



The SUPPORT Arts and Crafts
International Centre of Thailand
(Public Organization)



Handicraft work

Ban Pa Aow Brassworks



Ban Pa Aow is an extremely ancient village in Ubonratchathani Province. Presumably, it was established at the same time that Ubonratchathani Town was founded with age around 200 years. People in Ban Pa Aow Village did handicraft works by molding brass in traditional ways that have been inherited from ancestors with ancient production process that is aged approximately 200 years.

Brass handicraft works of Ban Pa Aow were created with precious wisdom of the villagers that have been succeeded from generation to generation. The procedures were traditional: molding, lathing, burning and smelting referred as to “bee wax smelting”. They maintain ancient patterns such as Ing Mak Wai Pattern and Lotus Pattern. Each piece is manually molded in every detail and it is smelted until it becomes a magnificent handicraft work. Each piece is distinct, or it can be said that it is the only one piece existing in the world.



Uniqueness as reflection of wisdom and craftsmanship

Ban Pa Aow Brassworks handicraft is art and cultural heritage that has been inherited for hundreds of years in Ban Pa Aow Community. Its feature is the work's novelty with simple shapes and all works are molded in traditional way referred as to non-bee wax molding. It is the way to conserve ancient procedures starting from providing a mold from clay, molding, processing, decorating and polishing. Thickness of bee wax thread is different hence; each piece of work is unique. Although at present, modern equipment and tools are developed and applied with the production such as plaster cement use as the mold, Ban Pa Aow villagers still prefer ancient method by making the mold manually, lathing, burning, and molding the work to obtain distinguished pieces. Even though they are the same type of work, shapes and sizes are not entirely the same. So, the works are inestimable or in other words, it's the only one piece of work in the world.



A crucial technique is model lathing. To obtain well-shaped work piece, the model must be lathed in curve shape evenly. If not, when pouring liquid brass, the work piece will be unacceptably distorted.

The process of model lathing is important because the work's beauty depends on model that is lathed in proportionate curve shape. The techniques of model lathing are individual ability and skill of the craftsmen.



Ban Pa Aow brass work Products could be categorized into 2 groups including original products such as betel box set, water bowl with tray, small bell, bell, water ewer and newly developed group such as vase, candle holder and kettle etc.

For patterns printed on bee wax, they are the same patterns originated from natural imitation such as Ing Mak Wai Pattern and Lotus Pattern which are uniquely available in Ban Pa Aow Community. Furthermore, new patterns are invented such as fish row Pattern, Fish tooth pattern, pine-leaf pattern and rolling pattern etc.

Pattern creation requires pattern printing on objects and molds carved from buffalo horn is used to press on bee wax to create patterns because the buffalo horn's features are that it is not attached with bee wax and it is easily cleaned with only water. Popular patterns are In Mak Wai and Lotus Patterns that are extensively pressed on water bowl and tray because it is believed that lotus is a flower for worshipping sanctity and it is highly valuable in local people's mind.





Background of Ban Pa Aow Brassworks

Brass handcraft works were originated in past 4500 years when ornaments, bronze bracelet, anklets and utensils made of brass were discovered. From the excavation of human bones, it is presumed that villagers from Lao People's Democratic Republic in the past evacuated along the right side of Mekong River and settled in towns such as Nongbualamphu, Ban Chiang, Ban Khor, Ban Kan Lueang until they permanently settled at Ban Pa Aow in Ubonratchathani Province and they inherited brass handcraft works not less than 200 years.

It was said that Ban Pa Aow Brass Handcraft was initiated by a monk instructing other monks in the temple about how to produce brass works. When each monk left the monkhood, they had knowledge and stated making brass bells because most villagers raised cows. So, they invented brass bells to be distributed for hanging with cows and buffalos. After that, they made small brass bells to hang on necks of the hounds.

Initially, brass works were not various including those for household usages such as metal tub and pestle for areca nuts, cement mold, different kinds of bells for pets such as bell, small bell etc. When they finished the brass works, they would sell the products in the villages or in other provinces by riding a cart or carrying the brass works for sale in the villages as a team.

When the rice farming season came, villagers would grow rice and when they had free time, they would prepare molds for the brass works. After they returned from rice farming, they would start the brass work. When the harvesting season ends, they would sell their brass products. Thus, in the past, brass work was not often seen because it was done only one time in a year since not many markets would support brass products. As a result, it was not relatively popular at that time.



Beliefs and Stories about Living way

Villagers in Ban Pa Aow Community had beliefs about brass works which were related to way of living, religion and culture. For instance, the bells should be offered at a temple or hung at Ubosot because it would make the offeror to be famous and highly respectable. If the bell was hung at a house, it would eliminate bad things that family members in that house would live happily without illnesses. It could be used to treat mental condition as any persons hearing the brass bell sound would feel relaxed and relieved and they would calm down.





Process of Ban Pa Aow Brassworks Production

Ban Pa Aow Brassworks are produced with traditional ways that have been inherited from ancestors as bronze molders, since the historic periods. Some steps may be developed by using modern equipment at different period of time.

