



Australian Government

Department of Education, Employment and Workplace Relations

HLTSTE409B Facilitate effective steam steriliser function

Release: 1

HLTSTE409B Facilitate effective steam steriliser function

Modification History

Not Applicable

Unit Descriptor

Descriptor

This unit of competency describes the skills and knowledge required to monitor and facilitate management of the steam quality and pre-vacuum steam sterilisers to ensure compliance with AS/NZS4187 and AS1410

The worker is required to understand the workings and optimal operational requirements of steam sources, reticulation and operational requirements for pre-vacuum steam sterilisers

Application of the Unit

Application

Functions at this level require:

- a thorough overview of steam production and quality, and steriliser construction and operation in relation to AS/NZS4187 and AS1410
- significant contribution to work practice improvement policies and procedures, and problem solving skills

Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Pre-requisite units

This unit must be assessed after successful achievement of pre-requisites:

- HLTSTE407B Manage availability and effectiveness of reusable medical devices
- HLTSTE408B Manage effectiveness of reprocessing of reusable medical devices

Employability Skills Information

Employability Skills

This unit contains Employability Skills

Elements and Performance Criteria Pre-Content

Elements define the essential outcomes of a unit of competency.

The Performance Criteria specify the level of performance required to demonstrate achievement of the Element. Terms in *italics* are elaborated in the Range Statement.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

1. Contribute to planning preventative maintenance for steam and sterilisers

- 1.1 Ensure maintenance schedules are met with regard to standards
- 1.2 Apply practice standards to monitor processes of the sterilisation cycle
- 1.3 Assess the data from monitoring of processes to ensure sterilisers functioning correctly to achieve validation of the sterilisation cycle
- 1.4 Manage trouble shooting for steriliser failure (eg. wet loads), using a multidisciplinary approach and including investigation of defects and failures

ELEMENT**PERFORMANCE CRITERIA**

- | | |
|---|---|
| 2. Assess data from monitoring processes | 2.1 Ensure planned maintenance schedules are met with regard to standards
2.2 Take action where discrepancies are identified to facilitate repair
2.3 Report any issues outside sphere of responsibility and competence to designated authority to achieve validation of the sterilisation cycle
2.4 Liaise with engineering and technical services departments and companies
2.5 Initiate change processes when required |
| 3. Maintain records | 3.1 Complete records of results of monitoring, according to AS/NZS 4187 and organisation policies and procedures
3.2 Complete records of all equipment maintenance and repair |
| 4. Contribute to organisation and operational policies and procedures | 4.1 Provide input into organisation policies and procedures to ensure compliance with AS/NZS 4187 and AS 1410
4.2 Monitor and if necessary, adjust work practices to reflect AS/NZS 4187 and organisation policies and procedures
4.3 Maintain currency via literature and manufacturer's information relevant to the effectiveness of sterilisation processes |
| 5. Liaise with maintenance personnel/technicians | 5.1 Liaise with maintenance personnel/technicians to determine when not to use a particular sterilizer
5.2 Liaise with maintenance personnel/ technicians to identify reasons for not using a particular steriliser
5.3 Determine circumstances in which maintenance personnel should be summoned |

ELEMENT**PERFORMANCE CRITERIA****6. Complete validation processes**

6.1 Complete validation, following installation qualification, operational qualification and performance qualification processes

6.2 Complete *documentation* requirements as outlined in AS/NZS 4187

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Essential knowledge:

The candidate must be able to demonstrate essential knowledge required to effectively do the task outlined in elements and performance criteria of this unit, manage the task and manage contingencies in the context of the identified work role

This includes knowledge of:

- Air detector function test (in detail) and air detector performance test
- Air detector function, operation, adjustment and testing
- Detailed knowledge of infection control principles as they affect the sterilisation work environment
- Detailed knowledge of the processes of maintaining and using tracking systems
- Detailed knowledge of the record keeping requirements of AS/NZS 4187 and organisation policies and procedures
- Detailed knowledge of the working of all equipment and machinery used in the sterilisation cycle and support equipment eg boilers and steam reticulation
- Load release issues, including the variety of acceptable monitoring criteria suitable for load release
- Methods used to audit machine performance and report discrepancies
- OHS policies, guidelines and symbols and their relevance to working in the sterilisation area
- Operation, monitoring and performance testing of downward displacement steam sterilizers and limitations on types of possible items for sterilization
- Relevant state/territory guidelines for sterilising services
- Routine monitoring, including:
 - trends in leak rate test results and appropriate action
 - trends air removal test results and appropriate action
- Steam supply requirements including:
 - issues about boiler types and their location
 - steam piping and steam delivery requirements
 - testing for steam quality - dry saturated steam, superheat measurement and management
- Standards, including AS/NZS 4187, AS 4815 and AS1410 and all relevant infection

REQUIRED SKILLS AND KNOWLEDGE

prevention guidelines, especially in relation to the care of reusable medical equipment

