

# A Comparative Study of the Use of Japanese Majolica Tiles in Modern Japan and Japanese Colonial Taiwan

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## Abstract

This paper discussed the connection between “Japanese majolica tiles” in modern Japan and Japanese colonial Taiwan, and the differences in the way tiles are used during these periods from both Japanese and Taiwanese perspectives. Japanese majolica tiles were manufactured in Japan primarily during the Taisho period (1912-1926) and early Showa period (1926-1945), with relief surfaces covered with multicolored lead glazes. The tiles produced in Japan at that time were mainly imitations and developments of a Victorian tile product called majolica, which was imported from England and exported to countries around the world. The results of the survey indicate differences in the use of tiles, with their usage in different architectural styles and cultures becoming apparent. In Japan, the connection between tiles and modern concepts can be noted. In addition, post-modern tile production and architectural preservation suggest that differences in the amount of extant Japanese majolica tiles in Japan and Taiwan have arisen.

**Keywords:** Japanese majolica tiles, modern Japan era, Japanese colonial Taiwan

## 1. Introduction

### *1.1 Background and Objectives of This Study*

Tiles, which are routinely used around water and on the exterior walls of buildings, began to be used in Japan and Taiwan only from the modern era. Dependent on the region, there are differences in use, design, and quantity of extant Japanese majolica tiles. In addition, in the literature, it is often noted that the tiles were not favored in Japan and, conversely, were popular in Taiwan.

This paper focuses on Japanese majolica tiles in modern Japan and Japanese colonial Taiwan. The purpose of this study is to examine the relationship between modern society and contemporaneous tiles, and to clarify the differences in the way Japanese majolica tiles are used in Japan and Japanese colonial Taiwan. Two research questions were formulated to guide the study. First, why are Japanese majolica tiles manufactured and sold in Japan, but used less in Japan than in Taiwan? Second, why were they not so popular in Japan but preferred in Taiwan?

According to interviews in Taiwan, there used to be about 3,000 buildings in Taiwan that used majolica tiles when she was a child, but now there are only about 300. By taking a cross-sectional view of both Japan and Taiwan, we believe we can unravel the modernity of the Asian region and reconsider Japanese Majolica tiles value as cultural heritage.

However, few studies have compared and examined the differences in the way majolica tiles are consumed between Japan and Taiwan. This study adds a transnational perspective on majolica tiles from two regions, Japan and Taiwan.

### *1.2 Position of Previous Studies and This Study*

Akihiko Fukai (2015) has created a reference material on Japanese majolica tiles in Japan, using tiles excavated from the Minpei ware kiln site and dating them using marks on the back of the tiles. He is also a proponent of “tile archaeology,” and together with Ken Masuda (2019, 2021) approach. Aki Toyoyama (2016) has elucidated

the relationship between tiles and the formation of modern social identity in India based on Japanese majolica tiles that traveled to India. In addition, in Japan, exhibitions featuring Japanese majolica tiles were held at the INAX MUSEUM in 2018 and at Tajimi Mosaic Tile Museum in 2021.

Regarding the study of Japanese majolica tiles in Taiwan, Kenji Horigome (2003, 2024) reviews the modern tile culture in Taiwan from the viewpoint of architectural history, giving several examples of modern architecture and residential buildings in which majolica tiles are used. Kang No-His (2015, 2023) summarizes Taiwan's porcelain tile culture from the perspective of tile history, classifying and summarizing majolica tile designs and arrangement patterns. In Taiwan, the Taiwan Flower Brick Museum opened in 2016, and in the city, you can see walls that imitate majolica tile designs and tiles being used in building renovations.

However, few studies have compared and examined the differences in the way majolica tiles are consumed between Japan and Taiwan. This study adds a transnational perspective on majolica tiles from Japan and Taiwan.

## 2. Method

The study was based on a literature survey and interviews. The literature survey included newspaper advertisements, columns, and tile catalogues from the Taisho era to the early Showa era, company histories of tile manufacturers from the 1970s to 1990s, research reports and research papers published from the 2000s onwards, and exhibition catalogues featuring Japanese majolica tiles. The interviews were conducted with Yasuo Goto, chief curator of the INAX Tile Museum, which holds majolica tiles, and Akihiro Fukai, curator of the Harima-cho Folk Museum and former staff of Taiwan Tile Museum.

