

I hope you are keeping well. I thought we would look at the origins of clay and it's qualities. It is a question that comes up some times at Core.

Clay is the product of the geologic weathering of the surface of the earth and since this process is continuous and goes on everywhere, clay is extremely common and abundant in nature. It is an end product of the weathering of rocks. Think of clay being almost a representative sample of the crust of the earth after it has been pulverised to a very fine particle size by the act of erosion.

Thinking about the chemical make-up of clays, they vary widely. Kaolin and ball clay have a high percentage of alumina and a low percentage of iron. The composition of clay varies, depending on the source of it's parent rock. In different areas the igneous rock which gives the rise eventually to clay may differ widely, some free of iron and some containing quartz.

Plasticity of clay is the term given to the amount of water in clay making it easy to shape. It is one of the virtues of clay. Among natural materials clay is unique in the degree of it's plasticity. It is it's plasticity that makes it possible the endlessly varied shapes and forms of ceramic objects.

Clays vary a great deal in plasticity depending on their geologic history. Some coarse clays, even though quite unplastic are useful for making bricks and drainage pipes. Other clays are too plastic and sticky to be used by themselves and must be blended with other less plastic clays to be useful. Many clays are usable just as they come from the earth and may be modelled or thrown on the wheel without any additions.

We are interested in clay not so much for what it is in its natural state but what it may become, clay which is so plastic and easily shaped becomes when fired to red heat or more a hard and permanent substance.

The discovery that clay became hard when fired ranks as one of man's most important early finds. The domestic lives of primitive man was immeasurably enriched by the possession of fired clay vessels for storing grain, carrying water, cooking, washing and holding food. Any ancient civilisation can be measured by the quality and quantity of the pottery it produced. Clay was no doubt first fired accidentally in a camp fire perhaps in the form of a mud lined basket.

When plastic clay dries it shrinks about five percent, some very plastic clays shrink as much as eight percent.

Clay bodies are  
terracotta, a red clay, can be grogged, stoneware, a buff coloured clay can be grogged, a lot of grade 3 grog called crank, or not grogged called artice white, earthenware can be white or terracotta,

porcelain, a very pale white clay, a fine bone china. Ming porcelain is translucent when fired, paper clay, is clay and fibre of flax and cellulose, when fired to 1280 degrees centigrade looks translucent.

Grog is fired clay that is ground up and used to make clay easy to hand build with and with stand high temperatures.