

Design Resource

Traditional Cement Sculpting - Madurai, Tamilnadu

Beautifully Sculpted Idols

by

Prof. Bibhudutta Baral and Guna D.
NID Campus, Bengaluru

Source:

<http://dsource.in/resource/traditional-cement-sculpting-madurai-tamilnadu>



1. Introduction
2. Tools and Raw Materials
3. Making Process
4. Products
5. Video
6. Contact Details

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Introduction

Sculpture comes from Latin word “Sculpere”- meaning to carve. It refers to the creation of three-dimensional figures forms designs from a single block mass of materials. Sculptures are one of the oldest of arts. It is an artwork created by shaping or combining hard materials, typically stone such as marble, metal, glass or wood, or plastic materials such as clay, textiles, polymers and softer metals.

There are two types of sculptures, which is Subtractive process and additive process. Subtractive sculpture is the oldest form of sculpture and involves removing material like woodcarving or stone sculpture to create a finished work. Subtractive sculpture is by far the most technically difficult and due to the nature of the medium is the most restrictive in expression. Additive sculpture is the process of creating sculpture by adding material to create the work. Additive sculpture describes all other forms of sculpture and the process most commonly used today.

Sculptures are created in four basic ways, which are carving, modelling, casting and construction. Carving method (Subtractive process) material is removed example on marble, wood, stone etc. Modelling method (Additive process) material is added example clay, wax, plaster, and papier-Mache. Casting method is made when a mould is used to form a material into desired shape example: Lost wax method. Construction method: welding, gluing, nailing materials together.

The first known sculpture in the Indian subcontinent is from the Indus Valley civilization, found in sites at Mohenjo-Daro and Harappa in modern-day Pakistan. These include the famous small bronze female dancer named as ‘The Dancing Girl’. However, such figures in bronze and stone are rare and greatly outnumbered by pottery figurines and stone seals, often of animals or deities very finely depicted. After the collapse of the Indus Valley civilization, there is little record of sculpture until the Buddhist era, apart from a hoard of copper figures of c. 1500 BCE from Daimabad. Thus, the great tradition of Indian monumental sculpture in stone appears to begin relatively late, with the reign of Asoka, and the Pillars of Asoka he erected around India, carrying his edicts and topped by famous sculptures of animals, mostly lions, of which six survive. Large amounts of figurative sculpture, mostly in relief, survive from Early Buddhist pilgrimage stupas, above all Sanchi; these developed out of a tradition using wood that also embraced Hinduism.

Place:

The arts and crafts of Tamilnadu has developed from the ancient times and is still practiced in many places of Tamilnadu. The beautiful carvings in our temple stands as an example explaining the skill of our artisans. Tamil Nadu is known as the land of temples, which are considered architectural masterpieces over the ages. Different dynasties over the centuries like the Cholas, Pandyas, Pallavas, Nayaks and others, constructed thousands of temples, which are the standing testimony to the rich Dravidian culture and art. They were great patrons of art and architecture and each temple thus exhibited distinctive styles of each empire.

1. Introduction

2. Tools and Raw Materials

3. Making Process

4. Products

5. Video

6. Contact Details

Design Resource

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1. Introduction

2. Tools and Raw Materials

3. Making Process

4. Products

5. Video

6. Contact Details

Some mythological story was attached to each temple and their gopurams, gateways, pillars and arches depicted the excellence and glory of a bygone era. The temples were important places for social gatherings, imparting education and celebrations. The Pallavas built the oldest temples dating back to 700 AD. The temples were constructed out of stone and were replicated out of caves. The Chola Empire included mandapams or decorative halls with huge gopurams or towers in their temples. The Pandyas later increased the artistic value of the temples by adding gateway arches, high wall enclosures and huge towers. The Vijayanagara rulers who had a distinct style of architecture comprising intricately carved monolithic pillars followed this. The Nayaks developed a splendid style of architecture by adding circulatory paths or prakarams. The intricate carving of the sculptures bears testimony to the creativity and artisanship of the sculptors and artisans. Some of the most famous temples are Meenakshi Temple at Madurai, Ranganathaswamy Temple Srirangam, Brihadeeshwara Temple at Thanjavur, Kailasanath Temple in Kancheepuram, Ramanathaswamy Temple at Rameshwaram and many other temples.

Chennai may be the capital of Tamil Nadu, but Madurai claims its soul. Madurai is one of the oldest cities in India, a metropolis that traded with ancient Rome and was a great capital long before Chennai was even dreamed of. Madurai is one of the ancient cities of South India with a glorious history. It is famous for its world acclaimed Meenakshi Sundareswarar Temple. The city of Madurai has been constructed in the form of a lotus and is built around the temple. It is situated on the banks of the river Vaigai. Owing to its rich cultural heritage and architectural splendour, the city is often referred to as the “Athens of the East”. The origin of Madurai dates back to the Sangam period, the golden period of Tamil Literature.

