

Distinguish, differentiate, compare and explain what is the difference between vapour absorption and compression system. Comparison and Differences.

## **Difference between Vapour Absorption and Compression System**

1. Vapour Absorption System, Uses low-grade energy, heat. Therefore may be operated by flame or by using exhaust steam from engines etc. Vapour Compression System uses high-grade energy, mechanical work.
2. In absorption system, moving parts exist only in the pump, which is a small element of the system. Hence, quiet in operation. In compression system, moving parts are in the compressor. So there is more wear, tear, and noise.
3. Absorption System can work on lower evaporator pressure also, without lowering the COP significantly. In compression system, the COP decreases considerably with a decrease in evaporator pressure.
4. In absorption system, there is no effect of reducing the load on the performance. In compression system, performance is adversely affected at partial loads.
5. In absorption system, liquid traces of refrigerant present in piping at the exit of evaporator constitute no danger. In compression system, liquid traces in suction line may damage the compressor.
6. In absorption system, automatic capacity control is easy. In compression system, automatic capacity control is difficult.