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EVALUATION OF THE RESTORATION STUDIES DONE IN THE WOOD STRUCTURES OF HISTORICAL BUILDINGS: KEBAN YUSUF ZIYA PASHA MOSQUE

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Abstract

In this study, the restoration work carried out in the wooden parts that is an important element of Keban Leaded Mosque was discussed. Yusuf Ziya Pasha in Keban town of Elazığ built Keban Leaded Mosque in 1795. The mosque has reflected the characteristics of the Ottoman period. The town is one of the few remaining from the complex structure. It is famous for its marble pulpit, processing dome, women's section made of wood, preaching, doors and window shutters.

Later its built, there are no registered information about the restoration work carried out during the Ottoman Period. However, towards the end of 1800 years, it is specified that some interventions was made. According to records of Foundations General Directorate, firstly, it was restored in 1965. Then, the second restoration was carried out in 1999.

The investigations made by means of observation and photography shows that the repair work has been concentrated mainly in the structure of the carrier element. The other portion is also left as it is. Wood preaches fame is a case useless and is kept in the closed section of the mosque. There were no transactions for the window shutters. It is understand that women section made of wood and doors was painted for protection. Repairs performed in the wood sector was observed that compensate led to power failure for material properties and construction techniques used in wood elements in the mosque were taken into account.

As a result, the restoration process for the missing parts of wood elements in the mosque must complete and should be initiated immediately to transfer to future generations. Structure in the restoration work should not be addressed as a whole. Each section of structure is proposed the examination by experts with regard to topic.

Keywords: Restoration, Wooden elements, Keban Yusuf Ziya Pasha Mosque

TARİHİ YAPILARIN AHŞAP KISIMLARINDA YAPILAN RESTORASYON ÇALIŞMALARININ KEBAN YUSUF ZİYA PAŞA CAMİİ ÖRNEĞİNDE İNCELENMESİ

Özet

Bu çalışmada, Keban Yusuf Ziya Paşa Camiinin önemli kısmını teşkil eden ahşap elemanlarında yapılan restorasyon çalışmaları irdelenmiştir. Keban Kurşunlu Camii, 1795 yılında Elazığ'ın Keban İlçesinde Yusuf Ziya Paşa tarafından yaptırılmıştır. Osmanlı Dönemi mimari özelliklerini taşıyan cami, ilçedeki külliyeden geriye kalan birkaç yapıdan biri olup, mermer minberi, kubbe işlemeleri, ahşaptan yapılan kadınlar mahfili, vaaz kürsüsü, kapıları ve pencere kepenkleri ile ünlüdür.

Yapımından sonra, Osmanlı Döneminde yapılmış bir restorasyon çalışması hakkında kayıtlı bilgi bulunmamasına karşın, 1800'lü yılların sonlarına doğru bazı müdahalelerin yapıldığı belirtilmektedir. Vakıflar Genel Müdürlüğü kayıtlarına göre, ilk olarak 1965 yılında gerçekleştirilen restorasyondan sonra 1999 yılında ikinci restorasyon çalışması yapılmıştır.

Gözlem ve fotoğraflama yoluyla yapılan incelemelerde, onarım çalışmalarının daha çok yapının taşıyıcı elemanlarında yoğunlaştığı, diğer kısımların ise olduğu gibi bırakıldığı görülmüştür. Ahşap vaaz kürsüsü, kullanılmaz halde olup, caminin kapalı bölümünde muhafaza edilmektedir. Pencere kepenklerinde hiçbir işlem yapılmamıştır. Ahşap kapılar ve kadınlar mahfili, anlaşıldığı kadarıyla koruma amaçlı boyanmıştır. Camide bulunan ahşap elemanların onarımında kullanılan malzeme özellikleri ve yapım teknikleri dikkate alınmadan gerçekleştirilmiş olması nedeni ile telafisi oldukça güç olan hatalara yol açtığı gözlemlenmiştir.