Madurai has become a big commercial centre in the south. It is famous for its textile industry, which is growing in stature with time. The city contributes immensely to the textile wealth of the county. The textile industry still uses its ancient techniques of weaving. The textile from the region is exported to all over the world. There is a vast variety offered by Madurai in both the textile material as well as the weaving techniques. There are a number of other small industries that contribute to the arts and crafts of the city apart from textiles.

Cement Sculpting:

Cement Sculpting is the process of making sculptures using cement as the base material. Cement is an important ingredient in a finished product called concrete. Concrete is a mixture of cement; a binder such as stone, sand or gravel and water. Mixture of all these ingredients sets a chemical process called hydration into motion. When first mixed, concrete has a heavy paste-like consistency, but thanks to hydration, it gradually becomes extremely hard, even though it should be kept damp as it hardens. When it is finished, it is impervious to water. Cast concrete is sometimes also called “cast stone”.

Concrete is versatile and one should be skilled to know how to work with it. It is also easy to experiment with because the raw materials are available at any hardware or building supply store. When it is in a semi-liquid form or uncured, concrete is heavy and viscous, not easy material to handle.

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At this point, depending on how one wants to use it, they can add substances to it that will slow the drying rate or speed it up, or make the wet concrete flow more freely. It all depends on how one wants to use it to make art. It can be cast into a mold, a hollow form made of plaster, aluminum or latex into which uncured concrete is poured. The inner surface of the mold is coated with a substance like shellac to ensure that the concrete does not stick to it. The concrete cures until it has hardened and then it is removed from the mold.

Another, more complicated method is to use armature, or skeletal form, to support the concrete. Here, the armature is made first, using materials like wire, wood, metal or bricks. Then the basic form is filled out using a lightweight substance like styrene, and surrounded with another outer shell of metal wire. It is only at this point that the concrete is poured, or continuously poured and pushed into place by hand to cover the underlying form. A finished work can sometimes require layers of concrete and wire support.



An example of Dravidian styled cement sculpting.

1. Introduction

2. Tools and Raw Materials

3. Making Process

4. Products

5. Video

6. Contact Details

Design Resource

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Master artisan R. Nagarajan stapathy.



Semi-finished cement sculpture of lord Shiva.



Skilled artisan working on the cement sculpture.

1. Introduction
2. Tools and Raw Materials
3. Making Process
4. Products
5. Video
6. Contact Details

Design Resource

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Tools and Raw Materials

Following are the tools and raw materials required for traditional cement sculpting:

- **Cement:** The base material with which the sculpture is made.
- **Sand:** Its used to mix with cement to make concrete.
- **Bricks:** Its used as armature in the sculpture.
- **Sculpture Pottery Tools:** These tools are used to lay concrete along with bricks.
- **Water:** Its used to mix with cement to make it semi liquid.
- **Brush:** To dust off unwanted materials from the sculpture.
- **Painting Knives:** Its used to give shape and detailing to the sculpture.



Sand is one of the main raw materials.



Different types of sculpting tools and brush used.

1. Introduction

2. Tools and Raw Materials

3. Making Process

4. Products

5. Video

6. Contact Details

Design Resource

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Beautifully Sculpted Idols

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Source:

<http://dsource.in/resource/traditional-cement-sculpting-madurai-tamilnadu/tools-and-raw-materials>

1. Introduction
2. Tools and Raw Materials
3. Making Process
4. Products
5. Video
6. Contact Details



Bricks are used to make the skeleton of the sculpture.

Design Resource

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Beautifully Sculpted Idols

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Making Process

Making of cement sculpture requires strong and powerful skills as well as experience in shaping an object into a sculpture. Artisan uses a rotating stool on which the sculpture is made. Rotating stool helps the artisan to sculpt the figure in all angles by rotating it at will in his convenience. The process starts by making of concrete. Artisan mixes cement, water and sand using garden trowel in a container. The consistency of mixing water with cement is controlled by the artisan. Bricks are broken into small pieces using a trowel. These bricks are going to be the armature for the sculpture.

Concrete is laid down on the stool. Brick pieces along with concrete is positioned according to the size of the sculpture. The torso of the sculpture is done first. Concrete is laid around the brick pieces and the bricks are not slightly visible. Smaller pieces are placed over the torso and concrete is placed alongside to make the article sturdy; this being the neck region of the model. Artisan lays a single vertical brick piece for the face of the sculpture. It is strengthened around with concrete. Small-scaled pieces are arranged with concrete between two pieces; above the face region as a high bun of the sculpture as the artisan is making the idol of Lord Shiva. Concrete is placed on the rear of the model from the top to the torso which represents hair of Lord Shiva.

