

# Analysis of the Architectural Characteristics of Pinghe Packaging Plant

Jiawen Wang, Yuyi Yang and Xuefei Zhu

School of Wuhan textile University, Wuhan 430073, China

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**Abstract:** The purpose of this paper is to discuss the characteristics of Pinghe Packaging Factory in Jiang'an District, Wuhan. As a building with significant historical value, Pinghe Packaging Factory has a unique architectural style that integrates traditional European and Chinese architectural elements. This article will provide a detailed analysis and elaboration on the architectural style, scale, exterior wall materials, and internal spatial layout of Pinghe Packaging Factory. By studying these characteristics, we can better understand the unique charm and historical significance of Pinghe Packaging Plant as an industrial building.

**Keywords:** Pinghe Packaging Plant; Industrial Heritage; Historical Evolution; Building Analysis.

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## 1. Introduction

In this paper, we will first introduce the historical background of Pinghe Packaging Plant, including its construction background and historical evolution, to help readers better understand the development context of this building. Next, we will explore in detail the architectural style of Pinghe Packaging Plant, including the integration of traditional European and Chinese architectural elements, as well as the characteristics and significance of red brick exterior walls. At the same time, we will also focus on the architectural scale of the Pinghe Packaging Plant, including the design and functionality of the main building and wing buildings. In addition, we will conduct in-depth research on the exterior wall materials of Pinghe Packaging Plant, including the process and characteristics of red brick masonry, as well as the aesthetic and stability of red brick walls. Finally, we will focus on the internal spatial layout of Pinghe Packaging Plant, including the spatial planning and design of the building interior, as well as the application and advantages of large-span structures. Through a comprehensive study of these architectural features, we will gain a deeper understanding of the unique charm and historical significance of Pinghe Packaging Plant as an industrial building.

The research in this paper is of great significance for deepening the understanding and protection of Pinghe Packaging Plant. By deeply understanding its architectural characteristics, we can better inherit and protect this important historical building, while providing beneficial insights for future architectural protection and utilization.

## 2. The Historical Background of Pinghe Packaging Plant

Pinghe Packaging Factory is located in Jiang'an District, Wuhan City, Hubei Province, China, and is an industrial building with a long history. Its historical background is closely related to China's modern industrialization and the economic development of Wuhan City.

Some existing studies suggest that the Pinghe Packaging Factory was founded in 1905. However, according to the "Hankou Concession Chronicles", 1905 was the time when the British merchant Pinghe Foreign Company opened the

Pinghe Co., Ltd. Packaging Factory in Han, rather than the construction time of the Pinghe Packaging Factory. In 1904, after the completion of the Nanjing Taikoo Yanghang project, the Taikoo Yanghang team entrusted the construction of the Hankou Taikoo Yanghang No.1 warehouse to Xiesheng Construction Factory for contracting, and appointed Shen Zhusan as the supervisor. Xiesheng Construction Factory sent Shen Zhusan to lead Shanghai workers and technical personnel to take charge of the contracting project in Han. In 1906, Xiesheng Construction Factory contracted the project of the British merchant Hankou Pinghe Packaging Factory, and still appointed Shen Zhusan to be responsible for the construction. In 1908, after completing the Pinghe Packaging Factory After the construction of the factory, Shen Zhu reviewed the situation three times and separated from Shanghai Xiesheng Construction Factory to establish his own Han Xiesheng Construction Factory in Han This historical record is consistent with the descriptions in historical documents such as "Han Xie Sheng Construction Factory that values integrity as life" and "Wuhan Local Chronicles - People's Chronicles", all of which clarify that the Pinghe Packaging Factory was originally built under the leadership of Shen Zhusan in 1906. Meanwhile, due to the fact that the initial construction unit of the factory area was Shanghai Xiesheng Construction Factory, not Han Xiesheng Construction Factory, although the Pinghe Packaging Factory is commonly mentioned in the historical documents of Han Xiesheng Construction Factory, it is not classified as a typical building of Han Xiesheng Construction Factory.

