secondary emitters. Zav.lab. 30 no.12:1512-1513 '64.

(MIRA 18:1)

18.7530 1116 2808 1087 S/126/61/012/002/006/019
26557 E111/E435

AUTHORS: Rutkovskiy, M.L., Anufriyeva, N.A., Kop'yeva, O.M., Potapova, N.V. and Kazakov, I.V.

TITLE: Kinetics of gas boriding of nickel

PERIODICAL: Fizika metallov i metallovedeniye, 1961, Vol.12, No.2, pp.217-222

TEXT: Materials such as borides, silicides and carbides satisfy the requirements of high chemical stability and resistance to erosion which technical developments are imposing. No substantial investigation on the rate of boriding has yet been reported and there is some divergence of views on results obtainable (e.g. Ref.10: Zhigach A.F. and others, Metallovedeniye i termicheskaya obrabotka, 1959, No.4, 45; and Ref.11:Weintraub E, Ind. a. Eng. Chem., 1911, 3, 299). The authors have studied the gas boriding of nickel at 900°C using a 1:4-1:10 mixture of boron trichloride and hydrogen. The gas mixture was stored in a cylinder and admitted, at a measured rate, to a 30 mm diameter horizontal quartz reaction tube (in a furnace) which could also be flushed with nitrogen. The flow of the gas mixture was started when the temperature reached 500 to 600°C. Specimens were in the

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form of rectangular 25 x 10 x 2 mm nickel plates, cleaned with emery and washed with alcohol. After thickness measurement with a micrometer the specimens were weighed. The thickness Δl of metal consumed in the formation of the boride film was taken to be half the difference between the initial and final thicknesses (measured at the centre of the specimen). A linear relation between Δl (mm) and boriding time (hours) (from attainment of the working temperature, 900°C) was found, Δl being 0.8 at the maximum of 30 hours. Gas flows of 6, 24 and 96 litres/hour were used, the corresponding weight-gains in g/m^2 hour being 26.6, 54.1 and 99. All flow rates were in the laminar range. From the results the authors conclude that the rate-controlling factor was boron diffusion from the gas phase to the metal surface. In the range studied, the weight-gain rate (i.e. boriding rate) was found to be practically independent of the boron trichloride to hydrogen ratios. This suggests that the trichloride does not participate directly in boriding but forms an active intermediate compound. A check on the weight of nickel lost during boriding showed that it was under 1%, indicating that nickel dichloride is not formed: this is

26565 S/126/61/012/002/016/019
E073/E335

1.1800

AUTHORS: Rutkovskiy, M.L., Anufriyeva, N.A., Kop'yeva, O.M. and Potapova, N.V.

TITLE: On the Causes of a Linear Relation Between the Thickness of the Layer and Duration of the Process of Borating Nickel

PERIODICAL: Fizika metallov i metallovedeniye, 1961, Vol. 12, No. 2, pp. 292 - 294

TEXT: In an earlier paper (Ref. 1 - FMM, 1961, 12, 217) the authors and I.V. Kazakov have shown that in borating nickel a linear dependence was observed between the thickness of the metal layers Δl expended on forming the boron film and the time of boron deposition τ for $\Delta l \leq 0.8$ mm. Usually, the curve reflecting the speed of the diffusion process is a parabola, for which the equation $y^2 = f \cdot \tau$ is valid; linear dependence between the thickness of the layer and the time is possible only if the forming film has mechanical defects along which the diffusing substance migrates to the surface of the

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base material. A photograph of a polished microsection of a boride layer is reproduced, from which it is concluded that the linear dependence is not due to mechanical defects of the film since defects at a direction normal to the surface of the specimen were not detected in the film. Comparison of the structure of boride films on nickel and cobalt has shown that they are qualitatively equal in spite of the fact that the increase in thickness of the boride film obeys the parabolic law in the case of cobalt and the linear law in the case of nickel; Figs. 3 and 4 show the dependence of the thickness of the borated layer $\Delta \ell$, mm as a function of time, hrs, for a borating temperature of 900 °C for nickel and cobalt, respectively. It was established that the temperature coefficient of the speed of borating nickel at temperatures above 900 °C was considerably higher than was anticipated on the basis of the exponential time dependence of the diffusion coefficient. If borating was at 1 000 °C the eutectic NiB + Ni_3B_2 with a fusion temperature of 990 °C formed and the specimens

melted off. Formation of this eutectic led to the idea that in the case of the formation of borides being exothermal the linear dependence between the thickness of the borated layer and the time at temperatures not differing greatly from the temperature of formation of the eutectic can be explained as follows. At the surface of the nickel specimens which is subjected to borating there will be concentrational fluctuations; due to the exothermal nature of the process this will lead to a local increase in the temperature in the borated specimen and to the formation of a low melting-point eutectic at these points. The diffusion coefficient at these points will increase instantaneously and this will lead to an overall increase in the diffusion coefficient and will result in a linear dependence between the thickness of the layer and the borating time. Conservation of the parabolic dependence in the case of cobalt is obviously due to the fact that the temperature of formation of the low melting-point eutectic Co-B, which is 1 105 °C, exceeds the borating temperature by 205 °C, whilst in the case of nickel this temperature difference is only

