

Research on indoor function replacement and reuse of old workshop

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Abstract. In this era of rapid technological development, So that our industrial form of production mode is constantly updated, In this fast-paced style of life, More old factories are being abandoned by the continuous production stoppage, To combine with the current economical society, people began to focus on these abandoned factories, And through the form of functional replacement of effective transformation, For these dated factories, We need to build on this in the form of retention and innovation, We make a repeat land use on the basis of the original land, In the process of transformation, we reasonably divide the indoor space, This paper also studies on the transformation of old factory houses at home and abroad, It will also explain the design source of the graduation design "Island Song" display space, So to carry on the indoor function of the old factory room replacement and reuse, It can better integrate it into the contemporary social environment.

Keywords: Old factory building; Function replacement; Interior design; Exhibition hall design.

1. Xu theory

1.1 Research background

Today's social and economic rapid development, changing industrial form and structure, the advent of the era of science and technology, in the fast pace of life mode between many cities cannot carry the era speed of industrial abandoned, although they represent the development level of the era and also plays an important role in the core operation of the city, the most important thing is that it also shows the original history and culture and connotation, the city is not divided future memory, it is now people called "old factory". However, in this city, people in demolishing and rebuilding such a piece of building bearing memory will gradually forget the development process of the city, which is contrary to the thought of harmonious society and energy-saving society advocated today.

In now urban land status is expensive pattern, coupled with the implementation of sustainable development policy throughout the whole city, now people pay more attention to the development of cultural history and historical cultural connotation, and dig the unique artistic value and economic value, in the original site gives new cultural connotation, enable it to continue the historical context of the city.

1.2 Purpose and significance of the study

When it comes to the old factory factors there are many aspects, first, with the rapid development of economy and the era of alternating update, as the level of science and technology and productivity level gradually rising, will inevitably make the relatively backward to keep up with the change of industry, which means that these abandoned factories will not be operating so they gradually become abandoned old factories.

Most of the buildings in the old factory carry a history of decades or even hundreds of years, they are all washed through the baptism of the environment through the surface of the building, but these rusty industrial sites, old buildings really useless? The answer is also no, we will transform it can use the site again, make it can become the historical and cultural significance of exhibition hall, exhibition hall and landscape garden, can bring higher public welfare and economic benefits and can emphasize pay attention to the urban environmental protection and it is not urban environmental pollution as the cost of economic interests.

The old factory building excavates its potential artistic value from the perspective of appreciation, Every inch of its wall of its land exudes its unique characteristics of The Times, They are in different

periods and then there are differences in their architectural styles, And these places are the medium for city people to recall the historical memories of the industrial age, People in these years all have some different degrees of emotion and significance to these buildings, It can even be said that, in a certain sense, it can be called a spiritual place of sustenance, To transform the buildings so full of urban emotion and history, Make it have a rich ornamental and very distinctive historical and cultural buildings, They will continue to accompany the city in another form.

2. Research status, both at home and abroad

2.1 Foreign Research Status

In the SOHO district of Manhattan in New York City (photo 1-1), numerous iron-based industrial plants and warehouses were built in the mid-19th century, before the factories closed and most of the production workshops idle. In the 1960s, artists organized to turn it into an art studio, a living space, an exhibition space and a small storefront, then painting the walls and remodeling pipelines, making SOHO a unique space, free and innovative artistic atmosphere and original history and culture. The successful practice of the SOHO district has directly attracted more architects and artists to participate. Transformation practice projects during this period show even more possibilities. A large number of old industrial areas in the city and their declining environment have been transformed into living Spaces, high-tech industrial zones, museums, and public activity Spaces (Fig 1).