They also visited the exhibition rooms of museums and companies currently holding Japanese majolica tiles, as well as actual buildings, to observe the tiles themselves and the places where they were used.

## 3. Overview Victorian Majolica Tiles and Japanese Majolica Tile

### 3.1 Majolica of Victorian Tiles

“Victorian tiles” is a general term for tiles produced in England during the Victorian era (1837-1901). Types of Victorian tiles include plain tiles, hand-painted tiles, embossed tiles, Majolica tiles, transfer printing tiles for walls, quarries tiles, geometric tiles, encaustic tile for floors.

The origin of Majolica tiles was the colored lead glaze developed by the Minton Company in 1849. During this period, Minton Co. called colored tin-glaze porcelain derived from Maiolica ware (Note 1), “Majolica,” and the colored lead glaze developed from the work of the Palissy workshop “Palissy” (Note 2). As colored lead glaze gradually became more popular and the number of tile makers using it increased, tiles with colored lead glaze were called “majolica tiles (INAX Museum, 2018). In the product catalogs of tile manufacturers of the time, the heading “Majolica Tiles” appeared on the pages introducing colored lead-glazed tiles. By the 1880s, Minton had standardized the term “majolica” for colored lead-glazed tiles, calling them Art Nouveau majolica tiles (INAX Museum, 2018). In essence, “majolica” became an industry term for colored lead glaze. Majolica tiles were mainly based on 6-inch square (approximately 152 mm x 152 mm) and 8-inch square (approximately 203 mm x 203 mm) Dust-pressing method tiles (Note 3), and “Relief (Note 4)” and “Tube lining (Note 5)” were often used as decorative techniques.

### 3.2 Japanese Majolica Tile

Various types of tiles, collectively called Victorian tiles, were exported from England across the world and reached distant Japan after the modernization of tile production in the 19th century. After the Meiji Restoration, the construction of Western-style buildings began to use tiles for interior walls, fireplaces, bathrooms, toilets, and floors, and this brought a great deal of information about and demand for tiles. Japanese engineers who saw the Victorian tiles were fascinated by the beauty of the designs and their waterproofing and other features, and some began manufacturing tiles in Japan. Japanese manufacturers imitated imported tiles, and created what became early Japanese interior tiles (INAX, 1991).

The development of hard ceramic tile and Japanese majolica tile technology is largely related to the development of the dust-pressing method from the conventional plastic clay method (Note 6). Both Keizo Nose of Danto Co., Both Keizo Nose of Danto Co., Ltd. and Murase of Fujimi Co. succeeded in producing prototypes of hard ceramic tiles using the dust-pressing method at about the same time in 1907 (Meiji 40). This was the origin of the hard ceramic tiles that dominated interior tile production in the early Showa period, and this method enabled tile manufacturers to stabilize quality and shipping volume.

### 3.3 Traditional Architecture and Tiles in Taiwan

According to Horigome (2024), Taiwan has a harsh natural environment with high temperatures and humidity,

prolonged rainy season and winter rains, as well as typhoons, earthquakes, and strong sunlight, and buildings deteriorate quickly under such natural conditions. In this regard, ceramic products such as tiles have developed in various ways as materials because of their suitability for exterior walls and roofs due to their waterproofing, fire resistance, mold and mildew resistance, UV resistance, and decorative properties. Historically, the ceramic products initially used in Taiwanese architecture were imported directly from Fujian Province by Han Chinese who migrated to Taiwan in the 17c. These were used for temples and ancestral halls, etc. By the end of the 19c, the Qing government's demand for building official residences and mansions increased, and kilns were built in Taiwan to manufacture bricks, tiles, and other building materials.

#### 4. Results

##### 4.1 Relationship with Modern Culture - Hygiene Awareness and White Tiles

In Japan, the demand for white tiles was not for decorative purposes, as in the case of Japanese majolica tiles, but for sanitary ware that was easy to clean and simple, as the association of “hygiene = white” led to increased use.

