

Design Resource

Metal Sculpture (Repousse)

The Art of Metallic Deity Making

by

Prof. Bibhudutta Baral, Divyadarshan C. S. and

Vijay G.

NID Campus, Bengaluru

Source:

<http://www.dsource.in/resource/metal-sculpture-repousse>



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Introduction

Metal sculpture is a process of shaping metal sheet into desired shape by hammering, which has some similar feature of Repoussé technique. One of the earliest traces of metal sculpting can be seen in Hindu and Buddhist civilization. The earlier days of Buddhist civilization lacked with forms of visual art. Third century BC was the time when visually divine figure came into existence into region of Tibet, Nepal, China and northern India. During the first century AD, representation of Buddha was seen in stone and wooden sculptures, which was a sacred art and widely spread through Himalayan and Nepal region.

During the Gupta period (i.e:320-475 century), Indian handicrafts and Napalese art were popular and Napalese artisan started using metal to represent the Buddha and Indian deities. Higher representation of metal sculpture was seen during the Licchavi period (450 – 750 century) under licchavi dynasty, which originated in India. Licchavi dynasty used Indian style embossed coins while trading with Tibet, due to which political and cultural relation become stronger with Tibet.

Metal statue art work is one of the most innovative and treasure art in Nepal, In 7th century, Sprincess bhrkuti of Nepal, brought a Buddha figure in her dowry after getting married the Tibetan king Songtsen Gampo (618-649 century), the idol was placed in Jokhang temple of Tibet. This lead to the development of metal sculpture in Tibet. Newari community of Nepal is one the traditional groups known of detailed metal sculpture. This lead to the development of metal sculpture in Tibet. Newari community of Nepal is one the traditional groups known of detailed metal sculpture Newari craftsmen are well known for their high quality metal work. There work has influenced the traditional art of china and Tibet, Newari artisan travelled to both the countries to showcase their skills in temples and monasteries. Majority of metal sculptures made by these artisans, did not focus on only one religion (Hindu or Buddhist), they produced idols for both the religion. Nepal is one of the places in the world, where Hinduism and Buddhism cohabited peacefully for almost 2,000 years. Newari craftsmen created their own unique style of metal sculpting. Some of the feature which can be seen in Newari metal sculpture are long and relaxed eyes, wider face, ornamental embellishments, exaggerated postures and unique jewelry styles. Many of the early bronze or copper sculpture were small in size but very much appreciated for craftsmanship involved in the work. Newari community is further divided in Tamrakar, Shakya and Swarnakars. The craftsmen developed techniques to melt gold and apply on metal sculpture. These techniques were much appreciated by the dynasty of Himalaya region, particularly Tibet. Many of the Buddhist monks of Tibet region were involved in the making of metal sculpture at Buddhist monastery. Due to the influence of outside world, new scripture and legends, the number of god and goddess increased. This was the time when there was a huge development in the productive of metal sculptures. Idols of god and goddess were exported throughout Asia and to other parts of the world from Tibet.

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At this time anatomy of the figure were kept under high standard, the idols were in slender form, with well-shaped limbs and finger. Voluptuous features like full bodies, broad hips and full chest were seen on the idols. Many believe that these feature were inspired by the idols made at Mathura kingdom. Due to influence of Mughal era by the end of twelfth century and many wars which happened before that, metal workers of Kathmandu come up with their unique style of metal sculpting like water containers, pots, plates, cups, and bowls, the high quality finish products were sold to Kings, traders and priests. Newari community developed new system of working at home by building workshops at ground floor and their home at 1st floor. Kathmandu valley divided into three kingdoms after the death of yaksha malla (king of Nepal) in 1484, all the three kingdoms showed their greatness by demonstrating art and architecture present in their kingdom. Each kingdom showed there superiority in metal, wood, stone and textile crafts. Craftsmen with finest skills in these art were highly rewarded. Mallas encouraged the development of metal art and supplied it to temples, Buddhist monastery and utensils to rich people thought out Asia.

