

Cutting and shaping aircraft soft furnishing materials

Overview

This standard identifies the competences you need to cut and shape aircraft soft furnishing materials, 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 materials to be cut and shaped. These materials may include leather, cotton fabric, silk and decorative fabrics. The cutting and shaping activities will include hand sewing, machine sewing, cutting by hand, cutting by machine, and bonding, to produce shapes that have concave forms, convex forms and multiple bending planes. You will also be required to make all necessary checks and adjustments, to ensure that materials are correctly positioned and aligned prior to joining, and that they conform to the specification.

Your responsibilities will require you to comply with organisational policy and procedures for the cutting and shaping activities undertaken, and to report any problems with the activities, materials or equipment used that you cannot personally resolve, or are outside your permitted authority, to the relevant people. You will need to ensure that all tools, equipment and materials used in the cutting and shaping are correctly accounted for on completion of the activities, and you must complete all necessary job/task documentation accurately and legibly.

You will be expected to work either with a high level of supervision or as a member of a team, and 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 this standard, and you must demonstrate competence in all the areas required by the standard.

Your underpinning knowledge will be sufficient to provide a sound basis for your work, and will provide an informed approach to applying the appropriate cutting and shaping techniques and procedures to aircraft soft furnishing materials. You will understand the cutting and shaping techniques and procedures used, and will know about the materials, tools and equipment, fastening and securing devices, 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 cutting and shaping activities. You will be required to demonstrate safe working practices throughout, and will understand the responsibilities you owe to yourself and others in the workplace.

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Performance criteria

You must be able to:

1. work safely at all times, complying with health and safety legislation, regulations, directives and other relevant guidelines
2. follow relevant specifications for the component to be produced
3. obtain the appropriate tools and equipment for the shaping operations and check they are in a safe and usable condition
4. shape the materials using appropriate methods and techniques
5. check that all the required shaping operations have been completed to the required specification
6. complete relevant paperwork and pass on to appropriate people
7. deal promptly and effectively with problems within your control and report those that cannot be solved

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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 working with aircraft soft furnishing materials (including any specific legislation, regulations/codes of practice for the activities, equipment or materials)
2. the health and safety requirements of the work area in which you are carrying out the cutting and shaping activities, and the responsibility these requirements place on you
3. the hazards associated with cutting and shaping aircraft soft furnishing materials, and with the tools and equipment used, and how these hazards can be minimised
4. the protective equipment that you need to use for both personal protection (PEO) and protection of the materials
5. the interpretation of drawings, standards, quality control procedures and specifications used for the cutting and shaping activities (including BS and ISO symbols and terminology)
6. the various types of soft furnishing materials to be used, and their specific care and handling requirements
7. the quality control procedures to be followed during the cutting and shaping operations
8. procedures for ensuring that you have the correct tools, equipment and materials for the activities
9. methods of handling and supporting the materials during the cutting and shaping activities
10. the use of various adhesives, and the precautions to be taken when using them
11. the procedure for the safe disposal of waste materials
12. how to conduct any necessary checks to ensure the accuracy and quality of the product produced
13. how to recognise defects (including items such as cosmetic appearance, misalignment, incorrect stitching, stains, foreign object damage or contamination)
14. the importance of ensuring that the completed item is free from dirt and foreign object damage
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
16. the problems that can occur with the cutting and shaping operations, and how these can be overcome
17. the recording documentation to be completed for the activities undertaken and, where appropriate, the importance of marking and identifying specific pieces of work in relation to the documentation
18. the extent of your own responsibility, and whom you should report to if you have problems that you cannot resolve

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Scope/range related to performance criteria

1. Carry out **all** of the following during the cutting and shaping activities:
 1. ensure that you have the correct documentation for the cutting and shaping operations (including items such as drawings, templates, job instructions, aircraft standards)
 2. adhere to procedures or systems in place for risk assessment, COSHH, personal protective equipment and other relevant safety regulations
 3. ensure that all tools and equipment used are within current calibration dates
 4. maintain safe access and working arrangements for the area in which the cutting and shaping activities take place
 5. dispose of waste items in a safe and environmentally acceptable manner, in line with company procedures
 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 free from foreign object debris
2. Use **six** of the following in the cutting and shaping activities:
 1. tape measure
 2. scalpel
 3. tri-square
 4. patterns
 5. shears
 6. straight edge
 7. knife
 8. templates
3. Use **four** of the following cutting and shaping methods and techniques:
 1. hand sewing
 2. cutting by hand
 3. adhesive bonding
 4. machine sewing
 5. cutting by machine
4. Produce components that have **two** the following features:
 1. concave forms
 2. convex forms

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3. multiple bending planes
5. Use **two** of the following materials:
 1. leather
 2. cotton fabric
 3. decorative fabrics
 4. silk
 5. synthetic materials
6. Carry out **all** of the following quality and accuracy checks during the activity:
 1. cosmetic appearance
 2. accuracy of furnishing lines
 3. freedom from damage
7. Produce components which comply with **one** of the following standards:
 1. Civil Aviation Authority (CAA)
 2. Ministry of Defence (MoD)
 3. customer standards and requirements
 4. Federal Aviation Authority (FAA)
 5. company standards and procedures
8. Complete the relevant paperwork, to include **one** from the following, and pass it to the appropriate people:
 1. build records
 2. log cards
 3. job cards
 4. aircraft log

Behaviours

Additional Information

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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