



Project 1: Studio Pottery | Sakshi Gambhir | IDC

Tel.: 95-120-2536487
Mob.: 9899672403
Email : meena_studio782002@yahoo.co.in

Studio 78

meena vohra

Ceramic Artist
D-78, Sector-21, Noida-201 301

Ref. No.....

Date 19-6-09

To
The HOD
Industrial Design Center
IIT Bombay

Dear Sir

This is to certify that Sakshi Gambhir (VC Junior, Roll number: 08625006) has successfully completed her Summer Internship project in Studio pottery with me from 19th May 2009 to 18th June 2009. She has been present for all the days excluding Sundays.

She has been keenly involved in Wheelwork, Hand-building techniques (slab, pinch, coil), assembling pieces, Bisque firing, Glazing. She has interacted with Raj Singh (my help) and me during the project.

Her conduct has been excellent. She has a flair for design; her work is neat and precise. I can see her as a good potter in the future. She is a keen learner, very observant, with a flair for creativity.


Meena Vohra

Studio '78', D 78, Sector 21, Noida

Declaration

I declare that this written submission represents my ideas in my own words and where others' ideas or words have been included, I have adequately cited and referenced the original sources. I also declare that I have adhered to all principles of academic honesty and integrity and have not misrepresented or fabricated or falsified any idea/ data/ fact/ source in my submission. I understand that any violation of the above will be cause for disciplinary action by the Institute and can also evoke penal action from the sources which have thus not been properly cited or from whom proper permission has not been taken when needed.

Signature:

Name: Sakshi Gambhir
Roll No.: 08625006

Acknowledgments

A lot of people have made this Summer Internship Project easy, fun and very rewarding. I hope to not miss any. Here's my list:

Meena Vohra Aunty - the proud owner of Pottery Studio '78' who tolerated me for four weeks in a scorching summer, my Guru.

Rajsingh Bhaiya - the help in the Studio who makes pots at jet speed, gives you tips you won't find in any books.

Aprajita Aunty - the caretaker in the PG accommodation, an ardent collector of pots herself.

Sabira and Mayesan - the local potters in Chinhhat (Lucknow) who helped me witness Upla firing of a few of my pots (magical!)

IDC - the facilitator of freedom to experiment, take chances, do something, fall, grow, evolve.

Somya for always being there.

Rohit - the 24x7 support system, constant mood elevator, my date for all evenings.

Mom & Dad - my emotional strength, they are everything I fail to frame in words.

Contents

About the artist	1
Clay	3
Wheel work	5
Cylinder	5
Hump throwing	20
Hand building	25
Coil	25
Slab	31
Hollow ball	35
Fluting	39
Bisqueting	41
Finishing	51
Glazing	53



About the artist

"Pottery is not just an art form, it is a therapy." An AIFACS awardee, Meena Vohra believes "Its never too late to learn." She had her first brush with clay at the age of 50. She has had a journey through its realms and has carved a niche for herself.

She had been a school teacher for 13 years but was always interested in art. She has done Ikebana (Japanese flower arrangement) and a number of art-forms. After raising her kids, she decided she would do pottery when she got the time. One fine day she didn't go to school and bought a wheel instead. Without too much initial investment, her studio is now equipped with two potters' wheels, kiln, custom glazes, tools & supplies and lots of enthusiasm! There was definitely great family support and e-learning.

She hasn't received much formal training (except one in designer pottery) because she didn't want to adopt any particular style. After five years of having started her studio, she bought a kiln, till then she baked her pots with cowdung cake. She also took pottery classes at German and American embassy schools, started full fledged pottery in 2006 and held her first solo exhibition in 2007. She's had a few group exhibitions (in IHC Delhi, Chennai) and got the AIFACS award in 2008.

"Its divine. It is very close to life. It teaches you determination, patience, detachment, dedication and develops an eye for beauty. The satisfaction you derive out of holding the 3D pot you create, the sheer joy of feeling it is immense", says Aunty.



