

Research Article

Combination of Industrial Style Elements With Cultural Elements of The Ancient Rumah Bolon in Residential Houses

Angryani Sipayung*, Mohammad Isa Pramana Koesoemadinata and Ira Wirasari

Telkom University, Bandung, Indonesia

Abstract.

The traditional houses of Indonesia are known for their unique architectural designs and interior decorations. One such example is that of the ancient Bolon houses, which refers to an Indonesian traditional house that is built on stilts and has a distinctive structure. However, due to the constant technological advancements of this era, most of the public tends to lean toward the current trend of modern interior design. The Modern Industrial style refers to a residential housing style that is widely admired by the public for its distinctive characteristics, namely the exposed materials utilized. In addition to the comparison between the house's structure and material, the emphasis on functionality can be used as a starting point for the merging of these two architectural styles. The Modern Industrial style of architecture is known for its functionality and the Rumah Bolon had been built with specific functions in mind, such as the usage of the Balai Bolon for traditional ceremonies. Therefore, there is a requirement for a residential interior design concept that combines both modern and traditional styles, namely through the characteristics of the Modern Industrial style and that of the ancient Bolon Houses. The concept of this residential design aims to be an educational aid that shows the uniqueness of Indonesian traditional houses to the public.

Keywords: residential house, Rumah Bolon, industrial style, style combination, traditional style, merging

1. Introduction

The Rumah Bolon is a traditional house of the Simalungun ethnic group from North Sumatra Province, Indonesia. One exceptional example of Bolon Houses is the Bolon Purba located in Pematang Purba, North Sumatra, which functioned as the king's residence and a center for the government during the era of the Ancient Kingdom. The Rumah Bolon Purba has an approximate area of around 20,000 m². Currently, the Bolon houses have retained their original structure, but it has changed their function and now act as a cultural heritage building under the patronage of the Indonesian Ministry of Education and Culture, the Directorate General of Culture, and the Directorate of

Corresponding Author: Angryani
Sipayung; email:
gnaani@student.
telkomuniversity.ac.id

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Cultural Heritage Preservation and Museums. The protection given to the Simalungun is based on the fact that their culture is deemed to be highly valuable, which can be seen through the architectural structure of the Bolon Houses, their building procedures, their decorative elements, and their beliefs. The physical structure of the Rumah Bolon has a unique appearance as it is covered in various ornaments in the form of carvings, decorative elements, and colors, which represents a cultural message as the form and personality of the community [1].

Industrial architecture first appeared in the 1950s by reusing abandoned factory buildings. These abandoned factories are then renovated and processed to create new aesthetics and interiors in the architectural world [2]. The application of this architectural style emphasizes the physical properties of the building and characterizes elements such as a monochrome color scheme, incomplete materials, and utility exposures which include the exposure of the structure's electrical wiring system [3]. Since its emergence, the Industrial architectural style has proven to be a trend that has a great opportunity to be accepted by the public. It has unique characteristics which have similarities to the features of the Rumah Bolon, which prioritizes natural elements and materials obtained from the local regions of Indonesia.

Therefore, the purpose of this study is to form the concept of this specific interior design, which is a combination of the Modern Industrial style with the characteristics of the ancient Bolon House. The establishment of this concept will present that there is a potential for the cultural characteristics of Indonesian traditional houses to be developed into modern residential home designs in today's society.

2. Methods and Equipment

2.1. Methods

This study uses a research method that is best described as descriptive, adaptive, and interpretive. This research method is conducted by naturally examining the condition of the objects to find any joint influences which could affect the relationship of the subjects of this study [4]. Further research is carried out by analyzing, investigating, describing, finding, and explaining the specialty of the subjects of this research [5]. Additionally, field observation was conducted at the research location where the Bolon House is located.

3. Results and Discussion

The Industrial architectural style refers to a style of architecture that maximizes the use of construction and combines it with the primary intent of being a container for all industrial needs [6]. The main point of this architectural style is that of efficiency which aims to present an air of simplicity through the usage of base materials as the main element utilized. Its usage of raw materials and exposed fabrications aims to facilitate maintenance and construction.

