



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



Arts and Handicrafts

Silver - Gold Ornaments Yat Lai Technique



Krueang Thong Yat Lai (Gold Ornament made with Yat Lai Technique) is a broad category of handicraft made from pure gold or silver. It is a part of ancient knowledge that has been inherited from the ancestors, and a unique technique for producing silver and gold ornaments, of craftsmen in Ban Kat Sub-district of Chiang Mai Province.

Krueang Thong Yat Lai is made by melting gold (or silver) and then press and stretch it into very fine, long - flat thread, as small as human's hair. Two or more silver or gold threads are then twisted together and several twisted threads will be used to form a workpiece and create whatever design the craftsman want. Uniqueness of Krueang Thong Yat Lai lies in the workpiece' clear and spacious body, both on the front and on the back. Hence, its beauty can be admired



from all directions; and since each workpiece is made from craftsman's contemporary imagination at that very moment, each workpiece is hence a unique - one of a kind. Yat Lai technique creates a unique beautiful workpiece, the one and only in the world.



99% pure gold



Krueang Thong Yat Lai – unique method for creating ornaments that reflects craftsman’ wisdom and ability

Krueang Thong Yat Lai is a technique of twisting and forming small gold threads into desired design. The technique is closely and amazingly similar to Filigree technique of the past.

Procedures for producing Krueang Thong Yat Lai are very complicated. Gold itself is tougher than silver, and hence harder to work with. There is also an issue of material loss when melting and pressing material into thin - long thread, at a size called ‘Size 34’, which is comparable to human’s hair. One Baht of gold can be press into a thread with the size of human’s hair with over 8 kilometers in length.

Size 34 gold thread will be flattened and then several threads will be twisted together. Excessive material will be filed of, the twisted threads will be pressed and flatten, and then formed into a design on the workpiece. The twisted threads provide the feeling of flow, delicacy, and rhythm that are perfectly fit together. Craftsman must also consider spacing of the design. The process is repeated over and over, with craftsman’s endeavor and extensive experience, in order to produce one tiny workpiece, whether necklace, bracelet, pendant, ring, earring,



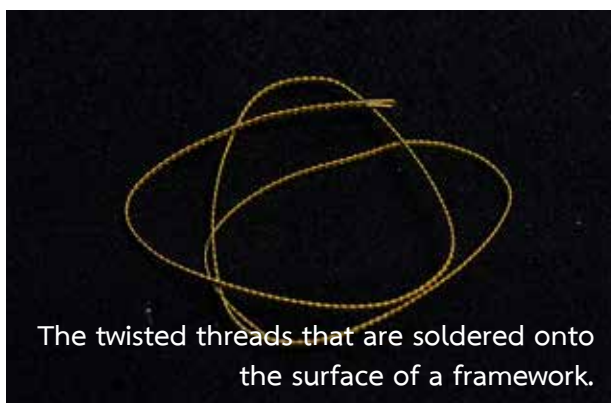
Stretching the wires



Twisting



Twisted wire



The twisted threads that are soldered onto the surface of a framework.

etc. Therefore, Krueang Thong, and Krueang Ngern (Silver Ornament), Yat Lai, the unique products from the craftsmanship of Ban Kat, are more expensive than general gold or silver ornament, over double in price. However, each and every piece is highly valuable and totally worth its price; thus customers are more than willing to pay the price, in order to get a hold of one of these workpieces.



Prominent characteristics of Yat Lai Ornament, whether silver or gold Yat Lai ornament, are the workpiece' spacious body, both on the front and the back. Such workpieces portray their beauty three dimensionally; they are also made with attractive and beautiful designs, such as, Lai Nok Yoong (Peacock), Lai Malangpor (Dragonfly), Lai Kularphin (Kalanchoe), Lai Dork Chaba (Chinese Rose), Lai Dork Tantawan (Sunflower), etc.