- The importance of sterilisation technology as a contribution to client safety and the relationship to well maintained reusable medical equipment
- The legal responsibilities of health care providers in relation to confidentiality, client rights, duty of care and implications of negligence

Essential skills:

It is critical that the candidate demonstrate the ability to:

- Accurately complete all documentation
- Address OHS, infection control and manual handling requirements
- Address performance and maintenance requirements of machinery used in cleaning and sterilisation processes
- Apply knowledge of the importance of sterilisation technology as a contribution to client safety
- Comply with AS/NZS 4187, AS1410 and AS/NZS 4815 for sterilisation purposes, especially in relation to the care and maintenance of equipment

In addition, the candidate must be able to effectively do the task outlined in elements and performance criteria of this unit, manage the task and manage contingencies in the context of the identified work role

This includes the ability to:

- Apply AS/NZS 4187 and AS1410 to organisation policies and procedures
- Apply AS/NZS 4187 and AS1410, organisation policies and procedures to work practices
- Develop sterilizing department policies related to load release
- Identify possible sterilizer related causes of wet loads and perform trouble shooting to address occurrences of wet loads
- Interpret reports arising from air detector testing
- Maintain data and record systems
- Take into account opportunities to address waste minimisation, environmental responsibility and sustainable practice issues, including appropriate practices to ensure efficient use of resources
- Undertake routine monitoring, including:
 - identify trends in leak rate test results and determine appropriate action
 - identify trends air removal test results and determine appropriate action
 - select and use appropriate process challenge devices
- Use and monitor low temperature sterilizers (peracetic acid and hydrogen peroxide plasma), including:
 - loading and operation

REQUIRED SKILLS AND KNOWLEDGE

- physical, chemical and biological monitoring
- maintenance by operators
- liaison with service contractors
- Use literacy, numeracy and oral communication skills required to fulfil the position in a safe manner as specified by the health care facility
- Use methods to audit machine performance
- Use problem solving skills - the ability to use available resources and prioritise workload

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment Guidelines for this Training Package.

Critical aspects for assessment and evidence required to demonstrate this competency unit:

- The individual being assessed must provide evidence of specified essential knowledge as well as skills
- Where, for reasons of safety, space, or access to equipment and resources, assessment takes place away from the workplace, the assessment environment should represent workplace conditions as closely as possible
- Consistency of performance should be demonstrated over the required range of situations relevant to the workplace

EVIDENCE GUIDE

Context of and specific resources for assessment:

- Assessment must be in workplace and under conditions
- Resources essential for assessment include access to:
 - relevant workplace
 - monitoring and tracking systems
 - manufacturers' guidelines
 - training records
 - Australian Standards, government and organisation policies and procedures

Method of assessment

- Observation in the work place essential
- Written assignments/projects
- Case study and scenario as a basis for discussion of issues and strategies to contribute to best practice.
- Questioning

Access and equity considerations:

- All workers in the health industry should be aware of access and equity issues in relation to their own area of work
- All workers should develop their ability to work in a culturally diverse environment
- In recognition of particular health issues facing Aboriginal and Torres Strait Islander communities, workers should be aware of cultural, historical and current issues impacting on health of Aboriginal and Torres Strait Islander people
- Assessors and trainers must take into account relevant access and equity issues, in particular relating to factors impacting on health of Aboriginal and/or Torres Strait Islander clients and communities

Range Statement

RANGE STATEMENT

The Range Statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Add any essential operating

RANGE STATEMENT

conditions that may be present with training and assessment depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts.

Steriliser construction and operation must include:

- Steam quality
- Pre-vacuum steam steriliser
- Load retaining device
- Chamber cleaning accessories
- Water quality (feed and service)
- Steam source
- Reticulation
- Trapping
- Solenoids
- Drain lines
- Air removal pumps
- Vacuum pump
- Steris operational parameters, etc.
- Hydrogen Peroxide plasma operational parameters etc

Investigation of defects and failures may include:

- Defects in:
 - lagging
 - steam traps
 - gradient of pipes
- Total Dissolved Solids (TDS) in boiler
- Pressure failure
- Assembly and packaging failure

RANGE STATEMENT

Monitoring and accessory equipment may include:

- Performance qualification equipment
- Throttling calorimeters
- Non-condensable gas testing
- Superheat
- Thermocouple equipment
- Physical parametric process recorders, including:
 - printouts
 - graphics and chart recorders
 - information technology data systems
 - computerised systems
- External chemical indicators
- Internal chemical indicators
- Biological indicators and incubators, and enzymatic indicators
- Dryness testing
- Process challenge devices
- Performance qualification equipment, including:
 - computerised data loggers
 - thermocoupling devices
- Leak rate test
- Bowie Dick type air removal test

Quality management documentation must include:

- Monitoring, fault analysis, maintenance of sterilisers and steam quality
- Non-conformance/non-compliance reporting
- Validation reports
- Pressure vessel certificates
- Fault registers
- Communication register
- Documentation relating to the non-conformance/non-compliance (fault detection, reporting and rectification)

Unit Sector(s)

Not Applicable