Hirschfelds 1875 - Enamel restorers, have been established for over one hundred and thirty five years.
Hirschfelds Ltd London are restorers of Fine Antique Enamelled jewellery & Modern Enamelled Jewellery and Objets d'art. Our enamel work include: Plique á Jour, Basse Taille, Cloisonné, Gilloche, Champlevé.
Every piece of work we receive is handled with the utmost care and our highly trained craftsmen. Enamel repair to Rings, Brooches, Cufflinks, Pendants, Snuff boxes. Restoration of Badges.
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
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.

Hirschfelds enamel repairs & restorers London.
Suite 26 88-90 Hatton Garden London EC1N 8PN
+ 44 (0)20 7405 1536
enamel@hirschfelds.co.uk
www.hirschfelds.co.uk

ENAMEL HISTORY

The ancient Egyptians applied enamels to stone objects, pottery, and sometimes jewelry, though to the last less often than in other ancient Middle Eastern cultures.

The ancient Greeks, Celts, Georgians, and Chinese also used enamel on metal objects. Enamel was also used to decorate glass vessels during the Roman period, and there is evidence of this as early as the late Republican and early Imperial periods in the Levant, Egypt, Britain and around the Black Sea Enamel powder could be produced in two ways, either by powdering colored glass, or by mixing colorless glass powder with pigments such as a metallic oxide.

Designs were either painted freehand or over the top of outline incisions, and the technique probably originated in metalworking. Once painted, enameled glass vessels needed to be fired at a temperature high enough to melt the applied powder, but low enough that the vessel itself was not melted. Production is thought to have come to a peak in the Claudian period and persisted for some three hundred years, though archaeological evidence for this technique is limited to some forty vessels or vessel fragments.

In European art history, enamel was at its most important in the Middle Ages, beginning with the Late Romans and then the Byzantines, who began to use cloisonné enamel in imitation of cloisonné inlays of precious stones. This style was widely adopted by the "barbarian" peoples of Migration Period northern Europe.

The Byzantines then began to use cloisonné more freely to create images; this was also copied in Western Europe. The champlevé technique was considerably easier and very widely practiced in the Romanesque period. In Gothic art the finest work is in basse-taille and ronde-bosse techniques, but cheaper champlevé works continued to be produced in large numbers for a wider market.

From either Byzantium or the Islamic world, the cloisonné technique reached China in the 13-14th centuries. The first written reference to cloisonné is in a book from 1388, where it is called "Dashi ('Muslim') ware". No Chinese pieces that are clearly from the 14th century are known; the earliest datable pieces are from the reign of the Xuande Emperor (1425–35), which, since they show a full use of Chinese styles, suggest considerable experience in the technique. Cloisonné remained very popular in China until the 19th century and is still produced today. The most elaborate and most highly valued Chinese pieces are from the early Ming Dynasty, especially the reigns of the Xuande Emperor and Jingtai Emperor (1450–57), although 19th century or modern pieces are far more common. Starting from the mid-19th century, the Japanese also produced large quantities of very high technical quality.

More recently, the bright, jewel-like colors have made enamel a favored choice for jewelry designers, including the Art Nouveau jewelers, for designers of bibelots such as the eggs of Peter Carl Fabergé and the enameled copper boxes of the Battersea enamellers, and for artists such as George Stubbs and other painters of portrait miniatures. Resurgence in enamel-based art took place near the end of the 20th century in the Soviet Union, led by artists like Alexei Maximov and Leonid Efros. In Australia, abstract artist Bernard Hesling brought the style into prominence with his variously sized steel plates.

Enamel was first applied commercially to sheet iron and steel in Austria and Germany in about 1850. Industrialization increased as the purity of raw materials increased and costs decreased. The wet application process started with the discovery of the use of clay to suspend frit in water. Developments that followed during the 20th century include enameling-grade steel, cleaned-only surface preparation, automation, and ongoing improvements in efficiency, performance, and quality.

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