Influence of Buddhism can be seen thought the region of Himachal Pradesh, many of the craftsmen from Tibet and Nepal has settled in the monastery of Himachal Pradesh about 500 years back. Metal sculpture is one of the rare art which is still practiced in these monastery. This crafts has been passed through one generation to other and many of the essential steps in making of metal idols are kept as secrets. Still today one can find tamrakar, shakyas and swarnakars in the valley of Nepal and Tibet, who have devoted their life in preserving the ancient and cultural gift given by their ancestors. There skill of creating metal sculpture have been perfected with the years' experience, which is appreciated throughout the world.



Metal sculpture is a traditional craft of Tibet which includes the process of hammering the metal to acquire desired shape.

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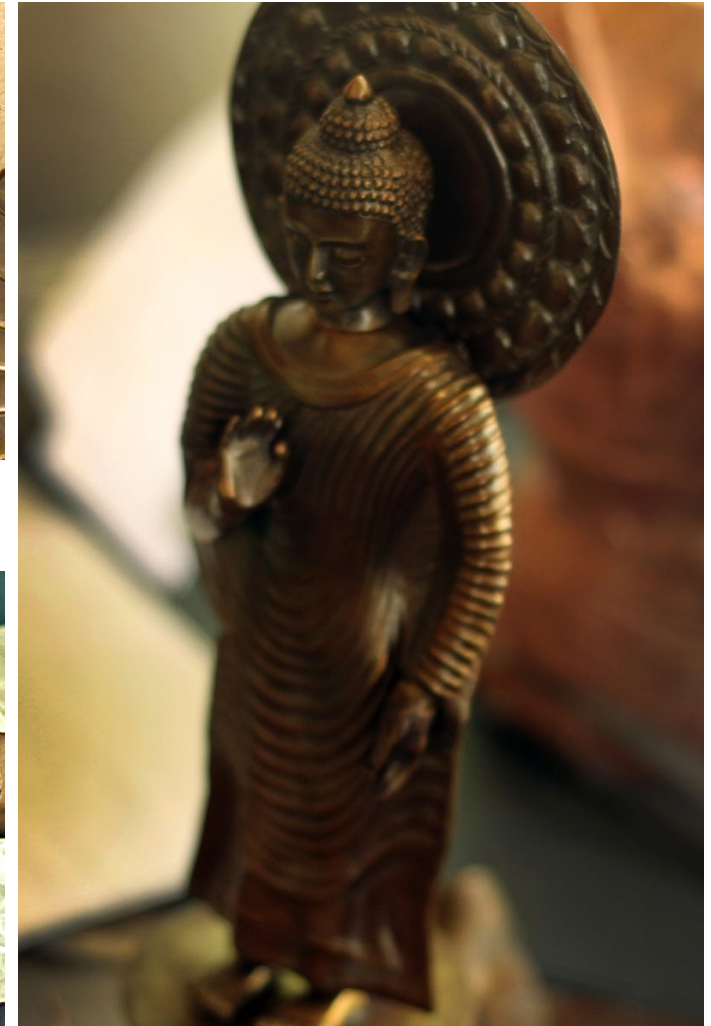
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The major production of sculptures include Lord Buddha and his different forms.



A simple sculpture of Lord Buddha.



Metal statues are given a gold coating which gives the article a royal look.

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Sculptures are decorated with pearls and gems stone.

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Gold plating is applied to the highly detailed idols.



Parts of the sculpture is made separately and joined together.

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Sculpture of Sakya Panditha painted with black shade.



Metal sculpture depicting Guru Padmasambhava.

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Sculpture decorated with semiprecious pearls and gems.

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Tools and Raw Materials

Raw materials is brought from Delhi. Including gold, mercury, pearls, gem stones and copper sheet. Pearls and gem stone are mainly used in the jewelry of Buddha.

- Copper Sheet: For making the statue.
- Hammer: Used for shaping the statue.
- Chisel: Used for fine detailing and marking on the copper sheet.
- Steel Rod: Used for shaping the copper sheet.
- Gold: Used for shine and luster.
- Mercury: Used in gold- gilding.
- Flame Torch: Used as a heating agent.
- Traditional Herbs: Used for coloring and for shine in the gold.
- Pearls and Gem Stones: Used for decorating in jewelry.



