CCSJ418

Plate and electroform jewellery or silverware

Overview

This standard covers the skills to produce finished items using advanced plating and electroforming techniques such as multi-plating, parcel gilding, and matrix electroforming. You will use these on a range of materials including wood, metal and plastics. You will need to use mathematical formulae and understand how to use chemicals safely within the techniques you are practicing.

While plating and electroforming, you will be required to work to instructions and to use a range of equipment and techniques, appropriate to the type of material being used and the type of items being worked.

You will be expected to take personal responsibility for your actions and for the quality and accuracy of the work carried out. During, and on completion of, the plating and electroforming processes, you will be expected to check the quality of your work. You will need to be able to recognise any surface defects, determine the appropriate action to rectify them, and ensure that the finished work meets the required specification.

Performance criteria

You must be able to:

1. research the range of advanced techniques in plating and electroforming in line with the needs of different projects
2. produce a selection of plated and electroformed items covering a range of advanced **techniques** in line with the needs of different projects
3. **electroform** a range of **materials in line with industry best practice
4. **electroplate** a range of materials in line with industry best practice
5. use safe working practices to reduce risk of injury to self and others and damage to components and equipment in line with health and safety practice
6. check the work for defects in line with project needs
7. take action to rectify any defects detected in line industry best practice
8. complete the work to the given specification in line with workplace instructions

Knowledge and understanding

You need to know and understand:

1. safety precautions to be taken when plating and electro-forming
2. mathematical formulae and calculations
3. uses of stopping agents and solvents
4. how to avoid damage to metal surfaces
5. chemicals and equipment for prescribed tasks and processes
6. the materials used
7. how to make electroforming matrix models and aids to create articles
8. where to find sources of information about plating and electroforming
9. the limitations to plating and electroforming
10. the characteristics and safety requirements of mandrel/matrix and solutions, the dangers of interactions of materials during production, contamination problems, and precautions to take against contamination
11. actions to take with faults in equipment
12. neutralising agents
13. how to maintain the chemical solutions in optimal condition for use
14. how to check that the plating and electro-forming meets the needs of the specification
15. best practice in plating and electro-forming within chosen jewellery industry
16. the importance of following the given specification and timescales
17. common defects and ways to rectify these

Scope/range