Sonuç olarak, camide bulunan ahşap elemanların eksik parçaların tamamlanması ve gelecek kuşaklara aktarılması için ivedilikle restorasyon işlemlerinin başlatılması, restorasyon çalışmalarında yapının bütün olarak ele alınması yerine her bir bölümün ilgili uzmanlarca incelenerek yapılacak işlemlerin belirlenmesi gerektiği önerisinde bulunulmuştur.

Anahtar Kelimeler: Restorasyon, Ahşap elemanlar, Keban Yusuf Ziya Paşa Camii

1 Introduction

Historical structures serve not only as a reflection enables us to visualize the life-style, level of development and all cultural values of the past, but also as a means giving future generations the opportunity to establish strong ties with the past. This is the main reason why it is of great importance that these structures, which have the characteristics of the past and bear witness to the history, are restored and protected.

Being the most important part of our cultural heritage, historical structures are constructed according to the masonry work construction with stones, bricks, marble and wood materials while its conveying system is composed of vaults,

arches, domes, pendants and walls [8]. Wood is generally the construction material of the mosque's shutters, which constitute an important part of historical structures, doors, preaching rostrums and pulpits as well [4].

Decorations representing cultural values are frequently made on marbles and wooden materials. The protection of the wood, which is distinguished from other construction materials, is possible through a work compatible with the particularities of the masterpiece.

Wooden materials turn out to be more appealing due to the fact that they have plenty of advantages [3]. The more there occurs a humidity loss in the hygroscopic limit (0-28), the more the wooden material narrows; while in the contrary situation an expansion is seen. Events resulting from this particularity and leading to measure changes in the wooden material when made under fiber saturation point are called "work". Wood's amount of work in all aspects is not parallel; it is the least parallel to fibers, the most in the tangential direction of annual rings. The wood material is affected by the temperature and relative humidity of the place, but it still continues to work after it is turned into a product. This case leads to certain deformations such as distortion, buckling and bending [6, 7, 9]. Thus, masterpieces made of wood that were constructed in ancient times but survived until our day and age, are subjected to a distortion in small or large scales due to environmental factors, which brings a need to restoration.

Restoration is an interference that is realized in order to protect a human- made product of culture having the value of an historical document. The first condition of this interference is to protect not only its historical identity and but also its value of being an historical document. The usage of the protected masterpiece can only come to the forefront as long as its historical identity is given priority. Its protection becomes meaningless otherwise. This is why giving a new function to old monuments does not signify giving up on its historic and aesthetic qualities [5].

Today's basic approach concerning the protection of monuments requires a perpetual maintenance. Plenty of countries in the world evaluate their masterpieces within the framework of 1 or 5 year programs and are restored according to the damages identified. In advance of the restoration work, the monument is documented thoroughly with techniques such as photographs or videos, after which their scaled-drawing is made. In addition, its short history, value, aesthetic and technical qualities and legal status are evaluated [1].

Anatolia has been the cradle of many civilizations for thousands of years. Archaeological excavations, which enable humanity to establish ties with their past, bring to our day and age the cultures of each civilization having lived on this territory. Today, while the traces of past civilizations are chased down with archeological excavations, present historical structures are restored with the aim of keeping Turkish-Islamic culture alive. This restoration focuses mosques which are the most important constructions in Turkish-Islamic architecture and the best reflection of the time they were constructed in with their artistic characteristics.

General restoration plans do not focus separately on supplemental elements leading sometimes to irreversible consequences. With the work made on the example of Yusuf Ziya Paşa Mosque, the inadequacy of the restoration on wooden elements was revealed.

Keban Yusuf Ziya Pasha Mosque was constructed by Yusuf Ziya Pasha, the person in charge of mine, in Keban / Elazığ in 1795. Possessing the characteristic of the Ottoman Period, the mosque is one the few remaining constructions from the social complex and is known for its marble pulpit, dome processing, women' gathering room made of wood, preaching rostrums, doors and window shutters. Nowadays, there remains a library, a mosque and a tomb dating back to the excavations of Yusuf Ziya Pasha [2].

After its construction, there was no access to accurate information about the restorations made throughout the Ottoman Period. A huge part of the social complex, which was closed for a certain time after the Republic Period, was devastated and demolished. After having been restored, the remaining parts of the social complex (mosque, library and tomb) were opened to use and worship for the first time by Foundations and Regional Offices in 1965-66 [2].

