

# Aesthetic Effects on the Ceramic Surface Resulting from the Multiple Fragmentation of Gypsum Blocksjoris Link

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This study addressed the aesthetic effects on the surface of the ceramic output of multiple retail molds of gypsum, as concerned with the definition of gypsum worn produce ceramic molds of gypsum and through the use of these gypsum molds fragmented to the product of ceramics variety of LCD mud, mud consists mainly of very small particles of Plate shape of alumina Silica is linked together with water , and the importance of the current research in highlighting an important aspect of the innovative aspects of the technique of casting gypsum moldings in porcelain, which was characterized by the abundance of their production and the latest update of this technique in the structure of plastic art in the modern era , the current research aims at the aesthetic effect on the surface Porcelain resulting from the multiple fragmentation of gypsum molds. We can rely on the experience that the potter was part of the technique of making gypsum molds, which was inspired by the design of a number of engineering shapes. The works were built through that technology, which was used to take a different form in the manufacture of ceramic utensils.

**Key words:** *Aesthetic Effects, Ceramic Surface, Gypsum Blocksjoris Link*

## Chapter One Research Methodological Framework *Research Problem*

Gypsum has witnessed, during the long history, descending and ascending waves that the Arab stages remain the most fertile if the use of them in architecture and decoration reaches a climax as an alternative to stones and timber as well. The characteristic of nobility, especially after it appeared in the bourgeois houses and the entrances to architecture and after the Second World War, especially in the sixties, with the beginning of the prevalence of new

patterns of decorations and decorative arts and the emergence of modern artistic currents, but this decline did not last long, as this prompted workers in this field to invent new models. From the decoration is in harmony with the taste of the new era and as they developed the style of gypsum making, which made it more solid, beautiful and smooth has the texture and this led him to impose himself as a decorative element that is in line with each classical stream was contemporary and today it is easy to deal with gypsum as a substance that cannot be neglected in the field Decorative, where it has ready-made panels and easy-to-install molds, or installed with various modern techniques. This natural material has many specifications that give it the best. The most important of these specifications is that it is insulated for cold and sound and is not combustible, after which it is molded and dried, it becomes very hard and steady, resists the influence of time and lives long, therefore it has been used in many works in architecture, sculpture and art of ceramics, and gypsum is distinguished by white color known to it, so it is easy to color and draw on it and the work of different patterns and decorations that give a touch of beauty and view to the place, and gypsum enters into the technique of casting molds for making clay pots in different forms and the research problem crystallizes with the following questions.

- 1- Is the fragmentation of plaster casts subject to multiple aesthetic values in ceramic works
- 2- What is the direct effect of gypsum molds on the ceramic surface

### ***The Importance of Research and the Need for a Mechanism***

The importance of the current research lies in highlighting an important aspect of the creative aspects of casting gypsum molds in ceramics, which were characterized by the abundance of their production and the latest update in the structure of plastic art in the modern era if this research is useful for students of primary and higher studies in terms of specializations for ceramics and sculpture.

***Research Objective:*** The present research aims at the aesthetic effect on the ceramic surface resulting from the multiple fractionations of gypsum molds.

***Research Limits:*** Porcelain works produced by artist Joris Link in the period (2010-2019) in the Netherlands.

### ***Definition of Terms***

1. **Effects:** Language: the rest of the thing, the collection, the rise, the effect and the effect on keeping the effect on the object and also the effect on the news. (San Arab) looks at a conventional definition: the axiom of human weakness from its surroundings, whether intentional or negative. Al-Taher (Khalil Al-Mousa, p. 40)

2. **Sentence:** Language: Jamal: (name) Jamal Badi` : Karima, RawaaTaher (Al-Raed, 1960). Idiomatic definition: It is the recipe for observations in things and sends souls with joy and harmony or its sense of regularity a, one of the three concepts attributed to the provisions of beauty values. The Immaculate (Mark, 2012, p. 30)
3. **Porcelain:** a language: it was not made of clay roasted with fire until it became pottery and a seller and made potter. Al-Taher (Sheikh Ahmed Rida, 1958, p. 269) porcelain as a term: it is artifacts made of clay materials and heat treatments for some inorganic earth materials that acquire the qualities of durability and hardness in completing their stages of manufacture. Al-Taher (Allam Muhammad, p. 3) Procedural definition: Porcelain: All clay laboratories pass through the formation stages and solidify with intense heat, then they are covered with a thin layer of wolf materials as they pass through a number of chemicals and physical variables that occur during the final burning process, it becomes impossible repeating the shape to its original material. 4- Gypsum:

Language: Gypsum Ajbs, Tjpisa, Mjbs, and Mjbs effect. Al-Taher (Tongue of the Arabs, p. 33).

