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# The Restitution of “Çifte Hamam” in Ahlat According to Final Excavation Outcomes

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## ABSTRACT

The excavation of Ancient Ahlat City has started 45 years ago by Prof.Dr. Prof.Dr. Haluk Karamağaralı, and resumed under the chairmanship of Assoc. Prof. Dr. Nakış Karamağaralı from 2005 to 2010. The excavations of old hamam were finalized at the end of the excavation season of 2010. The bath has two parts which are specialized for women and men. Both parts has a cross shaped plan and has 2500 m2 area in total. The bath is a unique building found in Anatolia with four the iwans and eight halvets symmetrically designed. The excavation process in general, the restitution of the hamam in detail is presented in this article. The restitution study is realized on the basis of the existing parts and the traces of the building that are found at the site, the excavation reports held by Prof.Dr. Haluk Karamağaralı, and the comparative studies on bath literature.

**Key words:** Hamam, Double bath, Ancient Ahlat City.

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## 1. INTRODUCTION

The Ancient Ahlat City (Eski Ahlat Şehri) excavations, having commenced in the year of 1967 by Prof. Dr. Prof.Dr. Haluk Karamağaralı in Ahlat District of the City of Bitlis (northwest of Van Lake), lasted for 24 years until 1991. Excavations were halted at that time due to poor conditions, and were restarted in 2005 after a gap of 14 years and resumed under the chairmanship

of Prof. Dr. Nakış Karamağaralı between 2007-2010.(Figure 1). Having reached around 1600 m<sup>2</sup> of size at the end of 2009, the monument, excavations of which were finalized at the end of the excavation season of 2010, have reached to its full size of 2500 m<sup>2</sup>. (Figure 2). Having the measured survey updated in 2010, the restitution plan, having been prepared since 2009 has been completed in its final form.

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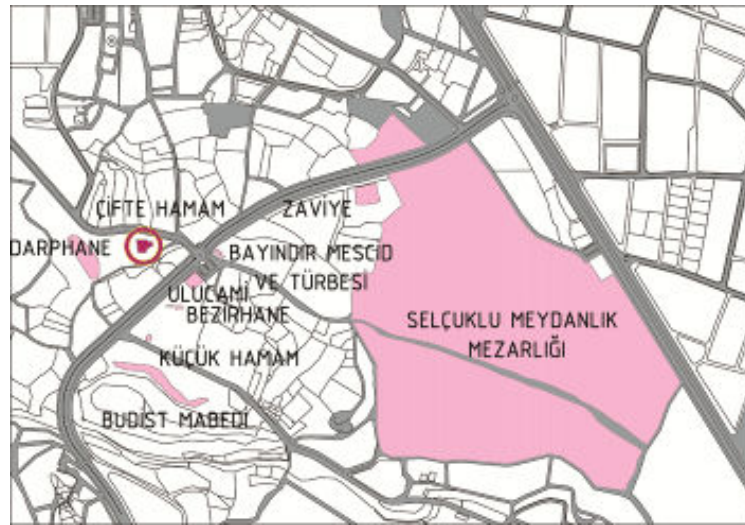


Figure 1. The position of the Hamam, at the ancient City of Ahlat.

