

Overview

This standard is for people who decommission refrigeration systems. The person performing this work must be able to comply with the correct procedures and practices for decommissioning refrigeration systems. This work must be in accordance with the current versions of the appropriate industry standards and regulations; the specification; industry recognised working practices; the working environment and the natural environment. They must know and understand the types, operation, operating principles and/or applications of:

- refrigerants (including their properties e.g. flammable/non-flammable)
- direct and indirect systems
- system components
- RAC and HP systems
- methods, procedures and techniques for decommissioning equipment, components and accessories

Performance criteria

- You must be able to:*
1. verify that the job information and documentation are current and relevant and that the plant, instruments, access equipment and tools are fit for purpose
 2. confirm before work starts that the work location and work area can be accessed safely
 3. produce a risk assessment and method statement in accordance with organisational procedures for the work to be carried out, including the identification and use of personal protective equipment
 4. interpret system information, diagrams and drawings to identify the location of the equipment, accessories and components that need decommissioning
 5. recover system refrigerant charge, decommission and remove the equipment, components and accessories in accordance with:
 - the working environment
 - manufacturer instructions
 - organisational procedures
 6. complete safe-isolation to ensure the safe disconnection of, electrical equipment and cables/wiring associated with the system
 7. ensure that the system cannot be accidentally reactivated or become dangerous
 8. confirm with the relevant people:
 - those necessary variations to the planned programme of work
 - the actions to be taken to ensure that any variations to the planned programme of work will minimise the potential for hazard and risk
 9. implement organisational procedures for the safe transport and/or disposal of waste material, substances and liquids in accordance with suppliers' and manufacturers' instructions
 10. complete relevant documentation in accordance with organisational procedures

Decommission refrigeration systems

Knowledge and understanding

- You need to know and understand:*
1. the operation and operating principles of different systems and their associated equipment, components and accessories in relation to:
 - the system's design
 - the working environment
 - the appropriate industry standards and regulations relevant to decommissioning refrigeration systems
 - the applications, advantages and limitations of different refrigerants their properties and methods for safe usage
 2. how to verify that job and system information and documentation is current and relevant and that the plant, instruments, *access equipment* and tools are fit for purpose
 3. how to produce a risk assessment and method statement for the work to be performed, including the identification and use of *personal protective equipment*, in accordance with:
 - the system's design
 - the conditions of the working environment
 - organisational procedures
 - activities of other personnel on site
 4. how to interpret, system information, diagrams and drawings to identify the location of the equipment, accessories and components that need decommissioning
 5. the procedures for completing safe-isolation of electrical equipment and cables/wiring associated with the system
 6. the methods and techniques for decommissioning the system and its equipment, components and accessories without refrigerant loss in accordance with:
 - the system's design
 - the working environment
 - manufacturer instructions
 - organisational procedures
 7. refrigerant recovery procedures
 8. the methods and techniques to ensure the system and its equipment, components and accessories cannot be accidentally

Decommission refrigeration systems

reactivated or become dangerous

9. the checks required to confirm that the equipment, components and accessories have been decommissioned in accordance with:

- organisational procedures
- the conditions of the working environment
- manufacturer instructions

10. the different types of refrigerants, their properties and methods required to ensure their safe recovery, recycling, reclaim and disposal

11. how to release pressure in the system prior to breaking a circuit

12. the organisational procedures for:

- confirming with relevant people those necessary variations to the planned programme of work that may have the potential to introduce a hazard and/or impact on the decommissioning work to be undertaken
- confirming with relevant people the correct actions to be taken to ensure that any variations to the planned programme of work will not introduce a hazard and have minimum impact on the decommissioning work to be undertaken
- obtaining customer/client acceptance of the decommissioned system and its associated equipment, accessories and components

13. how to implement organisational procedures for the safe transport and/or disposal of any waste material, substances and liquids in accordance with suppliers' and manufacturers' instructions

14. how to complete relevant documentation in accordance with organisational procedures

Scope/range related to performance criteria **Working environments (internal and/or external)**

- domestic
- non-domestic
 - commercial
 - industrial
 - agricultural
 - horticultural
 - leisure and entertainment
 - residential medical and care facilities
 - public services establishments
 - pre-1919 traditional/historic buildings

Systems

- vapour compression
- secondary
- multi-temp
- air conditioning and heat pumps
- compound/pumped

Equipment, components and accessories

- compressors
- condensers/evaporators
- heat exchangers
- pressure vessels
- liquid drier/receivers
- valves (line; regulating)
- pipework
- controls for pressure/temperature (including complex/smart)
- sensors and gauges
- internal and external units
- heat pumps
- grills/diffusers/fans/filters
- vacuum/condensate pumps

Organisational Procedures

- information management
- project management
- risk assessment management

Decommission refrigeration systems

- implementing and monitoring health & safety requirements and issues
- implementing and monitoring issues relating to the natural environment
- customer service
- accident reporting
- emergencies
- communication with relevant people

Plant

- transformers for low voltage hand-tools
- lifting equipment
- access equipment
- hot work equipment

Refrigerants

- HC
- HFC (HFO)
- CFC
- natural inorganic (including CO₂ and ammonia)
- secondary refrigerants

Relevant people

- customers/clients
- client representatives
- supervisors
- site/contract manager
- other contractors/trades
- members of the public
- work colleagues

Decommission refrigeration systems

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Suite Refrigeration and Air Conditioning

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