

Design Resource

Marble Carving - Agra

Attractive carving

by

Prof. Bibhudutta Baral, Divyadarshan C. S. and

Sourav Nandy

NID Campus, Bengaluru

Source:

<http://www.dsource.in/resource/marble-carving-agra-0>

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



Design Resource

Marble Carving - Agra

Attractive carving

by

Prof. Bibhudutta Baral, Divyadarshan C. S. and

Sourav Nandy

NID Campus, Bengaluru

Source:

<http://www.dsource.in/resource/marble-carving-agra-0/introduction>

Introduction

Marble is one of the most cherished crafting stone with innumerable properties which can never be paralleled by any other stone craft. Besides being an exquisite natural stone, it is the most favored stone by sculptors, who find its surface relatively soft and easy to work when first quarried, to the time it becomes hard and dense when aged. The white marble from makrana, possess a finer grain when compared to its other alternative craft stone, making the surface ideal for rendering minute details for various decorative works. Sculptures made from this fined grained marble becomes extremely hard and dense with age. Such sculptures can even withstand high temperatures because of their relative isotropy and homogeneity at its molecular level, thus by making its surface resistant to shattering.

White marble which came from the famous makrana quarries was extensively used by the Mughals for the construction of various monuments. It became a stone of choice for Mughals emperors, especially Shah-Jahan, who ordered the construction of Taj mahal using the same white marble from Rajasthan. It was during this period when the marble crafts reached its peak in medieval India. Though according to many historians, Akbar was the father of Mughal architecture who introduced the art of inlaying red sandstone into a matrix of white marble, but it was only during the reign of Shah Jahan that the white marble of makrana had replaced the red sand stone of the Vindhyan.

Agra in Uttar Pradesh, is famous for its two forms of stone cutter's craft, one being the Jali work or stone tracery which is carved out from a single piece of marble and other being the Parchin kari, the art of inlaying the precious and semi-precious stones in marble. The Jali or Jaali as called in Hindi, is a fine filigree of marble, carved to represent fretted surface of stone lattices with delicate and intricate floral and geometrical patterns. In these kind of stone tracteries two distinct symmetrical designs tend to run into each other in the same screen to eventually blend together to form an endless network of geometrical combination. These designs were often based on the replication and repetition of a single unit or a design in a sequence of steps to develop the screen in the form of a symmetrical pattern.

This decorative art of stone tracery was introduced at Agra on a large scale by the Mughal rulers during medieval period. The Jali was not only used for decoration but it also served the purpose of free ventilation which is very necessary for the harsh climatic condition of northern India. Though many Jali works found in various parts of India are predominated by the geometrical patterns because they are easier to carve, some examples of motifs based on a foliage can also be found in the stone works of Ahmedabad.

1. Introduction

2. Tools and Raw Materials

3. Making Process

4. Products

5. Panorama

6. Contact Details

Design Resource

Marble Carving - Agra

Attractive carving

by

Prof. Bibhudutta Baral, Divyadarshan C. S. and

Sourav Nandy

NID Campus, Bengaluru

Source:

<http://www.dsource.in/resource/marble-carving-agra-0/introduction>

Agra being the most important center for stone carving is also famous for its perforated stone fretwork and inlay work and marble mosaic. Although stone jali work is almost entirely used for architectural purposes, in Agra there is a small trade in marble, where the artisan tends to replicate the same marble carving techniques of jali to make small fret cut boxes and other articles like lamp shades and ornamental boxes, especially designed for the tourist trade.



Round Lamp shade made of marble.

1. Introduction

2. Tools and Raw Materials

3. Making Process

4. Products

5. Panorama

6. Contact Details

Design Resource

Marble Carving - Agra

Attractive carving

by

Prof. Bibhudutta Baral, Divyadarshan C. S. and

Sourav Nandy

NID Campus, Bengaluru

Source:

<http://www.dsource.in/resource/marble-carving-agra-0/introduction>



Decorative lamp shade carved with leaf motif on Marble shaped as a ball.



Egg shaped decorative marble articles embellished with floral motifs.



The time taken to complete an article depends on the size and details of the design.



