



## Aesthetics of *Jaran Ukir* Decorating *Tempel* Technique of Kasongan Village Pottery

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### Abstract

This research aims to create a new creation carved with the characteristic of *tempel* technique decoration, which is the strength of the local genius of Kasongan Village pottery that meets the quality standards of raw materials and modern design. Other regions do not own the *tempel* technique decoration that characterizes Kasongan Village pottery. However, its existence is starting to recede, with poor regeneration, and is no longer to the needs of the times. Direct hand-building pottery products with *tempel* technique decorations are complicated, difficult, and old-fashioned. The younger generation prefers to make printed pottery products that are considered more practical to be created with fabricated paint finishing according to global tastes while ignoring the local identity of Kasongan Village pottery characteristics. This research uses aesthetic methods with a practice-based research approach carried out with the stages of literature research, empiric study, visual research, and practice. The aesthetics of the new Kasongan carving, with the application of the *tempel* decoration technique, impact the preservation of sustainable local artistic creations. Creating a new carving with the *tempel* technique decoration in Kasongan Village is expected to be an educational tool for learning about the character of the nation's next generation from an environmental and cultural perspective. Carving with *tempel* technique decoration is an entity that must be maintained, preserved, and developed according to the global community's needs.

## 1. INTRODUCTION

Kasongan Village, located in Bantul Regency, Yogyakarta, is a creative village that produces clay products that are known worldwide. Its pottery products are created using traditional techniques that can be consumed by people throughout Indonesia and even abroad. The pottery products created by the craftsmen of Kasongan Village consist of products for household needs (cooking utensils), buildings, piggy banks, and the needs of interior and exterior decoration elements. The uniqueness of Kasongan Village's pottery production has become a cultural heritage of the Indonesian nation that must be maintained and preserved with evidence of recognition from the Ministry of Law and Human Rights in the form of a Geographical Indication Certificate received by the Kasongan community through the Regent of Bantul on April 30, 2024. This Geographical Indication Certificate is expected to increase the spirit of traditional craftsmen to continue developing pottery products that have the characteristics of being able to compete in the global arena.

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*Jaran ukir*, with *tempel* technique decoration, has become one of the most popular products, with its unique characteristics becoming the iconization of pottery in Kasongan Village. This product was favored by many tourists, both from within the country and abroad, in the 1980s [1]. The decoration of the *tempel* technique is obtained from the creation of direct hand formation, namely forming a twist of clay between the index finger and thumb, then attached to the pottery body as decoration [2, p. 8]. The pasting technique decorates the pottery body with a beauty value. Beauty in works of art is present in observing and enjoying something that appears. As stated by Dharsono, aesthetic facts are facts of the soul; works of art, however apparent, are not in the original observation but are present in observation and enjoyment. Thus, the measure of aesthetics is not in the initial assumption but is a very long process of interpretation from the observation stage with experiences of seeing and feeling the presence of art and beauty itself [3, p. 9].

The development of *tempel* technique decoration is used in various functional products as accessories to a product, not only in carved products. However, its existence began to fade when Kasongan pottery products were required to meet the standards of precise shape, fast, mass with the same size produced by printing techniques. The presence of this printing technique caused the craftsmen to abandon the production of hand-building pottery with *tempel* technique decoration. The overflowing demand for orders abroad in Kasongan caused the craftsmen to switch to the printing technique. The printing technique is considered practical and more profitable than the direct forming technique with the decoration of the *tempel* technique, which is considered *jlimet*, *ngremit*, and complex. The research data results show that one person's printed pottery products in the form of 30 cm pots can produce 5-10 products in 1 day in contrast to hand-carved pots that can produce 3-6 products per day of the same type. The printing technique does not apply the *tempel* technique of decoration. However, it prioritizes the right shape and size according to consumer demands as a product that functions as a container at a lower price. Meanwhile, pottery products decorated with pasting techniques function as home furnishing products that are more expensive but have the disadvantage of unstable size.

Kasongan pottery is now experiencing a critical period of raw materials because the clay raw material excavation site in Berjo Godean Hamlet will be closed. This place cannot be dug shortly because it has become a toll road connecting Yogyakarta, Solo, and Semarang. Some new clay raw material excavation places began to open in Mangunan and Kulon Progo, but the quality of clay is not as good as Berjo Hamlet's. This is a significant obstacle to meeting the standards of raw clay materials that are strong against climate change in a non-tropical nature. Improving the quality of raw materials classified as low has not been followed up by craftsmen due to limited knowledge, and they resigned to keep producing with local-national market segmentation.

