

STUDY ON THE TRADITIONAL POTTERY INDUSTRY IN AYEYARWADY REGION

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Abstract

Earthenware was used in the Neolithic Period though its development occurred at different time. An increased range of craft activities took place in the settlements of this period, notably the manufacture of the first local pottery vessels around 5500 or 5000 BCE. In Myanmar, earthenware has been used since Neolithic period. Pottery has been commonly used for different domestic and religious and ritual purposes. The pottery industry flourishes particularly in the Townships of Ayeyarwady region. The production process of earthenware is very interesting. The potters make this earthenware by using traditional methods. They produce them by hand through five production stages. These production stages are collecting raw materials, preparing paste, shaping pot, applying before baking and baking. Because of the plastic bottles and cans, the earthenware production business of Ayeyarwady Region becomes to decline gradually.

Keywords: Pottery industry, earthenware, plastic bottles

Introduction

The purpose of this study is to provide a detailed historical background of the pottery industry. The history of pottery in Ayeyarwady Region is essential and not redundant. Since there is very little written information available on the making process of pottery industry, much of the raw material acquired in the next pages has been gleaned through the owners, interviewees with artisans at the pottery industries. Since about one hundred years ago, earthenware utensils were in height demand among locals, creating an amazing situation. Nowadays, the pottery industry still exists as a stable traditional business in Ayeyarwady Region. The evolution and development of regional styles also needs further investigation. The changes of various arts and methods of pottery industry require a lot more research. As keen craftsmen and crafts, the pottery industry has always held a particular fascination for the handicrafts in the Ayeyarwady Region.

Historical Background of Pottery Industry in Ayeyarwady Region

The pottery industry is the traditional handicraft of Myanmar, and it can be found as a business in the Ayeyarwady Region until the present day.² The earthenware including pottery, was produced at Pathein, Henzada, Myaungmya, Laymyethna, and Ngathaingchaung, Mawlamyainekyun Townships in the Ayeyarwady Region.³ *Sin Oh Bo* ward is situated on the east bank of the Nga Wun River in Pathein Township. A variety of earthenware was produced at the forty kiln sites in the *Sin Oh Bo* ward of Pathein Township about forty years ago. Nowadays, only six kiln sites still produce earthenware related to pottery industry in this ward. Pathein Township has fifteen wards where the professions related to handicrafts were engaged. Among the fifteen wards of Pathein Township, Ward No. (I) engaged in the production of household utensils connected with earthenware. Therefore, This Ward is known as *Sin Oh Bo* ward since the previous time.⁴ The small glazed earthen pots, mortars, vases, small pots and the principal

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² Dr. Chit, ကျေးလက်စီးပွားပြည့်သူ့အင်အား (*The Rural Business, the People Strength*), Yangon, Thitsar Sarpay Press, 2009, p.347 (Hereafter cited as Dr. Chit, (*The Rural Business, the People Strength*))

³ Interview with U Aung Myo Win, Pottery Industry, Pathein, Artisan, the age of 47 years, dated 8-9- 2022

⁴ Interview with U Aung Myo Win, Pottery Industry, Pathein, Artisan, the age of 47 Years, dated 8 -9 - 2022

utensils were produced at *Sin Oh Bo* ward.¹ Pathein Township has fifteen wards where the professions related to handicrafts were engaged at these wards. Among the fifteen wards of Pathein Township, Ward No (1) engages in the production of household utensils connected with earthenware. Therefore, this ward is known as *Sin Oh Bo* ward since the previous time.²

The potters produce earthenware at Dauntgyi village about 15 miles on the southern part of Hinthada Township near the bank of the Ayeyarwady River. The potters also produced earthenware at Laymyethna Township on the bank of Nga Wun River.³ The kiln sites still exist about seven miles southwest of Myaungmya Township in Ayeyarwady Delta. Region. Myaungmya Township is also known as Myohaung, or the old town of Myaungmya.⁴ Kwin Lyarr is situated on the west bank of Nga Wun River in Nga Thaung Chaung Township.⁵ The different varieties of earthenware were produced from the pottery industries around and in Einme Township of Myaungmya district.⁶ Nowadays, the production of earthenware is less in other townships except Pathein Township in Ayeyarwady Region.⁷ The earthen toy pots are mainly produced in Pathein Township than other earthen industries in Ayeyarwady Region.⁸

Literature Reviews

The researchable books such as "The Neolithic Culture of Padalin Cave", compiled by U Aung Thaw in 1969, "Burma Gazetteer (Bassein District)", compiled by MR.H.P. Hewett, Mr. J. Clague in 1916, "Burma Gazetteer (Henzada District)", compiled by MR.W.S. Morrison in 1916, "Earthenware in Southeast Asia", compiled by John Miksic in 2003, "Myanma Encyclopedia, Vol.9(b)" and "Myanma Encyclopedia, Vol.10", compiled by Myanmar Translation Society in 1963, and "Myanma Terracotta", compiled by Than Tun in 2003 related to pottery industry are found to learn the process of pottery which based background history and a few processes on these books. This research paper was combined to get the perfect process of pottery with the interviews and learning these books.

Aim and Objectives

This research paper aims to explore the various changes in the economy and social life resulting from environmental changes, presented from a historical perspective in Ayeyarwady Region. Every citizen should follow moral rules to prevent socio-economic life from the destruction of ecosystems in the future. In the future, the studies should strive to collaborate preserving the environment and not harm the socio-economic as much as possible.

¹ MR. H. P. Hewett, MR. J. Clague, *Burma Gazetteer (Bassein District) Vol. A* Rangoon, Office of The Superintendent Government, 1916, p. 67, (Hereafter cited as MR. H. P. Hewett, Mr. J. Clague, *Burma Gazetteer (Bassein District)*)

² MR. W. S. Morrison, *Burma Gazetteer (Henzada District)*, Vol-A, Rangoon, The Superintendent Government Printing and Stationery, 1916, p-67 (Hereafter cited as MR. W. S. Morrison, *Burma Gazetteer (Henzada District)*)

³ MR. W. S. Morrison, *Burma Gazetteer (Henzada District)*, p.100.

⁴ John Miksic, *Earthenware in Southeast Asia*, Singapore, Singapore University Press, 2003, p. 96 (Hereafter cited as John Miksic, *Earthenware in Southeast Asia*)

⁵ Interview with U Than Phay, Pottery Industry, KwinLyarr, Owner, The, age of 70 Years, dated 3 – 9 -2020

⁶ Myanmar Translation Society, မြန်မာ့စွယ်စုံကျမ်းအတွဲ(၉-ခ) (*Myanma Encyclopedia*) Vol(9-b), Yangon, Sarpay Beik Hman Press, 1963, p. 464 (Hereafter cited as Myanmar Translation Society, *Myanma Encyclopedia*, Vol.9-b)

⁷ Interview with U Than Tun, Pottery Industry, Artisan, Pathein, the age of 65 years, dated 3 – 9 - 2020

⁸ Interview with Daw Khin Myo Win, *Oh Pote* Business, Pathein, Owner & Artisan, the age of 48 years, dated 8 – 8 - 2020

Data and Method

The vital sources of pottery industry are got as the primary source from the interviewees related with pottery industry. Other references are used by the books and journals related to the pottery industry from Department of Information and Public Relation Library, Patheingyi City Hall Library in Patheingyi and Universities' Central Library in Yangon.

