

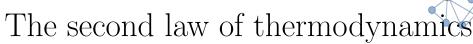
The second law of thermodynami

• Explain why all real engines are less efficient than the Carnot engine

• In a real engine does the gas inside the piston return to its original state on completion of a cycle as happens in the Carnot cycle? Explain your reasoning

• Write the Clausius inequality.

• Give a mathematical expression for the second law of thermodynamics





• Explain in your own words how the mathematical expression you just arrived at for the second law of thermodynamics is derived from the Clausius Inequality.