To prevent infectious diseases such as cholera and the plague, which were still prevalent in the Meiji period, it was necessary for the public to have a conscious awareness of “hygiene” to prevent such diseases. Two events had a great deal to do with the increase in hygienic awareness throughout Japan, and they are related to tiles. The first was the “Spanish flu”, which raged around the world in 1918, infecting and killing many people in Japan. In response, masks, hand washing, and gargling became widespread in Japan, and hygiene awareness increased. Later, the use of tiles in brothels and public bathhouses throughout Japan became mandatory from a hygienic standpoint, and a Tokyo Metropolitan Police Department ordinance issued in 1920 (Taisho 9), “Regulations Governing Bathhouses and Bathing Establishments,” stipulated that bathroom floors be covered with ceramic - in essence, tiles or stones.

The second major event was the Great Kanto Earthquake of 1923. After the Great Kanto Earthquake, reinforced concrete buildings were constructed to replace brick buildings. To protect that concrete, fire-resistant tiles began to be used for exterior walls, and tiles quickly became popular. A March 4, 1935, Asahi Shimbun column for households used “whiteness” and “cleanliness” synonymously and reported that tiles were used in the kitchens of ordinary homes in the early Showa period (1926-1945) (Figure 1). Other examples of the values of hygiene and tiles, and white = sanitation, can be seen in newspaper advertisements of the time (Figure 2).



Figure 1. Tile Advertisement  
*Tile, Washrooms, Toilets*

Source: March 4, 1935, Asahi newspaper, Morning Edition, p. 4.

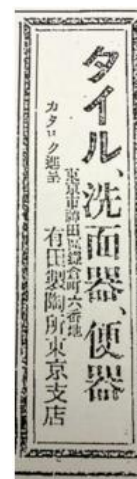


Figure 2. Newspaper columns

*The First is Important Collection: Lecture on  
how to use everyday items*

Source: April 5, 1924, Asahi newspaper, Morning Edition, p. 4.

##### 4.2 Comparison and Analysis of Japanese Majolica Tiles in Japan and Taiwan

After the Great Kanto Earthquake, domestic tile manufacturers entered the market (Note 7). However, by 1935, after the reconstruction period had passed, domestic demand had declined, and manufacturers began exporting tiles to China, Taiwan, Southeast Asia, India, and other regions, seeking outlets for their increased production capacity outside Japan. There are records that designs and colors for these regions were manufactured in

response to orders from Chinese and Indian traders (Note 8). Many Japanese majolica tiles were used in private homes on the main island of Taiwan, as well as on the islands of Penghu and Kinmen, over the 15 years from the Taisho period onward. In this section, we analyze the differences in the ways tiles are consumed in terms of where they are used, the designs of the tiles, and their post-modern status.

#### 4.2.1 Locations Used

In Japan, they were mainly used for the interior decoration of public bathhouses and brothels, as can be seen from photographs and postcards from the early Showa period (Figure 4). Other examples include barbershops and show window decorations (Figure 5). The common point is that they are used in places where hygiene control is important, and that they are often used in combination with other tiles.

In Taiwan, tiles were used outdoors as exterior wall decorations of buildings. Tiles were mainly applied to traditional decorative areas such as courtyard gates, roof ridges, pillars, walls (skirting, wail face, and molding), doorway inscriptions, and pediments (Figure 6). These places were decorated with Chien-nien (i.e cut-and-paste decoration) coloring and Koji ceramics before the Japanese colonial period (Figure 7). The bright colors of Japanese majolica tiles were easier to use than traditional ornaments and offered new patterns and freshness, and tiles gradually replaced traditional decorations (New Taipei city Yingge Ceramics Museum, 2003). And because Japanese majolica tiles were very expensive, they were used as a status symbol to show the style and wealth of a household. Furthermore, Japanese majolica tiles were used not only for newly built houses, but also for repairing and restoring existing buildings, as they were valued for their ability to simultaneously reinforce and beautify, and because they were easy to use. They were also used for secondary uses, such as inlaying bamboo and wood artifacts. In both cases, the size of the tiles used was a 6x6 inch (about 152 mm) square. This size is considered characteristic of Japanese majolica tiles made before World War II, when 6 inches was the standard size.