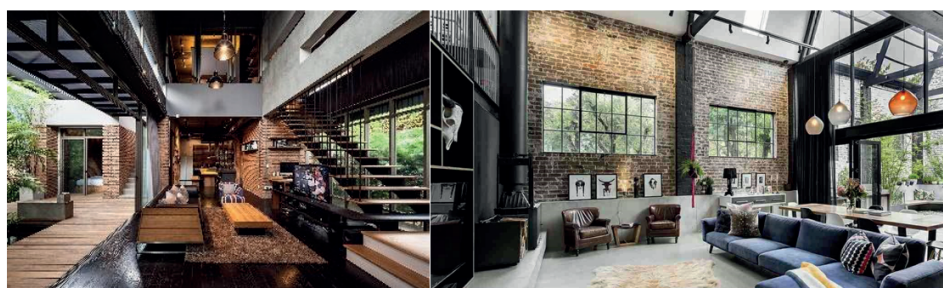


Figure 1: Example of industrial style design. Source: aca.co.id, loveproperty.com.

Based on field studies with direct observations to the area of Rumah Bolon Purba and data obtained directly in the field and supported by article sources from kebudayaan.kemdikbud.go.id by dwifajariyanto at 2015, it is explained The Rumah Bolon refers to the main building, which is divided into two parts, namely that of the front is called *Lopo*. A detailed explanation of Rumah Bolon can also be found in the information papa in front of the house building. The structure only has two doors, the front door which faces the east is the main entrance, which can be found by the stairs. The unique characteristic of this house is that it does not have any clear windows, which makes it so that light can only come through from the holes in the front wall. The front of the house contains a narrow room which is located in the corner of the house, it previously functioned as the king's bedroom. In this room, there is a large pole that works as the main support for the room, it is lined with white, red, and black, and it is tied together with buffalo horns. The backside of the house contains the room for the queen and the children of the king, it is wider than the king's room and was used as a bedroom for the king's wives as well as his children. The room was additionally used to store cooking tools. This area of the house has a small amount of light which is a result of the tightly woven bamboo which covers the walls. The back of the house has only one small door which doesn't function as an entrance, but rather, as a hole for light and air to come through. This room has a difference in floor height, where there are tiers that would be

used to distinguish the higher floors as beds, which are made solely of wood and are arranged crosswise.



Figure 2: Interior of the front area of the house. Source: Personal documentation.



Figure 3: Interior of the front area of the house. Source: Personal documentation.

The foundation of the house is called *Pallas* (information boards in the field, 2021) which is made from mountain stone, hardwood, and large ferns. The large cylindrical wooden bar in the foundation is installed by interlocking river stones around it. The separator between the foundation and the building is made of *Ijuk* which makes it so that it does not easily damage and rot. The pole in the Rumah Bolon of the Simalungun is called *Hulissir* (information boards in the field, 2021) , which is made of strong and sturdy wooden bars. The column is a structural aspect of the house which works as a medium to distribute even loads to the bottom layer of soil. The pillars that support the house are widened and arranged lengthwise.

The roof of the house is called *Tayub* (information boards in the field, 2021), which is in the shape of a gable base on the front and a shield on the back. The back end of the roof is shaped like the lid of a conch shell, while the front end has a buffalo headdress on it. These decorations symbolize courage and greatness, whilst simultaneously warding



Figure 4: Hulissir, The pole of Rumah Bolon. Source: Personal documentation documentation.

off evil spirits. This type of roofing is referred to as a true ceiling. The structure of the roof consists of a truss with an easel-like construction system and a layer of *ijuk*. Personal documentation from information boards in the field



Figure 5: The roof of the house. Source: Personal documentation.