Materials and Methods

The huts used as warehouses for storing earthenware played a vital part in the process of pottery industry. According to the process of pottery industry, the huts are built to store raw materials, finished and semi-finished products and therefore it is quite different from those of their living. A large hut is usually 78 feet in length, 36 feet in width and 27 feet in height.¹ The measurement of smallest hut is 67 feet in length, 33 feet in width and 21 feet in height. The kiln is an essential building for the process of pottery in order to succeed the pottery industry. A large kiln is usually about 52 feet in length, 15 feet in width and 15 feet in height. The measurement of a small kiln is about 30 feet in length, 9 feet in width and 9 feet in height.² The necessary equipment are wires for cutting the extra clay on the potter wheel, knives, potter wheel, and paddles or small sticks.³ Another important tool are mortar, boom and pestle which are very simple but interesting for earthenware industry.⁴

The diameter of a potter wheel is one foot in width, and it is a wood circle put on a small pillar of the center as an axle. On either side of a potter wheel, there are two wood handles for handling it. If the potters turn around two wood handles by their hands, this wood circle can easily turn on its axle. The measurement of paddles or small sticks are about 1 foot and 3 inches in width, and it is used to smooth the surface of pots. When the potters want to create a new creation, it was used to decorate folk images, beautiful floral designs on the pots.⁵

The working area of pottery industry is about ten feet in width and fifteen feet in length. The boom is about nine feet long log or plank. The pestle can be inserted about two and a half feet at the end of boom. The diameter of a circular pit is about 4 feet, and the depth is about 2 feet. It is operated by foot. Therefore, these tools are played a vital role to get fine powder.⁶ The amount of sand, loam, and clay are lied as the different soil layers below ground. When the pieces of stone or metal diameter is appearing between 0.05 millimeter and 2 millimeters, it is called sand.⁷ It is also called sediment, because the pieces of stone or metal diameter are between 0.02 millimeter and 0.05 millimeter.⁸ If the pieces of stone or metal diameter are the small size than 0.02 millimeter, it is known as the clay. The sediment is combined with the sand between 40

¹ Interview with U Than Tun, Pottery Industry, Patheingyi, Artisan, the age of 65 years, dated 8–9 - 2020.

² Interview with U Than Tun, Pottery Industry, Patheingyi, Artisan, the age of 65 years, dated 8–9 - 2020.

³ Myanmar Translation Society, *မြန်မာ့စာရင်း (Myanmar Encyclopedia)*, Vol. 10, Yangon, Sarpay Beikman Press, 1966, p. 383 (Hereafter cited as Myanmar Translation Society, *(Myanmar Encyclopedia)*, Vol. 10)

⁴ Interview with U Aung Myo Win, Pottery Industry, Patheingyi, Artisan, the age of 47 years, dated 8–9 - 2020.

⁵ Myanmar Translation Society, *Myanma Encyclopedia*, Vol. 10, p. 383

⁶ Interview with U Aung Myo Win, Pottery Industry, Artisan, Patheingyi, the age of 47 years, dated 8–9 - 2020.

⁷ David Saw War, *ရပ်ရွာစိုက်ပျိုးရေးနှင့်အာဟာရ (Rural Agriculture and Nutrition)*, Thailand, Wanida Press, 2007, p. 2 (Hereafter cited as David Saw War, *Rural Agriculture and Nutrition*)

⁸ David Saw War, *Rural Agriculture and Nutrition* p. 2

percent and 60 percent. The clay is mixed with the sand below 20 percent. So, the clay is suitable in three soil layers for earthenware production.¹

So, the owners of pottery industries are probably collecting one of the most useful clays for making earthenware. The best quality earthenware is always made from suitable clay. The potters use clay which is red clay and the yellow clay from the fields of Ayeyarwady Region. Both raw materials, which is the most useful clay, can be obtained from the sellers. Some sellers sold only the clay for the earthenware.² When some businessman made to dig for fishponds in the fields, they sold the suitable clay to the potters. When the owners of pottery industries purchased the suitable clay and carried the clay with three tons car. Each car costs about 40000 kyats. As some owners of pottery industry produced the clay from the grant-land, they cost only the charges of digging and transportation. The clay was sold from the month of November until May. The clay is collected at least 20 tons in the warehouse to make the clayware for the whole year. The owners of pottery industry have never purchased the clay from June to October due to soil moisture and it is difficult to obtain the appropriate clay.³

Prior to 1988, the potters had easily obtained the required firewood for earthenware. However, the potters have faced difficulties getting the firewood as fuel for the pottery industry after 1988. When the loggers cut down trees for wood, the owners of pottery industry purchased the fragments of wood which are carried with three tons logging vehicle, and it costs about 50,000 kyats per logging vehicle. Although the potters use a variety of wood as the raw material for the pottery industry, they only use *Malaysia Padauk* which is called *Acacia* in the scientific name. After the woods became scarce, the owners of pottery industries purchased the used scaffoldings from the construction site to use as fuel for the pottery industry.⁴ The low-roof building is first built for the process of glazed jars to prevent the wind and sunshine from outside. If these glazed jars get a lot of wind and sunshine, they can break. Firstly, the potters removed the rubbish from the soil before pounding the clay. Mortar, boom and pestle are also used to crush the red clay and the yellow clay to get fine powder for making glazed ware. Although yellow clay is a suitable kind of soil for making earthenware in the rainy season, it can appear cracked situation in the dry season. So, the red clay is suitable for making glazed ware.⁵

When the potters make the glazed jars, they mix sandy soil with yellow clay because yellow clay is a scarce soil. So, the potters mixed the double proportion of red clay and one yellow clay and then placed under the sunshine. After pounding about 50 baskets of clay for the whole day, these powders are shaken by using a sift with both hands to get fine powder. Then, the fine powder is mixed with a little water. Next step of making glazed jars is to shape as a raw glazed jar and the potters' made lumps of clay with their hands about many times. Two people are required for this process; one is for putting lumps of clay on the potter's wheel or spinning and another one makes for spinning the wheel by hand. Some pottery industry used the foot-controlled-spinning wheel for shaping process.⁶

The process of these two workers requires harmony between them. There are two stages in making huge glazed-ware jars. The potters will shape each of the lower and upper parts of glazed jar. The potters take the shape of a glazed-ware jar for about from 6 minutes to 8 minutes. Firstly, the lower part of glazed jar is heated up by firing to become the complete hardness. After

