

Technological aspects of a problem of increase of thermal capacity of existing systems of a heat supply

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In article some problems of increase of capacity of existing systems of a heat supply are considered.

***Index Terms:* energy, thermal capacity, heat supply system, thermal networks.**

Growth of consumption both electric, and thermal energy at practically full absence of input of new power capacities brings an attention to the question on possible deficiency of thermal energy and considerable complexities in functioning of systems warmly and electrosupply. Building of new stations demands the big capital investments that gives the precondition to working out tehniko-economically and ecologically proved methods of increase of thermal capacity of systems of a heat supply.

Additional problem of increase in had capacity of existing systems of the centralized heat supply is the condition of their thermal networks and their considerable congestion under the expense of network water. Thus growth of cities considerably increases also quantity of consumers of the warmth connected to local system of the centralized heat supply. New loadings become covered at the expense of increase of capacities of sources of a heat supply, as a rule, without change of characteristics of thermal networks, and also increase and so expenses above permitted standard. Besides thus features of functioning of all system as a whole in modes of an overload of its separate elements (in this case thermal networks) are not considered.

Many consumers of thermal energy in systems of a heat supply of Russia are connected without application even hydraulic automatics. Thus every year more and more thermal energy consumers (practically all again entered objects) are

connected to thermal networks on means of the difficult automated thermal points. As at station qualitative regulation is carried out (calculated on hydraulic automatics) at the new automated subscribers is carried out quantitative, and at not automated regulation is absent, there is a problem not optimum work of system of transportation, distribution and thermal energy consumption. Not an optimality it is expressed in system disbalance, smaller heat sale to one consumers and fuller heat sale others, and also overestimate from standard values of temperature of return network water. Thus there is a decrease in had capacity of system of a heat supply.

It is possible to carry to technological features of the decision of the given problem one of low expenses ways of increase of thermal capacity of systems of a heat supply optimization of holiday of warmth to consumers within days on the basis of mathematical modeling with the account warmly accumulating properties of protecting designs and thermal networks. Besides, directed on low expenses increase in thermal capacity of systems of a heat supply it is possible to carry other technological actions to actions. For example, optimization of distribution of thermal and electric loading between thermal power station turbine units, and also its combination with optimization of holiday of warmth to consumers.

BIOGRAPHIES



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