عنوان مقاله:

Performance Evaluation of Ejector Refrigeration Cycle (ERC) Using Multi-parallel Ejectors

محل انتشار:

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خلاصه مقاله:

In this paper, by using of multi-parallel ejector and lowtemperatureheat sources in the Ejector Refrigeration Cycle(ERC), the first and second laws of thermodynamics havebeen conducted in order to keep the system running atoptimum conditions due to the variation of workingconditions. The irreversibility of the components and wholecycle have been conducted leading to determination of themain source of the exergy losses in the whole system. It isshown that the ejector with lower pressure than thecondenser pressure accounts for higher source ofirreversibility. Later, seven working fluids (i.e., R152a,R134a, R290, butene, isobutene, isobutane, and R236fa) arepresented for the cycle. In this case, the maximum andminimum coefficient of performances (COPs) are calculated0.344 for R152a and 0.285 for R236fa, respectively, whilethe maximum and minimum exergy efficiencies arecalculated 33.98% for R152a and .27.63% for isobutene,respectively

کلمات کلیدی:

Multi-parallel ejector (MPE), Ejectorrefrigeration cycle (ERC); Energetic analysis; Exergeticanalysis; Low temperature heat source