90 °C. Thus, the heat released during borating of cobalt is apparently inadequate for producing a low melting-point eutectic at the spots where concentration fluctuations occur and, as a result of this, the parabolic dependence $\Delta\ell = f(\tau)$ is maintained in the case of borating cobalt under the given temperature conditions. There are 4 figures and 4 references: 3 Soviet and 1 non-Soviet. The English-language reference quoted is: Ref. 3 - Brewer, Dwight L. Sawyer et al - J. Amer. Ceramic Soc., 1951, 34, 173.

SUBMITTED: February 28, 1961

Card 4/4

RUTKOVSKIY, M.L.; ANUFRIYEVA, N.A.; KOP'YEVA, O.M.; POTAPOVA, N.V.; KAZAKOV, I.V.

Kinetics of the gaseous boron saturation of nickel. Fiz. met. i metalloved. 12 [illegible]:217-222 Ag '61. (MIRA 14:9)
(Nickel—Hardening)
(Case hardening)

RUTKOVSKIY, M.L.; ANUFRIYEVA, N.A.; KOP'YEVA, O.M.; POTAPOVA, N.V.

Causes of the linear relation between the thickness of a layer and the length of time in the boron saturation of nickel. Fiz. met. i metalloved. 12 no.2:292-294 Ag '61. (MIRA 14:9)

(Nickel) (Case hardening)

GORNAK, K.A.; KOP'YEVA, T.N. (Moskva)

Pathological anatomy of myasthenia. Arkh. pat. 27 no.10:12-21 '65. (MIRA 18:10)

1. Laboratoriya serdechno-sosudistoy patologii (zav. - chlen-korrespondent AMN SSSR prof. A.I.Strukov) Instituta morfologii cheloveka (direktor - deystvitel'nyy chlen AMN SSSR prof. A.P. Avtsyn) AMN SSSR.

S/137/62/000/006/020/163
A006/A101

AUTHORS: Li, A. F., Kop'yeva, V. N.

TITLE: Rare elements in East-Siberian auriferous ores

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 6, 1962, 4, abstract 6G30 ("Sb. nauchn. tr. Irkutskiy n.-i. in-st redk. met.", 1961, no. 9, 35 - 41)

TEXT: East-Siberian Au-ores contain a number of rare elements, mainly Se, Te, Ag, Bi, Ga and partially In. They are dispersed in the form of isomorphous substitution or as independent minerals, but only Se and Te have a practical value. The Siberian auriferous formation is richer in Te than in Se. From the practical point of view, sulfide flotation concentrates and Au-containing slurries are interesting as possible sources for extraction of Se and Te. There are 7 references.

S. Shmeleva

[Abstracter's note: Complete translation]

Card 1/1

KOP'YEVA, T.N., student; CHERKES, V.L., student

Changes in the liver during the early phases of protein-choline deficiency. Trudy 1-go MMI 22:192-199 '63 (MIRA 18:2)

KOP'YEVA, Ye. P.

✓An anesthetizing substance for use in stomatology. N. N. Prokopovich, Z. A. Fils, Z. I. Frankovskaya, and E. P. Kop'eva. *Vrachebnoe Delo* 1956, No. 1, 41–4; *Referat. Zhur., Khim., Biol. Khim.* 1957, No. 4439.—Propolis (I) (0.25%) was found to anesthetize the cornea of the rabbit's eye better than cocaine and procaine (II). The anesthetic action of I increased when it was combined with II. In expts. with conduction anesthesia a 1% soln. of I possessed 4 times the anesthetizing power of II (in expts. with frogs). I was a surface anesthetic; its penetrating power was negligible. I is recommended for use in stomatological practice.

B. S. Levine.

KOP'YEVA, Ye.P., assistent (Kiyev)

Use of celandine for the local treatment of paradentosis. Probl. stom. 4:271-274 '58. (MIRA 13:6)
(GUMS--DISEASES) (CHELIDONIUM)

TSALOLIKHIN, G.Kh..; KOP'YEVA, Ye.P. (Kiyev)

Condition of the oral mucosa in leukemia. Stomatologiia 38 no.2: 16-17 Ap '59. (MIRA 12:7)
(LEUKEMIA) (MOUTH--DISEASES)

DANILIN, S.; KOP'YEVSKIY, I.

