

Performance Analysis of Vapour Compression Refrigeration System with Alternate Refrigerants

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Abstract : The main aim of this project is to analyze the performance of vapor compression refrigeration system with alternate refrigerants. Currently we are using R134a as refrigerant. It is used in both household and industrial appliances as refrigerant. It has an advantage that the ozone depletion potential is zero i.e. R134a does not affect the ozone layer. But its global warming potential is considerably high. Also the compressor failure occurs frequently. Hence this project deals with how the performance of R134a varies with blended refrigerants such as R416a and R407c. This analysis is based on how much the Coefficient of Performance (COP) varies with different refrigerants.

Keywords : compressor, condenser, expansion valve, evaporator

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