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Typology of the Facade of Weapon Barracks at Fort Oranje

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ABSTRACT
The Dutch colonial period in Indonesia, especially in Ternate for about 3.5 centuries, left an extensive influence, especially for the development of architecture. The colonial heritage architecture has its features and historical values. In Ternate, the influence of Colonial Architecture was very pronounced. It shows from the standing of several colonial buildings, such as the citadel, offices, resident houses, weapons barracks, and several houses. The barracks building is one of the Dutch colonial-style buildings that is still maintained today. The research method used is a descriptive-qualitative method with a typology approach. The results of the field survey will be explained again in writing through typology theory related to the research title. The typology approach can classify building elements, building styles in a period of a particular architectural era. The results obtained from this study is the existence of colonial buildings in his day.
Keywords: *Dutch colonial architecture, typology, weapon barracks.*

1. INTRODUCTION

The arrival of Europeans in the Moluku Kieraha region, better known as North Maluku, is inseparable from the struggle for natural resources, namely spices, especially cloves, which were the primary commodities of that period [1]. According to Turner in Syahruddin, exploration efforts made by countries in Europe as the main source of spices throughout the world, carried out because of the immense profits derived from the spice trade. In Europe, spices are commodities that have essential uses in their lives, so they are searching after even at high prices. As a type of durable plant, spices are used as food preservatives, medicinal ingredients, and fragrance ingredients. Spices are also known as exotic commodities that are served at the banquets of European aristocrats. The exoticism of the spices in the order of the European community must be obtained from the distance that must be traveled from the origin of this commodity to arrive and be consumed by Europeans [2].

Ternate Island as an area that played an important role in the world upheaval in the 16th to 19th century AD in the struggle for natural resources, especially spices, carried out by Europeans. It was started by the Portuguese who came in 1512 and Spain nine years later [1] then followed by the Dutch, who came to Ternate on May 22, 1599, under the leadership of Captain Warwijk. Ternate, which was once the city of Bandar, was made the center of military activity during the Dutch colonial era by establishing the Oranje fort. The Oranje Fortress was established in the context of efforts to master the spice trade. The VOC realized that as an archipelago, the monopoly system must be supported by a commercial network in the form of a fortress as a trading post and surveillance post. It is evident in every agreement involving the VOC with local authorities in the region.

The buildings in the Oranje fortress that used to function as Main Gate and Guard Post, Ammunition/ Weapon Room, European Dormitory, Indigenous Dormitory, Residency Office, Prison House, Commander's House, Dormitory Housing Officer, Canteen, Hospital, Kitchen Backup Warehouse [3]. One of the buildings that are still preserved is the Ammunition/ Weapon House. According to data from the North Maluku Preservation and Cultural Preservation Agency (BPCB), based on the Oranje fortress plan on the Papua New Guinea expedition in 1903 [3].

2. RESEARCH METHOD

The research method used is a descriptive qualitative method. The results of the field survey will be explained back in writing through typology theory related to the research title. The typology approach can classify building elements, building styles in a period of a particular architectural era. Typology is the study of grouping object as a model [4]. The Weapons Barracks Facade at Fort Oranje is an object that will be described in this study using a typology approach. Facade comes from the term Facies, which has the appearance or face [5]. Krier in Harisun [6] explained that the building facade consists of roofs, doors, windows, walls, and sun protection / luifel. The building facade elements will be explained using a typology approach. The results obtained from this study are the existence of colonial buildings in his day.

3. RESULT AND DISCUSSION

Ammunition house is the largest building in the Oranje fort. The function as a fortress and military base is clear from the shape of the building that can still be seen today. With an area of approximately 25,451.4 m2, there are various buildings within it, one of which is the Ammunition House that is more often called the Weapon Barracks (following the original fortress plan in 1903). The building is very prominent in the fort besides facing the main gate of the fort; also, the building is dominated by large wooden windows with wide-open windows and dormers on the roof of the building.

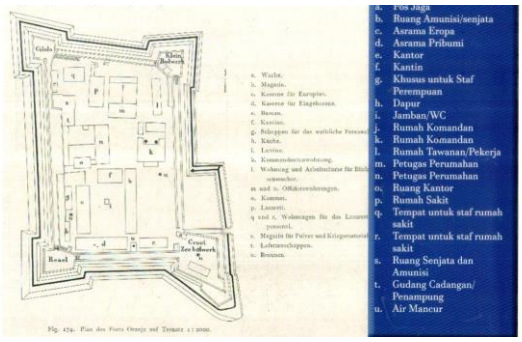

Figure 1 Oranje Fortress plan in 1903 [3]

The following is the typology analysis of the facade of the Weapon Barracks building based on the building facade.

