



Cloisonné enamelling, designed and created by Angela Haynes

# IN LOVE WITH ENAMELLING

There are so many different enamelling techniques that approaching the whole subject can seem a little mind-boggling at times. However, we hope our guide to the different types, helps you to find the technique that's right for you.

## Engraving And Enamelling: The Art of Champleve by Phil Barnes

Explains the rich traditions of the magnificent technique of champlevé, which combines the skills of engraving and enamelling. Celebrating fifty years of working as a master craftsman, Phil Barnes gives a unique insight into all aspects of the process.

999 A192 **£18.99**



## Colour And Textures In Jewellery by Bekki Cheeseman & Nina Gilbey

Covers a range of techniques and materials, including enamelling. Written by two experienced designer-makers and tutors, this book encourages you to experiment, make samples, bend the rules (safely) and see what results are possible, before following the detailed technical advice to apply the techniques to your work.

999 A193 **£27.50**



## Cold enamel

Cold enamel is a 2-component epoxy system providing an effect like glass enamel. For coloured cold enamel the colourless enamel can be mixed with colour pastes (for opaque colours) or with dyestuff concentrates (for transparent coloured effects). Other characteristics of cold enamel are: good scratch resistance, drying in ambient temperature (no oven necessary), almost no intrinsic colour, minimal yellowing on exposure to light and good age-resistance. After the cold enamel is dry it can be drilled, filed or polished.



Cold enamelling

# VITREOUS ENAMEL

Vitreous enamel is glass bonded by fusion to a metal surface. Though normally transparent, various degrees of opacity can be produced by adding or growing crystals within the glass structure. A wide range of colours can be produced by incorporating certain elements such as transition metals.

The physical properties of glass can be controlled to permit bonding to gold, platinum, silver, copper, steel, cast iron, aluminium and titanium.

## How does vitreous enamelling work?

The glass is crushed to a powder somewhat finer than granulated sugar and somewhat coarser than flour. This powder is applied to the metal surface. Next, the item is heated to 740–860°C, either in a preheated furnace or with a hand-held torch. After between 1½ to 10 minutes,

the item is removed and allowed to cool to room temperature. Subsequent coats, normally different colours, are applied. Sometimes as many as 10 to 20 firings are required to bring about the desired results.

## Transparent

These enamels allow light and colour to pass through to the metallic surface on which they are laid. They are used to create effects over a patterned, engraved or carved surface. Transparent enamels need to be washed very diligently to ensure a clear bright colour.

## Opaque

These enamels allow no light through at all, so the light bounces back from the surface. They are manufactured by inert crystalline particles being added to raw glass. The washing process must still be stringent in order to achieve clean and problem-free colours.

## Opalescent

Like opal gemstones, these enamels have a surface in which there are colour changes. These are caused by the different refractive indices of the matrix glass and the crystals. The opalescence, which can be compared with the glaze on high china, is produced by preparing the enamel with droplets which will not mix together. The range of opal colours is restricted to white, red, pink, mauve and blue. Opalescent enamels need to be fired at least twice to obtain the perfect effect.



Walters Art Museum

Cloisonné enamelling

# VITREOUS ENAMELLING TECHNIQUES

## Champlevé

The name champlevé derives from the French word 'champs' meaning field, and 'levé' meaning lifted or raised, and describes a technique where recesses are cut from the metal to receive the enamel. When packed and fired the enamel is 'raised', flush with the surrounding metal. This method possibly achieves the strongest combination of metal and enamel and is suitable for all areas, both flat and shaped.

## Basse-Taille

Developed in Italy in the eleventh century, basse-taille uses transparent enamels, allowing the metal base to be seen through the enamel. This base can be carved, chased or engraved with a pattern to give variations in depth of colour and

reflects light back for a rich and lively effect.

## Cloisonné

This style was originally developed in the Mediterranean. Ribbons of gold wire were soldered onto a gold base to form cells that were then filled with ground enamel, which was then fused into place. Modern cloisonné is more often carried out on a silver or copper base, using wires of gold, silver or copper alloys.

## Plique-à-jour

Plique-à-jour means 'glimpse of the day' and creates a similar effect to a stained glass window. Here the enamel is held within a framework of metal, with no metal backing. Developed in the fourteenth century, this

is a technically demanding technique, producing beautiful but somewhat fragile results.

## Low temperature enamelling

This fabulous product means anyone can enamel. You don't need a kiln or any expensive equipment as the powders can be 'fired' in an ordinary domestic oven.

The extensive range of copper blanks makes it ideal for jewellery makers looking for something new. The fact that you don't need a kiln means that younger crafters can enjoy designing delightful enamelled pieces too. Efcó Jewellery Sets contain everything you need to create exciting pieces like pendants and charm bracelets. A perfect introduction to the wonderful world of enamelling.