Simalungun is home to a diverse array of ornamental varieties, which reflects its natural environment, as well as the abstract and graphic forms of nature and humanity. The variety of ornaments in the Bolon House of the Simalungun tribe mainly has three colors, namely red, white, and black. These three colors are inseparable and have their own meanings as per their cultural beliefs. The color red symbolizes '*nagori tongah*' and represents courage as well as valor, the color white symbolizes '*nagori atas*' and remains as a symbol of spirit and purity, and the color black represents '*nagori toruh*' and death.(information boards in the field, 2021)

The unique characteristics of Rumah Bolon are explored in this study as a medium to introduce the Simalungun culture to the general public, notably that of its traditional houses. The innovation that has emerged in recent times and was discussed in this paper was that of the Industrial architectural style and culture. As such, the final interior design will have characterized rural local communities with the addition of a simple feel to its atmosphere.

The Rumah Bolon has distinct architectural features, which are visualized on the elements of the structure, namely on the walls, floors, and ceiling. These are equipped with cultural elements, ornaments, and colors that describe the lives of the community in the Simalungun tribe. The Modern Industrial architectural style has a unique aesthetic which is achieved through its usage of colors and materials, which gives off a calm, elegant, and attractive impression.

In this study, the design is created with a combination of the Modern Industrial architectural style with the traditional features of the Rumah Bolon, creating an interior design with a traditional industrial concept that is unique and attractive. The traditional elements of the Rumah Bolon, more specifically, the materials, colors, and ornaments, are implemented on the walls, floors, ceilings, and poles of the house. The Industrial elements of this design are that of the typical monochromatic color scheme and the wide openings, which maximize the entrance of natural lights. Additionally, further facets of the Industrial architectural style are adopted, namely that of the rough decorations on the exposed power lines. Modern industrial style is the opportunity, because it is well known by many people. This triggers curiosity for connoisseurs because the industrial style displayed is different from the industrial style in general which highlights simplicity without carving, while this combination design shows Simalungun ornament carvings with contrasting colors of black, white, and red. The industrial style displayed is minor, because the purpose of its use is to touch modern society to be curious about the traditional characteristics of Rumah Bolon whose purpose is as a source of knowledge for the community.

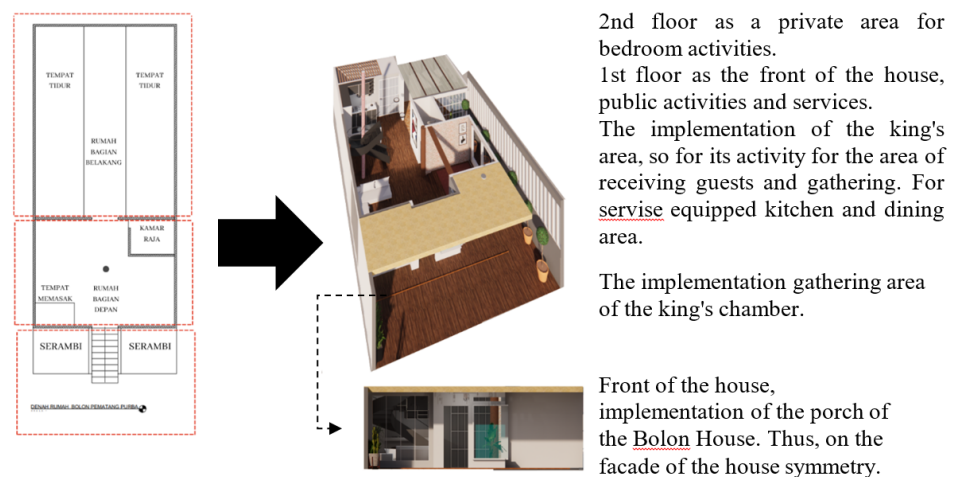


Figure 6: Floor Plan Design implementation illustration. Source: Personal documentation.

