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## Overview

This standard identifies the competences you need to fit/install marine composite components and assemblies to a vessel, craft or other marine structure, in accordance with approved procedures. You will be required to select the appropriate tools and equipment to use, based on the operations to be performed and the components or assemblies to be installed. The marine components to be fitted/installed will include items such as bulkheads, superstructure, masts, spars, fairings, air intakes, hatches, steering equipment, rudders, skegs, tanks, casings and coverings, radar/navigational domes, davits and internal fitments such as berths, vanity standards, consoles, seating, shower standards. The size shape and complexity of the components and assemblies to be installed will vary, and it is anticipated that some parts will be trial assembled prior to installation taking place.

Your responsibilities will require you to comply with organisational policy and procedures for the marine composite installation/fitting activities undertaken, and to report any problems with the fitting/installation activities, components or equipment that you cannot personally resolve, or are outside your permitted authority, to the relevant people. You will be expected to work with either a high level of supervision or as a member of a team. You will take personal responsibility for your own actions and for the quality and accuracy of the work that you carry out. Where team working is involved, you must demonstrate a significant personal contribution during the team activities in order to satisfy the requirements of the standard, and competence in all the areas required by the standard must be demonstrated.

Your underpinning knowledge will be sufficient to provide a sound basis for your work, and will provide an informed approach to applying fitting/installation techniques and procedures to marine composite components. You will have an understanding of the marine composite components and assemblies being installed, and will know about the relevant fastening and securing devices, in adequate depth to provide a sound basis for carrying out the activities, recognising and correcting/reporting faults, and ensuring that the final installation is to the required specification.

You will understand the safety precautions required when carrying out the installation operations, especially when working in confined spaces and when using adhesives and sealing materials. You will be required to demonstrate safe working practices throughout and will understand the responsibility you owe to yourself and others in the workplace, both ashore and afloat.

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## Performance criteria

### You must be able to:

1. work safely at all times, complying with health and safety and other relevant regulations, directives and guidelines
2. follow all relevant drawings and specifications for the installation being carried out
3. use the correct tools and equipment for the installation operations and check that they are in a safe and usable condition
4. fit/install, position and secure the assemblies and components in accordance with the specification
5. ensure that all necessary connections to the components are complete
6. deal promptly and effectively with problems within your control and report those that cannot be solved
7. check that the installation is complete and that all components are free from damage
8. complete relevant paperwork, in accordance with organisational requirements
9. leave the work area in a safe and appropriate condition on completion of the activities

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## Knowledge and understanding

### You need to know and understand:

1. the specific safety practices and procedures that you need to observe when installing/fitting marine composite components and assemblies (including any specific legislation, regulations/codes of practice for the activities, equipment or materials)
2. the health and safety requirements of the work area where you are carrying out the installation/fitting activities, and the responsibility they place on you.
3. the hazards associated with installing/fitting marine composite components and assemblies, and with the tools and equipment used, and how they can be minimised.
4. the protective equipment that you need to use for both personal protection (PPE) and protection of other people in the near vicinity
5. the requirements for working in confined spaces - including an understanding of the importance of emergency procedures and safe systems of work (including permits to work, required air quantities (RAQs) and local exhaust ventilation (LEV) to maintain safe conditions, the provision of adequate and safe lighting and avoidance of sources of ignition)
6. how to obtain the necessary job instructions, installation drawings or installation specifications required for the work being carried out.
7. the terminology used for the various sub-assemblies, how to recognise the sub-assemblies and components, and how to interpret the labelling
8. the tools and equipment used in the installation activities, and how to check that they are in a safe and usable condition
9. the need to check that all plugs, sockets and cables on extension leads are in a safe, tested and undamaged condition
10. how to prepare the vessel structure, sub-assemblies, and the levelling, setting out and marking techniques used
11. the techniques used to position, align, adjust and secure the components to the required surfaces, without causing damage to the vessel structure or surrounding areas
12. the importance of positional accuracy of the various sub-assemblies
13. the various types of fixing devices that are used to secure the structures to the required surfaces (including screws, cavity fixing devices, adhesives, threaded fasteners and rivets)
14. the importance of using the correct fasteners for the particular installation
15. procedures for obtaining the correct tools, equipment, components and fasteners for the activities
16. methods of lifting, handling and supporting the components/equipment during the installation activities
17. the use of sealant and adhesives, and the precautions to be taken when using them

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18. how to conduct any necessary checks to ensure the integrity, functionality, accuracy and quality of the installation
  19. why tool/equipment control is critical and what to do if a tool or piece of equipment is unaccounted for on completion of the activities
  20. the extent of your own responsibility, and whom you should report to if you have problems that you cannot resolve
  21. the documentation to be completed during and/or on completion of the fitting/installation activity

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## Scope/range related to performance criteria

1. Carry out all of the following during the fitting/installation of the marine composite components and assemblies:
  1. obtain and use appropriate installation drawings, instructions, sketches or specifications
  2. adhere to relevant COSHH requirements, risk assessments and other relevant safety standards
  3. check that all tools and equipment used during the installation are in a safe, tested and usable condition
  4. ensure that the work area is free from hazards, and that there is sufficient room to complete the installation
  5. use safe and approved installation techniques and procedures at all times
  6. return all tools and equipment to the correct location on completion of the activities
  7. leave the work area in a safe condition and to the prescribed category of cleanliness
  
2. Fit/install three of the following types of composite components and assemblies to the vessel, craft or structure:
  1. bulkhead
  2. berths
  3. steering equipment (such as wheel, tiller)
  4. superstructure
  5. consoles
  6. skegs
  7. wheelhouse
  8. air intakes/vents
  9. tanks
  10. cabins
  11. fairings
  12. radar/navigational domes
  13. masts
  14. hatches
  15. seats
  16. spars
  17. casings and covers
  18. trim
  19. davits
  20. shower standards
  21. housings
  22. rudders
  23. vanity standards
  24. other specific marine components

3. Use a range of tools and equipment during the fitting/installation, to include four of the following:
  1. hand tools
  2. clamps/cramps
  3. power tools
  4. lifting and handling equipment
  5. measuring equipment
  6. temporary fixing/supporting equipment
  7. levelling and alignment equipment
  8. other specific tool/equipment
4. Apply fitting/installation methods and techniques, to include five of the following:
  1. positioning and aligning
  2. applying adhesives
  3. laminating
  4. levelling
  5. drilling and securing
  6. filleting and fairing
  7. applying sealants
  8. other (to be specified)
5. Use three of the following types of securing methods:
  1. screws
  2. cavity fixing devices
  3. rivets
  4. adhesives
  5. threaded fasteners
  6. special purpose or quick-release fasteners
  7. other (to be specified)
6. Fit/install marine composite components/assemblies, in accordance with one of the following standards:
  1. BS, ISO or BSEN standards and procedures
  2. customer standards and requirements
  3. company standards and procedures
  4. recognised compliance agency/body's standards
7. Complete the relevant paperwork, to include one from the following and pass it to the appropriate people:
  1. installation records
  2. quality/acceptance documentation
  3. system log
  4. job cards

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5. work authorisation documents
  6. other specific reporting method

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## Behaviours

You will be able to apply the appropriate behaviours required in the workplace to meet the job profile and overall company objectives, such as:

- strong work ethic
- positive attitude
- team player
- dependability
- responsibility
- honesty
- integrity
- motivation
- commitment

SEMME2061

Fitting marine composite components to the vessel, craft or structure



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