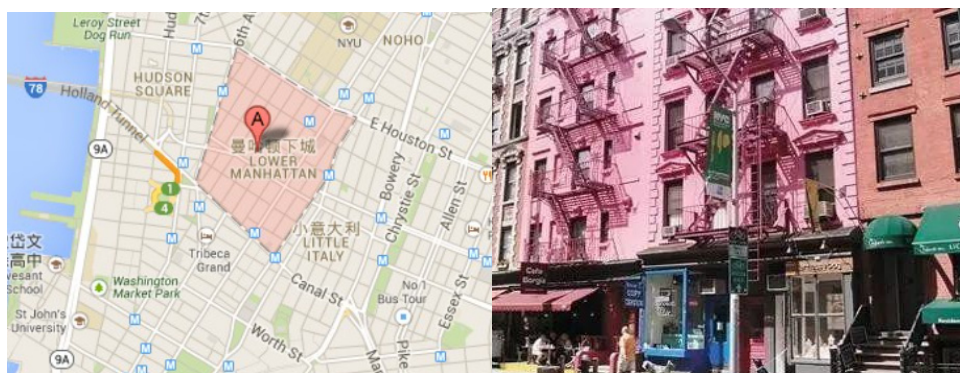


Fig. 1 SOHO District in Manhattan, New York City Photo 2-2 SOHO status

2.2 Domestic research status

At present, the museum collection from France, Italy, Britain, South Korea and other 25 countries and regions of galleries, design rooms, art exhibition space, artist studio, fashion shops, restaurants and bars and other cultural and art elements, artist studio and animation, film and television media, publishing, design consulting and other kinds of cultural institutions more than 500. These include the Pace Gallery in the United States, the Yulens Center for Contemporary Art in Belgium, the Iberian Art Center in Spain, the Forest Crown Gallery in Denmark, the Seasons Gallery in Singapore, the Longevity Tai Gallery in South Korea and the Soka Gallery in Taiwan. And more than 2,000 art exhibitions and art activities are held every year, receiving more than 5 million tourists from home and abroad.798 The Art Zone brings together a large number of artists engaged in different industries and have different pursuits, forming an influential cultural industry group. At the same time, cultural and creative industry clusters can produce a snowball gathering effect, attracting more individual artists to come here. Red brick walls, scattered factories, crisscrossed by pipes, and the walls still retain slogans of all ages. (Fig. 2-3).

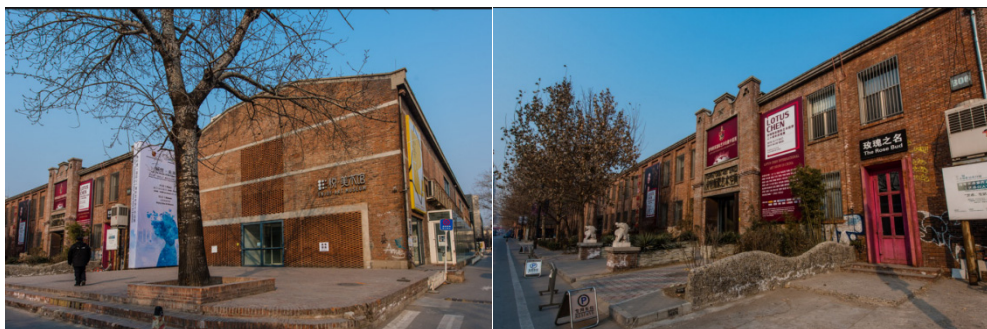


Fig. 2 Status quo of Beijing 798 Art District
(Photo source: online collection)

3. Basic elements of indoor function replacement

From the perspective of historical development, the old factory building needs to be protected individually, not only from the historical perspective, but also from the current national policy of sustainable development and environmental protection, we also need to protect the integrity of the old sites. In fact, from another point of view, we are not only protecting the old factory building, but also protecting its historical culture and cultural environment emotion, so to transform the old factory building, we need to deeply understand their historical information, not to generalize, so as to achieve the recognition of the public.

Protect the old plant overall need to note that we should retain the overall elements, also to the whole part of a certain degree of transformation, we cannot blindly only pay attention to the unique part of the actual application, because the whole part can show in the old plant elements cannot show part, they show the age baptism, the inheritance of history and culture and the emotions of the surrounding residents, once we will abandon the whole part of the significance of the transformation of the old site becomes dispensable. In contrast, we retain the whole on this basis of the transformation can show the reusable function and the actual practical effect achieved.

With the economic development of The Times, people's aesthetic is gradually improve, people are not only meet the demand of ordinary life supply, the demand for public space is gradually rising, people from the most basic functional demand slowly rose to the demand of visual beauty, so we should not only to symbolize their historical and cultural architecture, more to conform to the present people's aesthetic needs, so we have to do is in the environment of the era of science and technology, when the old factory renovation must add new innovation elements, and these elements can effectively combine with the old factory.

In the old factory building when we also need to consider the nearby environment and the development of the city, we need to consider people's expectations of the old site transformation, also need to consider the cultural quality of the mass crowd, because people's cultural accomplishment directly affects their direction and cognition, we need the cognition of beauty have seek common ground while shelving differences in the mind.

