

J3.18 Produce enamelled surfaces SQA Unit Code H9VL 04

Unit Summary

This unit covers the skills and knowledge required to produce a decorative surface, using appropriate enamelling techniques. In producing enamelled products, you will be required to work to instructions and to use a range of hand tools and a variety of techniques, appropriate to the style of enamelling.

During, and on completion of, the enamelling, you will be expected to visually check the quality of your work. You will need to report and seek guidance on any defects, the appropriate action to rectify them, and to ensure that the finished work meets the given specification which may include timescales.

Performance Indicators

You will be able to:

- a) Enamel work pieces on a range of **metals**
- b) Carry out enamelling to a given design on a range of **surfaces**
- c) Carry out enamelling using a range of **techniques**
- d) Use basic engraving tools and acid etching for texture prior to enamelling
- e) Understanding the qualities of standard, Britannia, and fine silver, and the preparation of these metals
- f) Understanding the procedure of fabricating pieces for enamel
- g) Check that the completed enamelling is dimensionally accurate, proportionally correct and meets the specification
- h) Complete work specifications to the given specification

Knowledge and Understanding

You will know and understand:

- 1) Work place health and safety requirements appropriate to the industry
- 2) The safe storage, handling and disposal of chemicals used in the workshop
- 3) Safe operation and maintenance of machines and hand tools
- 4) Enamelling terminology, and how to identify different techniques of enamel in any given piece
- 5) The use of transparent enamel on a range of textured surfaces
- 6) How to copy designs
- 7) How to produce multiples of a given design using casting, photo etching, and die stamping techniques
- 8) How to increase and reduce designs
- 9) Understand correct firing temperatures for different metals and enamel
- 10) Basic carving and cutting techniques
- 11) Etching techniques
- 12) Correct fabrication procedure for enamel; thickness of metal, high melting solder, fittings and findings
- 13) Surface preparation of the metal
- 14) How to wash & grind enamel appropriate to the form and their layout

- 15) How to identify faults, what kinds of difficulties the specification might present, and the appropriate actions to overcome these difficulties
- 16) The use of UV cured resin products
- 17) Finishing process for both enamel and metal
- 18) The sequence of application to remove enamel

Range

You are required to:

- A. Enamel work pieces on two of the following **metals**
 - (i) Silver
 - (ii) Gold
 - (iii) Copper

- B. Carry out enamelling to a design on all of the following **surfaces**
 - (i) Flat
 - (ii) Concave
 - (iii) Convex
 - (iv) Cast surfaces

- C. Carry out enamelling using both of the following **techniques**:
 - (i) Cloisonné
 - (ii) Champlevé, using basic carving, and acid etching