

## Thermodynamic Analysis of an Ejector-Absorption Refrigeration Cycle with Using NH<sub>3</sub>-H<sub>2</sub>O

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**Abstract :** In this paper, the ejector-absorption refrigeration cycle is presented. This article deals with the thermodynamic simulation and the first and second law analysis of an ammonia-water. The effects of parameters such as condenser, absorber, generator, and evaporator temperatures have been investigated. The influence of the various operating parameters on the performance coefficient and exergy efficiency of this cycle has been studied. The results show that when the temperature of different parts increases, the performance coefficient and the exergy efficiency of the cycle decrease, except for evaporator and generator, that causes an increase in coefficient of performance (COP). According to the results, absorber and ejector have the highest exergy losses in the studied conditions.

**Keywords :** absorption refrigeration, COP, ejector, exergy efficiency

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