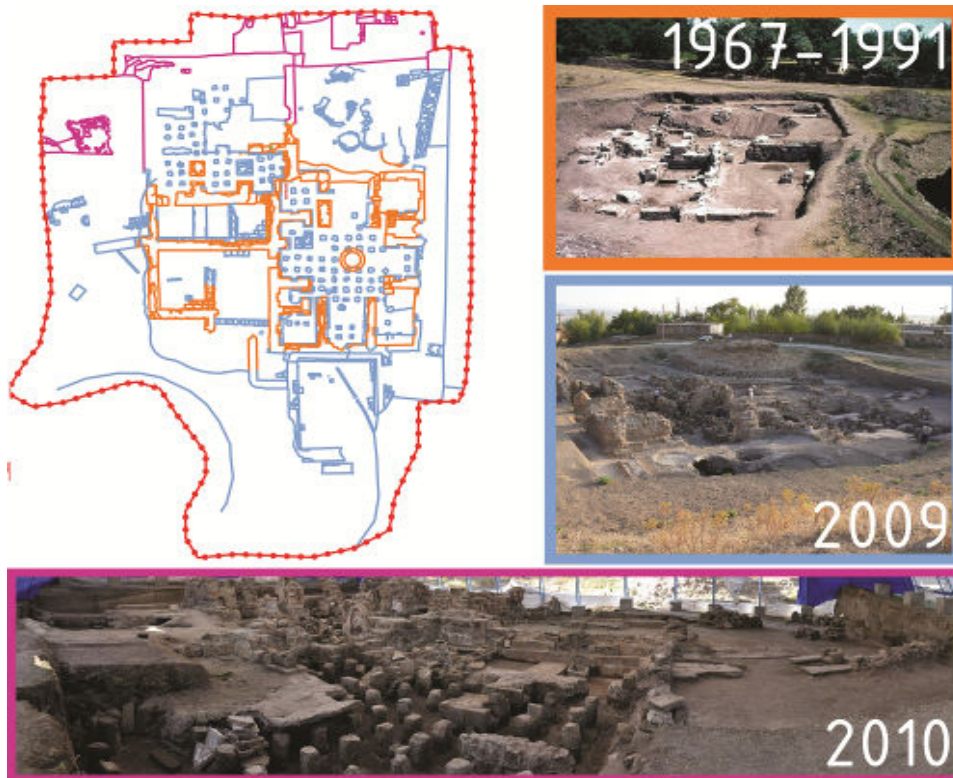


Figure 2. The excavation from 1967 to 2010.

As being a Turkish City, and having lived its brightest era in the Middle Age (particularly in between 12<sup>th</sup> and 14<sup>th</sup> Centuries), Ahlat hosts, in addition to Seljuk Graveyard, where there are monumental tombstones dated in between 11<sup>th</sup> and 15<sup>th</sup> Centuries, there are numerous structures having been unearthed thereat, such as cairn-type burial chambers, tombs, *zaviyas*

(small Islamic religious building – contents), mosques, *bezir haneler* (linseed oil manufacturing building), baths etc.. Having it considered with such features as being the center of science, commerce, and culture of its time, with its estimated population around 300,000, and with its graveyards, and unearthed architectural and small artifacts there from, the greatness and importance

of the city has thereby inarguably come to the fore. *Büyük (Çifte) Hamam* (Great (Double) Bath) among those appears as one of the magnificent examples of Seljuk era in Ahlat, not only with its hugeness, but also with its installation solutions and the unique plan scheme.

*Çifte Hamam* of Ahlat is located at İki Kubbe Quarter which is comprised of the Mosque, *Bezirhane*, Small Bath, *Zaviya* (Convent) and The Seljuk Graveyard at the northeast of Ovakişla road. The region, where the building is situated, is a 1<sup>st</sup> Degree Archeological Site within the Ancient Ahlat City excavation limits.

## 2. EXCAVATION PROCESS AND DEFINITION OF THE BUILDING

Having been under the ground as a whole when excavation thereof was commenced by Prof. Dr. Prof.Dr. Haluk Karamağaralı in 1970's, it is situated right outside the bastion remains at the northeastern side of the wall. The structure is positioned as *Çifte Hamam* on the north-south axis. As a result of the excavations led by Prof.Dr. Haluk Karamağaralı, men's section, water depot, and the wall separating the men's section from the women's section have been unearthed. At the southeastern corner of the unearthed area, *sıcaklık* (caldarium) section with the *göbek taşı* (central platform) at the center, the iwans surrounding it, as being located at the reciprocal axes, and the *halvets* (private rooms) at the corners are appertained to the men's section. At the relatively better-sustained men's section, while the walls and vaults were found to have been built by cut-stone, the domes and the transitions elements were found to have been built by brick. It is understood from the remnants that, all spaces, including the floors, were plastered with mortar. Bath basins, emplaced inside the pointed arc niches at the *halvets*, are seated on the plastered floor. It is understood from the water drains visible inside the walls, and from the single tap holes, that these bath basins were drained only with water warmed enough to take bath. (Figure 3).



Figure 3. The water pipe and halvet niche

*Sal* flooring, seated on square, or square-like rectangular cross-section feet, which are partly visible under the floor coating, constitutes the ceiling of *cehennemlik* (stokehold) of the building.