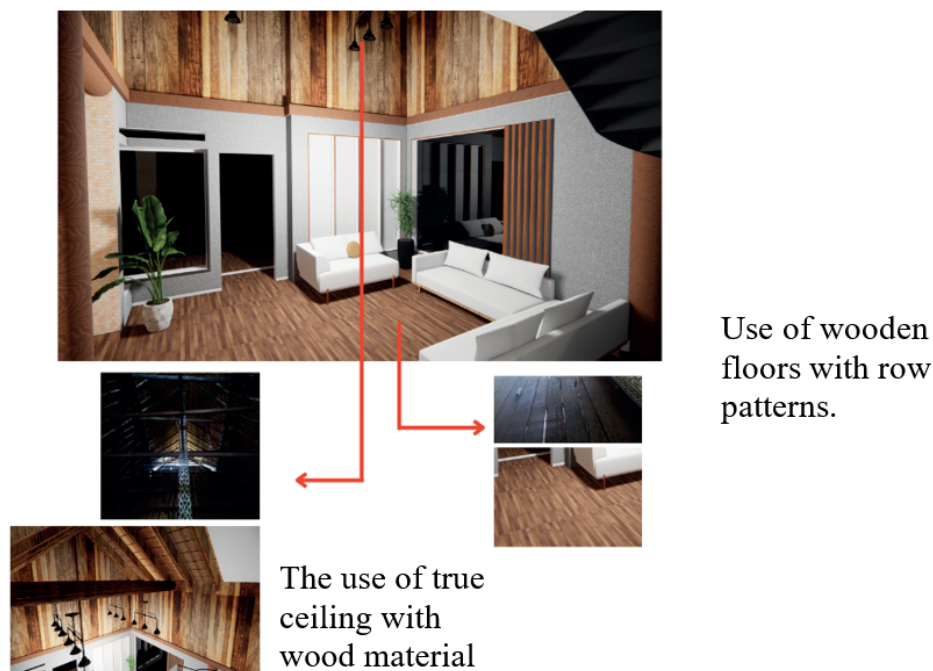


Figure 7: Illustration of Room. Source: Personal documentation.

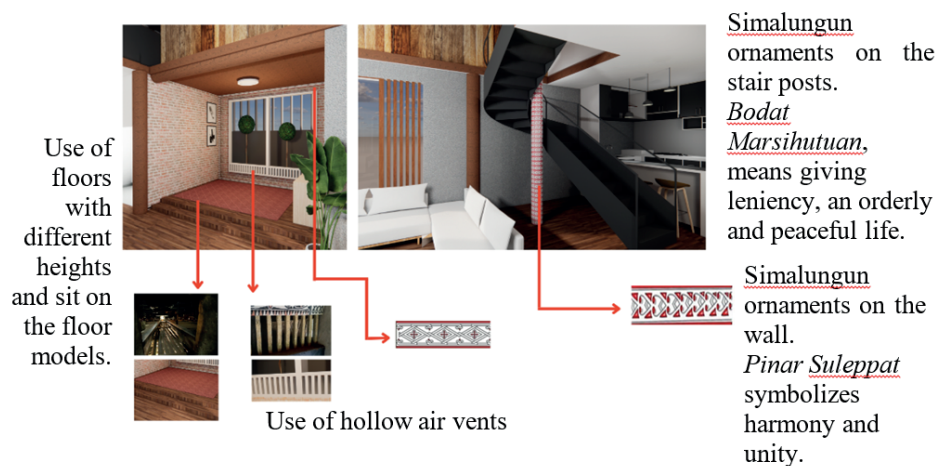


Figure 8: Illustration of Room. Source: Personal documentation.

The usage of wood as a material in the implementation of the Rumah Bolon elements in the proposed design had been derived from the abundance of natural resources in the Simalungun area. The use of white, black, and red are the basis of the Simalungun tribe's traditional color scheme.

