IQBAL FACTORY

A Successfull Conservation Project Report

Yazd,Iran

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Iqbal Factory

The Iqbal factory is located in the south western part of Yazd, within the city limits, outside the historical context, and in the precinct of Sardorah. The large factory with an area of over 36,500 square meters and a carcass (substructure) of nearly 14,000 square meters is one of the most beautiful factories of the first Pahlavi era.

The factory, is one of the earliest for spinning and weaving Yazd city, set up in 1934, with production beginning on March 15, 1935, and it was the first weaving factory in the city to operate using new technology methods; building was designed and implemented by the current architects of Yazd using traditional methods. It was purchased by the Ministry of Housing and Urban Development (National Land and Housing), with repairs initiated by Yazd Municipal Civil and Urban Improvement Company.


کارخانهٔ اقبال

Location map of Iqpal factory in Yazd which is in adjacent to the main street

Introducing the building

The building was registered with the No. 7781 on February 13, 2002 in the Iranian national monuments list.

The consulting company for the restoration of this project was commissioned by Yazd Shamseh Company and the conservation executor was Yazd Civil and Housing Company. Currently, the owner of the building is the Ministry of Science, and it functions as the Yazd Science and Technology Park. The building was registered with the No. 7781 on February 13, 2002 in the Iranian national monuments list.

Close to the Iqbal factory's site are, the Municipal Hall and National Garden Park. The architecture style of the building and its principal features relate, to the function and application of the principles of Iranian architecture Much of the factory's design demonstrates the architectural principles of the early years of the Pahlavi (I) period (which is itself the logical continuation of late Qajar architecture), including new architectural

and functional concepts. The general infrastructure of this factory has been affected by the industrial production method,

The main hall of the factory, which is located just opposite the entrance to the courtyard, has a main gate with brickwork decorations. The interiors of the hall are covered with vaulted brick square columns, and the roof pavilions provide indoor lighting. The south palace garden is one of the most important buildings of this period. On the east and west side of the yard, buildings are simpler, and likely to be used as a warehouse for raw materials and production. The site includes another mansion, a bit different from the complex, which was once a hat making factory and which was built several years after the Iqbal factory. Although the design of this mansion was heavily influenced by European architecture, it nonetheless has significant architectural value.

One of the most beautiful and unique parts of the building is the facade of the factory entrance, decorated in an Iranian style. This section is three storeys including a basement, and its high arched roof is decorated with brickwork.

Central to the building's decoration is the gate, which has colored decorative plaster. The factory building, the Kushk (a former palace also on the site), are also decorated with plaster and brick. The brickwork of the factory's vent tower is also an important element of the complex's decoration, together with the wooden doors and windows with heavy decorative features.

During the second Pahlavi era and in the first years following the Revolution, other buildings were added to the complex. However, these additions were made without respect to the existing context, meaning they have damaged the harmony of the complex's original design.

In terms of the building's structural quality, the following points are worth mentioning:

-Except for the entrance gate, the complex's other valuable buildings are vaulted. The engine room and generators use very delicate trusses, to create a space with a strong structure suited to factory operations.

-Where heavy machinery is located, structures are of brick. Side spaces and stores, by contrast, are built using only sundried bricks and mud.

The building is currently being used as a science and technology park.

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Image 1- Iqbal factory after conservation

Image 2: Main Entrance of Iqbal Factory after renovation

Image 3-Iqbal factory before conservation


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Introducing the Project


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Images 1& 2- Iqbal factory during renovation

Necessity of design

Restoration of existing buildings is a necessary part of sustainability, by reusing existing structures and materials, and improving the quality of the building and the surrounding tissue. The construction of the Iqbal factory, embodies the continuity of Iranian architectural traditions as well as more modern concepts, which makes this structure particularly worthy of conservation and preservation.

Schèeme Objectives

The objectives of this project are:

- to protect the existing structure from inevitable damages due to the passage of time;
- to restore and return life and activity to the site by changing its function;
- to continuity the site's Social use and functions

Explaining the approache, the theoretical framework, and the strategies for design and intervention

In light of the fact the Iqbal factory is not very old, but that it nonetheless requires comprehensive restoration, the following principles have been defined to deal with the project:

- any kind of addition should to some extent be able to be subtly differentiated from the old buildings, whilst exhibiting utmost contextual sensitivity;
- it should be possible to remove extensions without damaging the building;
- all extensions from the second Pahlavi period can be removed;
- non-supporting walls used to divide interior spaces can be removed ;
- extensions that have damaged the identity of the Pahlavi era can be removed;
- will be possible to construct new buildings in the complex;
- newly built buildings, while respecting the complex, should not necessarily follow the architecture of the historic building complex.

In addition to the above, other points pertaining to the comprehensive restoration of the building as approved by the Cultural Heritage Authority also apply to this complex.

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Interventions

A- Studies, Risk eliminationplanning and operations

As a first step, measures have been taken to eliminate risk and dispose of surface water. In the places where it seemed necessary, bracing was erected and the mortars of the roofs were repaired as temporary protection against rain. Once these urgent steps had been taken, an analysis of the existing situation and a diagnosis were carried out, which concluded (in brief) that the buildings were not suffering from many severe problems.

Identification and structural analysis:

Regarding the structure, the building was strong owing to the quality of its original construction in the first and second periods its construction. With few exceptions, all were fit to be maintained. Damage that had occurred through humidity and cracks were investigated.

The elements of decoration had unfortunately not fared as well. Due to the large number of windows and doors in the building, important wooden decoration suffered extreme termite damage. Plaster decoration was discoloured in many places, and the first step needs to be the removal of damaged colours following the correct process. Elements of plaster decoration visible at the entrance of the building have lost their quality due to previous incorrect repair work.