Materials/ equipment

1. Mud mixed with cow droppings as a mold
2. Wax for molding.
3. Pattern mold made of buffalo horns carved in different patterns for stamping on bee wax.
4. charcoal stove
5. File for decorating and removing sharp sides of the brass works
6. grinding wheels for smoothening bras edges
7. wood stick for fixing the center of the mold





Brass bell production procedures

1. Model preparation by mixing muds from rice farms or termite nests with cow droppings in ratio of mud: cow droppings at 2:1. Pound it until mud and cow dropping are well mixed by observing color of mud and cow dropping in the same tone before pressing it again.

The reason why cow droppings are used is that when the mold is burnt, and brass liquid is poured in, the mold can be easily removed as cow dropping is an ingredient to make soil airy.

2. Model sculpting: mold the soil in round shape and then puncture the wood stick as a diameter as a hole in which liquid brass is poured. After that, sun-dry the model for about 4-5 days depending on the weather. In summer, the soil can be fast dried while it will be dried slower in rainy season with humid condition.

3. Mold lathing: when the model is dried, insert it with the wood stick and pound it tightly before tied with a rope on the lathing platform. The rope is conveyer of the lathing platform and this method is ancient way as 2 persons on opposite side would pull the rope. One person would pull the rope to make the model spin while the other person completed the pattern works.

Ancient-style lathing's strengths are that manpower is required to spin the lathing platform so, the operators could increase or decrease force while lathing. The lathing platform would spin back and forth so as to obtain the desired shape. The important thing is that the puller and the lather must cooperate by giving signs to each other.

The model lathing is crucial because beauty of the work piece depends on the model lathing to be beautifully curve. Techniques of lathing are specific skills of the craftsman.

When lathing the model, sprinkle dust and apply water on it before using a wood stick to police surface to obtain smooth model like a sandpaper. After that, a wood stick is used to make a groove so that the bell produces nice and sonorous sound.





4. Bee wax application: it starts from heating bee wax until it turns soft and then put it in an equipment made of bamboo and steel. The craftsman will insert bee wax and use a wood stick to push it out as wax thread.

The wax threads are used to wrap the model for 2 rounds before heating it up until the bee wax turns softer. Then, squeeze the bee wax evenly.

5. Bee wax lathing: lathe the model wrapped with bee wax to get the desired shape and then, use a steel stick to make patterns. It must be lathed gently to control thickness evenly.

6. Printing pattern: it is the way to create pattern by pressing pattern stick made of buffalo horn on bee wax to obtain the intended pattern. The pattern stick is made of carved buffalo horn because it is highly flexible, and it could be carved as deeply as needed.



7. Ear attachment or hole attachment: use a wood stick to grate bee wax roundly like the bell ear and then attach it on the model wrapped with bee wax. Next, attach fuse for pouring liquid brass into the work piece provided that the fuse must be suitable with the work piece's size.

8. Pattern coating or "diamond embracement" amount the craftsmen because the work piece is like a diamond with delicacy. Mud mixed with cow droppings is used to enclose the pattern and apply water to make the mud gluey and leave it dry.

9. Chaff coating is done by mixing clay with chaff at ratio of clay: chaff = 2:1 and coating the mold for another layer so that it is not broken when pouring liquid brass into it. The chaff in clay will make the clay attached to the mold without cracks. After that, sun-dry it for 4-5 days or until it's getting dry.

10. Mold warming or burning is to burn the mold to remove bee wax. Before burning, a pointed-tip knife is used to carve the fuse hole for pouring brass before inserted in the furnace by putting it upside down to remove bee wax. The mold is burnt at 800-Celsius Degree with firewood below and above the furnace. The lower firewood will elevate while upper firewood is cut to control temperature and leave it for 3 hours. If the model turns red entirely, it means that the mold is done. Finally, remove it from the furnace and place it on the floor.





11. Brass smelting: place brass in a furnace with temperature about 1,100 Celsius degree for 2 hours before the brass turns into liquid.

12. Pouring brass: use a ladle to scoop liquid brass and pour it in a mold fully and leave it for 20 minutes.

13. Mold removing: when brass cools down, it is removed from the clay mold and fuse is cut off before removing dirt inside entirely.

14. Lathing: brass is lathed to decorate surface and polished to look glossy before assembled as a complete work.



Currently, Ban Pa Aow Brassworks are highly well-known handicraft works as identity of Ubonrat-chathani Province. They gain special attention from both Thai and foreign tourists. Hence, a number of visitors come to this place to have a field trip and

purchase products as souvenirs. It is the way to create jobs and income for people in the community who inherit and conserve this distinguished local wisdom to remain with the community forever.





Data source and documentary reference for data provision

Interview with Khun Boonmee Lomwong

Ban Pa Aow Brassworks Handicraft: Conservation and development in extension of community handicraft wisdom: Sakkarin Intarawong, Dr. Kriengsak Khiawmang and Dr. Sakchai Sikha.

Ban Pa Aow Brassworks Handicraft, Art and culture heritage from ancient wisdom: Asst. Prof. Suriya Choksawat et al, Department of Industrial Engineering, Faculty of Engineering, Ubonratchathani University

www.rakbankerd.com/travel/review.php?id=60&type=1

<http://ich.culture.go.th/index.php/th/ich/traditional-craftsmanship/241-craft/449--m-s>

http://www.lib.ubu.ac.th/html/ub_info/education/bronzeware.html

<http://www.lib2.ubu.ac.th/isaninfo/?p=732>