



Terracotta Artifacts Human Figurines from Trowulan Site An Overviewed of the Expertise of the Ornament Artisans from the Majapahit Era

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ABSTRACT

Terracotta artifacts Human Figurines at the Trowulan Site found in significant quantities have been believed to have been made by artisans from the Majapahit kingdom era (14 – 16 century). The terracotta artifacts human figurines of the people consist of a male version, a female version, children, adults, and elders that have been made in various forms, whether in figurine attitude or position, size, expression, decoration, clothing, as single object or a part of the larger ornament. The terracotta works show that the artisans did have the technique and expertise to make and produce them. A massive number of these artifacts have been found in Trowulan, giving an overview of the existence of a society that produces on small to large scale. To be able to mass-produce the terracotta product, some many ways and techniques can be applied. The discovery of the headprint artifact gives information on how terracotta figurines of people were made. Recently discovered intact printed artifacts (from head to footbed) add data related to technological methods of making and producing ornament figurines of the people. Coupled with the presence of a made-trace on the inside of the hollow figures and other attributes from the terracotta figurine, it provides a clear picture of information about how Majapahit era artisans produced those terracotta figurines of people. Using morphological approaches and observation methods, this article will discuss the technology of making and producing terracotta figurines of people from the Trowulan Site as an effort to provide an overview of the level of craftsmanship of the Majapahit era artisans, which seems to have not been researched by many.

Keywords: *Terracotta, Human Figurine, Made Technique, Majapahit Artisans*

1. INTRODUCTION

The human need to express feelings of beauty seems to be universal and has been going on for a long time. The results of cross-cultural and prehistoric research on various cultures that do not accommodate aesthetic forms and expressions. This shows that no matter how simple human life is, in between fulfilling their primary needs, they always look for opportunities to fulfill their desire to express and utilize beauty [1], [2]. Some of this desire for

beauty is manifested in the various media that humans or people make. The results of technology with even the simplest functions will be made in various shapes and as beautiful as possible. That's called creativity. Terracotta is one of the fantastic results of creativity left over from the past.

Terracotta is a processed product made from clay as their raw material, fired at a specific temperature, and shaped according to the needs and requirements of the

artisans. In terms of terminology, the term terracotta from trowulan is different from pottery, which is also a product made from fired clay. Pottery refers to clay-based products dominated by containers and everyday living/household equipment. Meanwhile, terracotta is more likely used for clay-based products that are not tools for daily living and are dominated by items that function as complements or ornaments [3]. Both pottery and terracotta are included in the earthenware type, namely for the items made from clay as their raw material and fired at temperatures ranging from 500 degrees Celsius [4], [5].

Terracotta is an equivalent word from Italian, which means "red earth" and refers to clay-based products that have been burning. These terracotta items are identified with solid clay items and are generally intended for small items such as small statues or figurines, temple miniatures, net weights, and other things [6]. Meanwhile, the term pottery is often referred to as "gerabah" which term is usually found in Central Java and East Java. "Gerabah" itself refers more to the materials and manufacturing techniques [5]

The tradition of making terracotta items in the archipelago has been going on for a long time, and one of the stands out for its terracotta products is Majapahit terracotta. The Majapahit Kingdom itself is known as one of the largest kingdoms in the Indonesian archipelago. The Majapahit Kingdom was founded in 1215 Saka or 1293 AD, marked by the collapse of Daha (Kadiri) and the success of Raden Wijaya in driving Chinese troops out of Java after being exploited by Raden Wijaya in an attempt to attack Daha and Canggal [7]. This kingdom continued to develop until its collapse, which is estimated to have occurred in the 15th Century. Experts have put forward various hypotheses regarding the time and factors causing the collapse of this kingdom. Quoted from Hasan Djafar, according to several experts, the collapse of the Majapahit kingdom was marked by the candra sengkala, which said "Sirna Ilan Kertaning Bhumi" which is interpreted as 1400 Saka / 1478 AD, which is thought to be the time of Majapahit collapse is believed to be the results of an attack by an Islamic regional coalition on the coast led by Demak as stated by Raffles based on the traditional Javanese book *Serat Kanda*. Meanwhile, W.F. Stutterheim estimated that Majapahit collapsed due to an attack from the Bhatarra ring Dahanapura in 1468 AD [8]. Meanwhile, another theory states that Majapahit collapsed around 1518 to 1521. Where this theory originates from news assumptions by Pigafetta, which says that Adipati Unus, who actually came from the Demak Kingdom, had become a mighty king in Majapahit, so Hasan Djafar assumed that in this way, the Majapahit kingdom had lost its power and collapsed around 1519 AD [8].

