

Sand Casting Metal: (Two-day workshop, Saturday & Sunday, September 15 & 16) **Robert Shaw and John Chickadel**

Description, materials & tools.

OUTLINE OF THE PROCESS: The upcoming sandcasting workshop will be done using Petrobond sand, a commercially available oil sand. Oil and a small amount of clay added to silica sand causes the sand grains to stick together around an object compacted into (buried) sand in a two part box. The object being reproduced can be wood, hard wax, plastic, stone, etc, but can have no "undercuts." The object is located at the intersection between sand in the top and bottom parts of the box. Once sand is compacted around the object, a sprue hole is cut through the sand from one side to allow molten metal to be poured into the sand mold once the model has been removed. We will cast both bronze and sterling melted in a tilt-a-pour handheld furnace.

PRESENTATION OUTLINE: Day 1 – Description of the process and discussion of the limitations imposed by the materials. Characteristics of the master explained; no undercuts. Participants start making their own master (work on the master in the evening and complete it by noon on Sunday). Making a mold box (cope and drag). Demonstration of the process – ramming up; cutting the sprue; removing the master; casting; cleanup; chasing. Day 2 – Checking to make sure your personal master is ready to cast and is complete by noon. Ramming up masters in sand within a mold boxed will begin at 11am or as participants become ready thereafter. Casting begins at 1:30pm immediately after lunch.

MATERIALS NEEDED: Bring the material you choose to make your master from – wood, stone, hard wax, plastic, etc. and the tools you need to shape your master. A Fordom grinder and bits are often very useful. A Foredom with burs will be available. If you do not feel comfortable making a master, you may cast one of Bob's. **EYE PROTECTION** and magnification for your individual use! A full face shield will be on hand for use during metal pouring. Bob will supply bronze or brass for one casting each. If you wish to cast silver, bring your own metal (if it is scrap, make sure it is clean sterling sheet trimmings, no solder and no filings).