Industrial heritage: Atarazanas Market's squares in Málaga

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ABSTRACT: The commercial activity is and has been fundamental for the development of the society in our cities. Though this labor is present from the ancient history, it is in the Middle ages when it has got in the urban design a major incident on having done the own streets of markets. We cannot forget that the medieval city was a market in itself, that with the passage of time will derive in market's squares, in complementary buildings of commercial nature and finally in the new typology of markets arisen after the industrial revolution. This abstract tries to make known one of the first attempts to recuperate the buildings heritage at the end of the 19th century in Spain: It's called Atarazanas Market's squares in Málaga, a marvellous Joaquín Rucoba's architect work. It is one of the first examples in iron architecture in Spain which opted preservation building heritage from the respect of the place memory even in his last restoration.

1 INTRODUCTION

During the first half of the nineteenth century, markets carried out in Spain are built with traditional materials such as wood or stone. However, from the 1960s, the iron interfered as dominant material influenced by several factors. Firstly, although iron and steel industry was known since remote times, as a result of technical innovations that are discovered after the industrial revolution (Sobrino, 1989) began in England in the 18th century, in Europe exploded iron culture in the middle of the 19th century. Les Halles in Paris, had a very influential and fundamental role. These markets were designed by Victor Baltard in collaboration with Felix Callet (1854-56) on order by Napoleon (Navascués, 2007), and they were formed by fourteen pavilions linked by iron and glass vaults streets, which caused such an impact, which they were imitated so much in the same Paris, since in other European countries.

Variety and wit became more noticeable in designers because there weren't typology made for this type of building. This demonstrated in beautiful examples, today eliminated, as the markets of the Barley (1867-1875) and of the Mortenses (1868-1875) in Madrid, both of the architect Mariano Calvo Pereira (Castañer, 2004). While in Spain low demand coupled with poor communications, will make that iron will take late in the new industry, everything built in Europe with this material was studied by Spanish architects, which will appear as autonomous fig-

ure in 1857. In addition, from the 1950s will emerge different manuals of trades and industries that will promote the employment of the new materials.

In the mid-19th century, Spain lived a romantic movement full of Oriental Historicism, favored by post historicist paintings and literature of travelers like Washington Irving (Palomares, 2013) who will be captivated (Ordieres, 1986) of the great Islamic culture heritage kept that will suppose a worry towards the taste for the Arabic thing and neomudéjar.

Atarazanas Market`s in Malaga combines iron architecture and Romantic movement. It can be considered the only one that introduced neoárabe taste in markets, in addition to being one of the pioneering examples of conservation of historic heritage.

2 DOCKYARDS IN MÁLAGA

The building of the dockyards has been linked through its history to the sea. Its origin was due to its proximity to him (Ordieres, 2002) and its progressive distance also. This was due to the continuous deforestation that suffered the bank of the Guadalmediana, as a result, the sea was separated since the 16th century and dockyards stayed in land (Camacho, 1991). In this way, they will progressively adapt to new uses being still obsolete, without any practical use. (Ordieres, 2002)

Dockyards in Malaga were constructed during the Islamic domination. They place in Malaga from 1296 according to Balbás the building will be constructed of 1333-1354. According to the hairnet of the main gate preserved, at least this door was built during the reign of Mohamed V during 1354-1391 (Camacho, 1991).

We know numerous graphic documentation, so we found out about its original outer perimeter. Walls joined to the building. (Ordieres, 2002) It was vast, stamped with towers and it served as arsenal. Later it was barracks, Park of artillery, College of medicine and surgery, and finally it was victim of abandon and ruin (Repullés, 1879).

In 1843 after Spanish confiscation, the central Government gives to the council of Malaga the old building of the dockyards for being used as a public purpose (Hernando, 1989).

Although since 1822, it was expected to install a public food market in the old building of the dockyards, in 1868 they think of building a new market taking advantage of the solar (Ordieres, 2002). Its demolition was promoted by the revolutionary Junta of 1868 in "order to attend to the needs of the working class" and was used by the City Council to make an old municipal suctio (Caballero, 1987).