A comparison of Taiwanese and Japanese applications can be summarized as follows: in Japan, tiles were used in a small percentage of modern buildings and in bathrooms for sanitary purposes. In Taiwan, on the other hand, tiles were used outdoors as building decoration. One of the reasons for this difference is that in Japan, pre-modern tiles and tiles imported in the Meiji period (1868-1912) were used for interior decoration before exterior decoration. Japanese majolica tiles inherited the trend of tiles for interior use, though in general the area to be covered with tiles was limited due to the wooden construction of Japanese architecture. On the other hand, Taiwanese architecture is mostly brick and concrete, which allows tiles to be applied in large quantities. In addition, Taiwan had a strong culture of decorating the exteriors of buildings in a decorative manner, which is thought to have led to the large differences in the locations and quantities of tiles used.

In our interview, Goto also pointed to climatic differences as a factor in the differences in the locations where tiles were used. In Japan, where temperatures vary widely throughout the year, hard ceramic tiles such as Japanese majolica tiles are susceptible to frost damage, but it may be possible to use Japanese majolica tiles for exterior walls in Taiwan, where the warm is mild throughout the year. Danto company (now Danto Tile) also noted that before World War II, tiles were probably not exported separately for interior and exterior use.

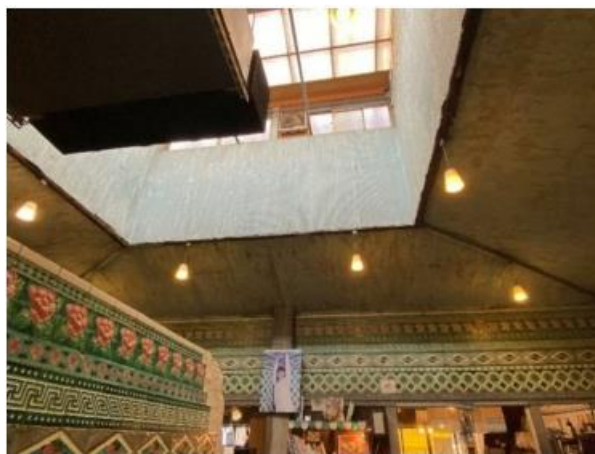


Figure 4. Example of Japanese Majolica tile application in Japan: Public bathhouse

*Note.* Former “Fujinomori Onsen”: Construction was completed in 1930. The Japanese majolica tiles used were evidently manufactured at the Sato Brick Works. (Sarasa Nishijin, Kita-ku, Kyoto).



Figure 5. Example of Japanese Majolica tile tiles used in Japan: show window

*Note.* The base of a display shelf used as a show window in a store. The tiles in the second row from the top are Japanese majolica tiles. (Former Hashimoto-ya display cabinet in Tsumaki Town, unknown manufacturer, approx, 1932).



Figure 6. Example of Japanese Majolica tile tiles used in Taiwan (Zhang Family Ancestral Temple)



Figure 7. Taiwan Traditional Architectural Decoration

left: Chien-nien (i.e cut-and-paste decoration) right: Koji Ceramics

#### 4.2.2 Tile Designs

In the early Meiji period, as information and demand for imported tiles increased in Japan, the tile trade gradually became more active, and various samples and catalogs arrived at the hands of traders in Yokohama, Kobe, and Nagasaki. Some aggressive potters obtained tile samples and began producing “Japanese majolica tiles” based on them. During the same period, tiles with the same designs as those in the tile catalogs of English tile manufacturers were produced (Figure 8) (Figure 9). The most common Japanese majolica tile design found

in Japan are botanical patterns, while other tiles are decorated with Japanese auspicious symbols such as cranes and Japanese characters such as “tobacco” (Figure 10) and “no smoking”(Figure 11), which may have been used in tobacco shops. Since Japanese majolica tiles were made to order at that time, it may have been possible to produce a wide variety of patterns.

