

# Press-Molded Sculpture

by Bill Kremer



*Notre Dame, Indiana, sculptor  
Bill Kremer.*

SCULPTURE combining curved, convolving planes with linear elements can be constructed from slabs pressed into large, handmade, plaster molds. The two faces of the sculpture will be related in structure, yet can be different in form. Brushed slips activate the surface.

To fabricate the press molds for the two halves, I use a method of transforming line into three-dimensions. Drawings and small-scale models identify these lines. Plywood templates are cut in accordance with the profile line of four surfaces: top, bottom, front and back.

Three of these four surface lines are indicated on a drawing of the form to be made (see page 32). The dotted line represents the seam between halves. The top and bottom surfaces are seen in relation to one another, with the height of the form determined by the distance between them ( $H^1$  and  $H^2$ ).

Templates of the top and bottom profile lines are cut from ½-inch-thick plywood. The front profile line will determine the surface contour, and is transferred to a plywood pull template, notched on one end to act as a registration guide. The templates are sanded smooth on the edges, then the top and bottom are nailed to a particleboard (or plywood) base to form a jig.

With the space between the top and bottom templates packed with any soft

clay (preferably without grog or sand), the pull template can now be drawn across the clay with firm, steady pressure. After each pull, excess clay is removed from the pull template. Any voids can be filled with additional clay. This shaving motion is repeated until the top and bottom templates are in contact with the pull template. Water is used to lubricate the last few pulls to ensure a final, smooth clay surface.

Once the form is established as wet clay, it is ready to cast. A wooden wall constructed around the positive clay form acts as a retainer for the plaster. Liquid soap brushed onto all clay and wood surfaces aids in the release of the plaster when it is set.

Number 1 pottery plaster is recommended and should be cast in three stages: First, a surface coat is poured to a depth of ½ inch. After the first layer has set, a layer of burlap dipped in plaster is added. When this second layer has stiffened, it is covered by another ½-inch-thick layer of plaster. This final layer is built up slightly on the edges to strengthen the mold.

To ensure minimum weight, the mold should follow the contour of the form. Molds, large or small, should be no more than 1 inch thick through the surface area, and 1 ½ inches thick along the edges.

When the plaster cools (plaster develops heat while setting up), the mold

can be lifted off. A combination of thin wedges and pry bars is used to *carefully* release the mold—the plaster is heavy and brittle at this stage and can crack easily.

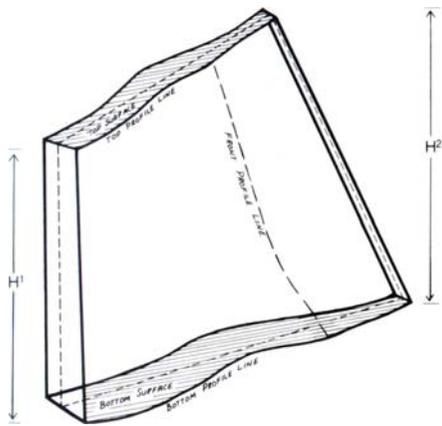
The back mold is defined by the same top and bottom templates. New molds require a week to dry, then are smoothed with fine sandpaper or nylon net.

Clay slabs are placed and arranged in the mold, the clay is registered against the plaster, and overlaps are compressed using a slapping rhythm. Excess clay is cut away, then coils are pressed along seam surfaces to reinforce the area which has been joined. The bottom is made by layering coils up to the seam line; the top is left open.

Surfaces to be joined are scored and dampened, then a single coil is placed along the seam of one of the halves. Slip is brushed along the seam of the other half. The molds are then lifted to their upright positions and inched together. Care is taken when securing the molds with rubber cords and clamps.

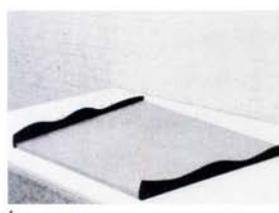
A strip of wood is used to tamp the bottom and side seams to ensure a good bond. Then the mold-enclosed form is allowed to dry for two days. The top is covered during this time to prevent premature drying.

With the molds removed, the leather-hard form is coiled shut, and seam imperfections are filled with clay. Surfaces

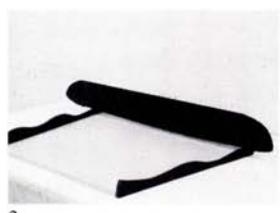


Top and bottom surface profiles from a line drawing (LEFT) are mimicked by plywood templates, nailed to particleboard to form a jig (1). A pull template (2) determines the surface contour of soft clay packed into the jig (3); firm pulls shave off excess clay (4). Then the contoured surface is framed and brushed with liquid soap (5). A plaster mold is cast (6); when cool, the mold is lifted off the clay original (7). After drying, molds are lined with clay

slabs (8). Molds are secured with rubber cords and clamps, then clay seams are tamped (9). Removed when leather hard (10), the form is brushed with slips (11). Cone 2 firing on a bed of sand (12). The base line of the fired form is traced on a pine board (13), to be cut at an angle matching the angle of the clay form (14), then attached with screws driven (15) into plastic masonry fasteners inserted into the drilled clay form. Additional laminated wood elements (16) are screwed to the base.



1



2



3



4



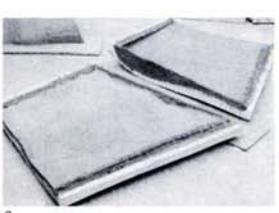
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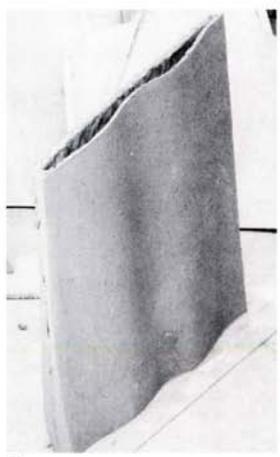
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10



11



12



13



14



15



16



*"Black Gesture," 42 inches in height.*



*Opposite side of "Black Gesture."*

*"Composition I" slip-brushed clay with painted wood, 28 inches in height.*





*"Vertical Wave," 44 inches in height, press-molded clay with colored slips, fired to Cone 2, painted wood, by Bill Kremer.*

can then be textured or patterned with incising, additions, or painted slips, oxides and commercial stains. Brushing slip on the leather-hard surface is much like oil painting on a shaped canvas. After a Cone 04 firing, the colors and surface qualities of the damp clay are restored with a thin coat of clear glaze or a few coats of clear lacquer.

A wooden base for the form is constructed from 2-inch-thick pine. The bottom outline is traced on the board, which is then cut with a band saw; the cut is angled to match the curve of the form. Thicker, tapered bases can be achieved by laminating additional boards, with each board in sequence acting as a pattern for the next.

The completed base is attached with plastic masonry fasteners and screws. A carbide bit is used to drill holes into the fired clay. Then plastic fasteners are inserted into the form, and screws are driven through the wooden base.

Additional wooden elements can be attached in a similar manner. Curved linear forms may be made by laminating a series of short curves together, then shaping further with a wood rasp.

Once all attachments are complete, the sculpture is disassembled, and the wooden elements sanded and painted. When the form is put back together, all screw holes are covered with wooden dowel plugs, which are in turn painted to match.

## *Recipe*

### **Slab Sculpture Body** (Cone 2)

Talc.....	150 pounds
Wollastonite.....	15
A. P. Green Fireclay.....	50
Ball Clay.....	50
Cedar Heights Goldart Clay.....	50
Silica Sand.....	30
	345 pounds

**The author** *Bill Kremer is a faculty artist at the University of Notre Dame in Indiana.*