Nobody discussed about conservation of Arab remains except for the Central Commission of monuments and the report architect Enríquez`s efforts, who stood for the preservation of whole building. There were no political interest in the protection and conservation of the architectural remains that had already been reported on numerous occasions by the Academy of Fine Arts of San Fernando on the continuous demolition of monuments. Fortunately the President of the Academy of Fine Arts of San Telmo de Málaga, José Freüeler, Marquis of Pamega, managed to save the arch of the demolition, being under protection of the Academy (Barrionuevo & Mairal, 2011) to include it in the future market.

3 THE ATARAZANAS MARKET`S. 1879

Malaga suffered one of themore bright and early industrial awakening on the country) .In 1832 they installed the first high ovens beginning the industry siderometalúrgica with great use of the iron, especially from 1850 far from the European development. (Dovecots, 2013). This was one of the reasons why in comparison with the rest of other Spanish cities, the city of Málaga bet to build a large iron market.

The first covered project market is responsible for the municipal architect Joaquín Rucoba, in 1873, fruit of the need, because the buying and selling were carried out in unsanitary conditions, outdoor, in narrow streets and squares. It was the first stone on April 5, 1875. In December 1875 once concluded the foundation, Rucoba requested permission to mount the Arabarc, because it should be the first thing made after replained the building. The metal structure was made by the

old Sevillian steel industry, Foundry of San Antonio of the brothers Perez. "Alfonso XII market`s" was opened in 1880. (Barrionuevo & Mairal, 2011)

Unfortunately today, we haven`t the original project available. However, while there are many texts that describe this market, we should emphasize the one made for the architect, writer and restaurateur Enrique María Repullés and Vargas (1845-1922) (Aguilar, 1995) on August 25, 1879 in number 16 of 'Annals of the construction and of industry', scientific journal where he made a brilliant description of the original project, really useful to the present article.

The market has a trapezoidal floor and it takes up an isolated block with 2932,20 m^2. The main façade shows Atarazanas Street. Inside, it is divided into three bodies covered by metal framework without intermediate supports. In the main nave, as on the sides there are posts both in Central rows as attached to the sides according to the central market of Paris.

Structurally, the armor of the main nave consists of mixed forms, curves, circular inside and straight on top pieces that hold the gable roof. This is made by Sieves` crystals of 5 mm thick and ribbed on the inside to avoid the Sun's rays.

> *"To facilitate the ventilation and lighting of the central part, of the lateral naves, each pair of framework is divided into two equal parts, so that the top is high 1.30 m above the bottom."*

The lateral naves are formed by smelting thick columns that start from the ground, presenting eight and nine segments in the lateral fronts, and four in the main and back front 5,65 m shaft to shaft columns. The lantern of the side rooms is double iron T 220 mm in height and 16 mm thick and the rest of the room, are formed from sheet metal (iron or rolled steel) forming blades with wheels (wider than thick piece of iron) 50.9 mm and other vertical of 130,9 mm united by means of rivets to two irons T 16,10 cm and 20 mm thick. The central nave`s framework is also of iron sheet metal double T, with the lightness which allows it to receive the low weight of the glass cover. Lateral naves are cover with painted flat tiles, green and yellow.

The facades are divided into thirds vertically: the first, a base of stone and brick, the second iron Arab arcs having placed three in each arcade, and the third, the tympanum arcades, also made with Arabic ornamentation and openings in the upper part to facilitate ventilation.

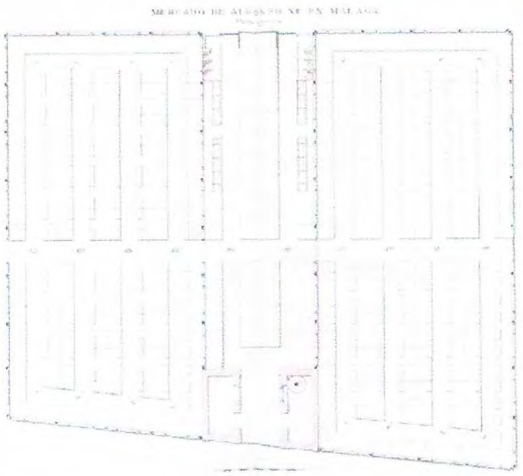

Figure 1. Ground floor. 1879.