In Taiwan, where there are many ethnic groups, Japanese majolica tiles were used among people of Chinese ethnic and cultural backgrounds. Majolica tiles used in Taiwanese private homes had mainly Chinese designs, such as geometric, floral, and auspicious patterns (Figure 12). Auspiciousness is very important to Chinese culture, and Chinese paintings and architectural decorations are covered with multiple layers of meanings, including the associations of the depicted objects with folklore and homophonic words, and any iconography that does not allow a viewer to decipher the picture or convey a message is considered worthless (INAX Museum, 2018).

Auspicious designs were specially designed by manufacturers for Chinese customers living in China, Taiwan, and Southeast Asia. The story behind the production of tiles with Chinese designs in 1920 is described in “Tile Frontier” by Fujimi Co. The company began exporting tiles to Shanghai and then to Manchuria, but these were exclusively patterned tiles, initially of Japanese or Western design. As exports progressed, they began to request tiles with designs unique to China. However, many Chinese-style lucky charms were extremely puzzling to Japanese sensibilities and could not be designed in Japan. Fujimi Co. employees asked his Chinese trading partner to come up with a design he liked and send it to him, but he did not receive any specific requests. Rokuro Murase, speaking of business transactions at the time, said, “It was very inconvenient to send and receive letters in Chinese, but even so, I was able to understand their sincerity.” (110 Years Editorial Committee, 1986, p. 62).

Although no written record of the exchange of designs has been found in Taiwan, interviews indicate that knowledge of such exchanges has been passed on orally within families involved in the production of Japanese Majolica tiles.

Thus, production of this tile, which began as an imitation of Western designs, gradually developed tiles with uniquely Japanese designs that were not found in Victorian majolica tiles. The fact that the tiles were designed and manufactured in accordance with the culture of the region where they were sold may be one of the reasons why they were so well accepted in Taiwan.



Figure 8. Tile catalog clipping from an English tile company

*Note.* Scratch book compiled by the former president of Saji Tile. (Early 20th century).



Figure 9. Tiles with the same pattern seen in the scratchbook in Figure 8 are manufactured by a Japanese manufacturer (Hirosho Tile Company, Japan, early 20th century)



Figure 10. Japanese Majolica tile for tobacco shop sign (Japan, Saji tile Co, Early 20th century)



Figure 11. Non-smoking tiles, fire-retardant tiles (Manufacturer Unknown, Location Tomioka Silk Mill)



Figure 12. Chinese auspicious pattern: Three fruits design

*Note.* Auspicious pattern also known as “Sanda”. Pomegranates, apples, peaches, and tangerines are depicted. Sanda means “many children,” “long life,” and “many blessings.”

Source: Place of production Japan, Danto Co. Date: Early 20th century (early Showa period) Collection of Dantsu Tile Co.

#### 4.2.3 Situation after Modern Times

##### 4.2.3.1 Decline in Buildings Used and Tile Manufacturing

During World War II, the number of public bathhouses in Japan declined significantly due to air raids, forced evacuations, or conversion to factories and warehouses. “There were 2,800 public bathhouses in Tokyo before the war, but by the end of the war in 1945, only about 400 remained, and the rest were either burned down or no longer in use”. (Kasahara, 1997, p. 26). Since Japanese majolica tiles were mainly used in public bathhouses, it is assumed that many of them were lost during the war. After World War II, the painting of single-colored tiles became popular in public bathhouses, replacing decorative tiles.

Furthermore, after World War II, most tile manufacturers stopped producing Japanese majolica tiles. This is thought to have been due in large part to the fact that the war interrupted export sales networks, and that, compared to other tiles, majolica tiles were more labor-intensive to produce, as they were painted by hand.

Japanese majolica tiles, which became scarce during the war, have not been produced in Japan since the end of World War II, and their quantity has hardly increased since the end of the war to the present day due to the discontinuation of production in Japan. This is thought to be the reason for the “small amount of Japanese

majolica tiles existing in Japan.