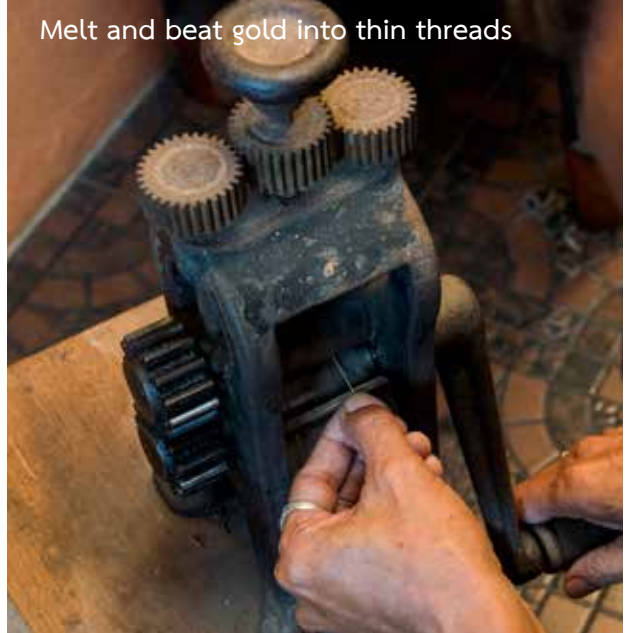
Krueang Thong Yat Lai is a prominent handicraft from Ban Kat Sub-district, where the craftsmen there still preserve original manufacturing method, where all works are manufactured manually, from the craftsmen's imagination and ability. Therefore, each and every single piece is unique, the one of a kind. Each ornament can be considered as the one and only handicraft of its kind in Thailand, or even in the world.

History of the local wisdom on gold - silver ornament with Yat Lai technique of craftsmen from Ban Kat Sub-district

Over 50 years ago, Chinese and Myanmar immigrants moved and relocated to the area in Ban Kat Sub-district, Mae Wang District of Chiang Mai Province; a small, remote community on the North of Thailand. Among these immigrants were many highly skilled silversmiths. These silversmiths later passed on their knowledge and method for working with silver ornaments to local silversmiths and goldsmiths of Ban Kat Community, whereas Chinese silversmith taught them the Yat Lai technique. Yat Lai is a technique that ‘Yat’ (forcefully adding) additional ‘Lai’ design to the workpiece, and thus making the workpiece distinct from general silver ornament. The villagers of Ban Kat Community henceforth use Yat Lai technique on their silver ornaments, and the technique became the unique characteristic of Ban Kat’s silver ornament.

Time passed, one family, which inherited the profession of silversmith from their ancestors and worked with ornaments, interested in the art of making silver and gold ornament, and intended to produce more distinct ornament. They did so by twisting tiny silver threads and forming the desired design. They named ornament made with this technique ‘Krueang Thong Yat Lai’ (Gold ornament with Yat Lai technique; or ‘Krueang Ngern Yat Lai’ for silver ornament made with Yat Lai technique.) This technique for producing unique silver and gold ornaments of the craftsmen from Ban Kat Sub-district is very similar to an ancient technique called ‘Filigree.’

Melt and beat gold into thin threads



Filigree technique



Soldering with borax.



It is later widely recognized that Krueang Thong Yat Lai from Ban Kat is an invaluable handicraft, as each and every piece is has to be manually created. The design of each workpiece comes from the craftsman’s imagination, and therefore, this process produces unique, one of a kind, workpiece. It creates very beautiful gold ornament with prominent and unique design, and it is a unique identity of ‘Silver Ornament Handicraft Group of Ban Kat’, Mae Wang District of Chiang Mai Province. Each individual workpiece is the only one of its kind in Thailand, and perhaps the one and only in the world.



Filigree: world class technique vs. Yat Lai technique

The history of world's art records and describes Filigree is an art of ornament making which is applied to only pure silver or gold ornament. This technique uses gold or silver to create very fine, very small silver or gold thread, with the size of not larger than a human's hair. Two or more threads will be twisted together and then used to form a design and workpiece. This art exists over 5,000 years before Christ and it was originally found in Egypt; before spreading along commercial routes to India, China, Asia, and other regions.

Moreover, Filigree spread widely among European countries, especially in Italy, France, and Portugal. From the evidences founded, Filigree wasn't just used for making ornaments but also for improving gracefulness and beauty of window, kitchenware, and various appliances in European royal palaces.

Though Filigree was a form of art that once found all over the world, it has vanished for over thousand years. This technique reappeared after someone tried to restore and applied it to the modern art. For Thailand, historical record shows that Chinese craftsmen brought ornaments made with Filigree technique into Thailand, during early days of Rattanakosin Kingdom.

Time passes, over five thousand years after the early dawn of Filigree, a small group of goldsmith in the community of Ban Kat, a small - remote community in the rural area of the North of Thailand, who had never officially studied the arts of craftsmanship, nor learned any technique or knowledge in making ornament but from the local wisdom that was being taught in their community. With great interest in the art of making gold and silver ornaments, these craftsmen invented and created their own style of ornament. As they were highly observable to their surrounding, and perceivable to the natural graceful designs from the nature around them; these craftsmen adapted the designs they observed into



their workpieces, and create a unique brand of ornaments.