Having the bath excavation restarted in the year 2009, the original street, curving along the part of the city wall at the southwest of the bath, was tidied out with its floorings unearthed; it was thereby clarified how the units of the bath, understood to have been built later, had been shaped in connection with the street.<sup>3</sup> (Figure 4)

The excavation was carried on towards the directions of north, northeast, west, and southwest; as a result of the conducted work, the water depot and furnace (*külhan*) parts,

<sup>3</sup> Having restarted to its excavation in the year 2009, after the tidying-up work, from the monument, having been unearthed by Prof.Dr. Haluk Karamağaralı in good condition, and undergone conservation works after the excavation, it was observed that, the walls, *iwān*, and corner rooms of the *sıcaklık* part of the men's section had been damaged largely both due to natural effects, and by man as well.





Figure 4. The Street near the Bath

together with the boiler spaces, the iwans and corner rooms of the women's sıcaklık (caldarium) section, partly lasting pavingstones, as well as the stone feet of the cehennemlik (stokehold) section, together with the stone floored ground thereof, and the soyunmalık (dressing room) and ılıkılık (tepidarium) sections were fully unearthed.

Five boiler bases with diameters varying from 2.10 to 2.30 m were located at the two sides of the water depot. While four of the boilers were fully unearthed, the remaining one was unearthed in half. Inside of only one of the boilers was emptied, in order to form an opinion of the architectural formation and construction materials thereof. All of the boilers are connected to the furnaces by means of the tunnels underside.

During the excavation works carried on at the northeast of the building, it was ascertained that, cut-stones were used as the construction material, and Horasan mortar as the binding material at the bottom level. At the west part of the bath, a fountain basin in trefoil form was unearthed as being situated on the stone cladding in the middle of the soyunmalık part of the women's section<sup>4</sup>. Besides, a wall remnant, put up by well-trimmed stone, was found at the north of the şadırvan (pool) (Figure 5) Paving stones in varying dimensions were found at the soyunmalık part of the women's section. On the floor of the location, pipe drains, belonging to the water installation of the bath, were also found; and two separate pipe drain networks were found to get connected with a larger pipe drain at the east of the location.



Figure 5. The wall remnant and the şadırvan (pool)

In front of the wall at the north of the soyunmalık part, under the flooring, a channel system (with 0.20 m of width, and 0.20 to 0.90 m of depth, and with 9 m length towards south-north, and 5 m length towards east-west direction), upper parts of which were made of cut-stone, having been identified through the main rock belonging to the waste water network of the bath, was identified<sup>5</sup>. (Figure 6)

<sup>4</sup> Similar şadırvans (pool) were also found at Divriği Aşağı Hamam (13<sup>th</sup> Cent), Karaman Emir Süleyman Hamamı (14<sup>th</sup> Cent.), and at Bolu Orta Hamam (14<sup>th</sup> Cent.).

<sup>5</sup> Provision of the water supply via a single pipe drain, and presence of a single lüle (tap) hole reveals the supply of bath water at bathing temperature (hot and cold water were not being supplied separately). Besides, there are pipe drains visible as being appertained to the chimneys, rising upwards from the cehennemlik (stokehold) within the walls, which were used both to heat the walls, and to discharge the hot air at the sıcaklık



Figure 6. the waste water network of the bath

Having the earth at the women's section removed, conveyor system/feet of the *cehennemlik* (stokehold) were unearthed. It was thereby determined that, the *cehennemlik* (stokehold) part of the structure was heading towards north.

In the year 2010, heading through the northern part of the structure, outer walls of the *sıcaklık* part, furnace, and those of the water depot were found, and northern border of the structure were thereby unearthed. However, other wall remnants were found as heading towards north therefrom.

Flooring of the *sıcaklık* was formed of *sal* stones, situated on the *cehennemlik* (stokehold) stones. *Sal* stones are in square form, dimensions of which generally vary from 70 to 90 cm. above the stones are plastered with a thick plaster layer. The said plaster layer was sustained throughout the *sıcaklık* walls, without any interruption at the floor-wall junctions<sup>6</sup>.

There is a water depot in "L" shape behind the *sıcaklık* parts of the men's and women's sections. There are five boiler spaces at the axis of both two sides of the water depot in "L" shape. At the water depot, unlike the other parts, wall bricks in 20×10 cm dimensions, and paving bricks in 20×20 cm dimensions on the flooring.

One of the most important findings of the year 2010 was the unearthing of the pipe drains at the water depot part, big jars interlinked therewith, which are located either together, or in short distances from each other, the water distribution network (*maksem*), and the filtration system thereat, which had been formed of pumice.