Carved out Marble decor for storing purpose.

1. Introduction

2. Tools and Raw Materials

3. Making Process

4. Products

5. Panorama

6. Contact Details

Design Resource

Marble Carving - Agra

Attractive carving

by

Prof. Bibhudutta Baral, Divyadarshan C. S. and

Sourav Nandy

NID Campus, Bengaluru

Source:

<http://www.dsource.in/resource/marble-carving-agra-0/introduction>

1. Introduction

2. Tools and Raw Materials

3. Making Process

4. Products

5. Panorama

6. Contact Details



Cylindrical lamp shades carved with different designs.

Design Resource

Marble Carving - Agra

Attractive carving

by

Prof. Bibhudutta Baral, Divyadarshan C. S. and

Sourav Nandy

NID Campus, Bengaluru

Source:

<http://www.dsource.in/resource/marble-carving-agra-0/tools-and-raw-materials>

1. Introduction

2. Tools and Raw Materials

3. Making Process

4. Products

5. Panorama

6. Contact Details

Tools and Raw Materials

White makrana quarried from the Rajasthan and other parts of India like Fatehpur sikri and Agra, served as a royal stone for the Mughals who used it extensively for the construction of various tombs and palaces. Its durability can easily be witnessed from its finest product in the form of Taj mahal. Moreover it also becomes easier for the craftsman to carve intricate floral designs because of its finer structure. These makrana marble carving in the form of jali work has always been a speciality of the Indian craftsmen who work on these rigid geometrical designs with extreme precision. Its resistance to shattering gives it an edge over other stones used for carving and sculpting. Besides makrana, alabaster is also popular in Agra due to its softness and close resemblance to marble. Alabaster is a common name for soft, smooth and fine grained sedimentary gypsum rock, whose substantial thickness makes it slight translucent. It is used to make table lamp shades as it allows the light to pass through it. It is also used to make products such as containers, and various egg shaped decorative objects with the forms carved in floral jaali. Depending upon the natural formation, alabaster can be divided into four different types:

- Calcite alabaster
- Gypsum alabaster
- Black alabaster
- Boulder alabaster

The various tools and raw materials used for carving can be listed as below:

Tools:

- **Flat Chisel (chheeni):** It is used to carve out the fine details on the surface of the marble.
- **Cold Chisel (tanki):** It helps to cut through the raw marble slab to get the basic shape of the desired product like a box or a spherical lamp, on which the designs would be carved.
- **Hammer (hatora):** This tool is used to drive the chisel through the raw marble for both sculpting and carving.
- **Files:** Used for fine tuning the designs.
- **Pen Drill (barma):** It is used to make rough outlines of the patterns on the surface of the marble. This tool is also used for carving the designs.
- **Divider (prakaar):** To draw outlines in the form of concentric circles for geometric patterns.

Design Resource

Marble Carving - Agra

Attractive carving

by

Prof. Bibhudutta Baral, Divyadarshan C. S. and

Sourav Nandy

NID Campus, Bengaluru

Source:

<http://www.dsource.in/resource/marble-carving-agra-0/tools-and-raw-materials>

- **Buffing Machine:** This tool polishes the carved surface to make it smooth.

Raw Materials:

- **Makrana Marble:** This kind of white marble is quarried from Rajasthan.
- **Alabaster:** Basically gypsum and black alabasters are used for carving.



Electric Bits of different sizes are used to carve designs on the marble.

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

Design Resource

Marble Carving - Agra

Attractive carving

by

Prof. Bibhudutta Baral, Divyadarshan C. S. and

Sourav Nandy

NID Campus, Bengaluru

Source:

<http://www.dsource.in/resource/marble-carving-agra-0/tools-and-raw-materials>



Buffer is used to smoothen the surface and give a shine to the article.



Different sizes of chisels are used to carve designs according to the motifs.



Tools used to carve and smooth the marble.