B- Studies, and preparation of conservation and restoration plan

Design Proposal

The most important issue is to adapt the proposed function of the building to the existing architecture in a consistent and defined manner. The proposed applications at the beginning were: the exhibition and the scientific-applied university of architecture', with the aim to restore the activity and performance to the building. The measures required for this change were also made within a month, and in the meantime, it operated as a science-applied university. The factory continued its activity for about 5 decades. Ultimately, it was purchased by the Ministry of Science and Research and turned into Science and Technology Park in Yazd after extensive conservations.

It should be noted that, to meet the needs of the science and technology park space, the existing factory spaces was used as follows:

1- The main hall of the factory, for the establishment of incubator, institutions and space service
2- Hall of Electric Powerhouse, to turn into a conference hall (park)
3. Input building, for information use, advertising, printing and publishing
4-warehouses behind the hall, to change and become exhibitions of establishments and stores
5. Previous worker's facilities of the factory, located next to the hall of the powerhouse (northeastern side of the site) for the establishment of office services, prayer room, dining (buffet) and essential services
6- Northwestern building, to become a lab and electronic work
7- Buildings close to the street (except for the entrance building), for deployment of potential functions such as coffee shops, information center, bank, post office, etc., which could serve outside the park visitors as well.

Image 1: Iqbal Factory after renovation (Function: Science and technology park)

Image 2: Iqbal Factory after renovation (Function: Science and technology park)

Also, some of the essential activities of the park, which could not be located in the old buildings or the existing spaces were not sufficient to adjust them, as well as functions which should be considered on the site, was located in the empty space of the site. Such as parking lot which located on southwest of the Hall.

Development of exhibitions also in the southwest corner of the site, the gatekeeper set up on the empty pit of the northeast corner of the site and the kitchen and bathroom were also built on empty spaces inside the site. (Archives of Yazd Science and Technology Park 2009)

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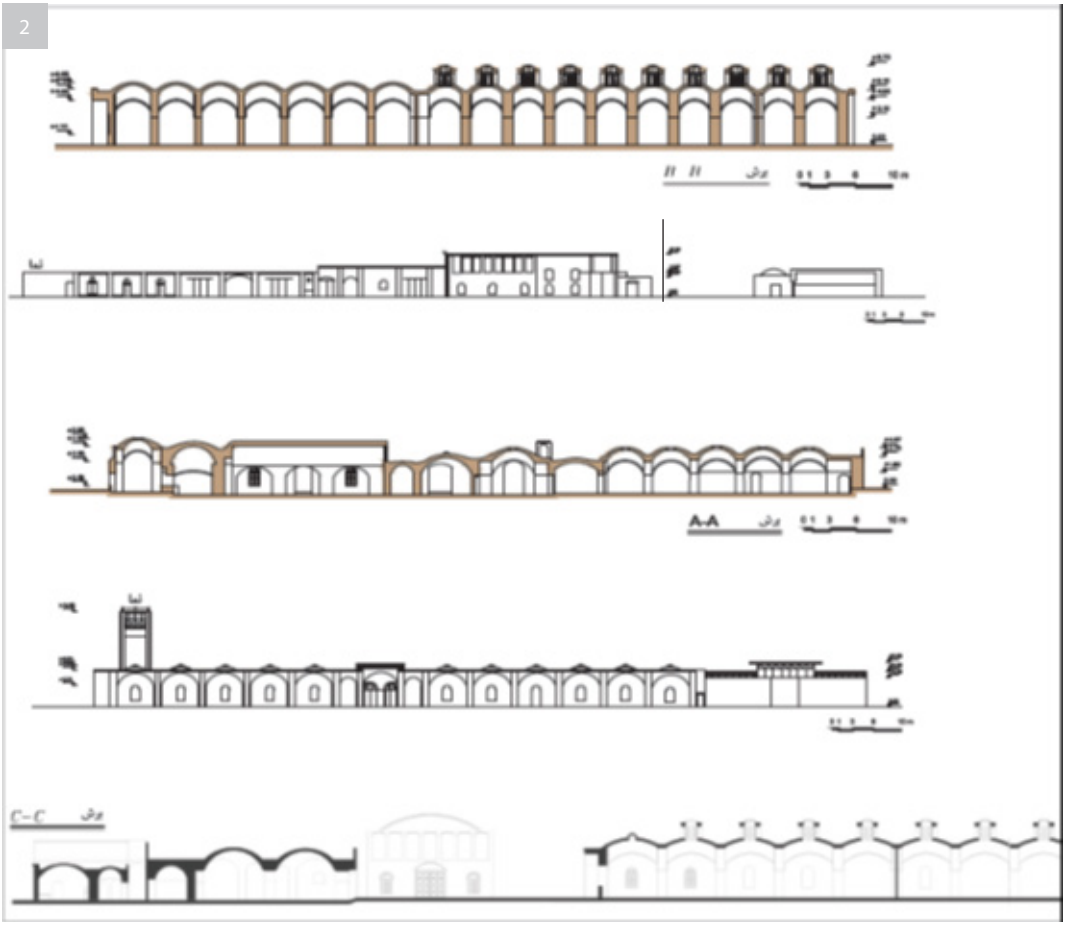

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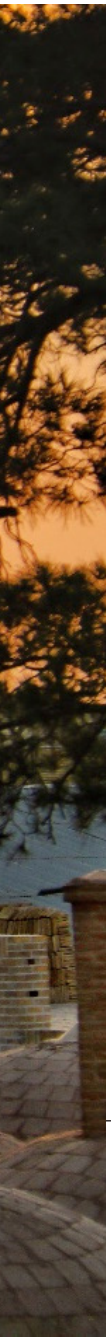

Image 1: Plan of the complex

Image 2: Sections