On the floor covering in this part, a layer formed of fumes and ashes was observed; plaster and floor remnants were found in the area. In various places of the structure, layers of eightfold plaster were found, samples of which were undergone archeometrical analysis.

A geological formation, with clay fill at the lowest level, and seashells through the upper levels were

abundantly observed, was examined at the north of the structure, and excavation was not resumed at that side.

The monumental structure of Ahlat Çifte Hamam was thereby unearthed together with the entrance, *soğukluk*, *ılıklik*, *sıcaklık*, *cehennemlik* parts of men's section, with the entrance, *soğukluk*, *ılıklik*, *sıcaklık*, *cehennemlik* parts of women's section, and with the *halvet*, bathing places with basins, pools, clean and waste water installation, furnace, water depot, boiler spaces, water distribution network, and the filtration system, as being each and every part of a bath.

At the southwest of the building, extending over a surface area of 2500 m<sup>2</sup> in its current condition, there is a wall remnant, and a street covered with stones. Therefore the locations at the southwest of the structure have been staged in conformity with the road. Men's section of the Double Bath is a section with a rectangular plan in 14×18 m of dimensions. Comprised of the parts of *soğukluk*, *aralık* (passageway), toilette, *ılıklik* and *sıcaklık*, this section has its entrance located at the southern axis. *Sıcaklık* part comprises the largest part of the building. As a result of the works, *sıcaklık* part was found to have four *iwans* and eight *halvet*, located over the long walls over the north-south axis, four of which are small, and the remaining four are big, located at the corners, three bath basins at the three walls of each *iwans* and corner *halvet*, made of the fountain taps inside the pointed arch niches, being visible at the axis. There are 4 the *iwans*, as being located at the north-south – east-west axis, with the remnants of the navel stone at the intersection point, found to have been having a sprinkler. From the point of plan typology, instead of the bath typology, being generally found as having four *iwans* – four-cornered cells, being found as a bath with eight corner cells, two per each corner, at the men's section makes this monument seen as extraordinary and unique among all other known examples.

From the point of building system, all the walls, apart from that of the '*külhan*' had been formed of cut-stones filled in between with mortar and rubble stones. It has also been ascertained in part from the structure itself that, the central domes found at the *sıcaklık* of men's and women's section had been made of brick, rims had been used in the transition to the domes, corner squinches were with muqarnas, while supportive information has also been discerned from the excavation reports.

<sup>6</sup>See: Figure 3; Men's section is at the *halvet*, located at the southeastern corner; base, conveying feet, *sal* stones, plasters and wall junction.

*the iwans*, being joint to the central dome, had been enclosed with stone vaults. *Sıcaklık* section of the building is plastered at the floor, walls and ceiling parts thereof<sup>7</sup>.

The architectural elements of the structure, having survived up to the present day, are the pool bowls, bath basins, and the feet. There is no ornamental element found to have survived from the structure up to the present day. However, as being specified in the excavation reports, during the excavation of the middle and corner *halvets*, finding of architectural tiles with animal patterns, and the presence of tiles with animal figures in Kayseri Huand Hatun Bath, as being among

the peers of the structure, suggest the use of various ornamental elements at the date of its building [1].

Upper cover, vault over the water depot, as well as the domes at the middle/main dome and corner *halvet* sections, and vaults at the *the iwans* of both men's and women's sections today does not exist but could have been ascertained on the basis of the remnants survived from the structure. (Figure 7).

<sup>7</sup> Eight plaster layers were found at the walls of *the iwans* and corner rooms, and it was ascertained that, *Horasan* mortar had been used at the walls as the binding material

