

CPD

DECARBONISE WITH HEAT PUMPS

COURSE OUTLINE

This course provides an overview of the fundamentals of heat pump technology, recovering waste heat from processes and buildings and reusing it. Participants will learn about the efficiencies of combined heating and cooling, magnetic-bearing compressors and the environmental benefits of using CO₂ as a refrigerant. This course includes a review of operating case studies and examples of where heat pumps can be applied for maximum return on investment. It explores the ideal applications for High Temperature and Medium Temperature Heat Pumps, including industrial applications with a heating and cooling load, pharmaceutical buildings, hospitals, and district heating projects. It aims assist participants in identifying opportunities to turn waste from one process into energy for another, working towards the common goal of a sustainable future.

COURSE CONTENT

1. Introduction
2. Natural Heat Sources & Heat Recovery
3. Heat Pump Principles
4. CO₂ as a Refrigerant
5. Magnetic-bearing Heat Pumps
6. Benefits of Heat Pump Technology
7. Systems Schematics
8. Water Source Heat Pump Applications

