

18th & 19th Century British Pottery and Porcelain for Starters: Bodies and Technical Types

Principle 1: if they could, potters tried to make cheap pots look like more expensive pots: they are out to fool you, so don't be surprised if sometimes they succeed !

Principle 2: each type of pottery was invented at a different time, but kept on being made for the cheap end of the market long after it had been replaced at the expensive end by more technically sophisticated types. It is not 'A comes before B comes before C', it is 'A overlaps a lot of B and probably the start of C as well'.

Earthenware: 'ordinary' pottery, fired at around 1000 degrees C, porous to liquids. To make it impervious to liquids, it is coated with glaze (a glassy coat) which is then fired. Most earthenware glazes before 1900 were made of lead.

Stoneware: pottery fired at high temperature, at least 1250 degrees C, to vitrify (that is, to fuse together) the ingredients so that it becomes very strong. This also makes it impervious to liquids, so it may or may not be given a glaze.

Porcelain: also known as china. Distinguished from pottery by the whiteness and translucency (where it is thin) of the body. Bodies are defined as porcelain more by these visual characteristics than by specific recipes.

Earthenwares

Lead-glazed earthenware was the staple product of the British pottery industry throughout the period. Most natural clays fire to a red or buff colour.

A surface of another colour could be made by colouring the glaze mixture.

Slipware

A surface of another colour could also be made by coating the pot with liquid clay (known as slip). Slip could also be used to 'paint' a design using a nozzle, rather like icing designs on a cake. Or a layer of slip could be cut away in places (before the pot was fired), revealing the body below, to create a pattern in two colours.

By 1880 these techniques were still in use only in humble potteries making cheap pots for local markets.

Tin-glazed earthenware

Buff-bodied earthenware was made to look something like porcelain by coating it with a lead glaze made white and opaque with tin oxide.

You could paint with a brush in the unfired glaze, but the colours tended to spread (like writing in ink on blotting paper) unless you painted fast. Only a small number of mineral colours would stand the temperature of the glaze firing without discolouring: blue, red, yellow, green, purple.

Tin-glaze had two big drawbacks: it did not adhere well to the body so could easily chip off; and when the white coat got chipped, you could see the tell-tale buff body underneath. By 1800 white pottery without these disadvantages had made it extinct.

In Britain tin-glazed earthenware was known as delftware. (It is the same type of pottery known in Holland as delftware, in Italy as maiolica and in France as faience.)

Creamware

From the 1740s lead-glazed earthenware was made to look something like porcelain by using white clays (from Dorset and Devon) and calcined flint to produce a fairly strong white body. The greenish-yellow tinge in the lead glaze made the fired pots look cream rather than white.

Pots could be decorated with powdered oxide colours before they were dipped in glaze: when the glaze was fired, the colours ran in the glaze producing a 'tortoiseshell' effect. Many colours would not stand the temperature at which the glaze was fired. Therefore they were (from about 1760) painted or printed on afterwards as enamels (i.e. glassy mixtures); to fix them, the pot was then fired again at lower temperature. Different colours are fixed at different temperatures, so the pot might need several extra firings, making it much more expensive to produce.

English creamware was the world's first cheap pottery that was white(ish), fairly strong, and had a smooth glaze. It was exported throughout Europe and all parts of the world dominated by the European powers from the 1760s, and put potteries out of business in many countries. It was a major component of Britain's overseas trade.

Pearlware and China Glaze

From about 1775 a little cobalt (a blue pigment) was added to lead glaze. This stopped the glaze from giving a yellowish cast to the body or the decoration under the glaze.

The result was an earthenware which for the first time looked really like porcelain. Modern collectors call it pearlware.

The pots were often painted in blue (cobalt) before they were glazed: these were known at the time as 'china glaze' ware.

They soon began to be painted with a few other 'high temperature' colours that would stand the temperature at which the glaze was fired: green, yellow, purplish-brown.

From about 1784 pots were printed in blue before they were glazed: these cost more than the painted ones.

If decoration was done before a pot had its glaze fired on, it kept the price down.

Other colours had to be painted or printed on afterwards as enamels, and then the pot had to be fired again at lower temperature to fix them. Extra firings added to the cost.

White earthenware

From about 1800 lead glazes were made clearer and no longer need tinting blue to stop the pots from looking yellowish.

Body and glaze were now so standardised that pots were described only by the way they were decorated. In order of cost this was: enamelled, printed, painted, dipped, edged, or plain.

Dipped meant decoration made using a lathe and a layer or layers of slip.

Edged meant just a thin blue or green painted edge (for example, around a plate).

'Ironstone China'

New types of earthenware body were made to resemble china (that is, porcelain) in strength as well as in appearance: they were variously called 'stone china', 'ironstone china' or 'opaque china'. Since none of them really was china, this caused confusion about the meaning of 'china'. These bodies were generally heavy in weight.

