

A Study of Casting the Silver Image of the Buddha in Ywahtaung, Sagaing Region

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Abstract

The introduction of research paper on "A Study of Casting the Silver Image of the Buddha in Ywahtaung" contains the historical account of Buddha images. Moreover the history of the ten different kinds of craft and art and the arrival of the craft of silverware into Myanmar are also presented. In the body of the paper, craft of silverware and the raw material used in silverware are presented. Furthermore the processes of casting of Buddha images are also described and illustrated with photographs. Then the localities where silverware work is being carried on are also included. To make the artistic work of silver in Myanmar recognizable and to get admiration of the countries around the world is the main idea of this paper.

Key words : Silverware, images, mould.

Introduction

During the reign of ancient Myanmar kings, there were ten kinds of arts and crafts. These arts and crafts were prefixed with 'pan' or flower which signifies craft, occupation or trade.

These arts and crafts are referred to in Myanmar literature in the following couplet: "flowers of ten different kinds not meant for offering at shrines." The ten kinds of art and crafts are as follows:

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| 1. Ba-dein (ပန်းထိမ်) | - the craft of gold or silver smith, |
| 2. Ba-gyi (ပန်းချီ) | - the art of painting, |
| 3. Ba-bu (ပန်းပု) | - wood-carving, |
| 4. Ba-daut (ပန်းတော့) | - stucco-molding, |
| 5. Ba-din (ပန်းတင့်) | - bronze-casting, |
| 6. Ba-da maut (ပန်းတမော့) | - stone-carving, |
| 7. Ba-be (ပန်းပဲ) | - the craft of blacksmith, |
| 8. Pann-ywun (ပန်းယွန်း) | - the craft of lacquer ware, |
| 9. Pann-pwut (ပန်းပွတ်) | - wood-turnery and |
| 10. Pa yan (ပန်းရန်) | - masonry. |

Regarding the Myanmar traditional arts and crafts, Letwethondara Minister U Myat San of Inwa Period wrote in *Sdhina Pyo* as follows: ကြိုးပမ်းစုံစေ့၊ အမွေအသိမ်း၊ ပန်းထိမ်တလျည်း၊ ပန်းတည်းတညီ၊ ပန်းချီတကွဲ ပန်းပဲတစု၊ ပန်းပုတတန်၊ ပန်းယန်မလွတ်၊ ပန်းပွတ်တလည်၊ အလုပ်သည်လည်း၊ ဖြစ်စဉ်များစွာ "Diverse and delicate work of gold and silver, Bronze work

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is one, painting is another, Blacksmith, wood sculpture and masonry works, Together with turnery works all in thriving trade."

For easy memorization of the names of these arts and crafts, the head monk of Zetawun Monastery of Monywa has composed a rhyme enumerating the ten kinds of crafts in Rajodeva Kyan as follows: ပဲ, ထိမ်, တဦး, တော့ ရန်, ပု, မော့၊ မှတ်လော့ ပွတ်, ချီ, ယွန်း: "Pe, Htein, Tee, Taw, Yan, Pu, Maw, Know yet! Put, Chi, Yun."

Regarding the crafts of gold and silver smiths it is stated in the *Kesamuti* stone inscription dated M.E. 636: ကိုဝ်ဆင်သော။ နာတောင်ခတ်ကြိုင်။ လက်စွပ်ထည်ထပ်မူသော။ ငယ်လင်ပန်။ ငယ်စလောင်။ ငယ်သန်တိယ်။ "String for the ear-plug, silver-tray containing rings, silver lid, silver bowl".

Based on the descriptions in stone inscriptions, the ten kinds of arts and crafts were already well developed in the Bagan period. It can therefore be assumed that Mon and Indian craftsmen already arrived in Bagan during the Bagan period.

Raw Materials

Silver is well-known for its brightest colour and its availability in all parts of the world. The Chinese people used silverware about three thousand five hundred years ago. A Greek historian stated that Lydian people were the first to use silver coins.

