
Overview

This standard covers the skills to produce jewellery or silverware using permanent joining techniques. You will work to instructions, using a range of joining equipment, and a variety of permanent joining techniques appropriate to the type of material being used and the style being produced. On completion of the process you will check the quality and standard of your work.

Performance criteria

You must be able to:

1. select permanent joining techniques for different projects and materials in line with workplace instructions
2. use joining equipment in line with workplace instructions and health and safety practice
3. maintain joining equipment in line with workplace instructions and health and safety practice
4. join components using **soldering equipment** in line with workplace instructions
5. produce components using **permanent soldered joins** in line with industry best practice
6. check the work for defects in line with the needs of the project
7. take action to rectify any defects detected in line with workplace **instructions**
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 during the joining of components
2. safety precautions to be taken during pickle process (acid) post soldering cleaning process
3. a range of joining techniques
4. how to identify the materials to be joined and appropriate solder
5. the importance of heat, flux and solder
6. the importance of dry assembly of components before carrying out the joining operation
7. best practice in permanent joining within chosen jewellery industry
8. melting points of solder
9. the importance of following the given specification and timescales
10. common defects and ways to rectify these

Scope/range

1. **Soldering equipment** and joining equipment for jewellery or silverware components using basic hand held gas torches can include:

1. micro welder
2. oxygen and gas/propane torch
3. natural gas and air (compressed or mouth blown torch)
4. propane torch
5. propane or natural gas and compressed air torch
6. laser welder
7. oxygen and acetylene torch

2. **Permanent soldered joints** can include:

1. butt soldered joints
2. a piece with multiple soldered joints
3. long seamed soldered joints

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