

# PLAQUE MANUFACTURING PROCESS



## > Overview

Phoenix Foundry manufactures Cast Bronze Memorial Plaques and markets these across Australia and overseas. The plaques range in size from 30mm to 800mm and each contains a unique inscription and a variety of design features. Some 1500 to 2000 plaques are produced each month. There are 8 stages within the production process:

### 1. Plaque Design

The layout of the inscription, motifs and other design features are keyed up in computer programs from information provided by the customer.



### 2. Negative Production

The plaque designs are transferred to a photographic negative in an image setter.

### 3. Moulding

The patterns are placed in a mould box and covered with a thin layer of a blend of selected virgin sands. The remainder of the box is filled with a mix of silica sand and binder which hardens the sand after a short time interval. This mould is stripped from the box and assembled with other sections ready to receive the molten bronze.

### 4. Pouring

Bronze ingots are melted in a gas fired or induction crucible furnace to a temperature of around 1200°C. The molten bronze is poured into the mould and solidifies in the form of the finished plaque. On cooling the mould is broken and the casting recovered.



### 5. Fettling

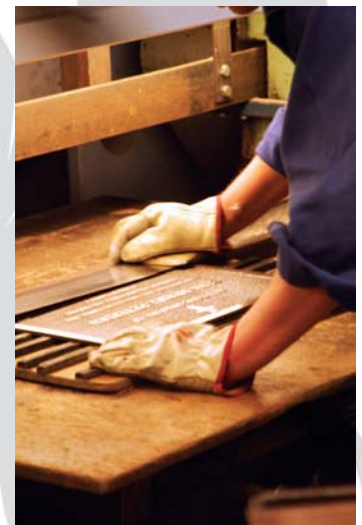
This stage of the process involves cutting off excess bronze from around the plaque, water and sand blasting and edge finishing to prepare the plaque for further processing.

### 6. Detailing

Within this stage fittings are attached and any irregularities are eliminated.

### 7. Finishing & Painting

The plaque is painted with background colour in a spray booth. The surface of the plaque containing the inscription is then ground with a belt finishing machine to bring up the bronze metallic colour on the raised inscription and other design features. A clear protective layer of paint is then sprayed on and the plaque baked in an oven to harden this protective layer.



### 8. Inspection and Packing

The plaques then undergo a final quality inspection and are packed ready for dispatch.

**For more information about Phoenix Foundry and our products visit [www.phoenixfoundry.com.au](http://www.phoenixfoundry.com.au)**