Clay

Pottery is made by forming a clay body into objects of a required shape and heating them to high temperatures in a kiln to induce reactions that lead to permanent changes, including increasing their strength, hardening and setting their shape. Types of clay include:

Red clay or earthenware: porous, turns red/ brown on firing at 900-1200°C

Stoneware: opaque, water resistant, more durable, turns peach/ grey on firing at 1100-1280°C

Porcelain: white primary clay made from kaolin (decomposed granite), often translucent, 1280-1400°C

China clay: softer, gains whiteness, hardness, translucency and stability from the inclusion of calcium phosphate, 1100°C

Than clay

Recipe for a stoneware body (100 grams):

China clay: 35 g

Ball clay: 20 g

Potassium feldspar: 15 g (added to aid plasticity and firing consistency)

Silica: 15 g (added to aid plasticity and firing consistency)

Than clay: 15 g



Cylinder

Wheelwork can be used to create wares with radial symmetry on the vertical axis. These can then be altered by pressing, bulging, carving, fluting, faceting, incising and by other methods making the wares more visually interesting. Often, thrown pieces are further modified by making handles, lids, feet, spouts and other functional aspects are added using the techniques of hand work.

Materials and tools needed are clay, water, sponge, prick-pin, cheesewire, bamboo, scrapping tools, fluting tools. The first few pots need to be dissected to examine wall thickness and weight.

The processes involved in wheelwork are:

Wedging: removing the trapped air within the clay body (de-airing) and ensuring even moisture content throughout. This is done manually off the wheel and on the wheel by pulling a cone up and pressing it down.

Throwing: placing the ball of clay in the center of the wheel head (though the word 'throwing' is used for pot-making on wheel in general).

Centering: pressing the ball of clay downward and inward into perfect rotational symmetry.

Opening: making a hollow in the center of the solid ball of clay.

Flooring: making the flat bottom inside the pot.

Pulling: drawing up and shaping the walls to an even thickness.

Trimming: removing excess clay to refine the shape of the pot when it is leatherhard.

Fluting: engraving/ embossing/ creating texture on the pot. This is done when it is leatherhard.































Hump throwing

Instead of making one pot at a time and removing it from the wheel, hump throwing is done to make many small pots from a big lump of clay. They are removed one after the other from the lump of clay by cutting it with a thread. It is a faster way of 'production' and saves the time of putting clay on the wheel each time for a pot.







Coil

Coil, slab, pinch, hollow ball are some of the handbuilding techniques commonly used. Handbuilding is the earliest, most individualized and direct forming method. Parts of hand-built vessels are often joined together with the aid of slurry or slip, a runny mixture of clay and water. Handbuilding is slower and more gradual than wheel-throwing but it offers the potter a high degree of control over the size and shape of wares.

Materials and tools needed are clay, water, sponge, prick-pin, cheesewire, slip, cutter, brush, rolling pin, filer, texture-making-objects or fluting tools.

Coiling is done by rolling clay in between the palms. Pots can be made by forming rings of coils and putting them on top of each other.

The processes involved in coiling are wedging, preparing the base of the pot (slab), rolling coils, pricking and applying slip, attaching coils and filling gaps with wet clay. Vertical lines can be marked in the interior of the pot to join the coils well and on the outside, the coils can be well defined by marking each one at the leatherhard stage. Any interesting detail/ element can be attached at the end of the last coil.

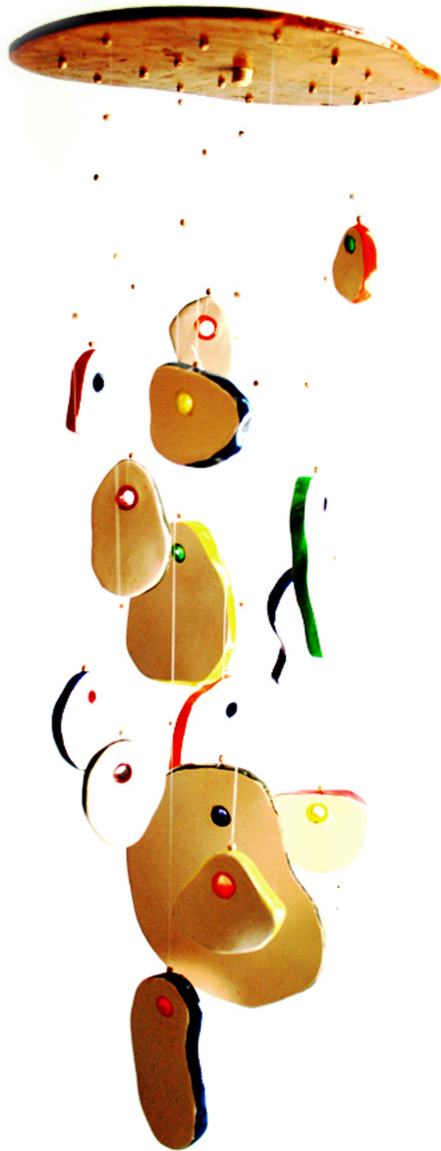












Slab

Clay is rolled between the rolling pin and an even platform to form thin slabs. Pots can be made by combining these in different ways. A lot of other things like wind-chimes and fridge magnets can be made too.