#### 4.2.3.2 Historical Background and Building Conservation

Next, let us consider the reasons why many Japanese majolica tile paintings have survived in Taiwan. After the Japanese colonial period ended in Taiwan, “de-Japanization” was promoted in various areas. Although buildings were considered a “national disgrace” and were often targeted for elimination, many buildings remained in use as government facilities. As a result, many Japanese buildings from the era remain in Taiwan. In addition, it has been pointed out that the Japanese colonial buildings were part of daily life because they were used daily and were separate from Japanese buildings (Lin, 2016). The point that they were a part of daily life may be more applicable to Japanese majolica tiles, which were used as an alternative to traditional decorations and used in ordinary houses. As mentioned in the introduction, in recent years there has been a growing interest in Japanese majolica tiles in Taiwan. Movements to preserve these tiles can be considered close to the idea of preserving Taiwan’s diverse history. This historical background, and the fact that the buildings remain intact, may be the reason for the large number of Japanese majolica tiles in existence in Taiwan.

However, like Japan, Taiwan also experienced wartime, and modern buildings have been destroyed one after another in the name of urban development. Another reason for the fact that there is such a large difference in the amount of tiles in existence in both countries is also presumably due to the relatively small number of tiles actually used in Japan.

### 5. Discussion and Conclusion

This paper has discussed the connection between “Japanese majolica tiles” in modern Japan and Japanese colonial Taiwan, and the differences in the way tiles were used during these periods from both Japanese and Taiwanese perspectives. It was confirmed that these differences arise not only from modernity, but also from the influence of relationships among the building materials and lifestyle culture of the pre-modern period when tiles were introduced, and the historical background of the post-modern period.

First, the difference in the amount of surviving tiles may be because wooden buildings in Japan had a limited area to cover with tiles, while brick and concrete buildings in Taiwan had many places that could be covered with tiles. Another factor may be that many buildings containing Japanese majolica tiles in Japan were destroyed by fire during the war, and not many tiles were produced after the war ended.

Second, the following factors may explain the difference in tile preferences between Japan and Taiwan. In Japan, the demand for modern white tiles expanded due to the association between hygiene and the color white. Chinese culture is a decorative culture that always displays auspicious symbols in homes, and Japanese majolica tiles were used for this purpose in Taiwan. In Taiwan, the tiles were extremely expensive, so they had the connotation of symbols of wealth.

There are still many points yet to be explored regarding the reasons for the large differences in the types of tiles used in Japanese and Chinese buildings of the same period in Taiwan, such as sales channels. In the future, we would like to clarify how modern tile culture spread and took root in the Asian region from a broader perspective than majolica tiles alone.

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### References

- 110 Years Editorial Committee. (1989 November). *Tile Frontier:110 Years of Fujimi Tile Co* (tairu furontia fujimyaki kabushikigaisya 110 nenn shi). Japan. Fujimi Tile Co.
- Agi, K., Niimi, T., Hino, E., & Yamamoto, M. (1991). *Tile Natural History of Japan* (nihon tairu hakubutsushi). INAX Co.
- Akihiko, F. (2015). *Current Status and Issues in Tile Archaeology* (Tairukoukogaku no genjyou to kadai). Research Bulletin. *Hyogo Prefectural Museum of Archaeology*, (8), 59-74. <http://doi.org/10.24484/sitereports.128067-112718>
- Asahi newspaper. (1924.4.5).