Along with the low quality of clay as the primary raw material for pottery making, the existence of Kasongan pottery products with hand-building techniques and decorating *tempel* techniques began to fade. Craftsmen more often use molding techniques with fabricated paint finishing decorations. The Bantul earthquake in 2006 greatly affected the community's mindset, eventually changing the pottery production process in Kasongan Village. The molding technique was the right solution to make new creations of modern Kasongan pottery, even though it had to leave the *tempel* technique's decoration due to the community's economic needs. The decoration of the *tempel* technique was degraded by the desire of consumers who wanted Kasongan products to be made with decorations in the style of Chinese ceramic products that were finished like glaze, namely with fabricated paint finishing. This is a concern because if this continues, the *tempel* technique decoration, which is the distinctive decoration of Kasongan Village and can even be said to be the hallmark of Indonesian pottery ornamentation, will disappear, leaving only stories for future generations.

The urgency of the research is how to make new work creations through carved products with patch technique decorations as a fulfillment of modern multifunctional home furnishing products according to the tastes of the global community. How are the process and results of experiments on clay raw materials and high-temperature firing finishing that can be applied at climatic temperatures below 15°C? The existence of the quality of Kasongan earthenware clay material is considered not to meet export quality standards, so further research needs to be done to be able to overcome the problem of the quality of raw materials that are fragile when experiencing seasonal changes in cold temperatures below 15°C. carving decoration *tempel* technique is not only a technique in pottery production but is believed to contain philosophical meaning containing noble character learning for the next generation. The aesthetic superiority of local culture manifested in the new product of carving with the *tempel* technique will remain the hallmark and iconization of the product from the Kasongan Village pottery center that can provide the main differentiator with pottery products from other areas, such as pottery in Pundong, Banjarnegara, Purwakarta, and Bayat. It also has an advantage over pottery producers from countries like Vietnam, Thailand, and Australia, who do not apply *tempel* technique decoration to their products.

## 2. RESEARCH METHODOLOGY

This research is practice-based and uses an aesthetic approach. Malins, Ure, and Gray explain the concept of practice-based research as research that starts from the activity of practice itself. This research is particularly relevant to creators because the new knowledge generated can be directly applied to related fields, allowing researchers to use their skills and knowledge on the subject [4]. Gray also details some specific methods used in practice-based research, including art-making, observation, drawing, note-taking, experimentation with materials, concept mapping, use of metaphors, and various social science methods such as case studies, participant observation, interviews, multidimensional analysis, and evaluative techniques such as semantic distinction and multiple sorting. In addition, three important components in the knowledge production cycle in art are the Artist, the Artwork, and the Audience, which interrelate and influence each other in generating, exploring, and creating new value from artworks and discovering meaning through appreciation.

The practice-based research creation method has several stages, namely: a) Literature Research: Literature study from various sources such as books, research journals, magazines, internet, and newspapers related to the object of research study; b) Empiric Study: In-depth approach to Kasongan carving decorating *tempel* technique as the object of study; c) Visual Research: Visual observation of the object of creation and analysis of works related to *tempel* technique decoration and d) Practice: Implementation of the collected data through the process of realization, such as sketching, experimentation of materials, techniques, shapes, application of *tempel* art decoration, drying, firing, and high temperature finishing using oxide glaze and pigments.

The aesthetic method in creating artwork involves holistically organizing and arranging art elements. This involves understanding the concepts of wholeness, prominence, and balance as outlined by A.M.M Djelantik [5, p. 17]. These concepts become the core of the art creation process, which leads to the application of aesthetic values such as line, shape, color, and texture in works of art. In addition, applying these aesthetic values also considers the selection of appropriate materials to reflect the concept underlying the idea of creating a *jaran ukir* with Kasongan *tempel* technique decoration. The weakness of the artisan community in creating new creations of aesthetic products according to the demands of the global community, namely home furnishing products with clay raw materials that can be applied in various climates, is something that the Kasongan Village artisan community has not solved.

### 3. RESULTS AND DISCUSSION

Home furnishing covers many items, including furniture, curtains, lamps, carpets, partitions, wardrobe items, mirrors, artwork, textiles, potted plants, computers, and electronic devices. These multifunctional products are designed to meet users' quality, comfort, and safety standards. In addition to aesthetic aspects, functional value is a significant concern, so each product can function as a decorative element while meeting high-quality standards. Home furnishing products are designed to match the house's design theme and the user's needs. The shape of the furniture design reflects the selection of materials used. This material is an important element in the furniture design process because it plays a role in determining the product's construction strength, aesthetics, and final form [6]. To enter the global home furnishing market, *jaran ukir*, with its traditional style decoration technique, must meet the quality standards of raw materials. It is a multifunctional product with interior and aesthetic elements appropriate for global market tastes.