In each arcade, the central arc is double light the other two, and small columns which separate them resting on the socket. Large arcs are closed by fixed wooden blinds and small doors hinged stained glass at the bottom that can be opened.

The light that is received in the central part of the market is overhead, and the joining with the closed arcades is "naked" so the light can communicate better. Repullés, from the beginning of the article, emphasized the importance of having to make the buying and selling in a convenient and hygienic way. He describes how get ventilated with holes that are attached to the openwork of the tympanum arcades` and opened skylights for the best air current. Also, the market was helped by small windows arcs` that controlled the air current closing or opening depending on the day.

As for the evacuation of water, they collected them in the market sewers` serving downspouts iron columns that hold the structure. At the bottom they have a mouthpiece 19 cm in diameter which empties into a small brick deposit connected to sewers by terracotta.

This system has to be applauded because Malaga evacuation`s in drains only have inconvenience and discomfort using old gutters (Repullés, 1879).

Works were finished in 1879, using 262.698 kg cast iron and 163.115 kg of sweet or wrought iron (Ordieres, 1986). They cost 756.904 pesetas (Aguilar, 1983).

4 ARAB DOOR RESTORATION

> "*The elegant cover, which is preserved by fortune, is of great merit; It was built in white marble and all his blocks were united without mixing or bitumen, following the Phoenicians adopted taste. On both sides of the cover he had and are preserved today, two shields, envolved diagonally with these inscriptions in Arabic, corresponding first on the right and the second on the left: only God is the rich, only God is the brave.*" (Repullés, 1879)

During the process of the demolition of the dockyards, the arch was dismantled and the stones remained guarded and numbered for his later restoration and incorporation in the new building. In order to avoid that the segments composing the arc above the door disappeared, the architect stressed that the reconstruction speed`s was fundamental, requesting the segments to be placed in the hollow of the arc door, closing it with a zither for avoiding disappeared pieces.

The door was in a lamentable condition, fruit of the successive works throughout the times.. His intervention is described in two levels, the first was the restoration of the gate itself and the second its adaptation to a new place: a metal structure market`s.

According to the final settlement document written by Rucoba, (Ordieres, 2002) the arch mounting process was described in this way: first of all they would tear down the wall attached to the Arabic arc, they would take apart the arc ashlars and later, they would probably add new jaspon ashlars in the lintel as well as Alicante stones in the straight and padding style on the main body. In addition, the patina would be eliminated to return the monument its old appearance. Twenty-six new stones were described probably used in the jamb arcs. His own tonality is the best reference to differentiate the new stones from the original. Moreover, it would be the most worn part that had been buried nearly a meter from the ground level, although this can only be considered as a hypothesis.

For all known information, it is concluded that arch would have stayed in foot attached to the wall built for this purpose, the zither mentioned in their reports. The biggest problem was the dismantled parts and their displacement 25 m to the east. It should be noted that the door will take out of context although its use would be the same: it will continue to operate as a main gateway to an enclosure.

We have to understand the context in which this intervention takes place. In 1870, few educated people were who valued Arab art. Rucoba reuses the door, and fits it constructive and compositionally to the new building made with other material and other dimensions. In any case, this decision would make it persist to the present day.

Rucoba looked for a tripartite composition to integrate the door. He added two bodies on both sides of the old gate, more discounted and with two horseshoe arch windows, columns with slim

capitals and shutters, star-shaped wooden enclosure. We have another attempt to whole integration, appreciated even in ornamental details. These new modules, as well as the cornice, are made by Alicante stone in contrast with the original marble and the jaspon. The economic reason given the difficulty of finding new material was probably decisive in the election.

The end result by adding a medieval element to a contemporary building iron structure was the fusion of two brilliant stages in the history of Malaga (Ordieres, 2002).

