

Constructing the Honeycomb Mould & Advanced Glass Casting Techniques.

Helen Stokes

Honeycomb Mould used in Lost Wax Casting

The introduction of the honeycomb wall between layers of plaster/silica and fibreglass produces a mould that does not crack at top temperature. The honeycomb structure makes the mould lighter because of the cavities within it. The drying process is accelerated when the moisture drains along fibreglass channels. Air flows freely throughout the mould enabling models to be cast successfully without the need for air vents.

The honeycomb is used to evenly aerate and cushion the edges of delicate bowls and support inner cavities. By varying the layers that support the honeycomb it is a particularly useful support structure for large moulds.

The glass models are cast from flower pot crucibles suspended above the moulds.

Class Content – I would suggest a 5 or 6 day workshop.

(I have found in the past that it is beneficial to have a 1 or 2 day break toward the end of the workshop – this time refreshes the students and allows time for the completion of the firing schedules. Students return to break open their moulds and participate in a critique).

The honeycomb mould is a modification of a layered mould and each student would begin by making a small layered mould following my technique. Glass would then be cast into the moulds the same day.

I would demonstrate the honeycomb technique and speak about its uses, the uniqueness in the way it behaves and its special qualities. The firing schedules specific to the honeycomb mould will be explained.

The students will make a bowl form in wax to invest in a layered mould that will incorporate a small area of honeycomb. This model will be cast in glass upon completion.

Each student will sculpt a form with some protrusions and will be encouraged to incorporate into their creation textured and smooth areas.

These sculptures will be invested in the honeycomb mould.

I will instruct students how to load coloured glass into the crucible to achieve the desired colour placement in the cast model. Students can experiment with this technique in each of their castings.

The final cast piece is a tile with a low relief design. Using 2 or 3 glass colours in a crucible cast low over the mould will provide a stunning result.

When the moulds have been fired I will conduct a critique with the students about their pieces.

Students will learn wax working skills to construct wax models. They will enjoy hands-on experience involving all aspects of casting including making the mould, steaming out the wax, preparing the glass, stacking the kiln, calculating firing schedules and last but not least, experiencing the joy of the cast treasure at the end!