

TP N° 1 FOUNDRY

1- Objective

This manipulation consists in producing the crude of a part obtained with the sand molding process by hand

2 - Manipulation

➤ Sand preparation:

We will use two types of sand:

- Contact sand: it is a mixture of 80% silica, which gives the porosity of the mould, 15% bentonite which has the adhesive element, 5% water which ensures the mixing of all these components.
- Filling sand: recycled sand will be used
- Sand mixing:

The mixer of the figures below will be used

➤ Preparation of the mould

➤ Lower chassis filling

- Position the chassis so that the upper plane of the chassis coincides with the plane of the table.
- Position the model within the necessary distances between the model and the chassis, then pour a small layer of talc to facilitate disassembly of the model.
- Fill with contact sand and pack covering the whole room.
- Fill the rest of the chassis with the filling sand.

➤ We make the remains

➤ Top chassis filling

- Position the upper chassis while respecting the centering between the two chassis to avoid offset defects.
- Place the tap hole, attack, vent holes at the highest point of the model, then pour a small layer of talc.
- Fill with contact sand and pack.
- Fill the rest with the filling sand.
- Make air dashes to increase the porosity of the mould.
- Make the funnel.
- Dismantle all the elements.
- Raise the mould while respecting the relative position between the two chassis.
- Pour molten aluminium at a temperature of 680 ° C.
- Wait until the room has cooled.
- Destroy the mold and extract the molded part.