



Australian Government

Assessment Requirements for UEERA0052 Install, commission, service and maintain low temperature systems

Release: 1

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Modification History

Release 1. This is the first release of this unit of competency in the UEE Electrotechnology Training Package.

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements, performance criteria and range of conditions on at least two separate occasions and include:

- applying relevant work health and safety (WHS)/occupational health and safety (OHS) requirements, including using risk control measures
- applying relevant requirements, legislation, standards, codes of practice and industry procedures
- commissioning a low temperature system
- installing a low temperature system
- locating and rectifying mechanical faults and electrical faults on a low temperature cabinet or freezer room system
- maintaining a low temperature cabinet or freezer room system
- recording values and reporting completion of work.

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements, performance criteria and range of conditions and include knowledge of:

- freezer room protection components encompassing purpose of implosion ports and floor, door and drain heaters
- common items identified on a preventative maintenance schedule for a low temperature cabinet and freezer room
- commissioning typical general-purpose low temperature refrigeration systems requirements and procedures, including:
 - techniques to determine operating values of a low temperature system
 - techniques to determine operating values of a cycling and safety control settings for a low temperature system
 - typical initiation and termination settings for electric element and hot gas defrost methods
- definition and purpose of hazard analysis and critical control points (HACCP)
- defrost methods, including electric element and hot gas defrost employing a time initiated

- and pressure or temperature terminated control
- fault finding and rectification of low temperature systems requirements and procedures, including:
 - symptoms and rectification of typical abnormal system conditions:
 - defrost initiation or termination failure
 - earthing short, including load circuit has connected with casing and/or frame
 - high side sub-cooling too low/too high
 - inefficient compressor
 - low side superheat too low/too high
 - non-condensables
 - open circuit
 - refrigerant overcharge and undercharge
 - restricted air flow through condenser
 - restricted air flow through evaporator
 - restricted filter drier/thermostatic expansion valve (TEV) strainer
 - shunted short, including load is internally shorted causing lower resistance
 - typical controller fault codes and use of manufacturers' data
- low temperature display cabinet types, construction and applications, including solid door cabinets, glass door displays and under-bars
- low temperature freezer rooms, including construction and ancillary fittings
- low temperature merchandiser types, construction and applications, including island and reach-in
- reading and interpreting single phase wiring and pipe work schematics for a typical low temperature cabinet or freezer room employing electric element or hot gas defrost
- reading and interpreting three phase wiring schematics for a typical low temperature freezer room employing electric element or hot gas defrost
- requirements for condensate removal/drainage
- typical range of products stored in low temperature cabinets/freezer rooms and required storage conditions, including frozen food and ice cream products
- refrigeration equipment installation requirements and procedures, including:
 - maintenance of fire rating integrity
 - relevant legislation, industry standards, codes of practice and regulations
 - self-contained and remote installations.

Assessment Conditions

Assessors must hold credentials specified within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must satisfy the Principles of Assessment and Rules of Evidence and all regulatory requirements included within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must occur in workplace operational situations where it is appropriate to do so;

where this is not appropriate, assessment must occur in simulated workplace operational situations that replicate workplace conditions.

Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Resources for assessment must include access to:

- a range of relevant exercises, case studies and/or other simulations
- relevant and appropriate materials, tools, equipment and personal protective equipment (PPE) currently used in industry
- applicable documentation, including workplace procedures, industry standards, equipment specifications, regulations, codes of practice and operation manuals.

Links

Companion Volume implementation guides are found in VETNet - -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b8a8f136-5421-4ce1-92e0-2b50341431b6>