3.1. Roof

The colonial building roof is a facade element that functions as the 'head' of the building. The facade formation prioritizes the condition of the skyline as the orientation of the height of the colonial building, which in turn will form the initial impression of the entire building [7].

The shield roof tends to be used in Dutch colonial buildings so that in its development, the formation becomes the majority roof formation. All buildings in the long castle use a shield roof [8]. Existing shield roofs tend to have a maximum height; this roof height is an adjustment to the tropical climate. Helen Jessup in Wardani & Isada [9] divides four periods of development of Dutch colonial architecture in Indonesia. In 1902, Hellen Jessup said the development of Indische Architecture or known as Landhuise, which was a type of dwelling throughout the Indies at that time, had architectural characteristics such as using a shield roof [9].

The type of shield roof used since 1902 shows that the shield roof of this building is an influence of the Dutch colonial architecture in Indonesia in the early 1920s. The use of dormers on roofs of buildings is a model of windows or other ventilation located on the roof and has its roof [10]. Dormer is a combination of a gable roof and a shield roof that forms a small window and serves for natural lighting in the building.

The use of dormer, besides a characteristic of colonial buildings, is also acculturation accompanied by the process of adaptation between two different nations. This adaptation process in the Indonesian climate adds to ventilation in the roof of the building. It is in line with Handinoto's opinion in Ardiyanto et al. [11], the form of Dutch colonial architecture in Indonesia after the 1900s was the result of a compromise of developing modern architecture in the Netherlands adapted to Indonesia's wet tropical climate. The overall result of Dutch colonial architecture in Indonesia is a distinctive form [11].

Figure 2 The ammunition house roof 3D perspective

Figure 3 Dormer roof of armory warehouse

As shown in figure 3, the dormer in the ammunition warehouse consists of four pieces facing the east side and two pieces facing the western side of the building. It is designed to optimize natural ventilation, where the wind blows from the direction of the mountain to the sea at night and vice versa, during the day. The majority of dormer use square shapes with plain window motifs made from wood. The dormer form can also be found in various buildings within the fort, one of which is the La Galigo museum in the Rotterdam fortress Makassar.

3.2. Doors and Windows

3.2.1. Doors

The building facade has five doors in two types. Three doors are in front of the building, one on the side, and one behind the building. Doors type-1 has undergone the door panel material changes during renovations in 2015, as well

as the door handles. An iron trellis is used as ventilation; the material is still original. There are three doors of type-2, each of which undergoes different changes. The change can be seen from the authenticity of the material used, like hinges, handles, and door leaves.
The prominent features of type-1 and type-2 doors are the tympanum (construction of a triangle or semicircular wall) placed above the door. Only one door of the building does not use tympanum. Figure 4 shows that the frame and door panels are still original. Massive wood paneling is used on the front layer of the door because the material is durable and sturdy as the first protector of large barracks and is still intact until now. So is the case with the padlock on the door, it is still intact and original with material made of solid iron. The shape of the latch can be found in all buildings in the Oranje Fort area and is one of the typical ornaments in the building.

Figure 4 Type-1 door details

Figure 5 Type-2 door details

Figure 6 Type-2 door latch

A large wooden door with a combination of classic style is in line with the Indische Empire Style. This type of door with heavy and dense material can increase the privacy of an ammunition room because it is more concealed and only entered by certain people [12].

3.2.2. Windows

As mentioned earlier, this building is dominated by large wooden windows and dormers on the roof. At the top of each window is a tympanum, which reinforces the impression of colonial style in this building. The existing window is a large double window, one installed on the outside, another on the inside. The solid iron trellis on the inside functioned as a visual liaison, also put sunlight into the room, resulting in natural lighting. The outer part is a window panel that can be opened and closed. Figure 7 shows the scale comparison between the window and human size.

Figure 7 Double window

According to Krier in Asyra [13], the composition of the facade, taking into account the details of windows, doors, sunshades, and roof areas, can create a harmonious whole. By using proportional vertical elements on doors and windows, the height of the building gets more attention.
There are seventeen windows in this building, which can be categorized further into two types. Window type-1, consists of two windows, has an open vent made of a solid iron trellis. This window also has a plain wooden panel and a large hinge. Because the location is parallel to the main door, which also uses open vents, then these three doors and two windows are natural sources of air.