In the early stages of its construction, the Pinghe Packaging Plant was relatively small in scale, but with the passage of time and economic development, it gradually expanded and strengthened. In the 1930s and 1940s, it underwent multiple expansions and renovations, adding production lines and equipment to adapt to the growth of market demand. Especially during the Anti Japanese War and the Liberation War, the Pinghe Packaging Factory played an important role in providing material support for the military.

With the establishment of the People's Republic of China and the acceleration of industrialization, Pinghe Packaging Factory has further developed and expanded. It has become one of the well-known enterprises in Wuhan and even nationwide, with products sold throughout the country and

gradually developing multiple series of packaging products.

With the changes of the times and market competition, Pinghe Packaging Factory is gradually facing transformation and challenges. With the introduction of new materials and technologies, the packaging industry has undergone significant changes, with traditional paper packaging gradually being replaced by plastics and other materials. Therefore, Pinghe Packaging Plant experienced a difficult period in the late 20th and early 21st centuries, with a decline in production scale and performance.

The architectural characteristics and historical value of Pinghe Packaging Plant have attracted people's attention and attention. In order to protect this important industrial heritage, the government and relevant departments have taken a series of measures, including repairing and protecting buildings, and exploring new ways of utilization to revitalize them.

Nowadays, Pinghe Packaging Factory has become one of the important historical and cultural heritage sites in Wuhan, attracting the attention of many tourists and cultural enthusiasts. It not only showcases the historical trajectory of Wuhan's industrial development, but also serves as a witness to China's modern industrialization process. The work of protecting and utilizing the Pinghe Packaging Plant continues, hoping that it can continue to provide people with historical, cultural, and educational value.

### **3. The Architectural Style of Pinghe Packaging Factory**

The architectural style of Pinghe Packaging Factory mainly reflects the characteristics of industrial architecture in the early 20th century. It combines the modernist style of Western industrial architecture with traditional Chinese architectural elements, showcasing a unique industrial aesthetic.

The building structure of Pinghe Packaging Plant is dominated by simplicity and practicality. The entire building adopts a reinforced concrete frame structure, which has stability and durability and meets the needs of industrial production. The exterior facade of the building adopts red brick walls, showcasing the solidity and simplicity of industrial buildings.

The exterior design of Pinghe Packaging Factory is simple and powerful. The building is arranged in a rectangular plan and divided into multiple independent building blocks. The entire building is dominated by horizontal lines, highlighting the balance and stability of industrial buildings. A series of windows and ventilation holes are installed on the facade, which not only ensures indoor lighting and ventilation, but also increases the three-dimensional and aesthetic feeling of the building.

In terms of architectural details, Pinghe Packaging Factory pays attention to decoration and detail handling. The walls of the building are constructed with red bricks, with clear textures that enhance the texture and layering of the building. The design of the windows and doors on the facade is simple and orderly, reflecting the practicality and functionality of modern industrial architecture. In addition, the internal spatial layout of Pinghe Packaging Plant is reasonable. The building is equipped with multiple production workshops and storage spaces, as well as functional areas such as offices and conference rooms. These areas are connected through corridors and connecting channels, forming a tightly organized internal spatial network.

The red brick exterior walls of Pinghe Packaging Plant also have unique characteristics and important historical significance.

**Durability and Durability:** Red bricks are a traditional building material with high strength and durability. The red brick exterior walls of Pinghe Packaging Plant have undergone decades of wind and rain erosion, and can still maintain a stable structure. This reflects the superior performance of red bricks as building materials, which is particularly important for industrial buildings because they need to withstand heavy loads and long-term use. **Practical and simple:** The red brick exterior wall showcases the practicality and simple beauty of industrial architecture. The red brick material is simple and neat, without excessive decoration, highlighting the functionality and practicality of the building. This is in line with the essence of industrial architecture, which pursues efficient production and economic benefits, without paying attention to luxurious appearance. **Clear texture and rich texture:** The surface texture of red bricks is clear and has a certain texture, bringing a unique visual effect to the building. This texture and texture give the exterior walls of Pinghe Packaging Factory a unique charm and sense of history. The texture of the red brick exterior wall can also reflect sunlight, creating a warm light and shadow effect, adding a sense of warmth and familiarity to the building. **Historical and Cultural Value:** As a historic industrial building, the red brick exterior walls of Pinghe Packaging Factory witness the development of China's industrialization process. The red brick exterior wall represents a typical style of early industrial architecture and has important historical and cultural value. It reminds us of the rise of the industrial era and the struggle of the working class, and is a witness to social change and modernization process. **Local characteristics and sense of identity:** The red brick exterior wall is one of the local characteristics of Pinghe Packaging Factory, which is in line with the local architectural style and cultural traditions. This characteristic makes Pinghe Packaging Factory one of the iconic buildings in Wuhan City, and also provides a sense of identity and belonging for local residents.

