



TRAINING - TUTORIALS CONTD.

Techniques - Lead v Copper Foil

There are two techniques available to the artist to hold the glass together - the use of lead came or copper foil.

The lead technique has been used in Europe since Medieval times and is the method by which the windows in your local church will have been made. The lead is either extruded or milled into 'H' sections of different widths called comes, and these are cut and placed round each piece of glass, then soldered at every joint. This provides the basic structure of the window that, after cementing, will be strong and Durable.

Copper foil was first used in the USA by Tiffany, when making some of his marvelous windows but is best known in his lamps. In this case, foil is wrapped around the edge of each individual piece of glass and then a long run of solder (a bead) is melted along all the seams on both sides of the glass. This method allows for great flexibility in design, with the solder providing the foil with its strength.

A detailed description of both techniques follows and, to help you make a decision on the choice of method we suggest you read ahead.

Lead

This is the preferred method when making windows due to the strength offered by the size of the lead, especially after cementing. They also tend to be more weather proof, important if our panels are open to the elements. Terrariums and simple lamps may also be made using lead.

Copper Foil

Most suitable for three-dimensional objects such as lamps, terrariums and boxes. It is also the best technique for window that has many small pieces of glass and will not be exposed to the weather. Accuracy of glass cutting is important with foil.

| | LEAD | COPPERFOIL |
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| MATERIALS | Lead came - H section in 2m length | Foil - 4 widths in rolls of 36 yards |
| SOLDERING | "Spot" joints at every place lead meets | Continuous bead along all seams |
| GLASS CUTTING | Accurate, but edges are hidden by lead | Accuracy essential or solder will fall through gaps in the joints. A grinder is needed for fine work. |
| CEMENTING | Used for weathering only | Not necessary |
| FINISHING | Patina to stain lead black | Patina to stain lead black or copper colour |
| USES & APPLICATIONS | Windows and panels projects or terrariums using angled lead and mirror | Windows and panels, 3 dimensional objects such as terrariums, tiffany lamps, boxes, fine intricate work and mirrors |