*Jaran ukir* aesthetics with *tempel* technique decoration was chosen for creating new creations because of its strong historiographic elements and symbolic meanings so that the *jaran* (Javanese language) can represent strong cultural values in the life of the Kasongan community. This work was created from a creative representation of the historical depiction of Prince Diponegoro's struggle against Dutch colonization [7, p. 486]. The *jaran* symbolizes the hero's toughness in fighting. Prince Diponegoro is depicted as an adept *jaranman*, like the *jaran* symbol of the Bajau people of Kota Belud, who are adept at riding horses [8, pp. 203-219].

Based on information from the Kasongan community, the first carved creations were made by a creative artist named Ki Jembuk in the 1930s. Carved creations were then developed with various versions by the Kasongan community applying *tempel* technique decorations, although still in simple forms and primarily functioned as piggy banks. So, in this era, Kasongan Village pottery products were known as piggy banks, namely products with functions for saving coins [9]. Piggy banks then developed with various shapes such as chickens, frogs, elephants, and other cute animal shapes. Further, *jaran ukir* creations were developed by artist Sapto Hudoyo in the 1980s using baskets (*krondho*). Visualizing the *krondho ukir* form is more elegant and functions as decorative art for interior design. People who could not make *krondho ukir* with good quality made imitations by creating *koden* [10]. The *jaran ukir* visualization in this era was made in three different forms: standing without a basket (*krondho*), standing with a basket (*krondho*), and sitting. In this era, it was created with more varied creations with the primary function as an interior decorative element with complete *tempel* technique decorations almost filling that body. This creation experienced a peak of glory, and there has never been an effort to change new creations again, causing consumers to experience boredom.

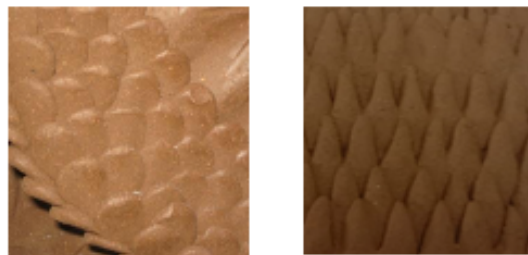


**Figure 1.** Carved imitation (*koden*) that functions as a piggy bank with monotonous creations.  
[Source: Author's document, 2023]



**Figure 2.** Carved tempel technique decorations that became the iconization of Kasongan Village pottery and there are no new creations yet.

[Source: [1]]



**Figure 3.** The decoration of the “bunder scales” and “oval scales” tempel technique means strong determination, courage, order, and mutual strength.

[Source: Author's Document, 2024]



**Figure 4.** The decoration of the paste technique “ukel biasa” and “ukel tegak” has the meaning of softness, flexibility, respect, dynamism, center on the heart, and firmness.

[Source: Arif Suharson, 2024]

Creating *jaran ukir* creations with different visualizations adapted to the needs of the global market referring to the needs of home furnishing is absolutely necessary. New *jaran ukir* creations with *tempel* technique decorations must be studied in practical and experimental research to meet quality standards. The creation of new *jaran ukir* product creations also has reasons as a fulfillment of the needs of the community who also want imitations of past carvings into new forms that leave religious values as products to meet aesthetic needs with functions for tourist memories at more affordable prices for certain groups of society. Soerdarsono revealed that in tourism activities, there will be characteristics of the products from the area that become tourist destinations as follows: 1) making imitation products of the original work, 2) made in a more diminutive/miniature form or packaged briefly and compactly, 3) religious, sacred, magical and symbolic values begin to be abandoned by the tastes of the times, 4) made varied with diversification of other forms, and 5) the price is made cheaper than the original [11, p. 92].

Kasongan Village pottery craftsmen in their existence to meet economic needs then make various variations in shape and size, both from carved products or other products that attract the attention of tourists. The goal is to make it more practical and more straightforward for tourists to take it home. The objects made are imitations (repetitions)



of products made before or currently selling in the market [12, p. 71]. Commercialization can encourage economic motivation to produce creative products to meet tourism needs [13, pp. 254-260].

The continuity and change of pottery craftsmanship in Kasongan Village are inseparable from the actors and communities that support it, including product makers/craftsmen, entrepreneurs, artists, and craftsmen. Craftsmen diligently and persistently pursue their profession, which relies on the skills inherited from their ancestors, while artists and craftsmen strive to develop creative and innovative works of art. The progress of Kasongan Village, part of Yogyakarta's tourist destination, has made it an advanced and characteristic tourist village with adequate support facilities. Kasongan Village's pottery production process is unique because it is a tourist attraction, and the pottery products can become the local community's economic driving sector. Tourism activities must be supported by excellent facilities and services provided by the government, tourism observers (entrepreneurs), and tourism awareness groups in the village.