The turning point in handicraft of Krueang Ngern or Krueang Thong Yat Lai from craftsmen of Ban Kat occurred when workpieces from villagers' handicraft became best selling ornaments. The effect of word to mouth spread widely, and those who have seen their workpieces wanted to have some of these unique - one of a kind ornaments for their own as well. The craftsmen of silver ornaments from Ban Kat were contacted by many gold shops in Chiang Mai Province, and asked to try to produce gold ornament with Yat Lai technique.

However, original negotiation was a failure, as the underlying constraints for producing silver and gold ornaments were drastically different. In term of production, it is inevitable that some materials will be lost in the process with this technique. For the case of silver ornaments, loss of silver isn't much of a great deal; however, for gold ornaments, reducing gold weight is a harsh constraint and respectable cost of production. As a result, the idea of making gold ornament with Yat Lai technique was, still, an idea among craftsmen of Ban Kat Sub-district. Solid workpiece was eventually created several years after.

Around 2014 - 2015, the craftsmen of Ban Kat finally decided to develop and improve the technique and manufacturing process of making silver ornament with Yat Lai technique, so that they are compatible with pure gold instead.

From relentless effort of trial and error, the result was the unique silver ornaments from the craftsmen of Ban Kat Subdistrict, which named their creation after the method used, 'Krueang Thong Yat Lai.' As a result of sophisticated method employed for producing them, gold ornaments made with Yat Lai technique are more expensive than general gold ornaments.



Method for producing Krueang Thong Yat Lai

Materials / equipments

Goldsmith workbench; special workbench for goldsmith is usually 100 centimeters long and 50 centimeters wide. The workbench has drawers for storing goldsmith's tools and equipments, as well as for collecting gold dust.

Heat blower and gold furnace; goldsmith heat blower is operated by pedal and wind chest, where the heat wind is used for melting and fusing pieces of gold together, as well as to softening the gold piece, in order to make it more susceptible to forming and bending.

Goldsmith's tools; which are used for forming the gold into desired shape, such as, anvil, hammer, etc.

Threading tool; this is used for producing gold thread at desired size. Threading tool is comprised of tongs, clamp, and winch.

Other tools for handling and cutting the gold and making design onto the workpiece, such as, gold working board support, gold working board, wooden hammer, chisel, hollow puncher, specialized chisel, tongs, and scissor of different sizes.

Other tools, such as, Mai Pun Thong (wooden gold coiling stick), file, whetstone for gold, gold brush, gold mold, Kala Tang Thong (coconut shell for gold dressing), curve measure board, weighting scale, etc.

Other materials, such as, gold, gold washing solution, enamel powder, gold flux, etc.



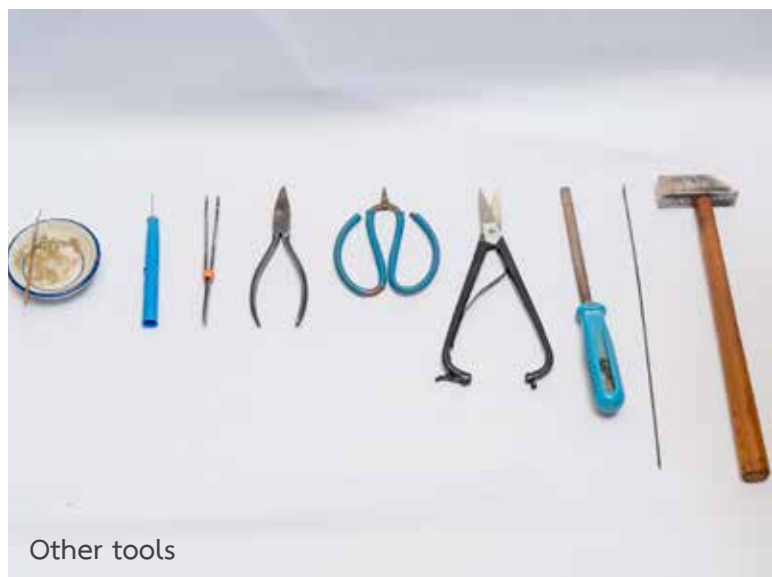
Heat blower and gold furnace



Threading tool



Pressing machine



Other tools



Process for making Krueang Thong Yat Lai

Raw material is a gold bar of 99.95 percents.