In the course of its long history of approximately three centuries, this kingdom has left behind many

cultural forms of clay-based goods artifacts. Some of these clay-based products are used as decoration attributes for houses in the capital city of Majapahit. Their pillars were carved into the roof of the house with decorations made of terracotta written in the *Negarakertagama* manuscript [9], [10]. However, this article focuses on terracotta human figurines originating from the Majapahit period.

2. THE RATIONALE OF THE STUDY

Terracotta artifacts from the Trowulan Site appear to have very diverse and varied shapes and decorations. Hilda Soemantri (1977) once wrote about this Majapahit Terracotta Art, which emphasizes figurine artifacts, both human and animal figurines, as well as terracotta landscapes and reliefs, with their various characteristics, with results regarding the features of people who are thought to have existed Majapahit era, as well as fauna known there [11]. Muller (1978) discusses techniques to make terracotta figurine and compare them with methods for making terracotta in India and China [12]. Yusmaini Eriawati (2006) wrote specifically about terracotta human figurines from her research at the Trowulan site in 2004 [13]. Likewise, the book about Majapahit terracotta written by Soedarmadji J.H. Damais (2012) mainly describes the forms of Majapahit terracotta, which are part of his collection, and adds several other collection artifacts without giving more details about the decoration on these objects [14]. However, these two articles will be used as essential references in writing about terracotta figurines of Majapahit era people from the Trowulan Site, looking at the data, especially some photo data of terracotta artifacts from their collection displayed in the article, which the author has never seen or found in research at the Trowulan Site.

3. METHOD

The method applied to gain knowledge about the shape, type, and decoration of terracotta artifacts found at the Trowulan Site; this research uses descriptive analysis to observe all vital attributes of the artifacts, in the form of shape, size, manufacturing techniques, decoration forms, placement and decoration techniques, as well as the most significant quantity of each shape and type of decoration on terracotta which is carried out carefully and in detail. In particular, the technique used to make terracotta human figurines will be looked at in more detail, especially the visible trace as an attribute of the method. This is directly related to the quality level of the artifact, which shows the level of skill of the terracotta figurine artisans and its quality in relation to its function as a commodity item.

4. DATA AND INTERPRETATION

4.1. Terracotta Human Figurine

The terracotta artifacts of human figurines made from baked clay found at the Trowulan Site are very significant in quantity. Thousand of artifacts, complete and intact or with only a few body parts remaining (head, body, hands, feet, etc.), were found from surveys and excavations. Research on human figurine artifacts used in the analysis to obtain knowledge about the description of the production skills of ornament artisans in the Majapahit era; this time is human figurine artifacts from the collection of the National Research Center for Archaeology which is now part of the National Research and Innovation Agency Raden Panji Soejono Science Area, the collection of the National Museum of Indonesia and the Museum of Fine Arts and Ceramic in the old city of Batavia, terracotta artifacts of human figurine from the collection of the Majapahit Museum (also known as the Majapahit Information Center or PIM) which is located in the Trowulan area, Mojokerto, and the results of 2018 research conducted by the author [15].

Terracotta artifact figurines found in significant numbers at the Trowulan Site are believed to be the work of artists from the Majapahit Period (13th – early 16 century AD). Terracotta human figurines, consisting of men, women, and children, are made in varied shapes, attitudes or positions, sizes, expressions, styles, and techniques or methods of making.

The attitudes of female figurines in a sitting position are depicted in only two ways: the first is sitting with the entire body resting on folded legs, and the second position is a cross-legged sitting position with the body upright and hands down, which shows a habit or culture that is politely depicting women's figures.

