THE PERFORMANCE CRITERIONS OF A COMBINED PLANT FOR COOLING AND HEATING

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ABSTRACT

This paper analyses the possibility of heat recovery! from the refrigerating agent of overheated vapors after the compressor outlet. The survey has been carried out without modifying the functional parameters of the refrigeration plant (t_0) and by varying values of the refrigeration power for each season necessity. In the summer time, the refrigerating plant is one hundred percent loaded and in the wintertime the load percentage is reduced for refrigerating and for recovering the heat a heat pump is utilised. It is made obvious the favourable influence of the necessary heat recovery in order to prepare hot water as a method of improving the exergetic efficiency of a cooling system. A study has been conducted on the specific water production that corresponds to the refrigerating power unit.

This paper presents a comparative study regarding the importance of heat recovery, when using different couples of refrigerants, within a range of values of the ambient and condensation temperature.

The study performed by computer is based on the use of equations for thermodynamic parameters of the

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