

## **Exergetic Comparison between Three Configurations of Two Stage Vapor Compression Refrigeration Systems**

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**Abstract :** This study reports a comparison from an exergetic point of view between three configurations of vapor compression industrial refrigeration systems operating with R134a as working fluid. The performances of the different cycles are analyzed as function of several operating parameters such as condensing temperature and inter stage pressure. In addition, the contributions of component exergy destruction to the total exergy destruction are obtained for each system. The results are estimated to be used in the selection of the most advantageous configuration from an exergetic view point.

**Keywords :** vapor compression, exergy, destruction, efficiency, R134a

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