Male terracotta figurines are depicted as more varied and dynamic and also represent everyday attitudes that are not bound by rules or polite ethics, as is the case with female figurines. This can be seen in the description of the sitting posture of a man who is "hanging out", sitting with his legs folded in front. Thighs against the chest with knees facing up; one leg is also sitting with one leg crossed while the other is folded with the knee facing up. However, most male terracotta figurines are depicted sitting cross-legged politely, in a position as if they were doing yoga.

As for the standing posture, both male and female figurines are in a standard standing posture, resting on straight legs, standing upright to tilted slightly to the right or left. Generally, In figurines, the cloth or clothing worn is long and covers almost the entire leg, although, at some, it only reaches the knees, which is primarily found in male figurines.

In general, the decorations that are always found on female figurines are ornaments in the form of earrings or studs on the ears, which are described as large, either plain round or decorated; a string of necklaces depicting strings of diamond or flowers, which most likely plates of precious metal (gold), ornate bracelets on both hands,

sometimes wearing waist ornaments, two flower headscarves tucked into the ears, carrying an untied scarf, and wearing a long cloth. Susannawaty explained that there were depictions of male figures, namely images of gods, priests, nobility, and ordinary people. Usually, noble statues wear full jewelry, while men from the common people are depicted with short hair or not wearing clothes [16].

Figures that are also found in the terracotta of human figurines are figures of children. It is depicted with a facial expression that shows a child's face, with chubby cheeks, small lips, big eyes, and a small nose, with the characteristics of the body of a fat child. The parts of a child's body can be seen in the underdeveloped shoulders and the short size of his arm, which is typical of a child. Hairstyle model with a type of bun hairstyle that is still found in Javanese Society today. Unfortunately, only the head of the figure was found, and the children's body parts have not been found.



Fig. 1. The figures of children are depicted with facial features of children's faces, hair in pigtails, and curly hair.

4.2. Single Human Figurine and as a part of an Ornament

The shapes and types of terracotta figurines are made individually and as a part of ornaments or decoration. The single human figurine is an artifact depicted or made standalone. Not as a part of a relief of decorative ornament. Even if more than one person is displayed, it is more about what they are carrying because some human figurines were also found carrying a child.

As for human figurines that are part of ornaments, these are figurines made as part of the ornament (Vases, Pillar Casing, landscape relief, etc.) attached to one part of the ornaments. It shows more varied shapes according to the ornament and the image shown in the decoration.

Based on body shapes, they can be divided into two categories:

1. The shape is round, like a bell, and has a cavity in the middle.



Fig. 2. Figurine with a bell-like cavity

2. The body is slim, solid, and massive, with no cavity below.



Fig. 3. Figurine with a slim and massive shape

Based on the description of its shapes, material, and surface condition, the human figurine can also be divided into two categories, namely:

1) Fine Terracotta, Detailed and Proportional



Fig. 4. Fine terracotta figurine in a sitting position

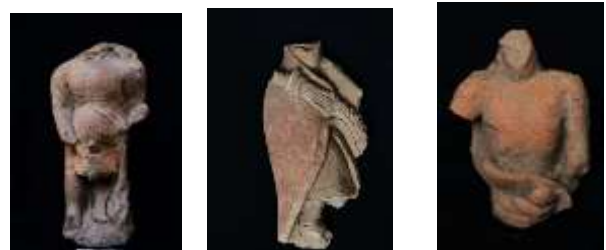


Fig. 5. Fine terracotta figurine in standing position

2) Rough Terracotta

The rough terracotta figurines category has a rough surface, and the body parts are not proportional, with depictions not detailed. There are also those made with a relatively smooth surface and quite detailed body parts and decorations, but the body parts look disproportionate.

Rough Surface with Proportional Limbs



Fig. 6. Rough terracotta figurine in a sitting position

Rough Surface and Disproportionate Body Parts



Fig. 7. Rough figurine with disproportionate shape in sitting position

Figurines with Detailed Characteristic but Disproportionate Features



Fig. 8. Disproportionate figurine with detailed features in a sitting position



Fig. 9. Disproportionate figurine in the standing position

Figurine as a Part of an Ornament



Fig. 10. Figurine as a part of vase ornaments, landscapes, and more

Figurines holding objects



Fig. 11. Figurines carrying various musical instruments



Fig. 12. Human figurine carrying a child



Fig. 13. Human figurines carrying items or tools

4.3. Made Technology of Human Figurine

Technical data used to obtain made technology materials mainly was obtained from human figurine artifacts from the Majapahit Museum (PIM) collection, The Indonesian National Museum collection, The Fine Arts and Ceramics Museum Collection – Jakarta, and the collection of the National Research Center for Archaeology (now called BRIN R.P. Soejono).

