



Statements

The expressions: “(1) the thermal efficiency of an irreversible heat engine is lower than the efficiency of a reversible heat engine operating between the same two reservoirs, and (2) the thermal efficiency of all the reversible heat engines operating between the same two reservoirs are equal” are known as the

Answer: Carnot principles

Explanation: These are the Carnot principles. The Clausius statement states that it is impossible to construct a device that operates in a cycle and produces no effect other than the transfer of heat from a lower-temperature body to a higher-temperature body. The Clausius inequality is the expression that states that the cyclic integral of $\frac{\delta Q}{T}$ is always less than or equal to zero. The basic thermodynamic principles and principles of reversibility are nonsense.