

عنوان مقاله:

Energy and Exergy Analysis of an Ejector-Absorption Refrigeration Cycle with Using NH₃-H₂O as the Working Fluids

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نویسندگان:

A. Habibzadeh - *Department of Mechanical Engineering, Engineering Faculty, Urmia University, Urmia, Iran*

S. Jafarmadar - *Department of Mechanical Engineering, Engineering Faculty, Urmia University, Urmia, Iran*

M. M. Rashidi - *Department of Civil Engineering, University of Birmingham, Edgbaston, Birmingham, England*

S. S. Rezaei - *Department of Mechanical Engineering, Engineering Faculty, Bu Ali Sina University, Hamedan, Iran*

خلاصه مقاله:

In this paper, the thermodynamic simulation and the first and second laws analysis of an ammonia-water ejector-absorption refrigeration cycle is presented. A computer program has been applied in order to investigate the effects of parameters such as condenser, absorber, generator, and evaporator on the performance coefficient and exergy efficiency of this cycle. The results showed that in general when the temperature of different parts increases, performance coefficient and the exergy efficiency of the cycle decreases except for evaporator and generator that causes an increase in COP. The Entrainment ratio of the ejector, COP and exergy efficiency of the cycle decreases when the condenser temperature rises. Evaporator temperature increase leads to the increase of all studied parameters except exergy efficiency. Moreover, absorber and ejector have the highest exergy losses in the studied conditions. When generator temperature rises, total exergy loss and the entrainment ratio increase but leads to the reduction of the exergy efficiency.

کلمات کلیدی:

Absorption Refrigeration, Ejector, Exergy Efficiency, COP

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