Bricklayers

At the head of the competitors. V pom. profaktivu 14, No. 5, 1953.

9. Monthly List of Russian Accessions, Library of Congress, June 1953, Uncl.

KOP'YEVSKIY, N.

Good sentiments are a person's ornament. IUn.tekh. 4 no.6:37-41 Je '60. (MIRA 13:9)
(Animals, Treatment of)

KOP'YEVSKIY, N.A.

Apartment No.6. Zdorov'e 3 no.8:28-29 Ag '57. (MLRA 10:9)
(RUSSIA--SOCIAL CONDITIONS)

SKIRDOVA, K., kand.tekhn.nauk; KOPYL, A., inzh.

Polymer film materials for finishings. Na stroi.Ros. no.4:30-31 Ap '61. (MIRA 14:6)
(Polymers) (Finishes and finishing)

KOPYL, A.N.

USSR/Farm Animals. Swine. Q-2

Abs Jour: Ref Zhur - Biol., No. 22, 1958, 101168

Author : Kopyl, A.N., Pozdnyakov, A.L., Migunova, G.P.

Inst : Kharkov Zootechnical Institute

Title : Fattening of Swine with Variously Prepared Corn Grain Fodder.

Orig Pub: Sb. tr, Khar'kovsk. zootekhn. in-t, 1957, 71-76

Abstract: According to the principles of analogy methods, 98 immature 8-month-old sows of the large white breed were divided into 4 groups. During 45 tests days, the animals were fed variously prepared corn. After the first 30 test days, the corn preparation method for the sows of different groups was modified (2nd period). During the 1st test period, the nutritional value of corn amounted to 68 percent, and during the 2nd

Card 1/2

ZHUKOV, I.I., KOPYL, A.N., redaktor; MEL'NIKOVA, N.V., tekhnicheskiy redaktor.

[Technology of leather substitutes] Tekhnologiia zamenitelei kozhi] Moskva, Gos.izd-vo mestnoi promyshlennosti RSFSR, 1955. 387 p. (Leather substitutes) (MLRA 9:5)

KHOROSHAYA, Ye.S., kand. khim. nauk; KOVRIGINA, G.I., mladshiy nauchnyy sotrudnik; KOSTRIKOVA, L.I., kand. tekhn. nauk; MUSATOVA, M.D., starshiy nauchnyy sotrudnik; KOPYL, A.N., starshiy nauchnyy sotrudnik.

Rapid method for determining rubber content of the leather mass prior to its feeding to the long-shot screening machine. Nauch.-issl. trudy VNIIPIK no.14:164-167 '63. (MIRA 18:12)

KOPYL, A.N.

KOPYL, A.N.; LIPSHITS, I.D.; SHUVALOVA, L.S.

Making patent leather by coating flesh layers with polyvinyl chloride varnish. Leg. prom. 18 no.1:20-21 Ja '58. (MIRA 11:2)
(Leather industry) (Vinyl polymers)

ALEKSEYENKO, V.I.; KOPYL, A.M.

Make full use of potentials in the artificial leather industry. Kozh.-obuv.prom. 2 no.8:4-7 Ag '60. (MIRA 13:9)

1. Kirektor Vsesoyuznogo nauchno-issledovatel'skogo instituta plenochnykh meterialov i ikusstvennoy kozhi (for Alekseyenko).
2. Zamestitel' glavnogo khimika Vsesoyuznogo nauchno-issledovatel'skogo instituta plenochnykh materialov i iskusstvennoy kozhi (for Kopyl).

(Leather, Artificial)

ALEKSEYENKO, V. I.; KOPYL, A. N.

Manufacture of artificial shoe-upper leather from textile fabrics (continuation). Koshobuv.prom. 2 no.9:8-10 S '60. (MIRA 13:10)

1. Direktor Vsesoyuznogo nauchno-issledovatel'skogo instituta plenochnykh materialov i iskusstvennoy kozhi (for Alekseyenko). 2. Zamestitel' glavnogo khimika Vsesoyuznogo nauchno-issledovatel'skogo instituta plenochnykh materialov i iskusstvennoy kozhi (for Kopyl).

(Leather, Artificial)

SKIRDOVA, K.M.; VAYNBERG, G.F.; KOPYL, A.N.

New types of light-diffusing film material suitable for lamp shades. Plast.massy no.7:48-49 '62. (MIRA 15:7)
(Plastic films)
(Lamp shades)