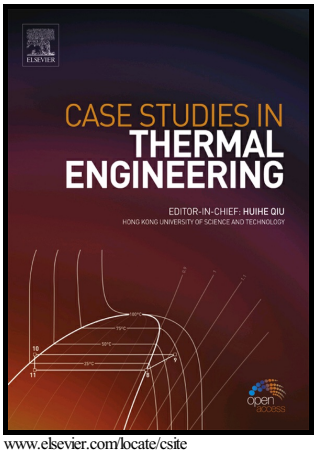

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PII: S2214-157X(18)30006-6
DOI: https://doi.org/10.1016/j.csite.2018.04.001
Reference: CSITE272

To appear in: *Case Studies in Thermal Engineering*

Received date: 7 January 2018
Revised date: 26 March 2018
Accepted date: 5 April 2018

Cite this article as: M.N. Khan and I. Tlili, New advancement of high performance for a combined cycle power plant: Thermodynamic analysis, *Case Studies in Thermal Engineering,* https://doi.org/10.1016/j.csite.2018.04.001

New advancement of high performance for a combined cycle power plant: Thermodynamic analysis

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Abstract

A great amount of energy gets lost through the exhaust of simple, reheat and inter-cooling cycle. Sometimes, this energy is enough to run another cycle or can be used to heat the compressed air from the compressor to the combustion chamber which leads to an increase in the overall efficiency of the plant. Combined cycle is an alternative to utilize the lost energy. In this way, not only the efficiency of the plant increases but it also helps to reduce air pollution and global warming. This paper is a parametric analysis conducted in order to optimize the performance of combined cycle which involves the bypass valve. The result shows that gain in network output is