¹ David Saw War, *Rural Agriculture and Nutrition*, p. 3

² Interview with U Myint Soe, Daw Ngwe Thi Pottery Industry, Pathein, Owner, the age of 72 years, dated 12-5- 2020

³ Interview with U Myint Soe, Daw Ngwe Thi Pottery Industry, Pathein, Owner, the age of 72 years, dated 12-5-2020

⁴ Interview with U Myint Soe, Daw Ngwe Thi Pottery Industry, Pathein, Owner, the age of 72 years, dated 12-5- 2020

⁵ Interview with U Aung Myo Win, Pottery Industry, Pathein, Artisan the age of 47 years, dated 8 - 9 - 2022

⁶ Interview with U Aung Myo Win, Pottery Industry, Pathein, Artisan the age of 47 years, dated 8 - 9 - 2022

the lower part is hardened, it is to be connected with the upper portion. Then the joined portions are smoothed and certainly made to line by glaze.¹

After joining these upper and lower portions, they are needed to paint a suitable colour. Copper Sulphate for green colour, *Arsenous Sulphate* for yellowish red colour, *Sulphur* for yellow colour, *Ammonium Chloride* for blue colour are used by mixing with water and then these colours are applied on the surface of glazed jars. The artisans made to mix the needed colours to the finest shade. While putting in the sunshine, it takes care to prevent from touching cool wind because some glazed jars will appear the crack situation. The process of glazed-ware jars always requires to be faired the conditions of hot and cool and it entirely depended on the weather. To dry the large, glazed jars, it is required about 5 days in the hot season and 10 days in the rainy season. After they are dried, the potters finally bake the glazed-ware jars in the kiln which measures about 52 feet in length and 15 feet in width and 15 feet in height. The duration of baking is about one day to three days depending on the size of glazed jars. Twenty to thirty glazed-ware jars can be placed in the kiln and only the woods are mainly used as fuel for baking jars.² The firewoods were placed around the glazed jars on the ground as the fuel. The space of glazed jars at the entrance of kiln is left about twelve feet from firewood. Firstly, bake the potters bake glazed jars for about 2 days with a low heat. After the glazed jars get power of resistance to heat, the glazed jars are stoked up to get intense heat for about 2 days again. The potters provide the necessary fuel in the eastern entrance of kiln. So, its capacity strongly supports in full-time process.³

After baking for about 7 hours, the colour of lava turns into a bright glaze and it is needed to maintain this heat in the kiln for about 7 hours. There is a chimney to each kiln and the hole of chimney measures 6 inches square. From the peephole, the potter determines that the kiln is getting the required heat evenly throughout the whole kiln. The potters gradually remove the remaining firewood after getting the required conditions in the kiln. Then, all holes are shut down and the kiln is left by itself for about twelve hours and leave these glazed earthen jars to cool for 7 days in the kiln before taking it out. Then, the wall at the entrance is opened to get cold at the glazed earthen jars. Then, the workers cleaned glazed earthen jars. After cleaning these jars, the owners distribute the glazed earthen jars in the local markets for the buyers. The glazed earthen jars were sold chiefly at Patheingyi and other townships in Ayeyarwady Region before 1988.⁴

Making Process of Clay Mortar

The different kinds of mortar are earthen mortar, iron mortar and wood mortar. The kind of clay mortar is particularly a proud of Myanmar handicrafts. Before 1980, the owners of pottery industries produced different sizes of mortars and glazed jars in Ayeyarwady Region. After modern household utensils entered into the markets, the demand for glazed jars gradually decreased and they have produced different sizes of mortars and other earthenware. Nowadays, the clay mortar businesses are located on the east bank of *Nga Wun* River in Patheingyi Township. The clay mortars consist of a different size which are 6 inches in width and 5 inches in height, 7 inches wide and 5 inches in height, 8 inches in width and 6 inches in height. Especially, the housewives need to choose a suitable size and kind of clay mortar in kitchen utensil.⁵

¹ Interview with U Aung Myo Win, Pottery Industry, Patheingyi, Artisan the age of 47 years, dated 8 - 9 - 2022

² Interview with U Aung Myo Win, Pottery Industry, Patheingyi, Artisan the age of 47 years, dated 8 - 9 - 2022

³ Interview with U Myint Soe, Daw Ngwe Thi Pottery Industry, Patheingyi, Owner, the age of 72 years, dated 12-5-2020

⁴ Interview with U Myint Soe, Daw Ngwe Thi Pottery Industry, Patheingyi, Owner, the age of 72 years, dated 12-5-2020

⁵ Interview with U Myint Soe, Daw Ngwe Thi Pottery Industry, Patheingyi, Owner, the age of 72 years, dated 12-5-2020

The housewives used to buy either small or large size of clay mortar depend on their cooking. The traditional clay mortar plays an important role in the culture of Myanmar families. They have used for crushing or grinding traditional herbs, and preparing food such as onion, garlic, chilies, spices, nuts, pepper, dried herbs, fresh herbs and drugs in most rural and urban communities. The clay mortar is also called “*Pan Sone*” in Myanmar language. The sellers of kitchen utensils sell clay mortars associated with wooden pestles in the houseware shops. So, they separately buy wooden pestles from the art of turnery industry.¹ According to the process of making earthenware, the potters removed rubbish and waste in the soil before pounding. The artisans said that the red clay is acceptable for making earthen mortar. The workers have to pound the red clay to get fine powder for making mortar. Then, this fine powder is mixed with water, and the workers have to tread on the clay with feet to get the sticky shape. After the suitable shape appeared, the workers modeled the lumps of clay into mortars by their hands according to demands per day. After taking the lumps of clay, the artisans place it on the pottery wheel for making mortar. Another artisan turns the potter wheel with his hand or foot. In order to get a mortar, it takes about 5 or 6 minutes. The workers use his or her nimble fingers to create the neat and beautiful mortar. The skilled worker regularly makes about 100 mortars per day which depend on the skill of the workers and the unskilled workers can make about 50 mortars per day.²

The workers use wire or thread to remove the bottom of the mortar on the pottery wheel. And then, each handle is fixed on the side of mortar and the artisans make to dry the mortar in the sunshine. If the weather is fine, the clay mortars will dry for a day. The workers apply the glaze liquid on the dried mortars before they are put into the kiln. If watery glazed liquid is used, the good quality mortars can be obtained. So, the glazed powder is certainly mixed in the suitable water. After making the mortars systematically, the workers carry the mortars carefully to the kiln. Then, ten mortars are arranged horizontally in the kiln and the woods and bamboos were placed around the mortars as fuel.³

