
Overview

This standard identifies the competences you need to prepare a range of yacht or boat substrates to enable coating systems to be applied, in accordance with approved procedures. You will be required to carry out the preparations on a variety of substrates using abrasive blasting equipment and abrasives. The process will also include the cleaning of the surface prior to the application of the coatings.

Your responsibilities will require you to comply with organisational policy and procedures for the preparation activities undertaken and to report any problems with the preparation activities, materials or equipment used, 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 competency 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 specified preparation procedures to yacht or boat component surfaces using abrasive blasting techniques. You will have an understanding of the preparation procedures, their application and relevant standards, in adequate depth to provide a sound basis for carrying out the activities to the required specification.

You will understand the safety precautions required when carrying out the preparatory operations. 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.

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. obtain and follow relevant instructions, standards and other specifications
3. identify the conditions of the surface to be prepared
4. select the appropriate tools and equipment and check that they are in a safe and usable condition
5. carry out the preparation activities using appropriate tools and techniques
6. check the prepared surface to ensure that it meets the required specification
7. deal promptly and effectively with problems within your control and report those that cannot be resolved
8. shut down and secure the preparation equipment to a safe condition on completion of the activities
9. reinstate the work area on completion of the activities in line with agreed organisational procedures

Knowledge and understanding

You need to know and understand:

1. the safe working practices and procedures to be observed when carrying out preparations of yacht and boat surfaces using abrasive blasting equipment (such as general workshop and site safety, protecting other workers from the effects of the work, safety in enclosed/confined spaces, working at height, use of mobile elevated work platforms (MEWPs), atmospheric controls)
2. statutory requirements, risk assessment procedures and relevant requirements of HASAWA and COSHH
3. the environmental impact of the operations that you are carrying out and with the materials you are using and how the impact can be minimised
4. the hazards associated with surface preparation using abrasive blasting (such as sparks, dust/debris, hearing damage, hand/arm vibration, working at heights) and how they can be minimised
5. the requirements for working in confined spaces, 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. the personal protective equipment (PPE) to be worn during the surface preparation activity
7. how to obtain the necessary job instructions required for the work being carried out
8. the reasons for carrying out surface preparation and the effects on the final finishing activities if preparations are not carried out correctly
9. why different types of substrate require different preparation techniques to be used
10. the types of defects and contamination to be found on unpainted and painted surfaces and their causes
11. types of equipment used, their setting up and operation, codes of practice, manufacturers' operating instructions, company procedures and instructions (including operation and techniques for use)
12. types of abrasive, their characteristics and application, the importance of abrasive profile and abrasive cleanliness, company procedures for checking levels of contamination in abrasives
13. the limitations of abrasive blasting, the requirements for the removal of particular types of coatings and hazards associated with the removal of particular coatings
14. the importance of maintaining a register of power tools and the need to check tools against certification
15. 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

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16. the various types of tests that are carried out on the prepared surfaces to check their compliance with the specification
 17. how to safely dispose of waste materials, including the environmental impact of the materials you are using and the minimisation of this impact
 18. the extent of your own responsibility and whom you should report to if you have problems that you cannot resolve

Scope/range related to performance criteria

1. Carry out all of the following during the abrasive blasting activities:
 1. ensure you have the necessary information to carry out the abrasive blasting activities (such as job instructions)
 2. adhere to procedures or systems in place for risk assessment, COSHH, personal protective equipment and other relevant safety regulations
 3. confirm that all necessary husbandry and containment arrangements are in place and are adequate
 4. maintain safe access and working arrangements for the work area
 5. ensure that safe working distance procedures are set up, where appropriate
 6. ensure that tools and equipment are correctly prepared for the operations being performed
 7. apply safe and appropriate working practices and procedures at all times
2. Carry out preparation activities on yacht or boat components, to include both of the following:
 1. unpainted surfaces
 2. painted surfaces
3. Visually inspect surfaces and identify surface preparation requirements for two of the following conditions:
 1. surface corrosion
 2. paint coating defects (such as flaking/detachment, blistering, cracking/crocodiling, chalking, bubbling, cissing, wrinkling)
 3. removal of old coating systems
4. Remove paint and/or corrosion products, using two of the following methods:
 1. dry abrasive blasting
 2. vacuum recovery blasting
 3. moisture-injection abrasive blasting
 4. wheeled deck blasting machine
 5. slurry blasting
 6. low pressure wet abrasive blasting
 7. compressed air wet abrasive blasting
 8. low pressure soluble abrasive blasting
 9. pressurised liquid blast cleaning

5. Remove paint and corrosion products from yacht or boat component surfaces incorporating five of the following features:
 1. corners (outside corners, obscured corners and edges)
 2. vertical flat surfaces
 3. curved surfaces
 4. horizontal flat surfaces
 5. slender components
 6. overhead surfaces
 7. round components
 8. inclined surfaces
 9. individual components (such as plates, deck fittings)
6. Carry out the preparation activities in three of the following situations:
 1. internal spaces
 2. exposed exteriors
 3. hull bottoms
 4. weather decks
 5. outer bottoms
 6. at height
 7. covered exteriors
 8. confined spaces (such as tanks, voids, double bottoms)
7. Prepare yacht or boat surfaces/coatings by abrasive blasting in two of the following environments:
 1. ashore
 2. afloat
 3. outside environment
 4. workshop
8. Identify requirements and clean the prepared surface, using all of the following:
 1. fresh water
 2. brush
 3. fresh water with detergent
 4. vacuum cleaner
9. Check that the prepared surfaces meet the specified standards, to include the use of three of the following methods:
 1. visual examination
 2. surface profile comparators
 3. press tape
 4. adhesion test
 5. swabs

6. acid test

10. Carry out yacht or boat surface preparations, in accordance with one of the following standards:
 1. BS, EN or ISO standards and procedures
 2. customer (contractual) standards and requirements
 3. company standards and procedures
 4. specific equipment requirements/manufacturers data
 5. recognised compliance agency/body's standards (such as Lloyds, Boat Safety Scheme, BMEA Code)
 6. other accepted international standards
11. Reinstate the work area on completion of the preparation activities, to include carrying out all of the following:
 1. safely disposing of arisings and waste materials
 2. cleaning and returning all tools and excess materials
 3. removing protection and exclusion arrangements (if no longer required)
 4. contributing to the completion of all required records
 5. leave the work area in a safe and tidy condition

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

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