This is in line with the government program with the issuance of Law number 10 of 2009 and looking at global tourism trends, both local and foreign tourists in the post-pandemic era who want different tours. Tourists do not just enjoy the beauty of a tourist attraction. Still, tourists want cultural experiences, contribute to the community's social life, and actively preserve the local cultural environment. The involvement of tourists in the cultural activities of a community is an important part of modern tourism, enhancing socio-cultural awareness further and shaping personality character in rapid modernization. This modern tourism activity also has a concrete impact on the economic welfare of local communities (Global Report on the Transformative Power of Tourism, UNWTO, 2016) [14, pp. 8-17].

The existence of *jaran ukir* with *tempel* technique decoration in Kasongan Village until the end of 2000 has not changed, or there has been no new creation [15]. This must be a concern and further study to make carving an idea for new creations so that this iconization is not lost in time and only as a memory [1, p. 2]. According to buyers from Europe through interviews, Kasongan pottery products are in great demand in the global market with the characteristic decoration of the *tempel* technique that is by the portion that is not too much or excessive so that it looks ornamental, attractive, and has character. The quality standard of Kasongan raw materials is still not good because they experience fragility and breaks when exposed to temperatures below 15 ° C. Kasongan pottery actors must consider this to diversify the form, which is more aesthetic, leading to multi-functional home furnishing products, with an increase in the quality of raw materials according to export standards.

Bambang Sugiarto stated that art with various works produced from the creative innovations of creators never dies. Because art is an inherent part of the evolutionary journey that cannot be separated from the cultural life of the community that supports the culture, it can be interpreted that human life in this world is indeed made by humans who are always made art/art or "art" is constantly created. Man is not a purely natural creature. He prefers to live in the world of imagination. As his imagination changes, so do his values, philosophy, knowledge, ways of relating, and ways of living. Imagination and taste make his reasoning always create and never stop [16].

It must be recognized that the artistic process will change over time. These changes are usually influenced by two important factors, namely internal and external factors. Internal factors are influenced by the desire of the cultural buffer community to continue to process and learn to improve themselves from the habits of experience that already exist or are experienced by each person. External factors are influenced by the environment that comes from outside the cultural buffer community in different geographical locations starting to

enter or the community itself, which brings influence from outside the results of interaction with outside cultures into the culture of the original community.

In general, the art process can strengthen the bonds of solidarity in society, both personally and communally, because with the bonds of solidarity in society, little by little, the distinctiveness of the arts that exist in the community is formed [17, pp. 57-62]. This is also the case in the Kasongan Village pottery center, which has local cultural characteristics of traditional decoration techniques that are inherent in characterizing pottery products in contrast to other pottery products that have given birth to various product creations with the application of *tempel* techniques.

While various products have been created in Kasongan, products with the idea of horses are relatively the best-selling products and have become the iconization of the village. The figure of national hero Prince Diponegoro in the 1825-1830 Javanese war, which is the historical background of Kasongan Village, is still believed to be the power of storytelling that can revive the spirit of art creation in the community [18, pp. 193-223].

Artworks in the form of *tempel* technique decorations are part of the arts and are one of the cultural activities of the supporting community. The characteristic *tempel* technique decoration is a tangible form of livelihood for the Kasongan Village communal community as a community supporting its local art culture, even though today there is a decline in regeneration and creation due to the times that demand changes in all fields.

Presenting new creations of traditional art that have distinctive characteristics must pay attention to four main criteria in the presentation of works of art, namely, the attractiveness of beauty, skill, manufacturing techniques, and materials used, as well as authenticity based on customs and culture that have relevance to the past and present [19]. As a form of public concern, the community considers the decoration of the *tempel* technique as an important cultural asset that must continue to be preserved and developed. Thus, creating *jaran ukir* with new creations applying *tempel* technique decoration was carried out with modern aesthetic considerations. Improving the quality of materials with strong production techniques and not releasing the relevance to the culture of the Kasongan community to align with the community's design trends in its era.

The trend of home furnishing design in the current era is a reference for buyers' creation of new Kasongan pottery products to give pottery products an advantage. Shape creations are highlighted by presenting applications of technological advances that are certain to leave *tempel* art decorations. Based on the consumers' needs, a study is needed to make new creations that meet quality standards and diversify modern forms so global consumers can still accept *tempel* art decorations.

Works of art created and delivered by the community must contain new ideas presented in a beautiful, unique, and interesting visual form. Artworks are considered to have aesthetic value if they also contain the intent and purpose of messages for the community [5, p. 61]. This is done in the research to support Kasongan Village pottery to continue to have the characteristics of local genius products with patch technique decorations not owned by other regions into a cultural wealth that can be proud of. *Jaran ukir* with patch technique decorations becomes a creative representation of local genius values and sustainability for connoisseurs of art or mainly in the regeneration of patch technique in Kasongan Village.