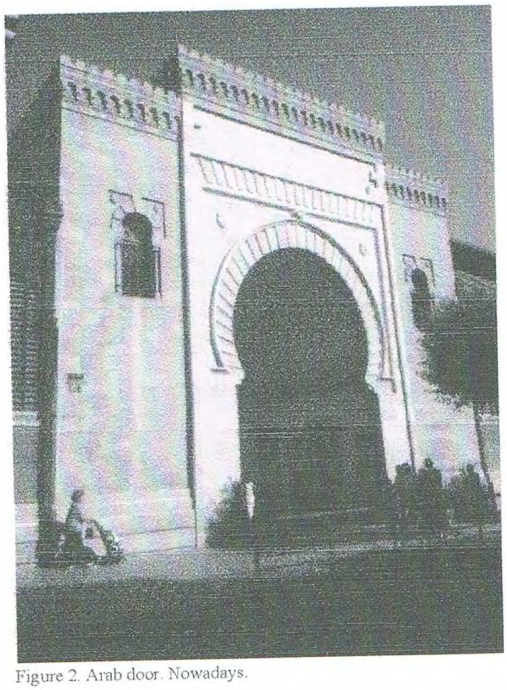

Figure 2. Arab door. Nowadays.

5 THE IMPORTANT REFORM OF THE MARKET IN THE 70'S OF THE S.XX

Along the history of the market several reforms and repairs have happened, though the most important and significant it was that of the project of 1966 of the architect César Olano after a progressive period of abandonment. New volumes were included with this performance and were introduced new services such as freezers, coffee shop, services and area for children (Barrionuevo & Mairal, 2011) that it disfigured the original building, ignoring its history.

They introduced false ceiling to hide system, stalls were individualized, flooring was modified and colorful covers were changed with new ones in shades of gray cement (Ordieres, 2002).

In 1973 the market was again rehabilitated by the architects César Olano and Carlos Verdú who entrust to the brothers Atienza the production of a great window on the history of Malaga in the arch of later front in substitution of the blind of Rucoba's crystal. Cesar Olano and Carlos Verdú`s architects ,who order the development of a large stained glass window on the history of Malaga in the back wall arch instead of Rucoba blind glass from Atienza`s brothers.

The gate and the arch were declared cultural interest asset on 9 September 1979 and the rest of the building has "comprehensive protection" (Barrionuevo & Mairal, 2011).

Figure 3. Stained glass window. Central nave.

6 THE LAST RENOVATION AND RESTORATION OF 2010

The last works of rehabilitation and restoration belong to 2008-2010 of the architects Aranguren and Galicians, where as they describe in the memory of the project, it is approached from two

premises: respect and recover the historical character of the building and maintain and improve on the stalls being adjusted to commercial standards.

Also, in the results of the project, Isabel Ordieres tells that in 2001 the state of preservation of the building was the result of the progressive abandon and ignorance of the public in relation to its historical value. She describes how exteriors ceramic veneered facade were damaged, as well as the downspouts, stained-glass, metallic structure and darkening of all glass slats.

Preliminary to the intervention way, was ordered a study on the structural conditions and laying foundation about the market. This document concluded that the trusses was in good state of conservation, bolted joints were deficient and that brackets only had in principle deficiencies of punctual and initial character. The laying foundation system seemed not to suffer alterations, although there would be some negative influence of the humidity contained in the area of contact with the buried basement surfaces (Ordieres, 2002).

After studying the cited previous study, to recover the concept of open market, first of all they proceed to the demolition of the mezzanine as well as market stalls, to recover the central space and to generate a continuous space, barrier-free, container of new stalls.

The procedure to follow, would continue checking the metal structure of the building did not suffer important pathology, later it would be restored and treated with rust preventer and finally it would be painted.

In the facade they cleaned stonework, dry, with sandblasted projection, sealed the cracks and joints and repaired the most damaged areas like joining hollows with the structure.

Figure 4. Back façade.