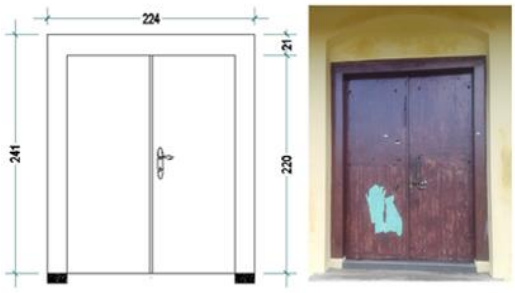

Figure 8 Type-1 window

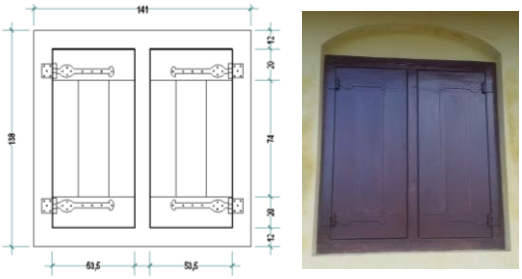

Figure 9 Type-2 window

There are fifteen type-2 windows. Almost all of the panels and hinges are still original, decorated with tympanum, which adds to the impression of colonial buildings. Besides the doors and windows, there are three open ventilations. It is not yet known whether the shape today is the same as the one in the colonial period.

Figure 10 Open ventilation

3.2.3. Walls

Figure 11 shows that the wall material is made of the arrangement of stone, coral, brick, and limestone with a thickness of ± 50 cm. This wall thickness functioned as a shield during the war. The spatial arrangement of this building is formed in linear order as in the Jakarta Fatahillah Museum building [14].

Figure 11 The inner wall of the ammunition warehouse

3.2.4. Sun Shading

The breezeway is part of a good building for the tropics. Figure 12 shows that the hallway is used as an intermediate space, both as a barrier to the entry of direct sunlight and regulating air. With building orientation facing east, sunlight on the east side can be easily blocked by placing a sun shading in the form of wide eaves or placing a breezeway. Placement of the window that is somewhat indented also produces a protective effect against sunlight.

Figure 12 The inner wall of the ammunition warehouse

This building is equipped with a hall that surrounds the building. The hallway serves as a protective building against sunlight, produces a shaded effect, and protects the building from high rainfall [15]. Besides the results of the above analysis about classifying colonial architectural objects in ammunition building from various types of shapes, there is also a very prominent character in the ammunition warehouse building, which is a facade and symmetrical floor plan as shown in figure 13 below.

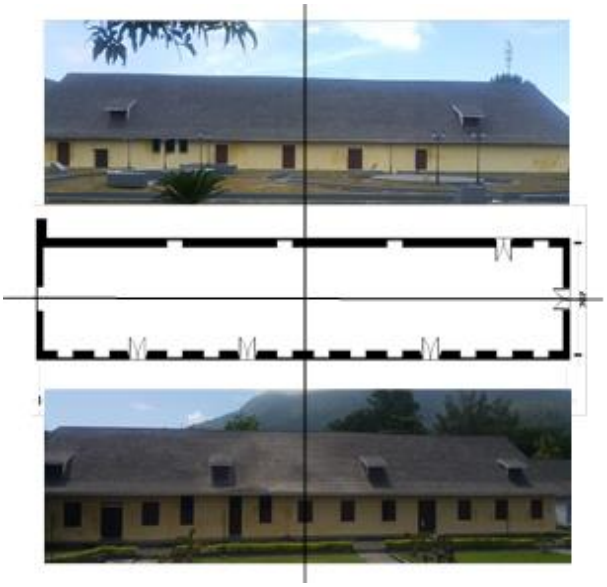

Figure 13 The Symmetrical facade and plans

4. CONCLUSION

Ammunition house is the largest building in the Oranje Fort. Based on the elements of the building facade, reinforced with symmetrical plan and looks, it can be concluded that the building of the barracks/ ammunition is a Dutch colonial-style building built in the 1900s (early 19th century). Building facade typology based on the Krier theory starts from the roof, very illustrates the characteristics of colonial buildings with dormers on the left and right sides of the roof.

On walls with a thickness of ± 50 cm, making this building also functions as a fortress. It is coupled with the type of

window and door with a double door and window system under the Indische Empire Style. The protruding terrace effect, reinforced by the hallway that surrounds the building, produces a protective effect against sunlight.

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