Lustre decoration

In 1805 a shiny lustre effect was introduced which was applied after the glaze firing like an enamel colour: it came in silver (made from platinum), in pink or (a little later) in copper colour (both made from gold). It could be painted on or used as a dip.

Printing develops

From the late 1820s pots could be printed in green or brown, instead of blue, before being glazed. After 1800 it became increasingly common to use a print as a guide for other colours which were painted on over the top (e.g. by child workers).

In the 1840s multicolour printing was introduced, and was at first used mostly for the lids of pots

(e.g. of hair oil or potted shrimps).

Stonewares

Unglazed stonewares are known as 'dry bodied stonewares'.

The easiest way of glazing stoneware is to throw a handful of common salt (sodium chloride) into the kiln when it is hottest. This separates the salt into soda and chlorine. The chlorine is evaporated off as a gas, but the soda is deposited on the surface of the pots as a very hard thin glaze. The resulting surface has a pitted texture like orange peel.

Brown salt-glazed stoneware

This was imported from Germany until English potteries began making it in the late 17th century. It continued to be made, as an increasingly down-market product, until the mid 19th century, then acquired a new lease of life for drainpipes for the sewage systems of towns. By a suitable irony Doulton, the most successful maker of these, began around 1870 to use it also for 'art pottery'.

White salt-glazed stoneware

By 1720 Staffordshire potters were using white clays (from Dorset and Devon) and calcined (burnt) flint to make a white pottery which was glazed with salt.

It provided a strong but cheap substitute for porcelain. From about 1750 it was painted in enamel colours, making it resemble porcelain even more.

It was the first hard white pottery, but lost ground to the more recently-invented creamware after 1770.

Red stoneware

Unglazed red stoneware teawares made at Yixing in China were imported by the East India Company. From the 1740s these were copied, together with the technique of stuck-on clay decoration (known as sprigging).

Basalt, jasper and caneware

In 1768 Wedgwood developed an unglazed black stoneware which in 1773 he christened 'basaltes' or 'basalt'. Many other potters soon copied it.

In 1775 he developed an unglazed white stoneware which he could colour right through the body with blue, green or (a little later) lilac: he called it jasper. A few other potters copied the blue.

In 1779 he developed an unglazed stoneware called caneware which is the colour you'd expect. This was copied by many other potters.

White feldspathic stoneware

About 1790 a white unglazed stoneware was developed by John and William Turner. Feldspar was an ingredient that made it white, and sometimes even translucent. Some argue that it therefore counts as a kind of porcelain.

Smear-glaze

A light sheen of glaze is sometimes found on stonewares, especially basalt and white feldspathic. Known as a smear-glaze, this was made by coating with lead glaze the inside of the containers (saggars) in which the pots were fired. After about 1820, stoneware in many other colours was made, and often covered with glaze.

Porcelain

Chinese hard-paste porcelain

Chinese porcelain was imported in bulk from around 1700. Its whiteness, strength, thinness and translucency inspired English potters to try to match at least some of these qualities.

Tin-glazed earthenware, white salt-glazed stoneware, creamware, pearlware and stone china all attempted to do this without actually being porcelain.

The body of Chinese (and Japanese) porcelain was made of china clay (kaolin) and china stone (petuntse), two related forms of decomposed granite. The glaze also had china stone in it, which made it fit the body very tightly.

Chinese porcelain was fired at high temperature, around 1400 degrees C.

English soft-paste porcelain

The English did not know the ingredients of hard-paste porcelain. From 1744 they made imitations using various different recipes.

These were all fired at a lower temperature, about 1150 degrees, and were less hard and less strong.

There were three basic types:

a glassy body, as made at Chelsea and Derby in their earlier years.

a bone-ash (phosphatic) body, as made at Bow. Bone-ash helped the body to withstand knocks.

a soapstone (steatitic) body, as made at Worcester. Soapstone helped the body to withstand thermal shock, e.g. from boiling water.

Plymouth and Bristol hard-paste porcelain

In 1767 William Cookworthy succeeded in copying Chinese porcelain, and patented his discovery.

He started a factory at Plymouth which quickly moved to Bristol. The high temperature needed caused a high rate of loss in the kiln.

Hybrid hard-paste porcelain

In 1781 a group of Staffordshire potters bought out the patent and started making hard-paste at New Hall.

They avoided the kiln losses by giving the china its high firing before it was glazed, then adding a traditional lead glaze and firing at lower temperature.

Bone china

About 1797 Josiah Spode combined bone ash with china clay and china stone. This has been the standard body for English china ever since.

Parian

In the 1840s an unglazed white porcelain was developed to resemble marble, for reproductions of sculptures. It was named Parian after Parian marble.