The mosque was taken in inventory by Malatya Foundations and Regional Offices in 2002. According to the information received by the concerned institution, a second restoration was made in 1999 and a new one is planned to be carried out in 2016, for which survey and photograph studies were realized and constructional elements were identified in 2014.

In this present study, restorations on wooden interior elements were evaluated thoroughly, which are one of the most valuable elements of the Yusuf Ziya Pasha mosque in Keban/Elazığ. After the identification of incomplete restorations in wooden interior elements, proposals were made.

2 Research Method

In this study we evaluated restorations on Elazığ Keban Yusuf Ziya Pasha Mosque's (Figure 1, 2) wooden elements. The preaching rostrum, door and window were evaluated through observation since they were mentioned in the research. Photographs of all elements were taken and documented and their technical drawing was realized after necessary measurings were taken. The correlation of the wooden construction element with other elements, its construction features and status quo were identified with the current preliminary studies. Other construction materials such as marble and stone were excluded from the study.

Figure 1. Keban Yusuf Ziya Pasha Mosque.

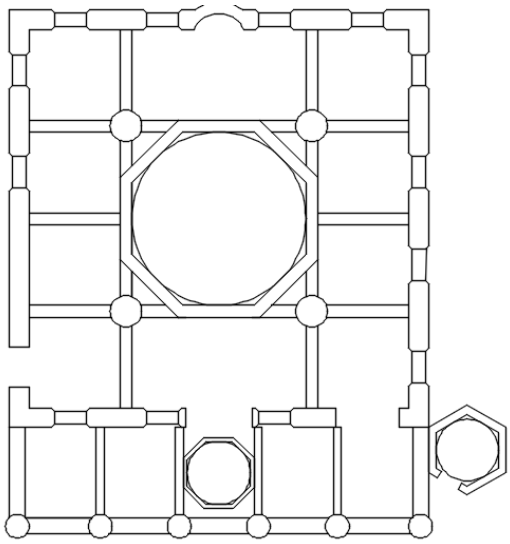

Figure 2. Keban Yusuf Ziya Pasha Mosque architectural plan.

3 Findings

Technical information about the examined door, window interior shutter and wooden preaching rostrum of the Keban Yusuf Ziya Pasha Mosque and findings concerning the deformation are states respectively.

3.1 Doors

There are 2 doors for the entrance to the mosque's courtyard, 2 for the front wall, 1 for the sidewall, 2 for the library and 1 for the minaret, adding up to 8 doors in total. Since one of the courtyard entrance door was completely misshaped, it was replaced with a gate made of iron.

Doors of the courtyard are double-wing gates and are produced with driving technique (Figure 3, 4). Large and small knuckles serving as the decoration of doors are nailed to the wall. In addition, the door handle is made in the shape of a half bun and metal badges were put at each door's corner.

Doors of the library, minaret and left side walls have only one wing. The main entrance door and the gathering place for women are two-winged doors. Doors of minarets and women's gathering room for were made with real kündekari technique, while others were made with tablaruka technique. There are metal strips decorated with geometrical patterns and metal knobs on cross rail. As for these, there are only carving decorations on the ride between the two wings. Rails of the door are combined with tongue joints and mortises are anchored with dowels.

Figure 3. The entrance to the mosque's doors.

