

The Lost Wax Method of Bronze Casting

There were two distinct methods for casting bronze sculptures during the 19th century: the lost wax method and the sand casting method.

The first step in the lost wax method was to create a sculpture in wax. A plaster mold of the sculpture was then made, and its internal surface was coated in wax to create a hollow mold that was filled with a varying mixture of sand, clay, ceramic powder, and plaster. After iron pins had been inserted through the mold, a network of solid wax rods was attached to various parts of the figure. This framework was subsequently covered in plaster that had been mixed with heat-resistant materials, leaving only a strategically placed pair of small openings in the encasement. Next, the mold was slowly heated in a kiln until all of the wax had poured out through the holes, with the iron pins left to hold the core materials of the mold in place. Finally, molten bronze was poured into one of the openings to fill the spaces left by the wax. The gases created by the cooling bronze escaped through the other opening. Once the bronze had set, the casing was cut away and the iron pins were removed. Extraneous pieces of bronze were sawed off and filed down, and flaws in the rough cast were filled and polished.

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