In the research carried out on Majapahit terracotta fragments, a terracotta mould of a human figurine was found made from clay as a terracotta as well. Similar mould prints were also found on the Trowulan Site. Apart from a complete mould of a human figurine's entire body, several moulds were also found that were only used to print the figurine's head. These two types of terracotta figurine mould prints are now in the PIM (Majapahit Information Center) collection in Trowulan.

Analyzed terracotta figurine artifacts showing the characteristics of their manufacturing techniques. Various types of human figurines offer several methods for making using a few techniques, namely:

1. Mould Technique

Another technique that needs attention is the mould technique (printing technique). Until now, many casts of human figurines have been found, but the number of human figurine artifacts made using this moulding technique is quite significant. Several human figurines using mould technique, namely:

- a) A moulding technique that produces human figurines with rounded and hollow or bell-like body shapes. From the cavity, you can see the remains of finger pressure on the dough to be moulded. Terracotta figurines use this technique to produce figures in standing or sitting positions.



Fig. 14. Moulding technique that produces human figurines whose bodies are shaped and hollow like bells



Fig. 15. The molding technique produces body shapes well and is done proportionally, even though one is already fragmented.

- b) Proportional shape. This second technique also creates a cavity in the middle of the body, but the mold produces body shapes well and is done smoothly and more professionally.
- c) A molding technique that produces flat body shapes, not rounded like the first technique. Because it is only printed on one side; usually the back side is not detailed, leaving a print mark. However, there are also things that are done perfectly on the back so that it is in complete proportion with the clothes worn.



Fig. 16. Terracotta molded artifacts of human figurines from the Trowulan Site. The picture on the right of a moulded artifact from the Leeuwarde Museum Collection is a significant example of print.



Fig. 17. The human figurines are made using a flat moulding technique, which produces detailed body parts, and the print marks are visible on the back.

- d) Positions characterize many heads part of figurines created by these moulds. A unique mould of the head of a human figurine will make a similar face, especially the forehead, eyebrow lines, dim-looking eyes and chubby cheeks. However, many people end up enhancing these faces by adding and polishing the faces of the human figurine to get the face wanted. Also, add accessories or ornaments, such as headgear, earrings, etc. The heads have long necks and are tapered at the end. This is done to attach or unite the head and body.

Indirectly, this also suggests the existence of moulds that only produce the body parts. Several figurines of people without heads, many of which display holes in their neck region. It is highly likely that these figurines of people were made by moulding only their bodies and later joined with separately moulded heads.



Fig. 18 Terracotta artefacts of moulded heads and terracotta head artefacts produced from moulds (as shown in the image above), as well as head artefacts from moulds, among which some still exhibit the presence of elongated parts inserted into the upper body of figurines



Fig. 19 Terracotta figurine fragments that only preserve the upper part of the body yet exhibit a small hole in the neck region, which is a part of the neck and the technique of attaching a separately moulded head.

2. Hand-Made Technique

The hand-made technique involves shaping figurines of people directly from the mixture (clay) to achieve the desired form. There are two methods for this hand-formed technique, namely:

- a) The coiling technique involves creating coils of predetermined sizes to form the body, body parts

(hands), and head. Then, these coils are shaped and joined together for each respective part using a pinching method. Typically, figurines of people created with this technique are seated, ensuring stability. This crafting technique is called the coil and pinch method [11]. The final touches include adding ornamentation to figurines of people wearing ornaments, detailing the fingers, adding items if they are depicted as carrying something, and smoothing the entire surface.



Fig. 20 The technique for making terracotta of human figurines is by making the dough into coils to form arms and bodies, which are flattened to get the desired shape.