After the fire started, the wood and bamboo were gradually put into the kiln by the workers within 24 hours. In order to prevent the fading of glaze colour the wood and bamboo are put into the kiln as fuel for 2 days or 3 days in the first stage. The workers make to get the suitable intensity of heat for the whole kiln. In the second stage, the entrance of kiln is closed by the workers because the kiln needs to get heat capacity. After the workers pulled down the closed bricks in the entrance of kiln within 6 day or 7 days, the color of the lava over the body of the mortars turns into a bright glaze. Again, all the holes of kiln are shut, and the kiln is left by itself for one or two days. This step appeared a major push to attract in the market. All the glazed mortars could be taken away for sale. After cleaning the mortars, they are ready to be used as the household utensil.⁴

A clay mortar prices is 1300 kyats for wholesale, and it is sold at 2000 kyats to 2500 kyats in retail shops. Prior to 1988, a clay mortar price was 500 kyats for wholesale and 700 kyats to 800 kyats in the retail shops. The price of the retail shops can be high or low depending on the marketplace and demands. The owners of earthenware industry sell glazed mortars to the wholesalers from most of the townships in Ayeyarwady Region and are selling around the year.⁵ According to the process of clay mortar, the potters make to avoid rubbish in the soil before pounding. The artisans make that the “myayni” is the acceptable clay for making mortar. The potters turn to pound “myayni” to get fine powder for making mortar. After this appearer is

¹ Interview with U Myint Soe, Daw Ngwe Thi Pottery Industry, Pathein, Owner, the age of 72 years, dated 12-5-2020

² Interview with U Aung Myo Win, Pottery Industry, Pathein, Artisan, the age of 47 years, dated 8 – 9 - 2022

³ Interview with U Aung Myo Win, Pottery Industry, Pathein, Artisan, the age of 47 years, dated 8 – 9 - 2022

⁴ Interview with U Aung Myo Win, Pottery Industry, Pathein, Artisan, the age of 47 years, dated 8 – 9 - 2022

⁵ Interview with U Aung Myo Win, Pottery Industry, Pathein, Artisan, the age of 47 years, dated 8 – 9 - 2022

mixed in the suitable water, the potters make to tread on the clay with their feet to appear as the sticky shape. These fine powders are made into a block of clay which is ready for making mortars. After the suitable shape appeared, the potter's handshape the size of clay about 8 inches height and 6 inches wide. The potters make the block of clay depend on the number of mortars per day.¹

After the artisan takes a block clay, he places it on the potter's wheel for making mortar. Another potter turns the potter's wheel with his hand. Sometimes they turn on this potter's wheel with their feet. When they make a variety of mortar sizes, the duration of each mortar needs to be about 5-6 minutes. The potter uses his or her nimble fingers to create neat a mortar. The potters regularly make about 100 mortars per day, which depends on the skill level of the potters. Despite the unskilled potters, they can make about 50 mortars per day. Use wire or thread to remove the bottom of the mortar on the pottery's wheel. And then, each handle is fixed on the side of mortar. The artisans surely analyze the weather conditions to dry under the sunshine.²

After the potters analyzed, if the weather is suitable condition, the potters make to dry mortars under the sunshine. If the weather is good, the clay mortars will dry for a day. The potters apply to the dried mortars by the glaze-liquid before kiln. If the watery glazed liquid is used, the mortars can get the right qualities. So, the glazed powder is certainly mixed in the suitable water to create an appearance of thick glaze-liquid.³ Some artisans dipped about two inches long from both inner and outer's the lip of mortar into the glaze-liquid in the basin. Any artisan never applied the remaining interior of the mortars because the glaze-liquid would create the slippery whole interior. If this slippery condition appears the inside of mortars, the housewives are not easy to pound in cooking.⁴

When the potters thoroughly applied to the mortars, they systematically carried them to the kiln. The mortars are neatly arranged in ten steps. The 300 mortars can be put into the kiln at once. The wood and bamboo spread around the bottom of the mortars. After the fire started, the wood and bamboo were gradually put into the kiln by the workers within 24 hours. After the entrance of kiln is pulled down, add the wood and bamboo as fuel into the kiln for 2 days or 3 days again because the colour of the glaze is fading in the first stage. The potter makes the suitable intensity of heat for the whole kiln. In the second stage, the entrance of kiln is closed by the potters because the kiln needs to get heat capacity.⁵ After the potters pulled down the closed bricks in the entrance of kiln within 6 day or 7 days, the color of the lava over the body of the mortars turns into a bright glaze. Again, all the holes of the kiln are shut, and the kiln is left by itself for one or two days. This step appeared a major push to attract in the market. All the glazed mortars could be taken away for sale. The baked mortars are collected by other workers. After cleaning, these mortars are ready to be used as utensils. A regular clay mortar prices 1300 Kyats for wholesale market, and it is sold at 2000-2500 Kyats in retailed shops. The price of the retail shops can be changed depending on the marketplace and consumers' demands. The owners of pottery industries sell glazed mortars to the wholesalers from most of the townships in Ayeyawady Region. The clay mortars are sold almost every month. The owners of pottery industries are selling a variety of clay mortar around a year.⁶

¹ Interview with U Aung Myo Win, Pottery Industry, Pathein, Artisan, the age of 47 years, dated 8-9-2022

² Interview with U Aung Myo Win, Pottery Industry, Pathein, Artisan, the age of 47 years, dated 8-9-2022

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⁶ Interview with U Aung Myo Win, Pottery Industry, Pathein, Artisan, the age of 47 years, dated 8-9-2022

Making Process of Earthen Water Pot, Thingyan-pot (*Atar-Oh*) and Vases

Despite modern household utensils entered in the Myanmar society, the earthenware such as earthen pots, vases, small pots of flowers are still standing in the rural and urban areas of Ayeyarwady Region. The water pot has different sizes and shapes. These clay pots hold at least 3 gallons and 4 gallons of water.¹ The ladies use clay pot to carry water in the rural areas of Myanmar.² As the temperatures raise in summer, the customers in some rural and urban areas have purchased clay pots before 1988. Therefore, the owners of pottery industries have continued to produce clay pots in most of townships of Ayeyarwady Region. The clay water pots are baked in the month of *Pyartha* (January). The people traditionally believed that these clay pots are to be cold around the year. Therefore, it is called as *Pyartha* pot in Myanmar. The clay pots are usually baked in the month of *Nattaw* (December) and *Pyartha* (January) because they can get better clay for the raw materials during these months. Since January, the wholesalers stored to sell clay pots in the warehouse.³