**Definition of the Term:** A well-known substance from ancient times formed by an air link thanks to the air, which is the conversion of natural geological stones by cooking them under a certain temperature, i.e. they are determined according to electric ovens and their chemical composition  $\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$ ) after cooking it turns into a  $\text{CaSO}_4$  mixture)) of Water creates a gypsum compound. Al-Taher (Juhailan, 1993, p. 59)

## **Chapter two Theoretical Framework**

### ***The First Topic: Gypsum Mold Manufacturing***

Gypsum is a substance known from ancient times and is formed by an air bond thanks to the air. It is the conversion of natural geological stones that are cooked under a certain temperature, i.e. according to electric furnaces, and their chemical composition  $\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$ ) After the cooking has turned into a mixture of  $\text{CaSO}_4$ ) Any water that evaporates from the gypsum compound is produced, and the natural geological stones extracted from the mines that are transported To factories for grinding into very small granules that can be easily cooked, the spectrum that uses the plant unit is called the unit of this unit of fragmentation. Al-Taher (Abdel-Khalil, 1984, p. 148).

The molding process is one of the industries that extend through the ages since the stone ages and we find that contemporary man has reached advanced stages in this field because the process of making molds has become one of the most important elements that contribute to the development of modern industries and daily needs. Al-Taher (Ahmad Othman, 2017, p. 301).One of the most important molds and the simplest method is (perishable mold) or flower

template and it has been called perishable, as this method cannot be done without consuming or destroying it by adding it to water, and we will explain this during mentioning the steps of executive action (Torraca, G, 1988 3 edlccRo.).

### **Prepare and use Gypsum**

Prepare the gypsum by spreading it on the water until we obtain the appropriate dough and the flower can be painted if we want to make a copy of the gypsum mold itself, pouring the gypsum directly over the surface of the protruding board and simplifying all parts and without leaving air bubbles between the compact and without touching the plate if the clay prevents deformation or scratching so that it is The surface of the dough is rough because the roughness is necessary to keep the rest of the mold in the case of pouring a second layer, and when we finish the casting, we leave the gypsum until it has antiques, then we prepare another dough that is not colored and cast on the previous surface of the mold and colored 2 cm thick and leave it to harden, and if the plate is more than 40 x 50 Poison The mold should be strengthened by pouring a third layer of gypsum (Anthony, John: Bedo, handbook, 2003) Vacuum casting technology (drain casting) or what is known as (slip casting):

It depends on filling the entire mold with the solution through the designated hole for this and the main casting process is attributed, which is the result of the passage of water from the solution to the mold, leaving a thin, coherent layer of gypsum, and gypsum is the same as making blotting paper, knowing that clay increased the time of casting. We have a thicker wall. Al-Taher (Farouk Sharaf, 2002, p. 51).

### ***Forming and Forming Pressure Technology (Pressure)***

Although this process does not harden the liquid material, it is located in the same field as the forming process, using flexible, non-liquid slurry. The slurry is used in this process without adding to the molten material, but it is added to it auxiliary materials such as (crocodiles or river sand) Especially in works of large sizes what is formed by pressing by making a slice of clay with one thickness, and the pieces can be taken out in fine detail, but it requires great skill and is pressed inside the mold after spraying it with a powder so that the clay does not stick to the surface of the mold during. Al-Taher (Nadia Habi, 2010, p. 24).