- b) The second technique is the sculpture-carved method, which involves creating figurines of people by carving the terracotta mixture (clay) that will be shaped. In this case, a solid, somewhat hard, and moist clay mixture can be formed into specific-sized blocks, allowing them to be carved to achieve the desired item's model. This second technique is commonly used for terracotta figurines of people to attain proportional, detailed, and finely worked appearances. This includes detailed work on body parts (neck, hands, fingers, feet, and other body parts), clothing, and ornaments (headgear, earrings, necklaces, hands, clothing, and sash or scarf) worn. In addition to the body and ornamented parts, items carried and the seating base are finely carved to achieve the intended purpose. Besides standalone figurines, many are placed in specific ornaments as individual pieces or parts of an ornament. These may include human figures put on the bodies of vases, pillar sheaths, landscape depictions, etc. Due to its nature, this technique yields a broader range of carving results.



Fig. 21 Terracotta human figurines are made using the sculpture carving technique (Sculpture carved method),

producing sculpted forms of humans that are as desired, proportional and smooth.

Looking at the shapes of the produced terracotta items, it can be discerned that the artisans creating terracotta items using the sculpture carving technique are skilled sculptors. In their carving process, they don't just carve human forms but also other ornaments, such as vines, flowers, landscapes, etc.

3. Hand-Made combination technique

The combination technique is a method applied to terracotta types to create a unified piece. It is used for cast items, where human figurines are designed first and then placed or attached to the main work, followed by carving and refining, typically while it is still moist. Artisans with advanced skills generally employ these techniques, resulting in items of generally good quality.



Fig. 22 The technique of making terracotta human figurines that do not stand alone and are integrated with other ornaments or decorations uses a combined method of hand shaping, molding, and chiseling. Which is done by artisans with an extraordinary level of expertise

4.4. Skills of Majapahit Terracotta Figurine Artisans

Terracotta almost covers the entire surface and land of the Trowulan Cultural Heritage Area, believed to be the capital of the Majapahit Kingdom. The land of Majapahit and the technological knowledge of its society are closely integrated with terracotta. Nearly all everyday items related to profane and sacred aspects of life were fulfilled through the technology of processing its soil into terracotta. Therefore, the people of Majapahit not only utilized terracotta for necessities but also to fulfill their artistic desires [17]. Furthermore, according to an archaeologist, Sumijati Atmosudiro, the peak of terracotta utilization for all forms of items during the Classical period occurred during the heyday of the Majapahit Kingdom (13th-15th Century).

"The technological knowledge of crafting terracotta figurines from fired clay was well-mastered by the craftsmen, and, of course, by the users of such items as needed, whether individual figurines of people or as part of ornaments (vases, pillar sheaths, etc.).

The findings of terracotta figurine artifacts from the Trowulan site illustrate that terracotta figurines are crafted with great finesse and proportion, some with rough forms but proportional bodies, and others adorned extensively. For example, with head ornaments, earrings or hoops, necklaces, and bracelets, wearing clothes and clothes and scarves shaped in various forms and styles to create a stylish and beautiful appearance. Especially terracotta women are often depicted sitting with their hands folded, resting on their thighs, giving them a graceful appearance.

The data presented indicates the specialization and skill of terracotta figurine makers, whether they were placed individually or as part of vase ornaments, pillar sheaths, landscapes, and others.

Especially among terracotta artisans who incorporated figurines of people into their creations. They possessed skills in making vases, pillar sheaths, landscapes, and the like, as well as the skill of crafting terracotta figures of people and placing them appropriately. These human figurines could be created using both casting methods and direct carving on the medium.

Several types of terracotta figurines from the Majapahit era show that terracotta figurines of people likely had a significant role. Moreover, considering their various forms and substantial quantity strengthens the presumption.

Considering the abundance of terracotta figurine artifacts found at the Trowulan site, in addition to illustrating their significant role, there were also a considerable number of artisans who produced these items to meet the demand for terracotta figurines among the people of the Majapahit during that time.

Another insight obtained from the data concerns the types, forms, sizes, types, and technology used to produce these items, indicating the levels of quality of these terracotta figurine artifacts. The existence of terracotta figurines created with proportional forms, meticulous detailing in the rendering of body parts, and the addition of ornaments (headgear, earrings, necklaces, arms, clothing, scarves, and cloth) suggest that the users or potentially the patrons were from a particular class, be it the ruling families or the middle-class society.