Cement powder is deposited on the hair, face and torso region to give toughness to the sculpture. Using painting knife, extra concrete is etched out and given detailing for the base of the model. The artisan next coats the sculpture with a slightly more liquefied concrete layer all over. Painting knives of different sizes are used according to the shape of the region. As the concrete is wet, it becomes more versatile for the artisan to give definite detailing to the facial features, ears, hair etc. Specific minute characteristics are given using a thinner painting knife. Extra blobs of concrete are brushed off using a painting brush at this stage, as once when the concrete solidifies it is non-viable to changes.

Post sculpting, water should be poured on the idol two times a day for 3 days for curing purpose. Painting process can be started only after 15 to 13 days after the sculpture is made. Primer is applied as a base coat for all the cement sculptures after which enamels can be used. Copper is used as the armature for idols above 2 feet in height, as the copper has resistance from rain, thunder and lightning.

1. Introduction

2. Tools and Raw Materials

3. Making Process

4. Products

5. Video

6. Contact Details

Design Resource

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Source:

<http://dsource.in/resource/traditional-cement-sculpting-madurai-tamilnadu/making-process>

Flow Chart:



1. Introduction
2. Tools and Raw Materials
3. Making Process
4. Products
5. Video
6. Contact Details

Design Resource

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Beautifully Sculpted Idols

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<http://dsource.in/resource/traditional-cement-sculpting-madurai-tamilnadu/making-process>



Brick is broken into small pieces.



Cement and sand is mixed together with water in right proportion.



Thick layer of cement is used as base.



Few bricks are placed on the thick layer of cement according to the sculpture.

1. Introduction
2. Tools and Raw Materials
3. Making Process
4. Products
5. Video
6. Contact Details

Design Resource

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by

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Source:

<http://dsource.in/resource/traditional-cement-sculpting-madurai-tamilnadu/making-process>

1. Introduction
2. Tools and Raw Materials
3. Making Process
4. Products
5. Video
6. Contact Details



The bricks are packed with cement.



According to the height of the sculpture a lengthy brick is placed.



Cement is applied on the brick.



Small pieces of bricks is placed and packed according to the subject.

Design Resource

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Source:

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Basic anatomy of the sculpture is made.



The required shape is achieved by applying soft cement.



The basic shape of the face is given.



Dry cement is applied all over the sculpture.

1. Introduction
2. Tools and Raw Materials
3. Making Process
4. Products
5. Video
6. Contact Details

Design Resource

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Beautifully Sculpted Idols

by

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Source:

<http://dsource.in/resource/traditional-cement-sculpting-madurai-tamilnadu/making-process>

1. Introduction
2. Tools and Raw Materials
3. Making Process
4. Products
5. Video
6. Contact Details



Detailed design of the sculpture is sculpted.



Smooth cement is applied over to give a finishing.



Smooth cement is used to sculpt the details of the face.



Detailing of the facial features is being sculpted.

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Source:

<http://dsource.in/resource/traditional-cement-sculpting-madurai-tamilnadu/making-process>



Water is applied over the sculpture using a brush.



Hair pattern is sculpted in detail.



Detailing on the face is sculpted.



Snake is made around the neck.

1. Introduction
2. Tools and Raw Materials
3. Making Process
4. Products
5. Video
6. Contact Details

Design Resource

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Beautifully Sculpted Idols

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Source:

<http://dsource.in/resource/traditional-cement-sculpting-madurai-tamilnadu/making-process>

1. Introduction
2. Tools and Raw Materials
3. Making Process
4. Products
5. Video
6. Contact Details



Beautifully made sculpture of lord Shiva.

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Products

The cement sculptures made are usually depicting Gods and Goddesses which will be displayed on temple gopuram.

Size of these sculptures varies from 12 inches to 21 feet. The artisan makes products like horses and other decors for interiors of home.



Beautifully sculpted idol of Lord Shiva.

1. Introduction
2. Tools and Raw Materials
3. Making Process
4. Products
5. Video
6. Contact Details

Design Resource

Traditional Cement Sculpting - Madurai, Tamilnadu

Beautifully Sculpted Idols

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<http://dsource.in/resource/traditional-cement-sculpting-madurai-tamilnadu/video>

Video



Traditional Cement Sculpting - Madurai, Tamilnadu

1. Introduction
2. Tools and Raw Materials
3. Making Process
4. Products
5. Video
6. Contact Details

Design Resource

Traditional Cement Sculpting - Madurai, Tamilnadu

Beautifully Sculpted Idols

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Source:

<http://dsource.in/resource/traditional-cement-sculpting-madurai-tamilnadu/contact-details>

1. Introduction

2. Tools and Raw Materials

3. Making Process

4. Products

5. Video

6. Contact Details

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