### **Chapter Two: Dutch Porcelain**

It is the world famous pottery that was produced in the blue city of Delft since the seventeenth century between the years (1600-1800), and was popular among the wealthy families who brought their groups the blue delft to each other, preferring the name pottery. Some, although Dutch porcelain was close to Chinese porcelain, but it was a cheaper version



of real Chinese porcelain, on a number that achieved unparalleled Delft fame, at its height, there were 33 blue factories among all these factories, the plant The only ones left today are the Royal Delft. (Van Damme, Delft Ware 1620-1850, Zwolle, 2004, p. 9)

### ***Dutch Origins***

Everyone knows the blue and white vases and dishes, which were made in the seventeenth and eighteenth centuries in the city of Delft inspired and sometimes traditional Chinese ceramics from the Dutch East India Company in the early seventeenth century greatly influenced Dutch pottery, but in reality it was not the basis of Dutch porcelain, that The origins of pottery take us back to the beginning of the fifteenth century, at that moment very simple pottery was produced in the Netherlands, small pottery factories were created in places where clay was found and there was a great deal of peat or wood to release furnaces, at the beginning this pot was only present In western Netherlands, but later spread throughout the country, in order to make these simple clay objects, clay was designed as required, the first time after this first launch, red objects were decorated. Designated patterns. The paint they used was made of water clay. The body is provided with clear lead-glass and released again to make it waterproof and easy to clean. (Scholten, Dutch, 1993, p. 11).

### ***Dutch Golden Age***

Potters were made in Delft tiles, in large numbers, estimated at eight hundred million over two hundred years. It still houses many of his Dutch court and was repaired in the seventeenth and eighteenth centuries rumors were widely exported. Delftware became popular in Europe and even reached China and Japan from about 1750 onwards. Most of the late pots are drawn with smart and fleeting motifs (Jean Blaise).

Many factories used enamel and gilding colors on the tin surface, requiring a low temperature oven. Having become common tools in the late 16th and early 18th centuries when they attempted to bridge the Chinese deficiency gap as well, their own began to copy vases in the making of classic Delft flowers on a balcony surrounded by three panels with pine design. Oriental styles remained popular in the early 18th century But Delftware, when Chinese ceramics became available again, fell between simple household items WaresDelftware ranged white pottery with little ornament or no luxury artwork. Most of Delft factories manufactured a set of cast steel jars, and provided graphical panels in abundance illustrated with religious motifs and original Dutch scenes with windmills, fishing boats, fishing scenes, landscapes, and seascapes. Provided a set of paintings with lyrics and music songs. (Volcker, T. Porcelain East, 1955).

### ***The First Tin-Glazed Pottery in the Netherlands***

The first tin-glazed pottery was made in the Netherlands in Antwerp in 1512 AD, and the painted pottery industry probably spread from south to north of the Netherlands in the 1860s, and in Middleburg and Haarlem in the 1870s a lot of beautiful ceramics were produced in Delft, but daily made of glazed pottery is possible such as Loro Tram, Amsterdam, Dordrecht, nicknamed the city of Delft, The Netherlands near The Hague with a small European capital of porcelain The city is famous for the blue porcelain known as Miri Delft and craftsmen have learned the art of Dutch pottery by more than 300 years and the longest this industry is one of the treasures The Netherlands, the Delft Pottery Factory was founded in 1653 AD and is the only factory established in the seventeenth century and still adheres to the traditional style of pottery making (Philip Buch, Jean Applications Edi ted by, 2007.)

### ***Molding Mechanic (Slip Casting Mechanism)***

The mechanism of action of casting clay depends on its important factors

- 1- Access to pouring water, i.e., more precisely, the more closely filtered and filtered clay, it is correct and without errors.
- 2- The pressure of pulling or sucking the mold, and this depends on the plaster mold, and it is known that it absorbs water, but it does not depend on the method of pouring it if it is true that the pores in the plaster pulls water from the viscosity by a very fine capillary force, and thus reduces the contents of the viscosity adjacent to the surface Plaster to embrace the body layer
- 3- As for the fluid density, it depends on mechanical effects such as natural flow, continuous shaking and stirring, in addition to the additions in it. Combines all of these factors together. The casting process can be successful using the segmentation method or normal mold. Bagh, Editor, 2012 (Elizabeth, Merten).