Pure silver is white. It can be beaten into a silver film measuring of 1/10000 inch thick. Next to gold it is the metal that can be beaten into the thinnest film. It is highly ductile and malleable metal. One ounce of silver can be stretched into a very thin three-mile long wire. Although pure silver is harder than pure gold, it is too soft to be made into coins and silverware. It has to be alloyed with copper to make coins and silverware. When alloyed thus, it does not lose its bright colour. It becomes harder and durable. Silver melts at 961°C boils at 1955°C and vaporizes into a blue gas. When silver vapours mix with air, it changes into dark green colour. The molten silver is able to dissolve in oxygen about 20 times of its volume. When cooled, the dissolved in oxygen escapes with a great force.

Making pots, containers, plates and jewelery with silver was quite popular even before the recorded history. The silverware tends to black when it gets in touch with sculpture. Thus after eating chicken and bird eggs with silver spoon, it has to be immediately washed. However the blackened spoon can be easily polished into its original bright colour.

Silver is useful in making explosives. Among the dynamites, the most powerful dynamite is silver fulminate. This explosive is not dangerous when it is wet. But when it is dry, it can explode with a great force, when it is touched by a feather. The negative films used in photography is coated with an emulsion of silver chloride, As it is sensitive to light, it changes chemically on exposure to light, when chemically altered film is treated with hypo, the silver particles were left stuck to the gelatin film as the picture.

It is rare to find silver ore from which pure silver can be extracted. Silver is mostly found together with lead and copper ores. In smelting the metal ore, silver is obtained as a byproduct. When a ton of argentiferous ore is melted, about 200 pounds of pure silver can be extracted. Silver mining is carried out in localities where argentiferous ores are found. In Myanmar, *Bawdwin* mine in the Northern Shan State produces the largest amount of silver. Argentiferous galena is also found in *Bamaw* Township, *Katha*

Township, *Yamethin* Township, *Kyaikhami* Township, *Dawei* Township and *Myeik* Township. It is also reported that there are silver mines in the *Wa* State.

Moreover the country that produces the world's largest amount of silver is Mexico in the North America. The localities which produce the second largest silver are Nevada State and Colorado State in the United States of America. In addition to these localities, silver is also mined in Canada, Spain and Australia.

Localities in which Silverware Industry is carried out

Myanmar silverware industry is a very old industry and craft has been handed down from one generation to another. Although silverware industry is a conventional work of art, now the silverware is being produced with innovated designs. Myanmar silverware is favored in the world's market of art. The major silver works are located in *Sagaing* (*Ywahtaung*), *Mandalay*, *Yangon*, and *Inle* Lake area. Among these, the silverware industry of *Ywahtaung* in *Sagaing* will be presented here. *Sagaing* Township is

located within latitudes 21°13' N and 21°15' N and between longitudes 95°3' E and 96°36' E. It falls within the dry zone. *Sagaing* Township stands 228.009 feet above sea level. *Sagaing* Township is bounded by *Mandalay* Township on the east, *Tada-U* Township on the south, *Myinmu* Township on the west and *Wetlet* Township on the north.

On the east and west the *Ayeyarwady* River forms a natural boundary of *Sagaing* Township and the *Mu* River forms a natural boundary on the west. On the north is the land boundary between *Sagaing* and *Wetlet* townships. The area of *Sagaing* Township is 485.16 square miles. The residential quarters in the urban area of the *Sagaing* town are: *Pabetan*, *Seingon*, *Tagaung*, *Minlan*, *Moza*, *Emyaywati*, *Potan*, *Nandawin*, *Daweizay*, *Myothit*, *Ywahtaung*, *Htonbo*, *Thawtapan*, *Parami*, *Nilar*, *Pattamya*, *Shweminwun*, *Zeyar*, and *Miyahta*. The quarters in *Sagaing* are known by the industry they are occupied with. The quarters are known by the trade because these trades or traditional crafts have been in existence since years ago. The art crafts of has been handed down generation after generation, although people may have moved to other places, the traditional crafts remain in operation in the same quarter. That is why the quarters are known in connection with the crafts they are engaged in.

Seingon quarter is known for hand-loom weaving and *Dawei* quarter for goldsmith work. *Ywahtaung* quarter is noted for several traditional crafts namely pottery, thin bamboo paper making, silverware work, bronze work, goldsmith work, stone carving and rattan works. Among them *Ywahtaung* is famed for its silverware works.

