عنوان مقاله:

Performance Improvement and Power Augmentation of Bandar Abbas Gas Turbine Power Plant Using Intake Air Absorption Cooling

محل انتشار:

همایش ملی آشنایی با فناوریهای روز در زمینه مهندسی مکانیک (سال: 1389)

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خلاصه مقاله:

Gas turbine is one of the most popular power generators especially for electrical power production, mainly because of its large amount of power output relative to its size and weight. One of the drawbacks of these power generators is that their output power decrease considerably in hot seasons, as a result of decrease in ambient air density. In Iran, particularly in southern hot regions, when the demand for the electrical power is at its peak in the summer, the output power of our gas turbine power plants lie at their minimum. One way to tackle this problem is to increase the ambient air density through inlet air cooling. In this paper, we study the application of absorption refrigeration cycle for inlet air cooling. Most of the energy required by absorption refrigeration system is in the form of heat, which is already available in hot air exhausted from turbine. The amount of increase in power is computed by thermodynamic analysis and the results will be validated using actual data from Bandar Abbas Gas Turbine Power Plant. Finally, the effect of .mentioned chiller system on various parameters of gas turbine, such as thermodynamic efficiency, will be predicted

کلمات کلیدی:

Gas Turbine, Power Plant,Refrigeration system, Absorption