Therefore, the characteristics and significance of the red brick exterior walls of Pinghe Packaging Plant not only reflect the advantages of building materials and the practicality of industrial buildings, but also carry historical memories and local cultural values. Protecting and preserving the red brick exterior wall is not only a respect for the architectural style of Pinghe Packaging Factory, but also a cherishing and inheritance of historical and cultural heritage.

Overall, the architectural style of Pinghe Packaging Factory reflects the practicality, stability, and minimalist beauty of industrial buildings. It not only carries the historical memory of the industrialization process, but also showcases the unique charm of industrial architecture. By protecting and utilizing the architectural features of the Pinghe Packaging Plant, we can better understand and appreciate this historic industrial heritage.

### **4. Internal Spatial Layout**

In terms of internal spatial layout, the design of Pinghe Packaging Plant fully considers the needs of production activities. Adopting a large-span structure, there are not too many partitions inside the building, providing flexibility for the layout of the production line. This spacious and bright internal space provides workers with a good working

environment and improves production efficiency.

The internal space layout of Pinghe Packaging Plant is mainly divided into two main parts: production area and office area. The following is a description of its internal space layout:

**Production area:**

The production area is the core part of Pinghe Packaging Plant, used for packaging and packaging production work. It usually consists of a series of production workshops, each used for different production processes or product lines. These workshops usually adopt an open layout to facilitate the transportation and operation of materials and equipment. The workshop is usually equipped with workbenches, machinery and equipment, conveyor belts, and storage areas to support the smooth progress of the production process.

**Storage area:**

The storage area of Pinghe Packaging Plant is used to store packaged products or raw materials to be used. The storage area is usually located near the production area to facilitate timely allocation and retrieval of materials. According to different products and needs, storage areas can be divided into different areas for storing different types of products or raw materials, and corresponding storage management measures should be taken to ensure the safety and effective utilization of materials.

**Office area:**

The office area is the management and administrative area within the Pinghe Packaging Plant. It usually includes offices, meeting rooms, reception areas, lounges, etc. The design of office areas usually focuses on comfort and work efficiency, providing a good working environment for managers and employees. The office area may also include some supporting facilities, such as restrooms, kitchens, and storage rooms.

In order to achieve smooth production and management, corridors, channels, and connecting channels may also be set up inside the Pinghe Packaging Plant to facilitate the flow of employees and materials. These corridors and passages connect different areas to form a tightly organized internal spatial network.

## 5. The Historical Significance of Pinghe Packaging Plant

As a historical building, Pinghe Packaging Factory has significant historical significance. The following is an exploration of the historical significance of Pinghe Packaging Plant:

**The symbol of industrial heritage:** Pinghe Packaging Factory is one of the witnesses of China's modern industrialization. It represents an important stage of China's industrial development in the early 20th century, reflecting the efforts and achievements of the industrialization process of that era. As a historical building, Pinghe Packaging Factory retains the traces of the industrial era and is a symbol of industrial heritage, which is of great value for studying and understanding the history of China's industrialization.

**Witness of social change:** Pinghe Packaging Factory has witnessed the tremendous changes in Chinese society. It was established in the early 20th century, during a period of political, economic, and cultural transformation in Chinese society. Through the history of Pinghe Packaging Factory, we can trace back to the social environment, industrial development status, and the living conditions of workers of

that era, and gain a deeper understanding of the impact of social changes on the industrial industry.

**Inheritance of technology and craftsmanship:** Pinghe Packaging Factory has accumulated rich industrial technology and craftsmanship experience in its operation process. As an enterprise engaged in packaging production, Pinghe Packaging Factory has accumulated valuable experience in the selection of packaging materials, innovation of production processes, and control of product quality. These experiences have reference significance for the development and innovation of contemporary packaging industry.