In addition, it is found that people still use pottery in traditional events including seasonal festivals and religious events such as Thingyan festival and Kason water pouring festival. A new earthen pot of about four to six inches in diameter especially made for Thingyan festival is known in Myanmar as “*Atar Oh*”. According to Myanmar traditions, Myanmar always welcomes the great guardian spirit by placing a small pot in which seven kinds of flora representing seven days of the week were planted on the table in front of the house.⁴ Kason water pouring festival is celebrated on the full moon day of Kason. Despite modern plastic pots entered into the market, the lovers of Myanmar handicrafts still pour water to the Bodhi tree by using the small earthen pots.⁵ Moreover, the earthen vase is one of the most famous types of Myanmar traditional handicraft. The earthen vases are still used by the people in rural and urban areas of Myanmar. The pottery businessmen sold the necessary vases to houses, offices, gardens, restaurants and hotels for decorating the building. Although modern plastic pots entered into the market, the earthen vases are continued to be used in rural and urban communities. Like other earthen wares, the potters used traditional hand-made methods in the processes of earthen pots, and vases by using suitable raw materials. Firstly, both the red clay and the yellow clay are taken as much as needed and soak overnight in the proportion of water in a brick tank before modeling the design on pots by the potters. Then, the potters mix the red clay and the yellow clay in a large bowl and then kneaded to get well-mixed clay paste.⁶

The potters make to be ready for many lumps of clay. By using the clay paste, potters made to be smooth surface of pots as well as to obtain the finest shape of pots. Next step is to shape a pot. In this process, two potters are required to shape a pot. Then, one potter puts the lumps of clay on the potter wheel to shape a raw pot, and another potter spins the potter wheel by hand. These two potter's skills are amazed to shape a rough water pot.⁷ After spinning the potter wheel about 4 or 5 minutes, the potters make model for the surface of pots and are put to dry under the sunshine for one day depend on the weather condition. After the potters have reached a satisfied standard, the second step consists of the process of making to smooth the rounded pots. The potters beat to smooth the rounded pots by using paddle. While the potter beat the surface of

¹ Interview with U Tin Tun, Pottery Industry, Pathein, Artisan, the age of 75 years, dated 16 – 2- 2020

² Myanmar Translation Society, *Myanmar Encyclopedia*, Vol. 10, p. 383

³ Interview with U Tin Tun, Pottery Industry, Pathein, Artisan, the age of 75 years, dated 16 – 2- 2020

⁴ U Than Phay, *မြန်မာ့ယဉ်ကျေးမှုနှင့်မြန်မာ့လေ့နှင့်မြန်မာ့စွဲခင်း* (Myanma Culture, Traditions and Scenery), Yangon, San Thazin Press, 2009, p. 51, (Hereafter cited as U Than Phay, *Myanma Culture, Traditions and Scenery*)

⁵ U Than Phay, *Myanma Culture, Traditions and Scenery*, p. 58

⁶ Interview with U Tin Tun, Pottery Industry, Pathein, Artisan, the age of 75 years, dated 16 – 2- 2020

⁷ Interview with U Tin Tun, Pottery Industry, Pathein, Artisan, the age of 75 years, dated 16 – 2- 2020

the pot by using the wooden paddle with one hand, an anvil of baked clay is held at the inside of pot by the other hand. The wooden paddle was called as *parlar* (ပာလာ). This paddle and an anvil of baked clay play an important part in getting a good earthen pot. Then, the potter removes the extra clay from the base of pot.¹

Then, the water pots are dried for about one day under the sunshine. The last step of making pottery is baking pots. The pots are thoroughly placed upside down on the ground layer in the kiln and each pile has about 5 pots. As one kiln covers 100 piles, about 500 pots can be baked at one time. The firewood and straws are spread around the pile of pots. Finally, the potters make to burn firewood and straws. In the first step of baking pots, a little firewood is used to get a good pot.² In the second step of baking pots, much firewood is required to bake pots in the kiln. The process of baking pots takes nearly 10 to 12 hours. These water pots are kept to a cool step for 6 days after baking them. After 6 days, other workers collect pots and clean these pots which are ready to be used. The size of a water pot is eight inches in width and one foot in height.³

Around 1980 the price of a pot was 20 kyats at wholesale market, and it is sold about 30 kyats at the retailed shops. Nowadays, the price of a pot is 1700 kyats to 1800 kyats at the wholesale market and the pots are sold for about 2500 kyats to 3000 kyats at the retail shops. However, the prices of water pot can be changed depending on the buyer's demand. The pottery makers distribute their pots to the wholesale shops at the Ayeyarwady region by water way.⁴ Since about many years ago, the pottery produced from *Kwinlyarr* at Hinthada Township in Ayeyarwady Region were well known and these pots were distributed to Pathein, Einme, Kyaungkon, Kyonpyaw, Wakhema, Shwelaung and Mawlamyinekyun Townships by water ways.⁵

Nowadays, the pottery industries from the Townships related to pottery industries produce and distribute the pottery according to the demands. Moreover, the earthenware industry makes *Atar Oh* and vases. The potters use red clay and yellow clay to make *Atar Oh* and vase like the water pots. In making *Atar Oh*, the worker places the lumps of clay on the pottery wheel to shape it. At that time, another a potter attempts to shape the pot by using his artistic hands and another one starts to turn the potter's wheel by hands. After getting a rough shape of *Atar Oh*, the potter uses his artistic thumb to decorate the simple designs around the lips of *Atar Oh* and vase. The workers make to dry these earthen *Atar Oh* in the sunshine.⁶

The drying process takes at least 2 or 3 days because of climate changes. The making processes of *Atar Oh* and vases are the same. The pottery takes about 4 to 5 minutes for a vase and 3 to 4 minutes for *Atar Oh*. The size of *Atar Oh* is about 4 inches in width and 5 inches in height. The size of a vase is about 8 inches in width and 1 foot in height. The last process is that the potters make to bake *Atar Oh* and vases in the kiln. Sometime both *Atar Oh* and vases are mixed to bake depending on the buyers because the potters make *Atar Oh* and vases before the water festival and Kason water pouring festivals. The potters put the vases on the ground inside the kiln. In each pile, 500 vases are lined up above the ground layer.⁷

¹ Interview with U Tin Tun, Pottery Industry, Pathein, Artisan, the age of 75 years, dated 16-2-2020

² Interview with U Tin Tun, Pottery Industry, Pathein, Artisan, the age of 75 years, dated 16-2-2020

³ Interview with U Sein Tun, Pottery Industry, Pathein, Artisan, the age of 75 years, dated 16-2-2020.

