

# *Study on the Reuse of Old Industrial Buildings in Cities: The Case of the 126 Cultural Creative Park in Mianyang*

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**Keywords:** Old Industrial Buildings Mianyang, 126 Cultural Creative Park.

**Abstract:** The reuse of urban old industrial buildings are a symbol of the progress of urban civilization and a feature of urban sustainable development. In recent years, due to the rapid development of social economy in our country, many factories in the city have moved out of the country. Therefore, the use of reuse to make old industrial buildings new, compared with the demolition of old and new more economic, environmental protection, historical. It's a powerful means to promote the vigorous development of the city. The purpose of this paper is to analyze the empirical model's reuse of old industrial buildings at home and abroad through literature analysis, and to investigate and analyze the reuse of Mianyang 126 Cultural and Creative Park on the spot. The result is to summarize the general method of reuse of old industrial buildings in cities, so that it has a certain reference significance for the reuse of old industrial buildings in Mianyang and even other cities.

## 1. Introduction

The reuse of the old industrial buildings in the city are a symbol of the progress of urban civilization. On the one hand, they are witnesses to the green, low-carbon and sustainable development of cities, on the other hand, they are important factors to promote the formation of their own characteristics of cities.

### 1.1 Reuse of Urban Old Industrial Buildings

Since the 1990s, with the adjustment of China's economic policy and urban planning problems, urban machinery mills, textile mills and so on appear abandoned state. However, in the process of urban development, whether the old industrial buildings are demolished or rebuilt has become one of the concerns of today's society [1]. From the reuse of Giladri Square in San Francisco, Japan, the reuse of the Royal French Salt Factory into the Ledu Museum, and the reuse of the 798 Art District in Beijing, they can explain the idea of promoting ecological energy saving and sustainable development in the reuse of old industrial buildings.

## 1.2. Aims of The Research

This paper reviews the experience mode of reuse of famous old industrial buildings at home and abroad, and then analyzes the reuse background, reuse purpose and reuse means of Mianyang 126 Cultural and Creative Park through on-the-spot investigation. This paper puts forward some suggestions on the reuse of urban old industrial buildings from three aspects: functional spatial structure, external form, architecture and landscape.

## 2. Content of The Research

### 2.1 Domestic and Foreign Research Cases

Foreign American San Francisco Giladry Square and Japanese Cangji Ayibi Square: San Francisco Giladry Square, the United States, its predecessor is the waste chocolate factory, wool spinning factory and so on. As shown in Figure.1. Japan's "Cangji Ayibi Square" is designed to convert the textile mill into a sightseeing hotel. As shown in Fig.



Figure 1: Giladry Square, San Francisco, USA. Figure 2: Ayibi Square, Cangji, Japan.

Beijing 798 Art District: 798 Factory is a key industrial project designed and constructed by the Soviet Union and East Germany in the early 1950s. After reuse, it has become a 798 art park with Bauhaus style architecture. As shown in Figure. 3 ,4.



Figure 3, 4: Beijing 798 Art District.

## 2.2. Analysis of Mianyang 126 Cultural Creative Park.

### 2.2.1 Background Analysis of 126 Cultural and Creative Park. Mianyang 126 Cultural and Creative

Park, formerly known as the Ninth Research Institute of China Electronic Science and Technology Group Company (Southwest Institute of Applied Magnetics), was built in 1967 by 11 and 14 institutes in Beijing to Mianyang, Sichuan Province, during the third line of the National University. Mainly it engaged in the research and development of magnetic functional materials and special devices, as well as the basic research of applied magnetism. Now it belongs to China Electronic Science and Technology Group. The main production plant has been relocated to the high-tech zone[2]. Sichuan Wansheng Tourism Development is responsible for the construction, covering an

area of 98 mu, and transforms the original office building of 126 Factory into a creative industry park with comprehensive functions such as creative design, art exhibition, cultural exchange and so on, and introduced other industries. At present, there are upper and lower bars, pottery museum, Xiaoya, ship palace WEDDING PARK, two mountain houses, glass time and so on.

### 2.2.2. 126 Analysis of Reuse Means of Creative Cultural Park. The 126 Plant Retains Dozens of Old Red

brick houses, black pipes, abandoned machinery and steel buildings with a strong “Bauhaus” style. As shown in Fig. 5, 6 and 7. One of its architectural features is the visible container, steel and glass combination of the building. As shown in Figure. 8.



Figure 5: 126 Creative Culture Park Bauhaus style Old Red Brick House. Figure 6: 126 black pipes retained in creative cultural parks. Figure 7: 126 waste machinery retained in creative cultural parks. Figure 8: 126 steel structure buildings retained in creative cultural parks.

#### 2.2.2.1. Expansion of Outdoor Space

126 the horizontal expansion of the cultural and creative park is mainly reflected in the extension of the entrance or display space. As shown in Figure. 9. The vertical expansion is mainly reflected in the construction space of the glass steel bar structure on the original building [6]. As shown in Figure. 10.



Figure 9: 126 expansion of the level of cultural and creative parks. Figure 10: 126 Vertical expansion of the Cultural and Creative Park.

#### 2.2.2.2. Interior Space Organization and Design

Indoor space organization is mainly reflected in: increase the indoor partition, demolition of the wall and other remodeling techniques. As shown in Figure. 11, 12. The interior color mostly uses black and white gray as the transformation tone, and the material mostly uses the steel, the wood, the glass and so on. As shown in Figure. 15, 16.



Figure 11: Increase the number of indoor partitions.

Figure 12: Demolition of wall. Figure 13: Indoor color. Figure 14: Indoor material.

### 3. Suggestions on the Reuse of Old Industrial Buildings in Cities by Using the Means' Reuse of Old Famous Industrial Buildings at Home and Abroad for Reference

In the reuse design of urban old industrial buildings, it is necessary to integrate tradition and modernity, highlight local characteristics, pay attention to the inheritance of civilization and the continuation of culture, embody the concept of sustainable development and ecological energy saving, and nourish the spiritual world of urban residents.

**Functional and spatial structure reorganization:** In the design of functional structure, we should consider the local characteristics, coordinate the relationship between the surrounding environment, meet the needs of human settlements, and fully tap its economic and cultural value. The internal space of the industrial building itself is open, which can be reasonably planned by flexible space addition and subtraction, and the use value of reuse can be realized.

**External form transformation:** it is necessary to fully consider indoor shading, air circulation and other factors, respect the facade characteristics of old industrial buildings, retain its original architectural characteristics, and carry out micro-transformation [6].

**The integration of architecture and landscape:** in the transformation, we should fully consider the integration of architecture and surrounding landscape, not only better reflect the humanistic care, but also attract other industries to enter, and jointly promote the development of the park.

### 4. Conclusions

On the basis of literature search and field investigation, this paper studies and summarizes the common means of reuse of old industrial buildings in the city.

Because some old industrial buildings in our country are still abandoned, this problem can be solved by means of reuse. Although the common means of reuse of old industrial buildings in urban areas are summarized on the basis of predecessors, it is necessary to determine the use of buildings and the needs of users in practical application. If the purpose and means of architectural reuse are determined, the reuse of old industrial buildings can not only dress up the living environment, produce social benefits, but also bring new economic growth points and economic benefits to the city. Only on the basis of the old industrial buildings for micro-transformation, this reuse is meaningful. And this means of reuse is in line with the current promotion of ecological energy conservation and sustainable development of the green concept.

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