The presence of terracotta figurines with varying qualities indicates that terracotta figurines of people were not only favored by a specific class of society but also by the middle class and even ordinary people. This is demonstrated by the existence of terracotta figures created with moderate quality (smooth but not proportional in body and limb formation, or made with a surface that is not smooth, sometimes with proportional body parts and ornaments worn, but the craftsmanship lacks detail)

4.5. Terracotta Human Figurine as Production Items

Based on the types and forms of terracotta figurines of people found at the Trowulan site, some of which are now part of museum collections and others stored as research artifacts, it is evident that these terracotta figurine artifacts had roles and uses during the Majapahit era. Data shows the existence of specialization and skills among terracotta figurine makers, whether they were placed individually or as part of vase ornaments, pillar sheaths, landscapes, and more. Especially among artisans who incorporated figurines of people into their creations, they possessed skills in making vases, pillar sheaths, landscapes, and the like, as well as the skill of crafting terracotta figures of people and placing them appropriately.

Considering their significant quantity, diversity, and varying qualities, which signify different user classes, it is apparent that terracotta figurine artifacts were mass-produced. Some were created based on contemporary

trends, while others were made to order, considering the various forms of ornaments combined with figurines of people (vase ornaments, pillar sheaths, landscapes, etc.). For instance, figurines of people carrying musical instruments or children indicate that terracotta figurines were products intended for sale. The discovery of artifact molds provides increasingly concrete evidence that these artifacts were produced for commercial purposes in the economic context during the Majapahit era.

It needs to be explained here why many terracotta artifacts found no longer have heads or the findings consist only of the head portion without the body. Muller states that this is similar to a cultural tradition in Thailand, which involves a ceremony of decapitating terracotta figurines as a means of averting calamity. This practice also occurred during the Majapahit era in the past [12].

Based on the data of terracotta figurine artifacts found at the Trowulan site, it is observed that in the neck area of the head, there is a straight and narrow stem found at the bottom. Additionally, in the body part of the figurine where the neck is situated, there is a hole that is very likely the point where the neck and head of the figurine were attached. Therefore, it is highly probable that the separation or breakage of the head and body of the figurine occurred due to the manufacturing technology, as joining two parts that were initially separate made those sections weak and very susceptible to breaking, snapping, and detachment.

This is also evident in terracotta figurines of people made in China, where, when discovered, most of them had separate heads and bodies, leaving a gap in the area between the shoulders where the neck is situated (see figure no. 23). Consequently, this challenges Muller's notion of a tradition of decapitation during the Majapahit era. This tradition is not documented in textual data if it indeed exists.



Fig. 23. The terracotta figurine of a person from a 17th-century Chinese shipwreck reveals that the head portion is missing, leaving a hollow imprint of its original placement.

5. CONCLUSION

Terracotta human figurines are also the most common form of terracotta and have become a very popular feature of Majapahit terracotta. This can be seen from the significant number of findings, which are almost always discovered at settlement sites in Trowulan. The

shape and size, various forms and arrangements of its ornaments, the techniques for creating and placing the decorations, and the function of the ornaments demonstrate the existence of levels of use. Not only among the common people, the presence of a specific technique is evident. Delicate with proportional forms, ornaments or decorations are intricately and beautifully created with finely detailed carvings added to the surface of the terracotta figures. This can indicate differences in social status and status levels. Terracotta figurines of people were possibly commissioned and specially crafted for individuals of high standing during the Majapahit era.

Different social statuses of the users are evident, showing that the item was made for the benefit of individuals with middle to upper social class. It was likely used by officials, nobility, and even kings to embellish their residences or surroundings. Its particular form and relatively large size convey social status.

The skills and expertise of Majapahit terracotta artisans, various forms, types of ornamentation, and their techniques display a high level of artistry, delicacy, and even complexity, executed with seriousness. Decorated terracotta vessels also demonstrate high levels of skill in expressing artistic diversity.

Terracotta figurines of people, as well as the artisans and traders, were all owned by the Majapahit society in the past. Furthermore, it can be said that there was already an industry at that time to meet the needs of the Majapahit society for decorative art or ornaments, whether for practical or specific purposes. This is evidenced by the numerous archaeological remains, numbering in the thousands, found at the Trowulan site.