⁴ Interview with U Sein Tun, Pottery Industry, Pathein, Artisan, the age of 75 years, dated 16-2-2020

⁵ Interview with U Than Phay, Pottery Industry, Kwinlyarr, Owner, the age of 70 years, dated 3-9-2020

⁶ Interview with Daw Win Win May, Pottery Industry, Pathein, Owner, the age of 57 years, dated 23-8-2020

⁷ Interview with Daw Win Win May, Pottery Industry, Pathein, Owner, the age of 57 years, dated 23-8-2020

The firewood is gathered around the piles of vases. And then, when the potters bake vases, the straws are spread over and beside the firewood. Thereafter, the potters start the firing process in the kiln. When the kiln has a great capacity for the fuel, the workers close the entrance of kiln. After about one day, the *Atar Oh* and vases are required to allow cool down about 10 to 12 hours in the kiln. When these pots and vases are of an acceptable standard, the workers collect and clean them before sale. After cleaning them, these pots and vases are prepared ready for the sale. Especially, the prices can fluctuate and change a few prices depend on the market.¹

Like other earthen wares, the potters used traditional hand-made methods in the processes of earthen water pot, *atar oh* and vases. Firstly, both *myayni*(the red clay)and *myaywar* (the yellow clay) are taken as much as needed and need to soak overnight in the proportion of water in a brick tank before shape pots by the potters. Then, the potters mix in the proportion of *myayni*(the red clay) and *myaywar*(the yellow clay) in a large bowl and then kneaded to get well-mixed clay paste.² The potters make to be ready for many clay blocks. The paste must be made smooth surface of water pots as well as to obtain the finest shape of water pots. Next step is to shape a pot. In this process, two potters are required to shape a pot. After one potter puts block of clay on the potter's wheel to shape a raw pot, another potter spins the potter's wheel by hand. Some potters use their foot to spin the potter's wheel. These two potter's skills are amazed to shape a rough water pot.³

After about 4-5 minutes, the rough texture of the water pot becomes half-dry and mould. These rough water pots are put to dry under the sunshine for one day depending on the weather condition. After the potters have got a satisfied standard, the second step consist of the process of making to smooth the rounded pots.⁴ The potters beat the rounded pots by using paddle. This step is the important part for the recent rough pots to become good shaped. The water pots are often beaten with a paddle, to smooth and thin them. After an anvil of baked clay is held at the inside of pot by the potter's hand, the potter's other hand beats the surface of pot by using wooden paddle. Therefore, it doesn't appear to collapse and then the potters use wire to move the extra clay to beside and bottom the pot.⁵

The step of decoration consists of a vital part of water pots. There are two kinds of decoration methods such as using “**palar**” and using of paddle and anvil techniques. Most Pathein pottery industries create simple designs and Zip-zap design by using paddle and anvil techniques. Then, the water pots are dried for about one day under the sunshine. The last step of pottery is baking water pots. The pots are thoroughly placed upside down on the ground layer in the kiln. Each pile has about 5 pots. Therefore, 100 piles total have about 500 pots. When the potters make to bake pots, they mainly use firewood and straws for firing.⁶

The firewood and straws are spread around the pile of pots. Then, the straws are placed like fencing beside firewood. Each pile is surrounded by a layer of firewood and three layers of straw fences. Finally, the potters make to burn firewood and straws. The purpose of slow baking is that the pots are baked in a firm condition with the heat of firewood within a closed clay-cover. Considerable firewood is required to bake pots in the kiln. The process of baking pots takes about 10-12 hours, and it usually starts at 3 or 4 pm yesterday evening and finishes at 4 or 5 am the next day. These water pots are kept to a cool step for 4 or 6 days after baked them. After 6 days,

¹ Interview with Daw Win Win May, Pottery Industry, Pathein, Owner, the age of 57 years, dated 23 -8 - 2020

² Interview with U Tin Tun, Pottery Industry, Artisan, Pathein, the age of 75 years, dated 16 – 2 - 2019

³ Interview with U Tin Tun, Pottery Industry, Pathein, Artisan, the age of 75 years, dated 16 – 2 - 2019

⁴ Interview with U Tin Tun, Pottery Industry, Pathein, Artisan, the age of 75 years, dated 16 – 2 - 2019

⁵ Interview with U Sein Tun, Pottery Industry, Pathein, Artisan, the age of 75 years, dated 16 - 2 - 2019

⁶ Interview with U Sein Tun, Pottery Industry, Pathein, Artisan, the age of 75 years, dated 16 - 2 - 2019

other workers collect baked water pots. They also make to clean these water pots which are ready to be used. The size of a water pot is 8 inches wide and 1 feet height.¹

Around 1980 a regular water pot priced Ks. 20 for wholesale market. It is sold about Ks. 30 in retail shops. Nowadays, a regular pot price Ks. 1700- 1800 for wholesale market and the pots are sold for about Ks.2500- 3000 in retail shops. But the prices of water pot can be changed to high or low price depending on the buying situation of customers. Since about years ago, the owners in Kwinlayar roam to sell the water pots and Thingyan-pots throughout river by boat to Pathein, Einmè, Kyaunggone, Kyonpyaw, Wakeman, Shwelaung and Mawlamyaingkyun Townships in Ayeyarwady Region.²

When the hyacinth groves throughout the river in the rainy season, the boat slowly goes throughout river. Therefore, the sellers take for two weeks because of hyacinth groves. Sometime the wholesalers buy the water pots, Thingyan-pots from Hlaingtharyar Township of Yangon Region. Also, the owners in Pathein sell the wholesaler market and retailed shops around Pathein.³ According to the process of pottery, the potters make Thingyan-pots and vases like the water pots. Despite this process not being difficult, their artistic talents can amaze the customers. The potters use “myayni” and “myaywar” to make Thjingyan-pot and vase like the water pots.⁴ The worker places wet one block of clay on the potter’s wheel to shape Thgyian-pot and then also vase. At that time, another a potter attempts to shape Thingyan-pot and vase by using his artistic hands. The potter’s wheel is started to turn by another one’s hands to obtain suitable earthen wares in this process. The potter takes about 4 to 5 minutes for a vase and 3 to 4 minutes for a Thingyan-pot.⁵

The size of a Thingyan-pot (Atar Oh) is about 4 inches wide and 5 inches height. The size of a vase is about 8 inches wide and 1 feet height. The formal Thingyan-pot and vase are carefully designed, the workers make dry them under the sunshine. The pottery industry depends on the weather. If the weather is good, they will be dried for one day. If it encounters cloudy days, the drying process takes at least 2 - 3 days. The last process is that the potters make Thingyan-pots and vases in the kiln. Sometime both Thingyan-pots and vases mix to bake depending on the buyers because the potters make Thingyan-pots before the water festival. The potters put an iron circle inside each vase which thoroughly placed upside down on the ground layer in the kiln.⁶

In each pile, 500 vases are lined up above the ground layer and the firewood spread around the piles of vases. And then, when the potters bake vases, the straws are spread over and beside the firewood. Thereafter, the potters start the firing process in the kiln. When the kiln has a great capacity for the fuel, the workers close the entrance of kiln. After about one day, the Thingyan-pots and vases are required to allow cool down about 10 to 12 hours in the kiln. Sometime needs to cool down for about 3-4 days. When the Thingyan-pots and vases are of an acceptable standard, the workers collect them and clean them out before sale. After cleaning them, Thingyan-pots and vases are prepared ready for the sale. Especially, the prices of Thingyan-pot and vases can fluctuate and change a few prices depend on charges and market.⁷