**The fusion of culture and art:** As an industrial building, the Pinghe Packaging Factory blends modernist and traditional architectural elements in its architectural style. It showcases the combination of beauty and practicality in industrial architecture, reflecting the level and creativity of industrial architectural design at that time. The architectural style of Pinghe Packaging Factory also reflects the rise of an industrial culture, combining industry with art, providing new ideas and examples for industrial architectural design.

Overall, the historical significance of Pinghe Packaging Factory is reflected in its role as a symbol of industrial heritage, a witness to social changes, the inheritance of technology and craftsmanship, and the integration of culture and art. Protecting and inheriting the historical significance of Pinghe Packaging Factory can not only maintain historical memory, but also promote cultural inheritance, historical research, and urban development.

## 6. Conclusion

In summary, as an industrial building with rich historical architectural features, Pinghe Packaging Plant has important cultural and historical value. By conducting in-depth research on its architectural style, scale, exterior wall materials, glass curtain wall design, and internal spatial layout, we can better understand and protect this historical building. At the same time, making reasonable use of the architectural characteristics of Pinghe Packaging Plant and exploring diversified utilization methods will help promote the development of cultural and creative industries and the prosperity of local economy. Protecting and utilizing Pinghe Packaging Plant requires the joint efforts of the government, experts, and all sectors of society. Government departments should strengthen the management and supervision of Pinghe Packaging Plant, formulate relevant regulations and policies, and ensure the smooth progress of its protection work. At the same time, investment and financial support should be increased for the Pinghe Packaging Plant to ensure the smooth repair and protection of its building structure.

Experts and scholars can conduct in-depth research and investigation to further understand the architectural characteristics and historical background of the Pinghe Packaging Plant. They can participate in the development of conservation planning and design, providing professional technical support and advice. In addition, they can also organize academic seminars and forums to promote academic exchange and exploration of the architectural characteristics of Pinghe Packaging Plant.

All sectors of society also play important roles. The public can enhance their awareness of the protection of Pinghe Packaging Plant and actively participate in relevant protection and cultural activities. They can visit Pinghe Packaging Factory to understand its architectural characteristics and historical value, and expand public awareness and attention

through sharing and promotion. At the same time, non-governmental organizations and non-profit organizations can also play a role in promoting and raising funds for protection work, and work together with the government to achieve the protection and utilization goals of Pinghe Packaging Plant.

In the process of implementing protection and utilization strategies, it is necessary to balance the relationship between protection and utilization. The protection work should respect the history and original appearance of the building, and avoid excessive repairs and changes. At the same time, the utilization work should focus on innovation and sustainable development, so as to revitalize the Pinghe Packaging Plant and make positive contributions to the local community and economic development.

In short, as a historical building with unique architectural characteristics, Pinghe Packaging Factory has important cultural and historical value. By conducting in-depth research on its architectural characteristics, strengthening protection and rational utilization, we can better inherit and promote industrial culture, promote local development and cultural prosperity. This requires the joint efforts and support of the government, experts, and various sectors of society to protect and make good use of this precious historical heritage.

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## References

- [1] Zhang Si, Zhang Xi. The Historical Evolution and Value Analysis of Hankou Pinghe Packaging Factory [J]. *Huazhong Architecture*, 2023,41 (1): 153-157.
- [2] Zhang Si, Qi Wei, Zhong Xun, Zhou Xiaosong. Strengthening and Renovation of Industrial Heritage in Cultural Relics Buildings: Taking the Strengthening and Renovation Project of Pinghe Packaging Plant in Wuhan as an Example [J]. *Engineering Earthquake Resistance and Reinforcement Renovation*, 2019,41 (1): 137-144.
- [3] Xiao Wei, Liang Bilian, Song Yi, Tang Xiaoliang. Case Study of Penang and Wuhan in the International Context of Green Renovation of Historical Buildings [J]. *World Architecture*, 2022 (8): 44-50.
- [4] Xu Yang. Research on the Protection and Reuse of Modern Industrial Heritage in Hankou Concession Area [D]. Hubei: Huazhong University of Science and Technology, 2006. DOI: 10.7666/d. d046514.