1. Introduction

2. **Tools and Raw Materials**

3. Making Process

4. Products

5. Panorama

6. Contact Details

Design Resource

Marble Carving - Agra

Attractive carving

by

Prof. Bibhudutta Baral, Divyadarshan C. S. and

Sourav Nandy

NID Campus, Bengaluru

Source:

<http://www.dsource.in/resource/marble-carving-agra-0/making-process>

1. Introduction

2. Tools and Raw Materials

3. Making Process

4. Products

5. Panorama

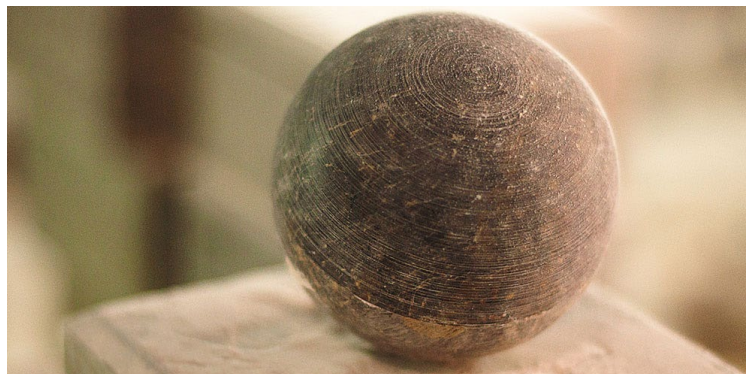
6. Contact Details

Making Process

The raw marble which is quarried at makrana in the Nagaur district of Rajasthan, acts as the chief source of marble for the craftsmen engaged in sculpting and carving of intricate jali works in the form of carved boxes and lamp shades. These craftsmen are famous for their skill and experience in these type of crafts as they inherit the same techniques of their fore fathers.

Carving is also done by using a soft stone called alabaster, due to its resemblance to marble. Being a soft stone it makes the carving easier for the craftsmen who use a minimum pressure of their fingertips to carve intricate details on the surface of the marble. Prior to the carving process the raw marble is sculpted and shaped using a hammer and a chisel to bring out the basic form of the desired product on which the patterns would be carved. The craftsmen then marks the outline of the design using a compass. Once the outline is marked, he then draws various floral and geometrical designs using a pointed chisel. This process is sometimes done by the eye alone by highly trained craftsmen who are experienced enough to accurately carve the designs without the outline. The craftsman then cuts through these pre-drawn patterns using various grades of flat chisels and hammer. This work has been further simplified by the use of a pen drill, which is driven by a motor. A drill or “barma” is also often used in case of a thick slab to pierce a hole to make frets of the design half way through the slab on one side, and then through the other side of the marble slab. A hand held pen drill not only makes the work less tiring but it also consumes less time when compared to the process of using a chisel and a hammer.

After carving, this marble block goes for further grooving and embossing, which is done by using chisels of varying sizes. The craftsman then provides minute details to the carved pattern by the process of filing, after which it is sent for polishing or buffing. Buffing is a process of polishing the surface of marble to make it smooth. It is usually done by a buffing machine which consists of a rotating wheel often coated with sand paper or hard wires made up of brass. Once the surface is smoothened it is then forwarded for final packaging.



Marble is first carved into the shape of the desired article.

Design Resource

Marble Carving - Agra

Attractive carving

by

Prof. Bibhudutta Baral, Divyadarshan C. S. and

Sourav Nandy

NID Campus, Bengaluru

Source:

<http://www.dsource.in/resource/marble-carving-agra-0/making-process>



Measurements and required designs are drawn on the shaped article.



With the help of an electric chisel designs are carved in the marble.

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



Initially a basic line of the design is carved.



Later the details of the designs are added.

Design Resource

Marble Carving - Agra

Attractive carving

by

Prof. Bibhudutta Baral, Divyadarshan C. S. and

Sourav Nandy

NID Campus, Bengaluru

Source:

<http://www.dsource.in/resource/marble-carving-agra-0/making-process>



Unwanted parts of the design is removed to create a hollow impression.



Craftsmen carves 20 to 30 pieces of articles a day depending on the size of the article.

1. Introduction

2. Tools and Raw Materials

3. **Making Process**

4. Products

5. Panorama

6. Contact Details



Once the article is prepared it is taken for buffing process.



Buffing smoothens the rough edges.

