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SCIENTIFIC & RESEARCH PROJECTS

Project No.: 01 **Year: 2008**

Project Field: Exergy Analysis

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Project Title:

Performance Evaluation of Counter-Flow Wet Cooling Towers Using Exergetic Analysis

Abstract:

In this paper, performance evaluation of wet cooling tower is done. To achieve this aim, first, thermal behavior of counter-flow wet cooling tower is studied through a simulation model. The influence of the environmental conditions on the thermal efficiency of the cooling tower is investigated. The cooling tower performance is simulated in terms of varying air and water temperatures, and of the ambient conditions. This model allows the use of a variety of packing materials. Second, the exergetic analysis is applied to study the cooling tower potential of performance improvement. The model is validated against the experimental data.