### ***Casting Clay Material***

Additions to the casting clay change according to the available ceramic materials. A calculated amount of water can be added to the clay powder until we have the appropriate liquidity, then we add some modification materials to it such as sodium silicate (sodium silicate) during mixing, which increases the degree of liquidity and raises the level of vitrification in the body and reduces the settlement temperature, or it is possible to The work of pouring clay with other materials such as

1. Rubber mud added to its components (Corniche stone - Feldspar - Al Sawan)
2. Water

3. A chemical substance called (deflocculated) and a Tina analysis message that increases the dissipation of Dzeitha solubility which increases the ability to suspend and the unstretched substance is Either sodium carbonate (anhydrous) with silica soda or sodium with sodium silicate, bring the fluidized fluid Bazavcha to hot with water fluctuation more than once, then cool and store in a closed place. Al-Taher (Al-QaisNahid, 2009, p. 44).
- 4.

### Theoretical Framework Indicators

- 1- The molding process is one of the industries that extend through the ages since the stone ages and we find that contemporary man has reached advanced stages in this field because the process of making molds has become one of the most important elements contributing to the development of modern industries and daily needs.
- 2- Gypsum is one of the most important elements used in the manufacture of ceramic molds to provide a distinctive and more accurate technique in ceramic production.
- 3- Gypsum is a substance known since ancient times that is formed by an air bond thanks to the air and transforms the natural geological stones by cooking them under a certain temperature, that is, they are determined according to the electric ovens and their chemicals. Composition  $\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$ ) after cooking has turned into a  $\text{CaSO}_4$  mixture) any water evaporated from the gypsum compound is produced.
- 4- The process of casting molds requires special training when kneaded with water, and one of its characteristics is that it expands and is heated slightly after mixing it with water to knead and pour it, without using alkalis with it because it leads to the internal pressures that negatively affect the stone materials.
- 5- The additions to the casting clay change according to the materials available for the ceramics, so that a calculated amount of water can be added to the clay powder until we obtain the appropriate liquidity and then add some modification materials to it such as sodium silicate (sodium silicate) during mixing, which increases the degree of liquidity and raises the proportion of Vitrification in the body reduces the sedimentation temperature.
- 6- Access to pouring water, more precisely, the more accurate the filtered and filtered clay, the more correct and without errors.
- 7- Pressure pulling or sucking the mold, and this depends on the plaster mold, and it is known that it absorbs water, but it does not depend on the method of pouring it if it is true that the pores in the plaster pulls the water from the viscosity with a very fine capillary force, and thus reduces the contents of the viscosity adjacent to the plaster surface To embrace the body layer
- 8- As for the fluid density, it depends on mechanical effects such as natural flow, shaking, and continuous stirring, in addition to the additions in it. Combines all of these factors

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### ***Molding Clay Material***

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- 1- Mud clay added to its components (Cornish stone - feldspar - granite)
- 2- Water
- 3- A chemical called (exudes) and the analysis message is Tina and it increases Dzeitha dissolving which increases the ability to suspend and extending the article either sodium carbonate (anhydrous) with silica soda or sodium with sodium silicate, bringing Bazavcha fluidized objects to hot as more water fluctuates more than once, then cools and keeps in a closed place. Al-Taher (Al-QaisNahid, 2009, p. 44).

## **Chapter Three: Search Procedures**

### ***Research Community***

The research community consists of the artistic ceramic works of the Dutch potter during the period (2010-2019) of which there are 25 ceramic works, which the researcher facilitated access to for the purposes of this research

### ***The Curriculum Used***

The researcher adopted an analysis of the content of the descriptive approach to study the effect of aesthetics on the ceramic surface resulting from multiple fragmentations of gypsum molds.

### ***Selection of the Sample***

The deliberate sample was chosen from the totality of the Dutch ceramic works Joris link, which represents the research community, removing some converging models to avoid similarity. Dutch ceramic works numbered four.