Put gold bar into the gold furnace where it will be melted into liquid gold and then poured into the mold.

Taking gold out of the mold and then press it eliminate any air bubble. Previously, goldsmith would use hand hammer to pound the gold and stretch it over and over. Now, they have pressing machine for this process.

The gold piece will be flattened into desired size; gold piece of one Baht in weight, or approximately 15.2 grams, can be stretched into a thread of over 8 kilometers long.

Stretch gold thread will be hammered and flatten again, in order to create thread with suffice flexibility, which will be later assembled together with gold flux.

Gold treads will be used to form the desired – base design, such as, flower’s petals and branches.

Two or more size 34 gold threads, which are smaller than human’s hair, will be twisted together by hand. This process is called ‘Kik’, where as the gold threads will be place together on flat surface and then rubbed until they are twisted into single thread.

Twisted thread will be pressed and flatten again, in order to reinforce the twisted thread and to create higher reflective dimension when it is used in the workpiece.

Smaller twisted thread will be placed inside the base design, in order to form the final design, such as, Lai Jor Jarn, Lai Kor Kai, etc. Gold flux and heat blower will be carefully applied to the workpiece, in order to fuse the threads together.

Finished workpiece will be cleaned, dressed and put onto the shelf for sell.



Melt and beat gold into different sizes of threads



Bend the gold thread to form a flower.



Intertwine and press two twisted wires.



Soldering



Development of Krueang Thong Yat Lai

The technique of making silver or gold thread into three dimensional workpiece of Ban Kat's craftsmen is quite similar to the art of making ancient ornament known as Filigree, which originated from Egypt. The difference of the two techniques is Yat Lat technique inserts the gracefulness and beauty of Thai art into the workpiece, and emphasizes on the delicate and gentle line and design that are inspired by the natural phenomena, such as, flower, leaf, flame. For example, the craftsmen use the concept of peacock, which is a symbol of woman and represents woman's beauty, blossom, love and happiness, and combine the design with ancient goldsmith's technique and other accessories, all of which are integrated and placed in a perfect harmony. It is safe to say that Krueang Thong Yat Lai from craftsmen of Ban Kat is the one and only handicraft of this sort in Thailand that is still preserved to this day.

The craftsmen also open up the shop and allow other people to learn this high class art of handicraft, such as, arrange training on this technique, exhibition of ornaments made by them, online exhibition, etc. They intend to provide legitimate knowledge of this art to the public, and to educate them on the knowledge of producing ancient gold ornament with Yat Lai technique, and most importantly, they intend to rectify some misunderstandings about Yat Lai technique and to cultivate recognition of Thai local wisdom; so the people may truly understand that Thai craftsmen and handicraft are quite interesting and comparable to international arts. ' Nowadays, Krueang Thong Yat Lai from Ban Kat is being developed continuously, whether in term of manufacturing process, raw material selection, combination with other materials, creation of better gold flux, and improvement of the ornament's design so it can be better use in practical sense, such as, using hinge instead of hook, which is prone to break against extensive friction. The craftsmen also focus on making new designs, training new generation of craftsmen to inherit this handicraft, and trying to make workpieces of simple objects in our daily life to be fancier with Yat Lai technique, such as, toothpick box, etc.



In term of the ornament development, the craftsmen improve ancient ornament making with Yat Lai technique and make the ornaments in a more modernized design, where the craftsmen insert several new creative ideas into the workpieces, such as, changing from using only Yat Lai technique to create a workpiece to embedding precious gem, like sapphire, pearl, and crystal, into the workpiece; coating silver ornament with white gold, and learning techniques and arts of foreign craftsmen, such as, traveling to see and study the arts and handicrafts of other countries and attending training provided by Japanese art master, in order to design better workpiece with Japanese art style and to answer the demand of Japanese customer.

From the aforementioned reasons, Krueang Thong Yat Lai from Ban Kat's craftsmen becomes popular ornaments that many people are interested in having them in possession. Even though some ornaments are far too beautiful and may not be suitable for using in their daily life, many customers still try to get a hold on these ornaments. Some customers ordered special ornaments with specific design of their families, where their reasons were to give these ornaments to their children on their wedding, and to the children of their children and so forth. This is because each and every piece is unique and one of a kind, and the general designs may be used in several ornaments, the details of each and every ornament can never be repeated.





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