The involvement of creative people (artists, culturists, academics) is highly expected to create new designs for its creations with *tempel* technique decorations tailored to society's needs in the current era. The creation of carvings in this study was carried out in various stages: 1) Study of written data and objects of study of Kasongan carvings that craftsmen have created as a basis for making creations that are different from those created by global

needs. 2) Experimentation of clay raw materials for making *jaran ukir* decorations using the *tempel* technique and high-temperature experimentation with 1200° C glass finishing. 3) Forming, drying, biscuit firing at 900° C, and glaze coloring after biscuit. 4) Glaze application and 1200° C high-temperature firing, 5) and market testing at craft product exhibitions. These stages were carefully recorded and analyzed to validate the research results. The creation of a new creation of carved decoration using the *tempel* technique that is harmonized with the needs of today's society can be presented as follows:

***Experimental research on clay as a raw material for creating decorative carvings with tempel techniques that meet export quality standards.***

Clay is a substance formed from crystals, most of which are so small that they can only be seen using a microscope. These crystals are formed mainly composed of minerals called kaolin. The shape is like a small, almost hexagon-shaped slab with a flat surface. Form crystals like this cause the clay, when mixed with water, to have properties clay (plastic), easily formed because these crystals slide on top of one another with water as a lubricant.

Although clay is everywhere, the characteristics of clay in one region and another have different properties. Some can be easily used without adding other elements; groundwater can be directly used to form ceramics. But there are making ceramics that must be processed or purified first. There is even clay that, before use, must go through processing by adding elements of other materials, which is not just enough with water. Clay that can be used directly without adding other elements is high-burnt soil, often called stoneware soil and earthenware soil. Both soils are examples of soil that can easily be used to manufacture pottery / ceramic items without any mixture. At the same time, porcelain clay must be processed and mixed with plastic materials to be easily formed.

The clay used by craftsmen in Kasongan village is currently experiencing a decline in quality, so it is necessary to add other elements in order to have strength, especially resistance to climate change. Soil tests were conducted at the ceramic laboratory in Bandung, and Kasongan clay elements classified as low-temperature burnt earthenware can be known elements. The addition of raw materials is what should be done to increase the clay up to the high combustion temperature.



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- **Pengambil**
- **Tanggal Pengambilan**
- **Laporan Berita Acara Pengambilan Contoh**

**Pengujian**

- **Metode Uji**
- **Tanggal Pelaksanaan Pengujian**

**Hasil Uji**

Hasil pengujian terdiri dari 2 (dua) halaman.

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12 Agustus 2024  
 Bahan  
 Tanah Lempung

Peminata jasa (keterwakilan contoh di luar tanggung jawab  
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**Figure 5.** Test Results of Kasongan Clay at the Bandung Ceramics Laboratory  
 [Source: Arif Suharsan, 2024]



The chemical test results on this clay sample show the chemical composition of several compounds contained therein based on the SNI 0449:2010 test method. The following are the main components and the weight percentage measured:

**Tabel 1.** Test Results of Kasongan Clay at the Bandung Ceramics Laboratory  
[Source: Arif Suharson, 2024]

No	Materials	Explanation
1.	SiO <sub>2</sub> (Silika): 41,09%	Silica is a major component in clay that is very important in the ceramic industry as it plays a role in the formation of mechanical strength and thermal stability.
2.	Al <sub>2</sub> O <sub>3</sub> (Alumina): 12,34%	Alumina contributes to the hardness and heat resistance of products produced from clay, making it essential to the quality of ceramics.
3.	Fe <sub>2</sub> O <sub>3</sub> (Oksida Besi): 3,95%	Iron oxides usually affect the color of clay and ceramic products. Significant amounts can impart a reddish color to baked goods.
4.	Na <sub>2</sub> O (Sodium Oksida): 2,56%	Sodium oxide acts as a flux, which helps lower the melting point of the clay during the firing process.
5.	MgO (Magnesium Oksida): 1,65%	Magnesium oxide also acts as a flux, and plays a role in improving the thermal stability and hardness of ceramic products
6.	K <sub>2</sub> O (Kalium Oksida): 1,54%	Potassium oxide, like sodium oxide, serves as a flux that aids in the mineral liquefaction process during combustion.
7.	CaO (Kalsium Oksida): 1,35%	Calcium oxide can affect the physical properties of clay, such as hardness, water resistance, and color in fired products.
8.	TiO <sub>2</sub> (Titanium Oksida): 1,03%	Titanium oxide is commonly used in ceramics to impart whitening properties and improve resistance to heat and chemicals.