### *Description and Analysis of the Sample*

#### **Template (1)**



Artist name: Juris Link

#### **Job name: Technical Training**

Completion year: 2011

The Netherlands

Eidia: private holdings

Verify the technical characteristics of porcelain achievements Jorislin according to his innovations and artistic narration, in which he often relies on the production of his artistic achievements, according to Roy, the aesthetic aspect of the artistic achievement confirms that making these products what distinguishes them at the same time contributes to the impact of his artistic experience and his own style in the segmentation technique is the casting of molds using liquid clay in the production of ceramic forms, through what is deliberately achieved through diversity in work and the ceramic shape in this model consists of murals with a five-dimensional abstract structure winding and uneven comfort from the middle we find in accomplishing this to achieve the characteristics The technique that depends on formative formulation in the formation technique, this ceramic work bears indicative and effective indicative signs that represent a similar composition to the shape of the beehive and regularly with it has gained some engineering features (lines, squares, triangle) and here we find the dominant color on the entire ceramic text is the color of the nut that Clay color represents that multiple intentional tones activate color as a pressure element in the textural process of texting, which would sort the cognitive structure in collecting summaries of juxtaposition and repetition because the color structure is the actual engine through which visual communication indicators in the true foundation of the rhythm that becomes important in achieving Harmony and details of the arrangement of the aesthetic and gustatory effect of the recipient. Thus, Potter created a new concept of the role of technology in creating his

aesthetic based on the desire to see. Keel also considered the artist's own experience as an absolute value in creating artwork.

#### Template(2)



Artist Name :Joris link

Business name :spherical formation

Completion year2014 :

Country :Netherlands

Aidiyah :private holdings

The ceramic composition in this form of the sample appears to us in the form of a spherical geometric shape when the internal form of work in the form of aligned cylinders sometimes resembles an irregular ring in size and shape ,the volume of cylinders in the text of the ceramic work is small in equal shape and in the corners of the ceramic work cylinders of a size Big and even surface but conical shape tothe interior is work , as the formal structure arose from relations systems being similar, repeated and equal formation with distribution , with variations in the level of the general surface of the shape has ranged between high and low in the ceramic shape , and from the surface features it is winding and uneven and was used by the potter only white color which is the color prevailing

on the overall shape And the potter used one way to color the ceramic shape, and she sprayed the compressed air to work completely.

The modular system of work is the mold-mounting system for forming cylinders and uses liquid slurry technology.

Internal and external work formats based on formats rhythmic consisting of repetition of forms added and the use of the color white refined on these forms ,and work with a simple level seemingly diverse overlapping there is a kind of dynamic movement within the shape defined vision directorial work,the final work on according to deliberate the potter that show discs and shape And align them into a ball.The harmony of the movement of work and the nature of its formal relationship to surface, texture, line, and color led to an aesthetic direction when seen for the first time confirms the mechanism of the work of the potter mentality that seeks to express through abstract and realistic units and that the formal system reveals to us the ability of potter to process the surface and texture through the formation technique, This difference in the volume of cylinders gave a more aesthetic value to the spherical ceramic shape.

#### **Fourth Chapter: Results and Discussed**

- 1- We can count on the fact that the potter's experiment was part of the technique of making gypsum molds, inspired by the design of a number of geometric shapes. The business was built with this technology that was used to take a different form in the manufacture of ceramic utensils using liquid clay.
- 2- Potter deliberately manipulating the geometrical shape using the forming technique, some of which are close to geometric figures, such as a circle.
- 3- Giving potter the freedom of color and its application methods are important in an attempt to absorb all the details of glazing and colors, from cutting one color to gradient color pieces to multiple and overlapping color designs
- 4- Potter plays a major role in the mental abilities to interpret these shapes and designs in making gypsum molds to form ceramic shapes using liquid clay.
- 5- Technology in making molds is an effective and influential role in ceramic figures
- 6- Overlap and overlap in the design structures of ceramic figures.
- 7- The technology in making gypsum molds plays an important role in producing various shapes of different sizes.

#### **Conclusions**

- 1- Porcelain with its ceramic skills was able to create new ceramic shapes through the technique of making gypsum molds using liquid clay.



- 2- The Dutch ceramic shape swings with an aesthetic texture.
- 3- The separate and contiguous ceramic figures achieved an aesthetic dimension.
- 4- The difference and variation in the pottery technique.
- 5- Porcelain methods for this technique to produce different shapes of porcelain in shape and size.

### **Recommendations**

- 1- Attention to the manufacture of gypsum molds and the processes of formation, composition, and installation as a clear phenomenon in creativity, development, and innovation.
- 2- Paying attention to the technique of splitting the molds to produce different types of ceramic works using liquid clay.

### **Suggestions**

- 1- Aesthetic importance in ceramics resulting from the multiple division of gypsum molds
- 2- Producing gypsum molds in making contemporary ceramic figures
- 3- Designing the aesthetics of ceramic figures resulting from gypsum molds of various sizes



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