Various kinds and sizes of chisels used in sculpting.

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Different types of hammers are used shape the sculpture.



Gold paint is applied on the sculpture.



Wooden base on which sculptures are fixed with lacquer.

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Pearls and gems are used to embellish the sculpture.



The sculpture is made of copper sheet.

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Gum applied on the sculpture to strengthen the gold paint.



Dryer is used to dry the paint after application.

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Lacquer is used as a base in sheet sculpting process.

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Making Process

Earlier days, the product of metal art was controlled by the government of the respected region. The secrets of fine metal work were restricted to only few and it was guarded from the outside world. The secrets of 2,500 years are passed from generation to generation. Even today Newari artisans can be seen working on metal crafts in the region of Tibet, Himachal Pradesh and Nepal. These methods still remain unchanged for centuries.

Depending on the idol to be made, sketch is drawn on a sheet of paper, to mark all the proportion of the Buddha. Rough proportion are drawn on the 4 by 4 feet copper sheet. Depending on the idol to be made, copper sheet of 18 to 24 mm thickness is chosen. With the help of wooden scale which is specifically made depending on the length and width of the idol to be made, final proportion of the idol is drawn. A grid consisting of horizontal and vertical lines are created containing numerical representations. This grid helps in marking the measurement and to arrange the posture of figure within the given parameters. Using these grids, different variations in posture, placements of parts like hands and arms or the direction of head are made. Grid system helps in depicting the features of deity like complexity of multiple heads, arms and legs. Outline of the drawn proportion is hammered, different types of chisel are used under this process.

Cold chisel and hot chisel are two categories used in metal work. Cold chisels are made from tempered steel that are used for cutting metal which is not heated. Cold chisel is mainly used to remove excess or unwanted material but does not give smooth finish. Hot chisel is used to cut heated and soften the metal. Once the excess material is removed, hammering process is continued by placing the sheet on a tool called steel rod, which helps in embossing of sheet into desired shape. Different parts of the statue are made separately, which helps in detailing process. Due to the soft nature of copper, it is ideal to make metal figurine. It consumes less time while making idols compare to brass and also cheaper compare to brass, gold and silver. Meanwhile a mixture of pine tree resin and mustard oil is boiled for 30 minutes to form a thick paste with very high viscosity and red oxide is added for coloring purpose. Shaped metal sheet is placed over the paste. Due to the friction of the paste, metal sheet sits firmly on it. Fine details like jewelry and facial details are made with the paste as a base.

A mixture of Brass, Silver and Zinc is made in a ratio of 65:35:5. The mixture is used in the form of small balls or cylindrical shape while soldering process for joining the different body parts. This mixture melts faster than copper and has lower melting point compare to copper. Idol is sanded with sand paper to level the uneven surface. Gold is applied to the best and expensive metal sculpture. Generally there are mainly two method of applying gold the sculpture, gold-gilding and gold-plating. In gold-gilding, pure gold is mixed with mercury and heated to make thick paste and applied on the sculpture and allowed to set. It is heated using normal flame torch and mercury evaporates due to heat leaving just the gold on the surface. For gold-plating, thin layer of gold (also known as varak) is smashed in a glass container and applied on the heated metal sculpture. Due to the heat, gold spreads on the surface of the sculpture, this method requires gold in large quantity.

