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***Steps for making a plaster mold using a wet clay model...***

Dry your model to the leather hard state using a blow dryer or heat gun. Or bisque fire your model prior to beginning the mold.

1. Decide the number of sections needed for the mold.
2. Orient the model perpendicular to the table plane and balance on clay wadding so that the form is securely placed and cannot move or rotate.
3. Using a carpenter's angle or triangle mark the sectioning line using dots. Do this by placing the edge of the angle against the form and mark the point of contact which is actually the height of the convexity or outward curve of the form.
4. Connect the dots to create a clearly visible line around the contour of the form.
5. Create a slab or flattened block to be used as the start for your separating plane.
6. Trace the shape of your model onto the top face of the separating plane.
7. Remove the clay on the interior of this shape and insert the clay model. Place a thin piece of plastic or thin paper towel under what is to be laid into the cut out separating plane. Be sure that the model is oriented perpendicular to the table top as it was when you marked the line demarcating the section.
8. Carefully add small pieces of clay to the cut edge to fill in between the separating plane and the clay model.
9. If your section lines goes up and down (in other words if the section line is not a straight line) make the plane move in the same fashion up or down as it travels around and outward from the form.
10. For slip cast molds create a spout (a funnel-like addition) and add it to the end of the form. This will become your pour hole. It will be placed against the coddle board so it opens on the top side of the section.
11. Place the coddle board around the separating plane. Depending upon the size of the model your mold walls should be 1 ½- 2 1/2 inches bigger all around the form.
12. No mold soap or other separating agent (i.e. Murphy's oil soap) is needed on your unfired clay form. If you bisque fire the form you must seal the fired clay and apply mold soap or Murphy's Oil Soap. Mold soap comes as a concentrate and is mixed with water in a 1:1 ratio. This means ½ cup of soap is mixed

with ½ cup of water. Use warm water and let the mixture dissolve overnight. Oil soap is also mixed in a 1:1 ratio or 50% soap to 50% water.

13. Mold soap is needed on the metal and/or wooden laminate of the coddle boards. Paint one coat with a soft brush and let the mold soap dry then brush over with a dry brush to deal. A second coat is needed on a bisque model but not usually on the face of the coddle boards which are made from a non-porous material.

14. Clamp the corners to hold the box around the separating plane square and in place. Add small (1/8 inch) clay coils to the inside corners of the coddle boards. Add ¼ inch coils to the exterior corners and around the exterior bottom of the coddle boards. This is done to prevent leaking.

15. Measure from the separating plane up 2 inches, measure the length and width inside the coddle boards. Multiple these measurements L x W x D take some off for the volume that will be displaced by the model which could be 1/3 of the volume. Then divide this number by 80. The answer is the amount of water needed. Look at the chart in for plaster to water ratio for ounces of water to pounds of plaster.

16. For slip cast molds use #1 pottery plaster. For press molds use #1 molding plaster. The bags are labeled.

16. Measure the water. Weight the plaster. Add plaster to water. Let slake so the plaster fully hydrates. Give this 2 minutes. Mix well. For larger batches of plaster use a drill with mixing attachment but clean the mixer and drill right after use so the plaster does not set on this equipment.

17. YOUR ARE READY TO POUR THE FIRST SECTION OF YOUR MOLD!

18. Allow plaster to full harden. This will take about 1 hour. Then remove coddle boards and clay. Flip the model over and remove the clay separating plane. Cut keys – usually four in the corners of the mold. Keys can be cut using a nickel or dime.

19. Be sure that the plane is correct. Use a scrub brite green pad to smooth bumps.

20. Seal the open face of the plaster using 2-3 coats of mold soap as per directions above.

21. Replace coddle boards. Seal seams with clay. Rebuild you spare. Cast second section.

22. For a three or four piece mold repeat steps.