Design Resource

Marble Carving - Agra

Attractive carving

by

Prof. Bibhudutta Baral, Divyadarshan C. S. and

Sourav Nandy

NID Campus, Bengaluru

Source:

<http://www.dsource.in/resource/marble-carving-agra-0/making-process>



Buffing also leaves a natural shine on the product.



The finished product is wrapped and covered in newspapers.



The final product is taken for packing.

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

Design Resource

Marble Carving - Agra

Attractive carving

by

Prof. Bibhudutta Baral, Divyadarshan C. S. and

Sourav Nandy

NID Campus, Bengaluru

Source:

<http://www.dsource.in/resource/marble-carving-agra-0/products>

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

Products

The makrana marble carving was introduced by the Mughals in the form of decorative art in Agra during the medieval era, and ever since then it has been famous for its stone crafts. But the real skill of the craftsmen of Agra lies in the carving of intricate jaali or fretted stone lattices. Jali is a fretted stone work which combines the elements of geometrical motifs along with the Persian style. This kind of stone work was based on the theme of paradise effect, which the Mughals adopted to bring out the beauty of both Persian and Indian arts using different types of geometrical shapes. Although this kind of stone jali work was meant for architectural purposes, but a small group of craftsmen of Agra have inculcated this technique of fretted stone work to make articles such as ornamental boxes, incense box and lamp shades of varying grades, especially for tourist trade. Agra is also home to products made from alabaster, like table lamp shades, containers, fret boxes, egg shaped decorative objects and various other nesting animals-elephants, owls and tortoise.

- Ornamental box
- Table lamp shades
- Incense box
- Container box
- Egg shaped decorative objects
- Nesting animals-elephants, owls and tortoise
- Photo frames
- Pen stands



Decorative lamp shade made of marble, carved with leaves motif.

Design Resource

Marble Carving - Agra

Attractive carving

by

Prof. Bibhudutta Baral, Divyadarshan C. S. and

Sourav Nandy

NID Campus, Bengaluru

Source:

<http://www.dsource.in/resource/marble-carving-agra-0/products>



Vermilion holder made of marble.



Decorative agarbathi box carved with simple leaves design.



Marble jewelry box embellished with floral motif.



Lamp shades are available in different sizes and motifs.

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

Design Resource

Marble Carving - Agra

Attractive carving

by

Prof. Bibhudutta Baral, Divyadarshan C. S. and

Sourav Nandy

NID Campus, Bengaluru

Source:

<http://www.dsource.in/resource/marble-carving-agra-0/products>



Jewelry box made of marble designed with floral motifs.



Decorative vase carved with leaves motif.



Cylindrical shape lampshade made of marble.

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

Design Resource

Marble Carving - Agra

Attractive carving

by

Prof. Bibhudutta Baral, Divyadarshan C. S. and

Sourav Nandy

NID Campus, Bengaluru

Panorama



Source:

<http://www.dsource.in/resource/marble-carving-agra-0/panorama>

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

Design Resource

Marble Carving - Agra

Attractive carving

by

Prof. Bibhudutta Baral, Divyadarshan C. S. and

Sourav Nandy

NID Campus, Bengaluru

Source:

<http://www.dsource.in/resource/marble-carving-agra/contact-details-0>

Contact Details

This documentation was done by Prof. Bibhudutta Baral, Divyadarshan C. S. and Sourav Nandy at [NID Campus, Bengaluru](#).

You can get in touch with

- Prof. Bibhudutta Baral at [bibhudutta\[at\]nid.edu](mailto:bibhudutta[at]nid.edu)

You could write to the following address regarding suggestions and clarifications:

Helpdesk Details:

Co-ordinator

Project e-kalpa

R & D Campus

National Institute of Design

#12 HMT Link Road, Off Tumkur Road

Bengaluru 560 022

India

Phone: +91 80 2357 9054

Fax: +91 80 23373086

Email: [dsource.in\[at\]gmail.com](mailto:dsource.in[at]gmail.com)

1. Introduction

2. Tools and Raw Materials

3. Making Process

4. Products

5. Panorama

6. **Contact Details**