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| Improved efficiency of solar energy using at combined systems of industrial heat supply |
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| <p>Theoretically and practically proved technical opportunity of creation of the combined system industrial systems of heat supply for objects of industrial heat supply that based of solar "delta - system" prefixes for boiler installations.</p> <p>The analysis of different techniques of estimation of instant efficiency of usual solar collectors and solar "delta-system" prefixes is earned out. The analysis of techniques of long-term characteristics of solar "delta-system" prefixes and usual solar collectors is carried out. Practical salvations that concerns structure of combined system industrial systems of heat supply are offered. Hourly mathematical modeling of energy efficiency of usual solar collectors and solar "delta-system" prefixes for boiler installations, modeling of replacement factor of traditional energy for warm months of the year my means of object-oriented language Visual Basic are determined. Energy characteristics of solar prefix to boiler in view of regimes of work of solar collectors at long-term work of system are determined.</p> <p>Recommendations of optimum designing of usual solar collectors and solar "delta- system" prefixes for boiler installations as a main structure elements of combined industrial heat supply system are offered.</p> <p>The technique, algorithms and programs of numerical modeling of thermal processes in combined industrial systems of heat supply are developed.</p> <p>Key words: the combined system industrial systems of heat supply, long-term characteristics, energy efficiency, solar "delta - system" prefixes, solar collector, solar prefix, boiler installation.</p> |