¹ Interview with U Sein Tun, Pottery Industry, Pathein, Artisan, the age of 75 years, dated 16 - 2 - 2019

² Interview with U Than Phay, Pottery Industry, Kwinlyarr, Owner, the age of 70 years, dated 3 - 9 - 2020

³ Interview with U Than Phay, Pottery Industry, Kwinlyarr, Owner, the age of 70 years, dated 3 - 9 - 2020

⁴ Interview with Daw Win Win May, Pottery Industry, Pathein, Owner, the age of 57 years, dated 23 - 8 - 2023

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⁶ Interview with Daw Win Win May, Pottery Industry, Pathein, Owner, the age of 57 years, dated 23 - 8 - 2023

⁷ Interview with Daw Win Win May, Pottery Industry, Pathein, Owner, the age of 57 years, dated 23 - 8 - 2023

Making Process of Earthen Toy (*Oh Pote*)

The earthen toy called *Oh Pote* is known as a simple traditional handicraft, and it is made with the local raw material without using any advanced technology. These earthen toys are thought to have originated among the native of Myanmar children. This earthen toy business is located in the east of Nga Wun River in Pathein Township. This variety of earthen toys are pot, mortar, pestle, stove, plate, pan, and lid etc.¹ Especially, Myanmar young girls used to play to cook with *Oh Pote* every time and young boys play with toys of ox or bull. The colourful earthen toys are competing in the market with modern toys. Despite Myanmar traditional earthen toys are not expensive, it is not only appreciative handicraft of Myanmar but also stand in the market. The owner of earthen toy business distributes their products throughout Pyapon, Maubin, Myaungmya, Hinthada, Latputta, and Yekyi in Ayeyarwady Region. Sometime the buyers of other townships come to buy the earthen toys from the wholesale shops of pottery in Pathein. The artisans need to buy suitable clay for the raw materials in order to make the earthen toys. Firstly, the ownerships have to collect the raw materials which can be processed into many different types of earthen toys. The owners of the earthen toy business usually collect the raw material from November to May because the raw materials cannot be easily collected during the rainy season.²

In particular, the raw material called black clay (*Mye Nat*) is collected from the field. Sometime the sellers of raw material mix other kinds of raw material. Therefore, the buyers must be careful to get the satisfied raw material. *Mye Nat* is a suitable raw material in the whole process of earthen toys. The owners brought this raw material in *Tegyigone* village of Pathein Township.³ The *Tegyigone* village is located about 5 miles from the place of earthen toy business. The owners usually buy *Mye Nat* by carrying with large truck for 15 times to be enough around the whole year. The *Mye Nat* costs 25,000 kyats for a large truck. Next, the raw material is firewood which each truck costs 70000 kyats.⁴ After carrying the raw materials, the workers have to store the raw materials in a suitable place. The making of earthen toys doesn't need a pestle and mortar to pound *Mye Nat* to get the fine powder because the kind of material doesn't contain lumps of mud as another kinds of clay. The size of kiln for making earthen toys is about 3 feet in height and 3 feet in width. The face and upper parts of this kiln have each entrance.

Despite other kilns having one small hole as chimney at the back to emit smoke, this kiln has only one hole to emit smoke at the upper part. Next step for making earthen toys is that raw materials soaked into the appropriate amount of water to get soften clay for about one day. The artisans often look at the situation of clay and if the clay needs a little water, a little more clay will be added. After the clay is reached a suitable situation for making toys, the artisans have made the lumps of clay depend on the number of earthen toys demanded per day. Then, the artisan places a lump of clay on the potter wheel and have to make well enough the ultimate shape by both hands of artisan. In making the earthen toys, it takes about 3 or 4 minutes for each toy. After modeling the toys, the workers make to dry these earthen toys under the sunshine if the weather is fine for a dried process.

If the weather is fine enough, it will dry for one day and if the weather is bad, it is necessary to dry the earthen toys for 3 to 4 days. After these earthen toys are dried, the workers carry and neatly arrange to dry the earthen toys in the kiln. Then, the workers continued to bake them in the kiln. The bamboo is not used to provide fuel in the kiln, because the bamboo produced a type of smoke which can change to black colour on the toys. As the workers place the

¹ Interview with Daw Khin Myint Ye, *Oh Pote* Business, Pathein, Owner, the age of 56 Years, dated 23-8-2020

² Interview with Daw Khin Myint Ye, *Oh Pote* Business, Pathein, Owner, the age of 56 years, dated 23-8-2020

³ Interview with Daw Win Win May, Pottery Industry, Pathein, Owner, the age of 57 years, dated 23-8-2020

⁴ Interview with Daw Khin Myint Ye, *Oh Pote* Business, Pathein, Owner, the age of 56 years, dated 23-8-2020

embers of fire on the area of earthen toys, the workers gradually put the firewood into the kiln for 6 or 7 hours. After the heat rises, the entrance of kiln is closed for about one day. When the earthen toys get to a suitable standard, keep them cool for 5 or 6 hours in the kiln before carrying them. After cleaning the earthen toys, the artisans paint to complete a suitable traditional craft in the market. The painting is the final step in the process of earthen toy making. After painted on the toys, they are dried under the sunshine for one day. Then, the workers wrapped the earthen toys in plastic bags. One package contains 10 different toys. The price of one package of earthen toy is 500 kyats for wholesale market and it is sold at 1000 kyats at retailed shops.¹

When the artisans make the earthen toys, they need to buy suitable clay for the raw materials. Firstly, the ownerships collect the raw material which can be processed into many different types of earthen toys (Oh Pote). The owners usually collect the raw material from November until May because of the rainy season. In particular, this raw material is collected from the field. Sometime the sellers of raw material mix with other kinds of raw material. Therefore, the buyers must be careful to get the satisfied raw material. “Myaynet”(Black colour) is a suitable raw material in the whole process of earthen toys(Oh Pote). The owners collect the raw material in Tègyigone village of Pathein. The Tègyigone village is distanced about 5 miles from the earthen toy (Oh Pote) business. The owners usually buy for 15 times of truck to be enough “Myaynet”(Black colour) around one year. The “Myaynet”(Black colour) costs Ks.25,000 at a time. Next, the raw material is firewood which each truck costs Ks. 70000.

After being carried, the workers have to store the raw materials in a suitable place. The making of earthen toys (Oh Pote) doesn't need a pestle and mortar to pound “Myaynet” (the black clay) to get the fine powder because the kind of “Myaynet” (the black clay) doesn't contain much the solid as another kinds of clay. The size of the kiln is about 3 feet height and 3 feet wide. The type of this kiln is different type from another kilns. The face and upper side of this kiln have each entrance. Other kilns have one small hole at the back to emit smoke, this kiln has only one hole to emit smoke at the upper. Next stage is that after stored the obtained raw materials, soaked to soften the clay about one day in the appropriate amount of water. It is soaked from 4 pm today until 4 pm the next day. The artisans often look at the situation of clay. If the clay needs a little water, the artisans add a little more clay.

