

Steps in Cast Sculpture

Excerpt from National Park Service Unit for Augustus Saint Gaudens Park

Cast sculpture goes through several steps from first idea to final piece:

- 1) An idea is drawn on paper.
- 2) The artist models a small clay "sketch" so it can be seen from all sides.
- 3) The artist makes a clay model that is the same size and proportion of the finished piece. Sculptors use special kinds of clay for this work. For large pieces, clay is built up over an armature (supporting structure). When clay dries, it is very fragile and breaks easily, so clay is never the final material.
- 4.) A plaster mold is made around the clay figure.
- 5.) The mold is opened and separated from the clay leaving a hollow or negative shape.
- 6.) Liquid wax is poured into the mold creating a wax model. Several wax models can be made from the same plaster mold, which is why you may find sculptures that look identical.
- 7.) Wax spews are added to the wax model. Like plumbing, they will allow an open pathway for the liquid bronze to travel and exhaust gases to escape.
- 8.) Casting in bronze is done at a foundry. A plaster–cement mixture called an encasement is created around one of the wax models and wax spews
- 9.) The wax is then burned out in a kiln, and hot, liquid metal (usually bronze) is poured into the hot encasement's negative space.
- 10.) The encasement is broken away from the metal cast and the spews must be sawed off.
- 11.) The sculpture is given the finishing touches.
- 12.) A patina is applied to give the sculpture its finished color.