What is not yet known about the terracotta figurine technology during the Majapahit era is related to the firing process, which undoubtedly involves the selection of materials and the quality or durability of the clay. From the various forms and types of these terracotta artefacts, whether in standalone figures or as parts of different ornaments, it can be interpreted that their sources or functions were very likely various. To confirm this interpretation, laboratory testing is required to determine the clay composition and its mix, as well as the firing level with the quality and skill of the artisans, as well as the market value at that time. This is a consideration for further research.

REFERENCE

- [1] B. A. Badcock, *The Reversible World: Symbolic Inversion in Art and Society (Symbol, Myth, and Ritual)*. New York: Cornell University Press, 1978.
- [2] S. Budhisantoso, *Kesenian dan Nilai-Nilai Budaya dalam Analisis Kebudayaan*. Jakarta: Departemen Pendidikan dan Kebudayaan, 1982.
- [3] Y. Eriawati, "Ragam Hias Jambangan Terakota Situs Trowulan: Gambaran Seni Kriya Majapahit," in *Menggamit Minat Ragam Hias Nusantara*, B. Sulistyanto, Ed., Jakarta: Pusat Penelitian Arkeologi Nasional Bekerjasama dengan Yayasan Pustaka Obor Indonesia, 2020, pp. 139–164.
- [4] P. M. Rice, *Pottery Analysis, A Sourcebook*. Chicago, London: The University of Chicago Press, 1987.
- [5] W. R. Wahyudi, *Tembikar Upacara di Candi-Candi Jawa Tengah Abad ke 8-10*. Jakarta: Wedatama Widya Sastra, 2012.
- [6] N. Rangkuti, I. H. Pojoh, and Harkatiningsih, *Buku Panduan Analisis Keramik*. Jakarta: Departemen Kebudayaan dan Pariwisata, 2008.
- [7] M. Djoened, Poesponegoro, and N. Notosusanto, *Sejarah Nasional Indonesia Jilid 2: Zaman Kuno*, Edisi Pemutakhiran., vol. 2. Jakarta: Balai Pustaka, 2008.
- [8] H. Djafar, *Masa Akhir Majapahit Girindrawarddhana & Masalahnya*. Depok: Komunitas Bambu, 2012.
- [9] S. Robson, *Desawarnana (Nagarakrtagama)*. Leiden: KITLV Press, 1995.
- [10] T. G. T. Pigeud, *Java in the 14th Century*. The Hague: Martinus Nijhoff, 1960.
- [11] H. Soemantri, *Majapahit Terracotta Art*. Jakarta: Ceramic Society of Indonesia, 1997.
- [12] H. R. A. Muller, *Javanese Terracottas: Terra Incognita*. Lochem (The Netherlands): Uitgeversmaatschappij de Tijdstroom B.V, 1978.
- [13] Y. Eriawati, "Figurin Terakota," in *Majapahit, Trowulan*, Jakarta: Indonesian Heritage.
- [14] S. J. H. Damais, *Majapahit Terracotta*. Jakarta: BAB Publishing Indonesia, 2012.
- [15] Y. Eriawati and al et, "Penelitian Arkeologi mengenai Peradaban Majapahit di Wilayah Kabupaten Mojokerto, Provinsi Jawa Timur: Permukiman dan Etnis di Majapahit Gambaran Kebhinnekaan Peradaban Majapahit Masa Lalu," Jakarta, 2018.
- [16] A. Susannawaty, "Kajian Bentuk dan Makna Simbolik Figurin Gerabah Majapahit (Periode Hayam Wuruk 1350-1389 M)," *ITB Journal of Visual Art and Design*, vol. 2, no. 2, pp. 123–140, 2008, doi: 10.5614/itbj.vad.2008.2.2.2.
- [17] W. D. S. R. Ramelan and I. H. Pojoh, "Terakota Majapahit: Tanah, Teknologi, Seni, dan Kreativitas," in *Inspirasi Majapahit*, D. A. Tanudirjo, Ed., Yogyakarta: Yayasan Arsari Djojohadikusumo Bekerjasama dengan Universitas Indonesia, Universitas Gadjah Mada, Universitas Udayana dan Universitas Hasanuddin, 2014.

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