

Hirschfelds Enamel restorers have been established for over one hundred and thirty years.

Every piece of work we receive is handled with the utmost care and our highly trained craftsmen. Rings, Brooches, Cufflinks and Dials

Whether it is a sentimental heirloom or a piece of Faberge you can trust us to deliver the highest possible results.

We undertake all types of enamel restoration; Champlevé, Cloisonné, Grissaille and even Plique à jour is possible for us to restore.

### **Enamel**

Enamel is essentially glass which is ground to a powder before being fired on to a metal base. Suitable metals for enamelling include gold, silver, copper, aluminium, and steel. The ground glass is a combination of silica and soda ash with addition of small amount of metal oxides to give it colour. Enamelling is the process of fusing layers of ground glass onto metal using a kiln or torch. Firings can take from 30 seconds to several minutes, with the kiln heated between 650°C and 1000°C, depending on the techniques and materials used.



Industrial, or liquid, enamels are enamel frits ground very finely and mixed with other components to make a liquid suspension. This is applied to a metal surface with a spray gun, a brush, or by dipping.

### **Cloisonné**

The enamel is contained within wire cells (cloisons). These wires are usually fired onto a base coat of flux (a clear transparent enamel), then filled with wet enamel. The wet enamel is often applied with quill in layers, a technique known as wet packing. The piece is fired after each layer has been applied.

### **Champlevé**

Recesses in the form of patterns or designs are carved or etched into the metal and the enamel is wet packed into these areas.

### **Basse-taille**

An extension of champlevé, the recesses are engraved with patterns or carved with a low relief design which can be seen as varying densities of colour through the transparent enamel.

### **Plique-à-jour**

In this technique, the enamel is fired into an open metal framework, with the result resembling stained glass. It is particularly beautiful with light shining through the transparent or translucent enamels.

### **Painted Enamels and Grisaille**

Traditionally very finely ground metallic oxides are painted onto a white enamel base with fine brushes and fired, layer upon layer. The process, which is analogous to painting, can produce a detailed three-dimensional quality. Grisaille is painted in a similar fashion but reversed: the background is black or dark blue and the images are applied in various densities of white to give a chiaroscuro effect.

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