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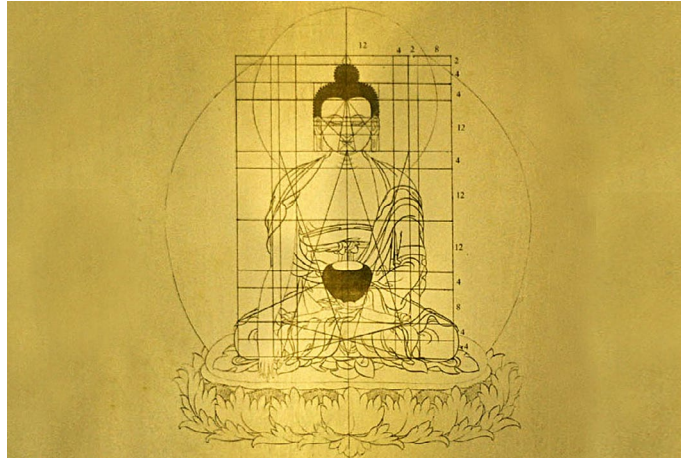
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Thus gold gilding technique is used on copper as copper reacts best with gold. Gold gilded sculpture is dipped in a solution made of traditional herbal plants (trade secret). This helps the sculpture attain higher shine and luster. Sculpture is painted with natural color and embellished with pearls and gems. The body of Buddha is given glossy finish and face is given matte finish. Fine details of face can be easily seen on matte finish. Painting of the idol is done by thangka painter. Generally it takes about 45 to 50 days to complete a 6 inch tall idol when done by a single craftsmen.



A detail sketch of the sculpture is drawn on a sheet.



The drawing is drawn using metal pen on the copper sheet.



Copper sheet is hammered to get a basic shape of the sculpture according to the design.



Roughly shaped sculpture is heated with the help of a flame torch.

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Shaped sheet is arrested on lacquer for support.



Detailing is embossed using various types of chisels.



Lacquer is removed by heated and sheet is dipped in diluted acid to remove leftover.



With the help of sculpted part, proportion of other parts are taken.

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Front and back half of the head of the statue is hammered and shaped to match.



Both halves of the head are tied with a metal wire.

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Mixture of zinc, brass and copper in a ratio is placed on the line of two halves.



Heating helps the mixture to melt and joins two halves.

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Parts of the sculpture is made separately.



Accessories for the sculpture are made separately and later fixed to the statue.

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Coat of gold paint is applied on the face, body and jewelry.



Facial details are painted with natural colors.

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Some sculptures are heated till a black color (over burnt) is acquired to give the sculpture an antique look.



Accessories are fixed to the sculpture one by one.



Clothes, crown, jewelry are sculpted and fixed in the order.



All the accessories are fixed using mini hand tools.

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Pearls and gem stones are glued on the jewelry.

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Stone embellishments gives a royal look to the product.



Finished Sculpture of Lord Buddha.

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Products

Most of the Tibetan statues represents god and goddesses of Hinduism and Buddhism, some of the commonly seen statue are Amitabha, the Buddha of unending light, lord Ganesha, the elephant-headed Hindu god of wisdom and learning, Buddha and lord Shiva. Some of the other known statues are Manjushri Mulakalpa, Samvarodaya, Krishna Yamari, and Kalachakra tantras. There is a huge demand of these idols in the market, most of the western tourist prefer Tara in sitting position or Buddha in standing. Top quality elaborate and sophisticated are hard to find, due to which the prices of these statues ranges in lakhs. Because of the hand – work involved in metal work, it is very much time consuming and does not allow large amount of production. Idols size varies from 6 inches to 23feet and 18 inch tall idol is more popular in the market. Idols below 4 inches are made using molding (lost wax casting) process, because it consumes lot of time for sculpting small size idol.



Lotus flower made of copper sheet.

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Most of the statues represent different forms of Buddha.



Metal sculptures are painted with gold and embellished with pearls and Gem stones.

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Display of varieties statues of Lord Buddha's.



Sculpture of White Tara and Buddha Amitayu.



Metal sculpture depicting Lord Buddha Shakyamuni.



Products of Buddha Amitayu and Ushnisha Vijaya.

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Simple statue of Lord Buddha.

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Simple statue of Buddha Amitayu.



Metal sculpture depicting Buddha Amitayu with black shade that gives it an antique look.

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Sculpture of White Tara Buddha.



Small sculpture of Buddha Amitayus decorated with pearls.

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Big sculpture of Buddha Shakyamuni.

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