

Bronze Casting of the Great Buddha

Casting is a process in which metals such as iron, aluminum alloy, bronze, copper, or brass are heated to beyond their melting point and then poured into a form, allowed to cool, and thus set into the desired shape.

In the case of the Great Buddha of Kamakura, a wooden or clay model was prepared, and an outer shell of clay was made. A second, inner clay shell was then made, matching the outer shell in shape, with the gap between the two equal to the desired thickness of the metal casting. The inner and outer shells were set in place and earth was piled up around each of them to provide support. Molten metal was then poured into the space between the outer and inner shells and allowed to cool. This process was repeated for each succeeding segment of the image, which was built up from bottom to top.

Advanced techniques were used to strengthen the junctures of the segments. The outer and inner shells were supported by great mounds of earth gradually built up as the various segments were cast and joined. In the case of the Great Buddha, the body alone required seven different casting operations. When the entire process was completed, the outer clay shell and the earth mound that supported it were removed. Then the inner shell and the earth that supported it were removed through the window that is still visible on the back of the statue.