

Pottery - development, 6th C, Black figure pottery

Technique

Black colour – slip/firnis/varnish: fine grain clay with large content of iron and an additive of sodium carbonate and potassium carbonate.

Red background – clay of larger grain and large content of iron

Before firing the decoration painted with slip was hardly visible.

Dried vase was fired in the three-step process.

- the vase was fired with oxygen in the chamber (ca. 800 °), and the entire vase turned orange-red (the iron in clay and slip oxidized);
- green wood was added and the vents were closed, temperature ca. 950 ° smoking the vases completely black – the iron oxide had been reduced again to iron and the slip sintered turning into a glaze which couldn't react any more;
- finally oxygen was re-introduced temperature lowered and areas without slip turned back to red (iron oxide again) while areas with slip remained black.

Red figure technique was the same but the background was black and figures red.

White – caolin or other white clays



Amphora by Exekias, ca 540;
Metropolitan Museum of Art