- Asahi newspaper. (1935.3.5).
- Edited by Editorial Committee for the History of the Tile Industry in Japan (1991 January). *History of Tile Industry in Japan* (nihon no tairu kougyoushi). INAX Co.
- Editorial Committee of “Japanese Tile Culture”. (1976). *Tile Culture in Japan* (nihon no tairu bunka). Japan, Dnto Co.
- INAX Museum. (2018). *Japan-made Majolica Tiles-Trail of Inspiration* (wasei majolica tairu-akogareno Rensa). Japan. INAX.
- Itsuo, K. (1997.October). *1010*(28). Japan.
- Kang, No-His. (2015). *Vintage Tiles: Memories and Architectural Beauty of early-20-century Taiwan* (台灣老花磚的建築記憶). Taiwan.
- Ken, M., & Akihiko, F. (2019). *Archaeological Study of Japanese Tiles in Zanzibar of Tanazani* (Zanzibar ni okeru nihonsei tairu no ryutsu to riyou: tairu koukogakuteki apurouti). *Journal of Global Humanities and Social Sciences*, Nagasaki University.
- Ken, M., & Akihiko, F. (2021). Tile Dispersal Sites in the Tenmangu River, Hiroshima City: A Tile Archaeology Approach to Living History (Hiroshimashi tengayama niokeru tairu saputi:seikatsushi eno tairu koukogakuteki apurouti). *Journal of Handayama Geography and Archeology*. (in Japanese). <https://doi.org/10.34552/00002421>
- Kenji, H. (2003). *Condensing Time and Light into Ceramic: Old Tiles from Tawan and the Netherlands* (流光凝煉方寸間: 臺灣與荷蘭老磁磚展). New Taipei city Yingge Ceramics Museum. Taiwan (in Chinese and English).
- Kenji, H. (2024). *Taiwanese Tile Genealogy: Encyclopedia of Taiwanese Tile Appreciation of Eight Types of Tile* (台灣磁磚系譜學 台灣磁磚大百科・八大類磁磚鑑賞). Taiwan.
- Lin, S. (2016). Wansheng Japanese Alumni Association and Their Taiwan Alma Mater: School Memories Interwoven by Japanese Repatriates’ Homeland Remembrance and Taiwanese People’s Local Consciousness (Wangsei nihonjin dousoukai to sono Taiwan bokou-nihonjin hikiagesya no kokyou no nen to taiwanjin no kyoudoishiki ga orinasu gakkou kioku). In *Memories of Japan in Taiwan: Constructing New Images through Postwar Resumption*. Japan (Taiwan no naka no nihonkioku-sengo no ‘saikai’ ni yoru aratana imeigi no koutiku). Sangensha. pp. 253-297.
- Shiro, A. (1965 July). *Biography of Otokichi Hanya* (Hanya Otokichi den). Japan, Hirosho tile company.
- Terunobu, F., Emi, S., Motoki, S., Mari, T. (Eds.) (2022). *100 years of Japanese tiles: history of use and beauty* (nihon no tairu 100 nenn-you to bi ayumi). Japan.
- Toyoyama, A. (2016). Symbolism of Japanese tiles in interwar India (Sen Kanki Indo ni okeru nihonsei tairu no juyou to sono kigousei). *Socio-Economic History*, 82(3), 35-50. [https://doi.org/10.20624/sehs.82.3\\_193](https://doi.org/10.20624/sehs.82.3_193)

## Notes

Note 1. Maiolica ware: The name “Maiolica” comes from the fact that tin-glazed colored pottery was introduced to Italy via the Spanish island of Mallorca, and production began in Italy in the late 13th century, reaching its peak during the Renaissance.

Note 2. Bernard Palissy: The Bernard Palissy Studio produced ceramics with glazes containing lead and relief decorations on the surfaces of the pieces, which were molded directly from reptiles and other creatures, leaving behind a unique body of work.

Note 3. Dust-pressing method tiles: These tiles are made by pouring a 7% moisture base soil into a highly compacted metal mold. Compared to plastic clay tile, there is less elongation and contraction, resulting in higher dimensional accuracy and more stable quality.

Note 4. Reliefs are formed in relief in a mold. The glaze accumulates in the concave areas, creating changes in shading even in a single color, and the patterns emerge.

Note 5. Tubelining is a technique in which a flat base is outlined with string-like plaster squeezed from the narrow end of a tube. The glazes are not allowed to mix with each other.

Note 6. Plastic clay method tiles: These tiles are formed by pressing clay with approximately 20% moisture.

content into a wooden frame or unglazed vessel. The high moisture content of the raw material tends to cause shrinkage and strain during firing.

Note 7. According to “Tile Culture in Japan,” there were more than 50 tile manufacturers from the late Taisho period to 1945. (Editorial Committee of “Japanese Tile Culture”, 1976).

Note 8. The “*Biography of Otokichi Hanya (hanya otokichi den)*” which describes Hirosho Tiles, records transactions with Indian merchants, and the “Tile Frontier” layer, which describes Fujimi Tiles, records transactions with China. Both manufacturers also produced Japanese majolica tiles.

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