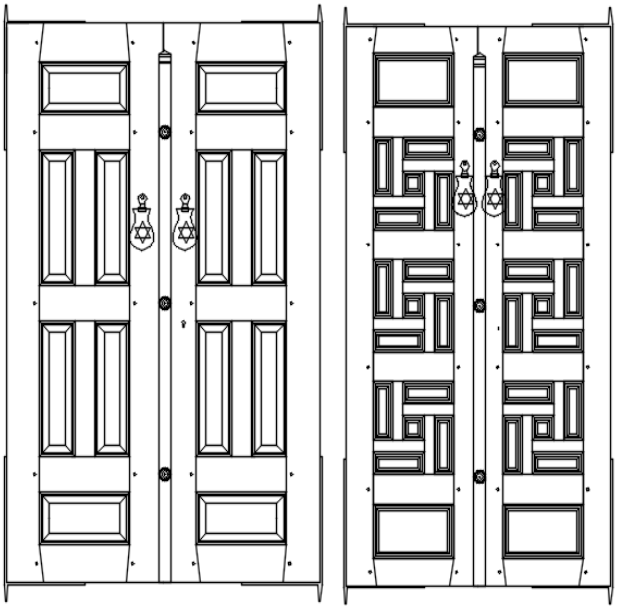

Figure 4. The entrance to the mosque's doors technical drawing.

3.1.1 Problems with Doors

All headings should be even though there is an original door lock, it is no longer effective due to corrosion and the coating applied. Instead of repairing the damaged door lock, a new lock was fitted and cavities were made in the surface (Figure 5).

Figure 5. The original door lock and the lock that was fitted afterwards.

The coating that was applied to wooden parts for protection was also applied for metal painting without making any separation between materials. This case led especially to the deformation of metal elements' actual shape. It was clear to a poor workmanship since there was no coating to the exposed wooden parts, which were under metal connections and accessories (Figure 6).

Figure 6. The application of coating to wooden and metal parts of doors.

Doors were made with kündekari and tablaruka techniques. In tablaruka and kündekari technique, parts have to be positioned without being glued and merged to rails and panels. Tablaruka and kündekari techniques lost effectiveness due to the fact that the protective coating applied was thick & gluey and filled the spaces in-between the parts (Figure 7). Namely, there is a high risk of deformation in doors in consequence of a possible work, which can occur with the change of the place's climatic conditions.

Figure 7. Details from the women's gathering room where coating was applied.

No measure was taken especially for door situated on the outer courtyard. Doors are completely under the influence of the outer atmosphere. This case paved the way for the corrosion of courtyard door and loss of some parts within time (Figure 8). Nowadays, a metal door was placed instead of the wooden door in the courtyard of the lower entrance. Unless protective measures are taken for the top courtyard door, it is predicted that it will share a similar fate.

Figure 8. Corrosion seen in metal parts of the outer courtyard door and the rotting of wood.

3.2 Interior Window Shutters

The interior window shuttle on the right of the mihrap was made with the kündekari technique while others were made the tablaruka technique (Figure 9, 10). Rails of window shutters were combined as open mortise with the real kündekari technique, as others were combined as concealed mortise. Wooden dowels were used in order to anchor mortises. Metal strips, which are decorated with geometric designs, are located on the top and bottom rails of window shutters.

These strips serve at the same time as knuckles since they are connected to the rings on the walls. There are ringed door handles which are in the form of bulging badges and have a parallel size with window shutters. There is no other decoration except for parts of the edge on wooden parts. There are only several geometric carvings on the ride between two covers.

Figure 9. Window shutters made with tablaruka and kündekari techniques.

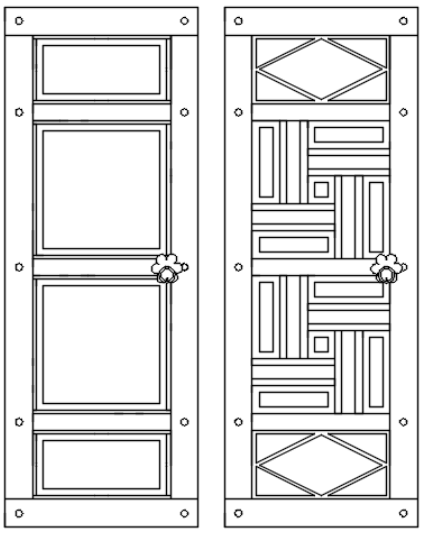

Figure 10. Window shutters technical drawing.

3.1.2 Problems seen in window shutters

There are no decorations and tools on the upper service of wooden elements. This leads to the corrosion of some wooden elements (Figure 11). Even though they are protected from the outer atmosphere, they are negatively affected from the air and humidity. Rotting is especially seen on the parts close to the wall.

Figure 11. Corrosions seen in window shutters.