The laboratory results direct the overall research that adding temperature-enhancing materials, such as kaolin and stoneware clay, in proportions of about 60% would help improve the thermal and physical properties of the Kasongan village clays. Such a composition would allow these clays to be used in ceramic applications that require high temperatures and produce products with more optimal strength, smoothness, and visual beauty. With the predominance of silica in these clays, the ceramic products are likely to be fired only at low temperatures. For broader use and to achieve higher quality ceramic results, such as in stoneware or porcelain products, the addition of kaolin and stoneware clay becomes indispensable. These additions will increase the final product's plasticity, firing temperature, and color stability. In particular, with these additives, these clays can be used for a broader range of applications and produce high-quality ceramics that resist high temperatures, produce a more aesthetic appearance, and are resistant to climate or weather changes [20].

Experimental research was carried out by mixing Kasongan soil with different Sukabumi (40%: 50%, 40%: 60%, and 50%: 50%), then processed homogeneously in a wet technique by machine. Soil strength testing was made measurable by testing measured test pieces for soil absorption so that wet shrinkage, dry shrinkage, and combustion shrinkage were known. Then, the test pieces were tested for burning and given a finishing glass so that the soil used for making new jaran ukir creations has the strength of plastic raw materials but can withstand all temperature changes, frigid temperatures below 15 ° C. The soil test results showed that Kasongan soil combined with Sukabumi soil had a ratio of 50%. The strength test of the soil at cold temperatures was carried out in a freezer at 5° -10° C. It was allowed to stand for 7 days and tested for strength by beating it with a wooden stick and splashing

it with warm water. Test pieces are robust and do not change shape and color, so this result is the basis for making more soil composition for raw materials to create new creations of carving decoration *tempel* technique.








**Figure 6.** Testing Kasongan Clay in Technical Ceramics to Increase the Strength of Burning  
Temperature Impact on Ceramic Body Strength  
[Source: Arif Suharson, 2024]

### ***1200 °C Firing Glaze Finishing Experiment.***

Glaze is a material consisting of several soil materials or silicate rocks where these materials, during the firing process, will melt and form a thin layer like glass that sticks together on the ceramic surface. Glaze in the making of the work serves as a finishing material that is applied on the surface of the ground that has dried or has been burned at a bisque temperature of 900o C. Glaze applied to the work is the result of research and experiments conducted continuously on ceramic plates test pieces. Materials used to compose a mixture or glaze solution, including Silica ( $\text{SiO}_2$ ), Feldspar, Whiting/lime/calcium oxide ( $\text{CaO}$ ), Alumina ( $\text{Al}_2\text{O}_3$ ), Zinc oxide ( $\text{ZnO}$ ), Dolomite ( $\text{CaMg}(\text{CO}_3)_2$ ), Magnesium carbonate or magnesite ( $\text{MgCO}_3$ ), Colemanite or gerstley borate or calcium borate ( $2\text{CaO} \cdot 3\text{B}_2\text{O}_3 \cdot 5\text{H}_2\text{O}$ ), Kaolin or china clay ( $\text{Al}_2\text{O}_3 \cdot 2\text{SiO}_2 \cdot 2\text{H}_2\text{O}$ ) Rutile or titanium oxide ( $\text{TiO}_2$ ), Tin oxide or stannic oxide ( $\text{SnO}_2$ ), Talk ( $3\text{MgO} \cdot 4\text{SiO}_2 \cdot \text{H}_2\text{O}$ ). Glaze also requires raw materials of color, which usually consist of various kinds of metal oxides or color pigments (stains) that can be added to give color to the glaze used. Meanwhile, to get a cover or matt glaze, several oxide elements can be added which can provide dop properties such as tin/tin oxide ( $\text{SnO}_2$ ), zircon oxide ( $\text{ZrO}_2$ ), calcium oxide ( $\text{CaO}$ ), zinc oxide ( $\text{ZnO}$ ), magnesium carbonate ( $\text{MgO}$ ), and others. The following are some of the results of the coloring of gelatin on Kasongan's new soil that has met the quality standards, and the high burning temperature is resistant to all climate changes.

**Table 2.** Table of the results of the coloring of gelatin on Kasongan's new soil that has met the quality standards, and the high burning temperature is resistant to all climate changes.  
[Source: Arif Suharson, 2024]

No	Warna	Bahan	Figure
1.	Black satine metallic dark green spot	TSG (Transparent Soft, Glaze) 100%, Bentonite 3%, Copper Oxide 7%	
2.	Glossy black (if applied lightly it will turn brown)	Glafir F3 4,5 gr, Wood Ash 18 gr, Feldspar 4,5 gr, Silika 7 gr, Borax 7,5 gr, Copper Oxide 2,5 gr, Manganese, Oxide 2,5 gr, Zircon 1 gr	
3.	Black glossy bluish green marbled patches	Glafir F3 90%, Bentonite 2%, Titanium Oxide 2%, Copper Oxide 5%, Cobalt Oxide 1%	
4.	White glossy	Glafir F3 90%, Titanium Oxide 2%, Zirconium Oxide 10%, Bentonite 5%	
5.	Glossy bluish-green blue marbled patches	Glafir F3 90% Borax 20% Titanium Oxide 5% Bentonite 2% Manganese Oxide 3% Copper Oxide 5%	