Materials and tools needed are clay, water, sponge, prick pin, rolling pin, cutter, plastic base for making

slab (so it doesn't stick to the tabletop), beads and fishnet wire etc. to string the slab pieces.

The processes involved in making a slab pot are wedging, preparing the base, cutting out shapes, filing holes (if needed), fluting, attaching slabs to each other for the desired result, sponging regularly to prevent cracks.







Hollow ball

Hollow ball technique is used to make pots or utilitarian things (like piggy bank, toothbrush holder etc.) that are hollow. This is done by scooping out clay from two hemispheres and joining them to form a whole. Materials and tools needed are clay, water, sponge, scooper (or spoon), prick pin, fluting tools, filer, slip.

The processes involved are wedging, making a clay ball, slicing it into two halves, scooping, smoothening or sponging, pricking walls to apply slip to join, attaching the two hollow halves, applying a coil along the joint for strength, adding details to the finished hollow ball.







Fluting

Fluting is done after trimming and finishing the pot. The processes involved are wetting the pot with sponge (if it is too dry), fixing the pot with clay stoppers on the wheel, trimming the extra clay and creating textures. Attaching handles or decorating it with handbuilt clay pieces can be done at this stage. The pots can also be carved, bulged, incised

upon while they are leatherhard, after which it is not possible to do all that because they are too dry and liable to break.

Materials and tools needed are leatherhard pots, water, sponge, prick pin, fluting tools like knife, spoon, cutter, shells, corals, pins etc.



Bisqueting

Kilns may be heated by burning wood, coal, gas or by electricity. Modern kilns powered by gas or electricity are cleaner, more easily controlled and often allow shorter firing times to be used. The purpose of bisqueing is to change the clay into ceramic material, without fully fusing it. Most pottery goes through a bisque firing before it is glazed and then fired again to melt the glaze and fuse it to the clay body. Bisque firing pots is important. Because the bisque firing is brought to temperature much more slowly, bisqueting also reduces the chances of pots cracking or exploding in the glaze firing. Bisqueting changes the color of the clay to a soft peach, which is more uniform in gas firing. In upla firing, smoked patches are seen on some pots, which if not desired, are covered up during glazing.

Gas kiln firing (850°C):

In the gas kilns, the air circulates to a high degree, adding fuel efficiency and more even heating throughout the stack area when firing. The kiln has components like the pyrometer, temperature display, digital stabilizer. The interior is made up of a heat absorbent fiber and the pots are kept on shelves supported by props.

Cowdung or upla firing:

For this type of firing, several layers are arranged. Layers of pots, dry leaves, twigs, cowdung cake (upla) and broken fired pots are laid out and kerosene burnt upla is added in the center of the arrangement to start the firing. The mound is covered with a blanket of rice straw which in turn is covered with a thin layer of loamy soil. This firing takes a few hours and the bhatti is allowed to cool down for a day. Such a firing is slow as the smoke gradually bakes the pots.



















Finishing

After bisque firing the pots, they are rubbed with sandpaper to smoothen them and then the dry dust is brushed off. They're washed before the next step, which is glazing.



Glazing

Glaze is a glassy coat applied to pottery. This produces irreversible changes in the body. Glazes are highly variable in composition. They are prepared by trial and error with a lot of study, patience and time. Application of glaze is done by spraying, brushing, dipping or electrostatic process.

Common materials used are potassium feldspar, silica, china clay, whiting, dolomite, wollensite and metal oxides (for color). Copper can produce green, turquoise or red. Iron can produce yellow, brown, grey-green, blue or red. Other oxides are of carbon,

nickel, zinc etc. The choice of metal oxide depends on the desired color result.

Glazes provide functional qualities (impermeability, hygiene, strength) and decorative effects (color, texture, opacity, brilliance).

A coat of wax is applied at the base of the pot so that the glaze doesn't trickle down and stick the pot to the shelf in the kiln. Wax can also be applied for experimenting with wax-resist glazing effects. The firing temperature is between 1200°C-1300°C.