Fundamental elements were ignored when meeting technological needs of the construction, as it is the case for most historical constructions which are still open to use. The only window frame in which ac pipes were integrated was the original one among all the changed window frames(Figure 12).

Figure 12. Ac Pipes going through the window frame.

Windows are made with tablaruka technique, one of which is made with kündekari technique. While those made with tablaruka technique were processed double-sided, those made with kündekari technique were one-sided. However, when this window is closed, the non-decorated back surface is seen instead of the front surface. This leads to the idea that the window was changed. If it is the case, then there is no information about what happened to the original part. If it is not the case, it leads to the idea that its place and location was not taken into consideration.

Figure 13. Window shutter made with kündekeri technique positioned in the frontage.

3.3 Preaching rostrum made of wood

It was made by placing intermediate records between six feet that have the shape of a square. Intermediate rails were combined to the feet with concealed mortise. Railings with vertical slats were positioned between rails, decuple carving was made between railings and thin wooden boards were placed. Cords were opened not only on strips but also records and fine processing of herringbones were applied to the abutment. Geometric patterns were applied in the table situated in the interior.

The rostrum that is no longer used nowadays is situated in the sultan gathering room that was used as a depot in the mosque. Alternatively, another marble rostrum that is not even the slightest compatible with the construction was placed there. During the restoration, there was no interference to the preaching rostrum that was taken to the depot. It was left to corrosion. It is possible to see that many parts of it decayed.

Furthermore, it was identified that some platforms dislocated or lost while some parts were tried to keep in place by nailing with nail. Geometric patterns were processed with a trellis kündekari technique right in the middle front and two-side body of the rostrum, which was made in order to prevent a later collapse of boards that were nailed behind.

Figure 14. Preaching rostrum situated in the sultan gathering room.

4 Conclusion

If a figure one of the most important resources that enable lots of accommodation units to establish strong ties with the past and to transfer cultural values to future generations is historical constructions. Their loss or deformation during restoration leads them to lose their documental quality. We need to carry out attentive studies in order to enable the transfer of regional cultures to future generations, of which there are only few documents present.

In this study, solution suggestions were tried to be given by evaluating the restoration and application problems seen wooden elements of the Keban Yusuf Ziya Pasha Mosque. It is remarkable to see that attachments leading to destruction in constructional elements exist among the primary problems that occur due to technological advancements. Fitting new door locks, integrating and trying to hide electrical wiring, attachment such as ac pipes and water installation lead to critical destruction when particularities of constructional elements are not taken into consideration.

It is important to protect and make interior elements usable, which are an important factor enabling the integrity of the construction. However, wooden elements such as the courtyard door whose huge parts are rotten and the preaching rostrum, which is no longer available to use, shall be taken under convenient protection conditions in museums. In addition, by imitating the general characteristics of the construction and replacing them, it would be possible to preserve the uniqueness by not destroying the integrity.

All qualities of each material that compose the masterpiece should be taken into consideration during restoration. The type of tree used, the decoration, the construction technique and the work done on the upper surface are of great importance. The paint used for covering, which provide a temporary protection, may cause irreversible damages. For this reason, when selecting protection tools, upper case tools which do not cover the fiber structure of a tree and do not harm the construction technique should be preferred. This work carried out only on wooden interior elements show that doing all the restoration as a whole is not right. During works executed in order to preserve the general appearance of the constructions, many interior elements get harmed and have to be replaced. This causes the construction or the historical artifact to lose its general character in time. Each interior element needs to be observed by experts on this very subject and their correlation with other construction materials need to be taken notice of.

The fact that these places are still open to use serve as a great advantage to the survival of the historical artifact and its passing on to future generations. Continuing to use historical constructions, even if to meet different ends, prolong their lives and reduces the maintenance cost. It is important that the construction purpose and the need of constructions such as mosques do not change since they would also hinder different aims expected from the construction. In addition to this, the attitudes of the users of these places should differ from a new construction and to a historical construction is wider than a single column, it may be given as to cover two columns and it should be placed at the top or bottom of the page.

5 ACKNOWLEDGMENTS

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