***Creation of new jaran ukir creations for modern home furnishing aesthetics.***

Creating new *jaran ukir* creations begins with collecting visual data on carvings that Kasongan pottery craftsmen have made. This data became a reference for creating carved forms adjusted to consumer interviews and visual data on modern designs that lead to home furnishing designs. Carved products are created into new forms with practical functions as interior elements that are more unique, elegant, and attractive according to modern design styles. Creating decorations with traditional or technical techniques emphasizes traditional craftsmanship so that the local characteristics are not lost. Some things that need to be considered are: 1) the ability to process raw material local resources must be able to sustain the continuity and sustainability of the creation of craft products so that their existence will be maintained (sustainability); 2) the accuracy of human resource management as artistic creators and integrated-programmed environmental resource planning; 3) the improvement of soft skills-hard skills of human resources sustainably and sustainably with synergy and collaboration; 4) the creation of creative, innovative, unique, specific, characteristic, good quality craft art; and 5) understanding of consumer needs and having a strategy in reading hard, tight, and competitive free market competition [21, p. 245].

The following are the results of the new creation of it decoration using the *tempel* technique, starting with sketching, making products with hand-building techniques, applying *tempel* technique decorations, drying, biscuit firing, glaze firing, and marketing as follows:



**Figure 7.** The results of the creation of new carved decorations with modern home furnishing designs can be used for flower vases, pencil holders, and aesthetic elements of office desks.  
[Source: Arif Suharson, 2024]



**Figure 8.** The result of the creation of a new carving decoration with a modern design of home furnishing that can be used as a lampshade for the bedroom and living room.  
[Source: Arif Suharson, 2024]

#### 4. CONCLUSION

The pottery production process in Kasongan Village has undergone significant changes in line with technological advances and the global community's needs. Traditional methods such as hand-building have shifted to molding techniques with modern, fabricated paint-based decoration, replacing Kasongan's signature *tempel* technique decoration. This change is driven by economic demands and consumer preferences that favor Chinese-style ceramic-style products with fabricated paint finishes. As a result, the *tempel* technique decoration as a hallmark and cultural heritage of Kasongan is threatened with extinction, which could eventually erase the cultural identity that should be passed on to the next generation.

This research has succeeded in creating new innovative creations of carved pottery products with *tempel* technique decoration as part of modern home furnishings that are multifunctional and by the latest global market tastes. Experiments on raw clay materials and high-temperature firing glassware finishing have also been successfully conducted to improve the quality of Kasongan earthenware clay, making it more resistant to temperatures below 15°C and meeting export standards. In addition to its role as a production technique, carving with the *tempel* decoration technique has a philosophical meaning that teaches

noble values to future generations. This product has become a distinctive icon of Kasongan Village with local aesthetic advantages that distinguish it from other regional pottery and countries such as Vietnam, Thailand, and Australia, which do not use *tempel* decoration. The *tempel* technique decoration, recognized as Indonesia's cultural heritage through the Geographical Indication Certificate, strengthens Kasongan Village's position as a pottery center that can meet the global market's needs with unique production techniques.

