Análisis exergético de una planta de cogeneración operando bajo ciclo combinado [

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Analítica

Nowadays, there are several ways to generate electricity; one of them is to harness the amount of energy released after burning a fuel and carrying out a series of processes to convert energy through a thermodynamic cycle. To make these processes more efficient, there are techniques that allows to analyze which plant devices are wasting energy; one of these techniques is exergy analysis which consists on a simultaneous application of the first and second law of thermodynamics. This paper shows the exergy analysis in a plant of electricity and heat generation from the steam production operating under a combined cycle. Initially, important concepts are defined to perform exergy analysis. After applying the first and second law of thermodynamics, the results indicate that the exergy efficiency of the plant of combined cycle is 53% and the combustion chamber is the device that destroyed more exergy in the system and the pumps are devices where occur less destruction of exergy
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