4. The "Island Song" display space design

Exhibition hall design is the most important function belongs to the display space, we are the "island song" exhibition hall space for the following division: first, we will according to the content of the display and the type of professional direction to distinguish for the concentrated comparative appreciation, so that people can be more convenient for each exhibit for purposeful viewing and appreciation. Second, we have added the interesting exhibition in the exhibition hall. We should not look at the whole exhibition hall as monotonous. We put large interesting exhibits in the space planning (Fig. 3), which has a visual impact effect and brings different feelings to the whole exhibition hall. Third, we have added a certain level in the spatial division, and each site is divided with different materials, which increases the attraction of the site, and can better control the direction of the flow of

people, without causing the inconvenience of pedestrian traffic, and increases people's time to stay in the exhibition hall.

"Island song" show space its name is dreamy reason is that his form looks like an island, the roof mainly adopts dislocation visual effect to an indoor and outdoor light staggered space atmosphere and the overall line style, roof shape is triangle is given priority to, the top is parallelogram, the roof with a point of different height partition visual impact, middle height difference to steel column to achieve a height difference, different time internal light and shadow will have different visual effect and light and shadow change.

"Island song" exhibition hall is mainly the style of industrialization, the first from the color exhibition hall mainly uses red, white and gray, red mainly comes from the red brick wall to give a person a sense of restoring ancient ways, gray mainly comes from the feeling that the floor gives a person to elegant and quiet, white and black mix and match have more rich changes on the level. Second, in terms of building materials, the "Island song" retains part of the appearance of the original building, plus the metal texture, which gives people a strong sense of visual impact. Third, the gate design principle of the "Island Song" display space is that the "open door" without barrier is an independent gate. The whole indoor and outdoor space is connected.

The interior is divided into two parts, and the building is divided into four areas with rest areas. Ornamental area, toilet, and art large display, the second floor is divided into two parts to corridor to form a hollow out style, can be from top to bottom ornamental light change effect and art appreciation, the design combines the basic elements of flat packaging factory red brick steel wood materials to create, mainly expressed an original site is to retain some elements and on its basis to retain its original historical legacy also on the basis of an innovation, in the transformation of the old factory while we need to show our design principles, let the public can very good accept. In the pursuit of beauty on the road, everyone has their own ideas, we accept a different aesthetic, but we must seek common ground in different ways, so that our old factory renovation design can be accepted by the broad masses.



Fig. 3 Renderings of the "Island Song" exhibition hall
(Photo credit: Self-drawing)

5. Summary

We adapt to the fast-paced society and we need to slow down and think about our surroundings, Contemporary society pays attention to the strategy of making sustainable development and the economical society, We agree with the transformation of industrial sites, Not only can the land be used again, but also the history and culture of the city with science and technology, And through the rational division of space, Increasing economic benefits, In the process of functional displacement, we retain his overall elements, So that he can show their historical and cultural connotations, Can show the exhibition hall very well again in front of the public.

References

- [1] Wang Yaqin. On the Application of Light in exhibition hall design [J]. *Modern decoration (theory)*, 2017 (01): 112.
- [2] Zou Yuying. *The Museum Architectural Design* [M]. Beijing: China State Construction Industry Press, 2002.
- [3] Chen Dengao, Cai Ji'an. *Architectural Design Dataset* [M]. Beijing: China State Construction Industry Press, 1995.
- [4] Deng Lu. Planning and Design of Museum Public Space [J]. *Art Mirror*, 2021 (02): 88-90.
- [5] Liu Nan. Study on Reconstruction of Old Plant Based on Urban Development [D]. North China University of Science and Technology, 2018.
- [6] warm. Research on the Reconstruction and Innovative Design of Old Industrial Buildings [D]. Qilu University of Technology, 2013.
- [7] Yang Zhenyu. *Landscape design in Industrial Site Reconstruction* [D]. Beijing Forestry University, 2015.
- [8] By (beauty) by Carol Berens. Wu Xiaojing translation. The redevelopment of industrial heritage utilizes an architect, planner, developer and developer.
- [9] Chang Jianming. Research on the Reconstruction and Renewal of Industrial Site Based on Landscape Urbanism Theory [D]. Hunan University, 2013.
- [10] (beauty) by Pete Melby, Tom Cathcart. Zhang Ying, Li Yong, translated. *Sustainability Landscape Design technology* [M]. Beijing: Machinery.