The area of *Ywahtaung* quarter is topographically an undulating terrain for it is situated on the lower slope of **Minwun Range**. It consists of low spurs and shallow depressions originating from the **Minwun Range**. The area has little level ground surface as it is situated on the western lower slope of the *Minwun* Range. The low *Minwun* Range and the higher highly dissected *Sagaing* Range are aligned north-south to the east of *Ywahtaung* quarter. *Ywahtaung* quarter is elongated in the north-south direction and relatively narrow in the east-west direction. It is 1.2 miles long in the north-south direction and 0.6 mile wide in the east-west direction. There are 950 households and over fifty-two thousand population in *Ywahtaung* quarter. Prior to the World War II, the most marketable articles of silver were bowls, betel boxes, powder boxes, cigarette boxes, alms-bowls, miniature *cetis*, Buddha image, miniature monasteries and flower vases, The price of silver was then K, 60 for 100-tola weight.

The traditional silver craft in *Ywahtaung* has begun since the time of their great fore-fathers. It continues to exist to the present time. The traditional craft of silver remains till today because it has been preserved by successive families since the days of Myanmar kings. The silver craftsmen who made silver articles for royal use lived in the *Ywahtaung* quarter in *Sagaing* town. Now the silverware industry in *Ywahtaung* is being studied by foreign tourists and these who are interested in domestic. The above mentioned silverware industry owners open their shops at their houses. They sell their wares in retail and wholesale. They also send silverwares to shops in Mandalay and other towns. As the silverware industry has become a thriving business, silver ware industry has spread to *Nyaungkon* village in *Sagaing* Township.

Now the silversmiths are producing new designs by combining the old and new methods. Furthermore, fashionable jewelers and articles of use are now being crafted. Some of the craftsmen are making many kinds of silverware by applying their imagination. The craft of silversmith that began in the long past representing one aspect of Myanmar work of art has now spread. (See figures 1)

Making Buddha Images

The Myanmar people have been making Buddha images for worshipping since the Began Period. The Buddhist people make Buddha images with silver, copper, stone, stucco, etc. As long as the Buddhist *Śsana* thrives, this tradition of worshipping Buddha images will continue to exist especially in the *Theravāda* country.

Buddha images in various heights and in different postures, such as seated images, images absorbed in *Jhna*, images delivering the first sermon, images with different *mudras*, have been made through the ages. But Buddha images made of pure silver in large sizes are very rare to be found.

In casting Buddha images the silversmiths adopted the lost-ware process (cure pedicle). A rough model is first made with bee wax unlike rough shaping and finishing work necessary in producing items of bowls, flower vase and *stgffpas*. The size of image, the weight of silver and the thickness are decided as one desires. Before fashioning any silver works, rough moulds are first made. In stone sculpture, silverwares are first made giving particular attention to the prescribed proportions of the body. Similarly rough moulds with prescribed proportion are made in silver work. Moulds are made with two layers of clay with one layer of wax between the two layers of clay in the particular ratio. Wax used in making moulds is prepared with dammar. First dammar is ground into powder and the powder is sifted with a cloth. The powder so obtained is mixed with beeswax to get the right consistency. Then beeswax is shaped into the image of the Buddha. Then, the image has to be touched up. Then, this ware model is encased in a mold of clay the preparation of the wax mould, the outer clay mould is laid on the wax mould.

The clay used in making moulds is prepared with clay. The clay is thoroughly mixed with finely divided gunny sack or horse-dung and water. The mold is then left for about two days to dry up. When the clay is dry, it is heated to drain the wax. If the mould is small, the fuel used is cattle dung. It is said that firing has to be systematic. If the firing is underdone, there can be defective patches. If the firing is overdone the surface tends to be grainy.

After removing the wax mould, a hollow clay mould is left. Then the molten wax is again poured into the hollow clay mould which is shaken so that the molten wax spreads and covers all parts of the clay mould which holds all the detailed features of the first wax mould. Then the hollow core of the mould is refilled with clay mixture. In casting wax into the clay mould, there must be small holes to let the air out. After refilling with clay, the mould is dried in the sun.