After the clay is reached a suitable situation, the artisans have made the block of clay depend on the number of earthen toys (Oh Pote) per day. The artisan places a block of clay on the potter's wheel. Making earthen toys (Oh Pote) requires skill and experience. Both hands of artisan have made well enough the ultimate shape. When the artisans make a variety of earthen toys (Oh Pote), each toy needs to be made for 3-4 minutes. After analyzing, if the weather is suitable for a dried process, the workers make to dry these earthen toys (Oh Pote) under the sunshine. If the weather is good enough, it will dry for one day. The bad weather has allowed us to dry the earthen toys (Oh Pote) for 3 to 4 days. After these earthen toys (Oh Pote) are dried, the workers have continued to bake them in the kiln.

Next, the workers carry and neatly arranged to dry the earthen toys (Oh Pote) in the kiln. The bamboo which isn't used to provide fuel in the kiln, because the bamboo produced a type of smoking which can change to black colour on the colour of toys. After arranged, spread many broken earthen toys (Oh Pote) over the earthen toys (Oh Pote). Because the workers place the embers of fire on the area of earthen toys (Oh Pote). After the fire heat, the workers gradually put the firewood for 6-7 hours into the kiln. After the heat rises, the entrance of kiln is closed for

¹Interview with Daw Khin Myo Win, *Oh Pote* Business, Pathein, Owner & Artisan, the age of 48years, dated 8 – 8 – 2020

about one day. When the earthen toys (Oh Pote) get to a suitable standard, keep them cool for 5-6 hours in the kiln before carrying. After cleaning them, the artisans make to paint the earthen toys (Oh Pote) from the kiln. The painting is the final step in the process of making an earthen toy (Oh Pote) and the artisans paint to complete a suitable traditional craft in the market. After painted on the toys, they are dried under the sunshine for one day.¹ Then, the workers wrapped the earthen toys (Oh Pote) in plastic bag. One package contains 10 toys. One package of earthen toy (Oh Pote)'s price is Ks.500 for wholesale market and it is sold at Ks.1000 in retailed shops. The artisans use decorative paint for the earthen toys (Oh Pote). A package of earthen toys (Oh Pote) is Ks. 1000.²

Market Scope of Pottery Industries in local and Foreign Markets

The earthenware industries of Ayeyarwady Region have produced and distributed the earthenware in the local market due to their improved quality since many years ago until present day. However, they didn't penetrate into the international market because of difficulties in technology. The owners of earthenware industries distribute their products to the areas of Ayeyarwady region. During the years from 1948 to 1988, each earthenware industry distributed about 1000 to 1500 drinking water pots, 800 to 1000 earthen mortars, and 100 to 150 large jars to the domestic markets. In the previous time, Pathein, Hinthada and Kwin Lyarr were the largest importers of earthenware in the Ayeyarwady Region. After 1988, each earthenware industry distributed about 100 to 200 pots, 200 to 600 mortars and other earthenware products to the local markets. The pottery market in Myanmar faces the challenges in the market because of modern plastic utensils. The earthenware products connected to religion are continued to be produced in the Ayeyarwady Region according to the demands. The earthenware toys are produced and distributes to the markets.³

Findings

According to the interviews on the pottery industry, it was found that the traditional pottery industries face challenges such as the shortage of craftsmen, scarcely enough raw materials and poor marketplace in the present time. Some housewives gradually use iron and stone mortars. Some local people use plastic bottles and cans for drinking and storing water due to mobilizing living standards. However, as the clay pots can cool water naturally and are affordable and easy to use, there are some households which are still using pottery. In addition, it is found that people still use pottery in traditional events including seasonal festivals and religious events such as Thingyan festival and Kason- Bodi Tree-water festival. Myanmar handmade clay toy (*Oh- Pote*) seem to have a universal appeal for children. The Oh-Pote market has closed in rural areas than urban areas.

Discussion

When the sunlight contacts plastic, it causes water to treat water in the plastic bottles. After the drinkers drank treated water, they are reacted harmful diseases such as bladder, colon cancers and can affect other diseases in the future. because of the side effects. Mixed chlorine

¹ Interview with Daw Khin Myo Win, *Oh Pote* Business, Pathein, Owner & Artisan, the age of 48years, dated 8-8- 2020

² Interview with Daw Khin Myint Ye, *Oh Pote* Business, Pathein, Owner & Artisan, the age of 56 years, dated 8-8- 2020

³ Interview with U Myint Soe, Daw Ngwe Thi Pottery Industry, Owner, Pathein, the age of 72 years, dated 12 -5-2020

into the water from the water treatment plant. By using traditional clay water pots, people should prevent these diseases in the future.

Next, when the customers eat the food the mixed meals and vegetables together with stone and iron powders by using the stone and iron mortars, they will suffer from stomach-pain (*Stomach-ulcer*), kidney stone (*Urolithiasis*) diseases in the near future. Some of these customers prefer to buy plastic pots because they want to use new items and another reason is to avoid the crack pots. But the market for small clay pot (*Atar-Oh*) has been active for around a year until today since the previous days. The artisans need to create the earthen toys (*Oh-Pote*) as distinctive designs by using the innovation method. In all of these submissions, the pottery industry had achieved as a huge market in previous time, and nowadays, the pottery industry still lives as a mid-marketplace. In order to maintain the traditional handicrafts, the ownerships need to carry on earthenware products of Ayeyarwady Region.

Conclusion

The owners of earthenware industries in Ayeyarwady Region faced challenges which consist of a shortage of craftsmen who inherit handicrafts. Therefore, the owners of earthenware industries need to apply modern technology together with traditional methods to prevent the shortage of workers. At present, the production of earthen large jars has disappeared in Ayeyarwady Region. Although the earthen pots have started to decrease in use in urban areas, they are still used in the rural areas. Earthen mortars and other earthenware are produced and distributed from the earthenware industries in Ayeyarwady Region. Nowadays, modern plastic utensils are replaced as household utensils in place of earthenware in the urban areas. Earthen mortars were well known as household utensils, but the use of these mortars decreased in urban areas than the rural areas. Although the small plastic pots penetrate into the domestic markets, the small earthen pots are still sold in the months of April and May. Therefore, it is necessary to create a new design and control the markets by creating new designs. Nowadays, modern toys influence children. However, the children from the rural areas still play with these earthen toys. In order to maintain the markets of these toys, the owners of earthenware industries need to create new designs. The competition in technologies, scarcity in raw materials, the necessity of artisans and the increase in investment effect on the markets of earthenware industries. Therefore, earthenware industries and artisans need to preserve the traditional handicrafts of Myanmar, which would be required for future directions to prevent the fading tradition.

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