## 5. REFERENCES

- [1] T. Raharjo, "Gerabah Kasongan 'Jaran Ukir' Ikon Kabupaten Bantul dalam Perspektif Ilmu Kriya," presented at the Pidato Pengukuhan Jabatan Guru Besar dalam Bidang Kriya pada Fakultas Seni Rupa Institut Seni Indonesia Yogyakarta, Yogyakarta, Mar. 29, 2023.
- [2] N. D. Astuti, "Pengelolaan dan Pemanfaatan Limbah Keramik Bayat sebagai Alternatif Material Produk Kerajinan Tangan," *Ekspresi Seni: Jurnal Ilmu Pengetahuan dan Karya Seni*, vol. 20, no. 2, pp. 88-101, 2018.
- [3] D. S. Kartika, *Estetika*. Rekayasa Sains, 2007.
- [4] J. Malins, J. Ure, and C. Gray, "The Gap: Addressing Practice-Based Research Training Requirements for Designers," *The Robert University, Aberdeen, United Kingdom*, 1996.
- [5] A. A. M. Djelantik, T. Rahzen, and N. N. M. Suryani, *Estetika: Sebuah Pengantar*. Masyarakat Seni Pertunjukan Indonesia, 1999.
- [6] D. K. Seftianingsih, "Pengenalan Berbagai Jenis Furniture dengan Kombinasi Material Beserta Kontruksinya," *JURNAL KEMADHA*, vol. 7, no. 1, Art. no. 1, Oct. 2017, Accessed: Feb. 11, 2025. [Online]. Available: <https://jurnal.usahidsolo.ac.id/index.php/kmd/article/view/473>
- [7] B. Sudardi and I. Istadiyantha, "The Prince of Diponegoro: The Knight of the Javanese War, his profile of the spirit and struggle against the invaders," *International Journal of Multicultural and Multireligious Understanding*, vol. 6, no. 5, pp. 486-493, 2019.
- [8] H. S. Mohd. Yakin, A. Totu, and R. Derak, "Simbol Binatang Ternakan dan Konsep Artifak sebagai Manifestasi Identiti Budaya dan Identifikasi Etnik Peribumi Sabah: Satu Kajian dari Perspektif Komunikasi," *MANU*, Dec. 2016, doi: 10.51200/manu.v24i0.523.
- [9] T. Triyanto, M. Mujiyono, and E. Sugiarto, "Aesthetic Adaptation as a Culture Strategy in Preserving the Local Creative Potentials," *komunitas*, vol. 9, no. 2, pp. 255-266, Sep. 2017, doi: 10.15294/komunitas.v9i2.9522.
- [10] S. Gustami, "Seni Kerajinan Keramik Kasongan Yogyakarta Kontinuitas dan Perubahannya," Universitas Gadjah Mada, 1988. Accessed: Feb. 10, 2025. [Online]. Available: <https://etd.repository.ugm.ac.id/penelitian/detail/13870>
- [11] R. M. Soedarsono, *Seni Pertunjukan dan Pariwisata: Rangkuman Esai tentang Seni Pertunjukan Indonesia dan Pariwisata*. Badan Penerbit ISI, 1999. Accessed: Jan. 17, 2025. [Online]. Available: [http://lib.pasca.isi.ac.id%2Findex.php%3Fp%3Dshow\\_detail%26id%3D1510](http://lib.pasca.isi.ac.id%2Findex.php%3Fp%3Dshow_detail%26id%3D1510)
- [12] I. W. Mudana and P. K. Ribek, "Komodifikasi Seni Lukis Wayang Kamasan Sebagai Produk Industri Kreatif Penunjang Pariwisata," *Mudra Jurnal Seni Budaya*, vol. 32, no. 1, Art. no. 1, Jun. 2017, doi: 10.31091/mudra.v32i1.83.
- [13] P. N. P. Laras, "Aesthetic Characters of Flora and Fauna Painting Art Pengosekan on Visual Objects Wood Carving Craft Arts in Singakerta Village, Ubud," *Mudra Jurnal Seni Budaya*, vol. 39, no. 2, Art. no. 2, Apr. 2024, doi: 10.31091/mudra.v39i2.2777.
- [14] A. S. Bahri, A. Basalamah, F. A. A, and T. A. Rahmat, "Penerapan Kriteria Desa Wisata pada Desa Wisata Batulayang, Bogor, Jawa Barat," *KONTAN: Jurnal Ekonomi, Manajemen dan Bisnis*, vol. 2, no. 1, Apr. 2023, doi: 10.59818/kontan.v2i1.428.
- [15] T. Raharjo, *Historisitas Desa Gerabah Kasongan*, Cet. 1. Yogyakarta: Program Pascasarjana, ISI Yogyakarta, 2009.
- [16] I. B. Sugiharto, *Untuk Apa Seni?* Bandung: Matahari, 2013.



- [17] I. G. A. A. I. Mas and I. G. A. Kurniawan, "Pentingnya Kesadaran Menjaga Kesenian Khususnya Kesenian Daerah Bali pada Anak Sekolah Dasar Desa Mengesta," *Imajinasi: Jurnal Seni*, vol. 17, no. 2, pp. 57-62, 2023.
- [18] Z. M. Bizawie, "DIPONEGORO AND THE ULAMA NUSANTARA NETWORK," *The International Journal of Pegon: Islam Nusantara civilization*, vol. 3, no. 01, Art. no. 01, Apr. 2020, doi: 10.51925/inc.v3i02.26.
- [19] J. Fischer and J. Danandjaja, *The Folk Art of Java*. in The Asia collection. Kuala Lumpur ; New York: Oxford University Press, 1994.
- [20] W. D. Kingery, H. K. Bowen, and D. R. Uhlmann, *Introduction to Ceramics*. John Wiley & Sons, 1976.
- [21] S. Gustami, *Seni Kerajinan Mebel Ukir Jepara: Kajian Estetika melalui Pendekatan Multidisiplin*. Penerbit Kanisius, 2000.