For pouring molten silver into the model, two holes are made at the bottom in the wax layer between layers of clay to let the air out. They are called '*kalano*'. The details of Buddha's head, the protrusions, halo around Buddha's head and folds of the robe are mould on the first wax image. These details are then faithfully copied by a thin wax mould later. After this the required weight of silver is melted to cast into the mould. At the same time the image mould is heated on a fire to drain the wax. After draining the wax, it is in readiness for casting molten silver.

If a solid image is desired, the core of the image is not refilled with clay. The mould is left hollow. But as this way of casting silver requires more silver, it is not used.

In preparing to cast silver, there are two fires, one for melting silver and the other to heat the image mould to the required temperature. The clay mould is heated with charcoal fire until the colour of the clay mould becomes red hot just like the colour of the crucible in which silver is melted. Only then the molten silver will spread all over the details of the image impressed on the inside of the outer clay mould. If the required temperature is not reached, the operation will be a failure. After casting the molten silver into the clay mould, it is left to cool down. When it has cooled down, either on the same day or on the next day, the outer clay mould and the clay in the core is broken off.

Now a rough hollow Buddha image is obtained. Then the hollow image is filled with lac. The image is touched up. Prominent features are shaped with *crooked chisel*. Image face is shaped with *circular chisel*. Rings around the eyes, nose and wrinkles around the throat are cut with *foot-chisel*. Threads of distinction and waist bands are accentuated by making use of *forked chisel*.

After completion of the details of the image, the lac-filling is removed. The basal plate is welded to the bottom of the image. Then the image is immersed in soap acacia solution. So that it would become hide and clean. Then the image is given a final polish with a soft copper brush after which the image appears as an object of veneration. The most popular and marketable silver objects are the Buddha images with *Bhūmiphassa mudr.* (See figures 2)

Conclusion

Pandain, one of the ten traditional arts and crafts, is not referred to as a separate craft of silver through the different periods of history from Pagan to *Konbaung* period when the last Myanmar kings ruled. *Shwenanthon Abhidhan* mentions royal pandain workers and copper workers. But it does not mention workers in silver. Therefore it is assumed that the pandain craftsmen worked with both gold and silver.

Under the Myanmar kings, the field of art was kept separate. The country people had no right to use articles and adornments made of gold or silver. Only late in history rich people came to use them. In the present day, as the price of gold is very high, the use of gold spoons, plates, kettles, etc. is rarely found. The use of gold bowl is sometimes

found. Thus people come to use articles made of silver which is not as expensive as gold and the silverware industry developed.

Silver works related to Myanmar Buddhist culture are Buddha images and household utensils. The articles of silver are crafted by Myanmar artisans with imagination and innovation by making use of traditional methods and tools of trade. As the artistic works of silver are being favored by foreign tourists, Myanmar silver work is now well known in foreign countries. The fame of Myanmar silverware is the skill, patience, industriousness and the minute detailed works of Myanmar craftsmen. The most favored silverware is silver bowl. The silver bowls are decorated with episodes from the life of the Buddha and the ten great *Jātakas*. By looking at the decoration of the bowls, the skill of the craftsman can be seen. Now the silver craftsmen are incorporating the traditional methods and modern technology in fashioning patterns and designs. Moreover, fashionable silver jewelers are being made in new designs. This is contributing to the fame of Myanmar silverware.

Foreign tourists visit the silverware workshops where articles of silver are being made manually. They buy silverware as souvenirs the tour guide or the shop owner explains the decorations on silverware and their depiction of Buddhist culture and Myanmar way of life.

Before the industrialization, household utensils were made manually. Despite technical advances, the craftsmen are still making things manually. People put more value on handmade goods. Handcrafting is being preserved traditionally. Silver work is one of the crafts that is still keeping up tradition. With a view to promoting and preserving Myanmar handicrafts, Myanmar silverware work pertaining to Buddhist culture, non religious silverware together with raw materials, the tools used and the terminology are presented after collecting data within a specified limit of time.

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LOCATION MAP OF YWAHTAUNG QUARTER IN SAGAING TOWN



