

WILLIAM DE MORGAN: TECHNIQUES & MATERIALS

“In '72 (or '70) I rediscovered the lost art of Moorish or Gubbio lustres. It had been discovered before in Italy in 1856 – but that I didn't know at the time. It has been re-discovered since, times out of number”.

Lecture: Lustre War – given by De Morgan to the Society of Arts 31st May 1892

Lustre

In ceramics the word LUSTRE means that a fine film of a metal has been deposited on the surface to give an iridescence whose effect varies with the position and strength of light on the ceramic.

The first use of lustre was probably as early as 9th century Egypt but with the fall of the Fatimid dynasty in 1171 the centre of production moved to Kashan in Persia. The 12th and 13th centuries were the great years of achievement with a brownish lustre used with turquoise and cobalt. Kashi or Kashani are still the common words for “tile” in Iran. The Moors in Spain in the 14th and 15th centuries produced fine copper lustres which were also exported from Malaga and Valencia to Italy. The Italians gave these wares the name maiolica and began producing them at Deruta and Gubbio where they reached their climax in the 16th century.

Reduced pigment lustre is technically difficult to produce: the kiln temperatures are critical. The process (very much simplified) involves a third firing. The first firing hardens the basic clay pot or tile; the second firing adds the glazes and decoration. Before the lustre firing the areas to receive the metal coating are brushed over with a metallic oxide mixed with carbon (enabling the brush strokes to be seen) and gum arabic for a better flow from the brushes. At the critical moment in the temperature of the kiln, wood shavings or brushwood are introduced at the bottom. Because of the heat, the wood has to catch fire but can only do so if there is oxygen present. The metallic oxide is reduced as hot oxygen is released leaving the fine metallic deposit that the design requires.

De Morgan, who was a stained glass artist for a time in the 1860's, noticed that the use of silver nitrate stains on his glass produced an iridescent effect at certain temperatures. After some experimenting with ceramics when he moved to Chelsea in 1872 he was able to produce lustre tiles. At first the lustre areas (red) were simple animal forms and flowers in silhouette but soon he found that by diluting the painted oxide he could achieve tones of colour.

De Morgan's techniques were very much his own; he described his personal methods in the paper quoted above. In spite of his close understanding of the lustres achieved at Gubbio and Deruta his work shows no stylistic influence from any of the Italian maiolica sources. The greatest of De Morgan's lustre achievements were his moonlight and sunset suites. A large blue punch bowl with gold and silver lustres displays a technique unique to him: by acid etching the dark blue he was able to achieve a light blue. In his definitive book *Lustre Pottery*, Alan Caiger-Smith has suggested that this may have been influenced by the indigo discharge technique used by William Morris in some of his textiles.

Tiles and tile painting

De Morgan's early experiments in decorating tiles were made on low-fired earthenware buff clay tiles bought in from Holland which were covered with an opaque tin glaze. It was not until De Morgan moved to Chelsea in 1872 that he started to make his own tiles using clay bought from the Morgan Crucible Works in Battersea and from Stourbridge. Red clay quarry tiles from the Architectural Pottery in Poole covered in white slip were also used. De Morgan also bought in commercial white dust-pressed tiles from Wedgwood and Craven Dunnill and, finding them very satisfactory for his lustre designs, used these throughout his pottery working life.

Tiles made in-house were sliced from a block of clay by a multi-stringed "harp", rather like a large egg-slicer, hinged at one end. The rough slices were trimmed with a knife and allowed to dry slowly between sheets of glass to prevent distortion, then given a first high temperature firing and coated in a siliceous white slip onto which the design could be painted. De Morgan's tiles were prone to vary in size during the firing process and some customers found this unsatisfactory.

Pouncing was occasionally used as a method of transferring the outline of a design onto the tile surface. This involves pricking along the outline of the design on paper with a pin, placing the paper over the tile, and sprinkling fine charcoal dust over it which falls through the pin holes leaving a trace of the design on the tile surface. A more accurate method of transferring a design to a tile was De Morgan's own invention. This is best described in the words of the architect and sometime partner of De Morgan, Halsey Ricardo:

the pattern (its leading lines only) was drawn in strong black lines on tracing paper and this was pasted onto a sheet of glass. On the other side of the glass was fixed (temporarily) a square of thin paper and the glass, easel fashion, was set up in front of a window. The lines of the pattern were easily visible on the thin paper and the painter proceeded to follow them with his pigments, filling up the rest of the pattern according to his discretion as to the intensity and so forth of the colouring. The painted paper was placed face down over the slip-coated tile, then the back of the paper was brushed with glaze and sodium silicate. In the firing the paper being extremely fine, was reduced to a film of ash which was easily incorporated into the glaze

De Morgan was strictly a decorator. His vases, dishes etc. were mostly bought in (Wedgwood, J.H. & J. Davis of Hanley) but he employed a thrower who produced shapes drawn by De Morgan.

Six women were usually employed to paint tiles. Dishes, vases etc. were painted by the senior and experienced decorators. Some 30 decorators are recorded but the most important ones are: Jim Hersey, Joe Juster, Charles and Fred Passenger, Frank Iles – kiln master, F.D. Ewbank – shop manager and Reginald Blunt –supervisor 1897-1900.