

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

Differences between Vapour Compression and Absorption

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