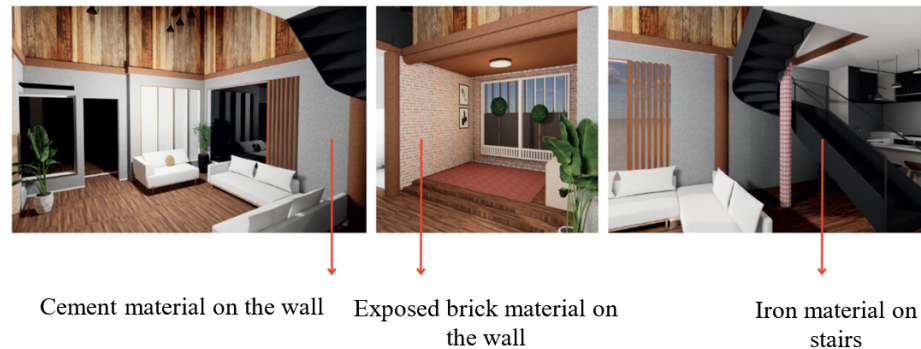


Figure 9: Illustration of Room. Source: Personal documentation.

4. Conclusion

Indonesia is a country that is rich with an abundance of natural resources and cultural wealth. One such heritage of the archipelago that should be preserved is that of the Rumah Bolon. The wealth of this archipelago is worth being proud of as there is meaning and uniqueness in every facet of the land, such as the usage of ornaments which are said to contain one's hope and advice. The Bolon House can be utilized as a medium that can be applied in the construction of today's residential buildings. This is one such effort that is used to show one's pride in the richness of Indonesian culture and the efforts done to preserve it. The distinct aspects of the Rumah Bolon, such as the use of exposed natural elements and a simple color palette, are comparable to the characteristics of the Modern Industrial architectural style. The similarities of these elements are the basis of the proposed combination of the two styles to present a new interior design concept.

This study combines both styles in an act of creativity to explore new ideas, which is based on various principles, namely that of focusing on the similarities of the two styles that will be merged so that every facet will complement one another and be in unity. One such example is the usage of natural materials which are exposed by the Rumah Bolon, and the Modern Industrial style could maintain a balance which makes the overall design look more graceful. Specifically, the selected elements of the two styles are found in the wall design of the proposed concept, where there is the Industrial exposed brick material that is covered by the wall of the ornamental motifs from the Bolon House. Consistency in the application of these characteristics of the two styles is maintained, namely the wooden materials which is a fixed element in both styles.

Conflict of Interest

The authors have no conflict of interest to declare.

References

- [1] Regita R. Kajian Bentuk, Fungsi Dan Makna Ragam Hias Rumah Bolon Simalungun Berdasarkan Tatahan Sosial Budaya Masyarakat Simalungun. *ARTic*. 2018; 2:73-82.
- [2] Hamdani LN, Hantono D. Kajian Arsitektur Industrial pada Bangunan Hotel, Case Study: Chara Hotel, Bandung. *Modul*. 2021;21(1):21-28.
- [3] Persada NGE, Giri KRP. Representasi Tema Industrial Pada Toko Railroad Industrial Furniture. *Seminar Nasional Desain dan Arsitektur (SENADA)*. Denpasar: Institut Desain dan Bisnis Bali. 2020; 3: 512-518.
- [4] Kusumastuti A, Khoiron AM. *Metode Penelitian Kualitatif*. Semarang: Lembaga Pendidikan Sukarno Pressindo (LPSP); 2019.
- [5] Wardhana MAR, Wirasari I, Syafikarani A. *Perancangan Strategi Promosi Visual Kreatif UMKM Pyongpyon Melalui Sosial Media*. Bandung: Telkom University; 2022.
- [6] Jevremovic L, Vasic M, Jordanovic M. Aesthetics of Industrial Architecture in the Context of Industrial Buildings Conversion. In: *Proceedings IV International Symposium for Students of Doctoral Studies in the Fields of Civil Engineering, Architecture And Environmental Protection*. Nis: PhIDAC; 2012:80-88.
- [7] <https://kebudayaan.kemdikbud.go.id/bpcbaceh/uniknya-rumah-bolon-istana-raja-purba/>