They reinstated the volume of natural stone with stones of similar characteristics to the original fixed by anchors, and they restored the lost mass with epoxy mortar. The possible efflorescence from stone would be treated and the facades would be shored up increasing hardness stone.

The work of rehabilitation and repair of metallic vertical walls consist of wet sand at low pressure sandblasting, replacement parts of cast iron or polyester in singular points, stripping pressure and primer for the protection of oxides to finally apply the termination with oils and finish until you get the original color.

They recovered the brick, in that moment hidden with tile, so once demolished the tile, on the hidden brick would provide a brick masonry face, smooth, that would recover the original design.

They will clean and rehabilitates the big window to its original state, as well as the lattice of glass blades that all the glasses would be replaced.

They recovered the original tile ceramic, vitrified, flat cover in green and yellow in the aisles and glass laminated 4+4 with translucent "butiral" in central nave imitating the original.

They recovered the catching water system as it was originally, i.e. with the placement of zinc seen in the central nave and hidden in the side nave. The point where there was the tank was dug and is new.

There are new facilities such as plumbing, electricity or air conditioning. The new toilets are located on the ground floor next to the back façade.

They dug over the flooring 25 cm deep to perform a new sill waterproofed and paved with continuous terrazzo on-site.

They also restored the Arabic Tower adapting it to technical rooms and offices. They demolished existing interior partitions and woodwork to replace them with new ones of similar characteristics. The flooring on the ground floor is marble and in the zones of offices in the first and second plants stoneware. Its cladding on the ground floor, prelude to the market, is made with stucco and in the rest of the market`s enclosure with cement mortar.

The new stalls were made with metal structures and were coved of lacquered wavy plate manufactured finished with aluminium. They tried to create a structure of stalls developed as a sequence of chromatic prism that establish a contemporary dialogue with the historical structure of the market. The formation of the elevated floor was made with auxiliary tubular structure and finished with wooden boards (Aranguren & Gallegos, 2002).

Coinciding with the works was made an archaeological project under the direction of the late archaeologist Antonio Rambla Torralbo, who concluded that the oldest medieval occupation at solar was setting to the 12th century, appearing further constructive phase of modern times confirming the different uses of the building. On October 27, 2008 the Ministry of culture permitted the burial of the remains leaving custody archaeological property (Barrionuevo & Mairal, 2011).

7 CONCLUSIONS

From the point of view of the authoress, every action in a historical monument should have a personalized criterion of intervention. Work, as part of the team that studied each case, extremely important and sensitive.

In numerous industrial buildings, as it is the case that concerns us, the artistic and patrimonial value has not been valued by the majority of the society along their lives. And, as a result of that detachment, many of them have been victims of the neglect or in the best cases, they have been reused to be adapted to new uses, taking into exclusively the program of needs.

The Atarazanas market in Malaga is an interesting case of intervention due to the perception and conception of the patrimonial value of the building is similar in the initial project and in the last rehabilitation. Although they are distant in more than one century of history, both interpretations share the valorization of the buildings which went relatively unnoticed by a great part of the society in different periods.

Rucoba harmonizes the patrimonial inheritance with the innovation of the iron architecture in a sensitive way, inspired by Arab architecture. The compositional scheme, geometric decoration, horseshoe arcs, are masterfully combined from stylistic reflection, historical memory, the conservation and the restoration combined in this building. Wealth lost during the reforms of the time, which fortunately and rightly recover Aranguren & Gallegos with contemporary language. Once more, restoration blends different artistics period. In the latter case, the architects opt to recover the heritage lost, or rather hidden, since now we can enjoy it after the rehabilitation.

A building built itself throughout several years, consequently it is made from overlapping and evolution of different artistic variants becomes a whole interesting heritage value in many cases. However, in other cases, since the intervention on this market in the seventies, the team draughtsman did not talk with the existing building and they made disappear the wealth of the space after his development. Therefore, the recent and last rehabilitation searches and finds, and releases and reveals the essence of the building, not only externally, but from the depth of the concept, of the space and his materials.

Figure 5. Main façade.

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