

عنوان مقاله:

Thermodynamic Analysis Of A Refrigeration Vapor Compression Cycle In Various Climatic Conditions Using R22

محل انتشار:

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خلاصه مقاله:

In this research a study of refrigeration vapor compression cycle with various climatic conditions and using R22 as refrigerant performed. A methodology performed for consideration of thermodynamic states of a compression cycle by 25 steps, named Zand's method. The range of refrigerant performance for main thermodynamic properties like temperature, pressure, enthalpy and entropy described. A Comprehensive combined P-T-s-h diagram of P-T-s-h situations and conditions of states for R22 provided in order to compare behavior of the selected refrigerant in assumed working and climatic condition. Subsequently The Coefficient of Performance (COP) for refrigeration (cooling procedure), heat pump (Heating procedure) and both heating and cooling in standard and actual conditions performed and described. Afterward EER, HRR and cycle Capacity provide, and finally, the minimum and maximum ranges of thermodynamic properties of each state, for assumed values and different climatic conditions calculated and described.

کلمات کلیدی:

Compression cycle, Zand's Method, Enthalpy, Entropy, COP

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