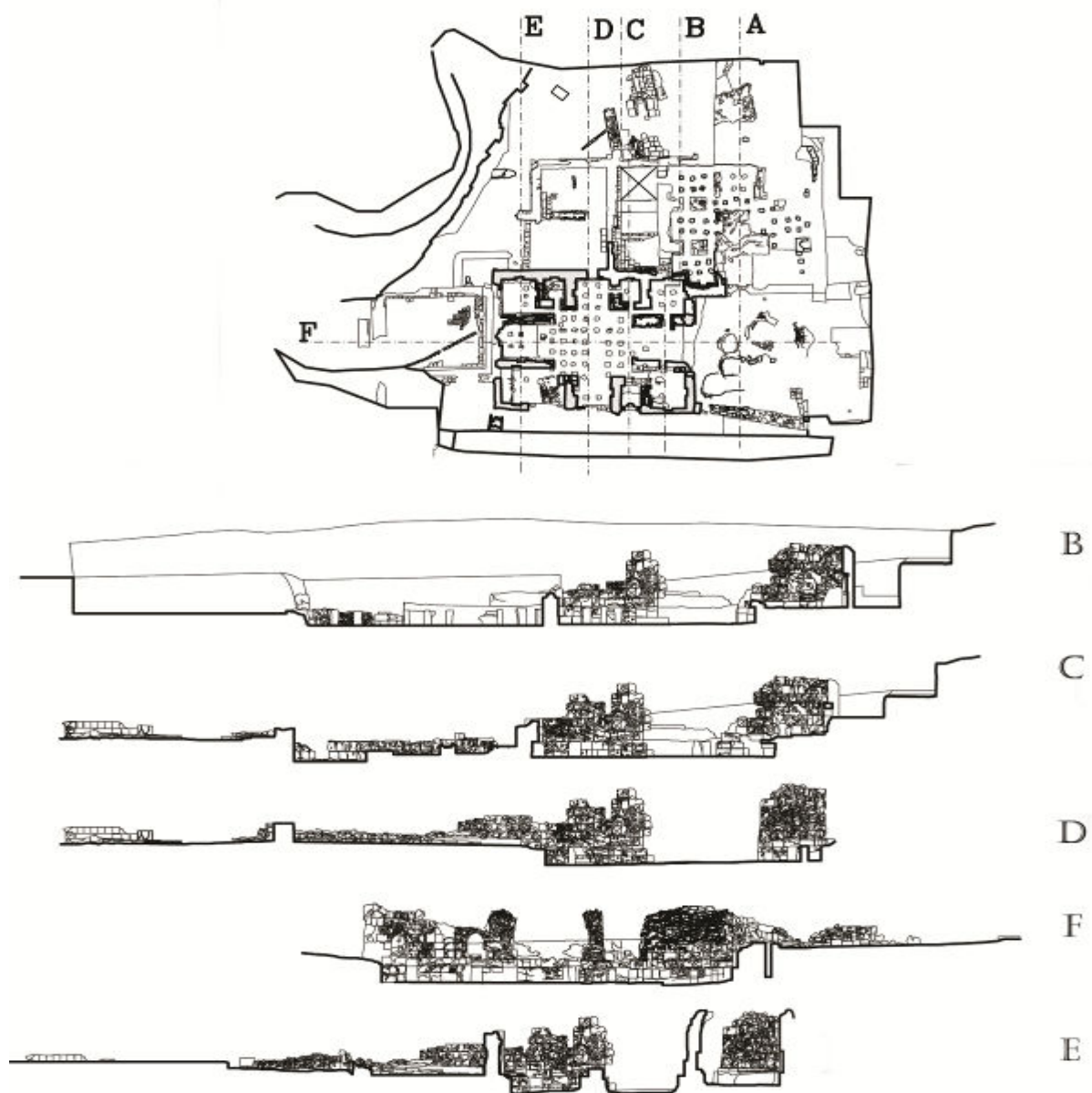


Figure 7. Measured Drawing of Hamam

### 3. RESTITUTION

Restitution work was conducted so as to ascertain the location and function of the remnants of the Double Bath, having been unearthed by the excavation, and to ascertain the original condition thereof. In order to attain accurate results at this stage, written, drawn, and visual sources have been made use of. Restitution of the Double Bath, which has been recommended with in-situ preservation, will serve as a decisive criterion for the surrounding structures in terms of the era, in which they had been built, as well as the scope and elements thereof.

From this point on, the date and stages of building of the monument, as well as the layout system thereof have come up as the main problems to be resolved; ascertaining the place of the structure within Seljuk architecture has become our main purpose from the point of a vast literature search, comparative reviews,

architectural traces, masonry, mortar and plaster analyses, captured small remnants, and from the point of the layout of the locales. In the restitution project, having been arranged towards this direction, the photos having been taken by Prof. Dr. Prof.Dr. Haluk Karamağaralı, who has unearthed a substantial part of the excavation in 1970's, and the excavation reports he kept with regard to the bath, have shed substantial amount of light on our path.

While the available parts of the structure have formed a substantial source of data throughout the restitution study, visual and written documents, and comparative works done with the structures revealing periodic characteristics have played substantial part in the completion of the restitution. In this context, restitution stages have been assessed in the following three consecutive titles ( Figure 8).

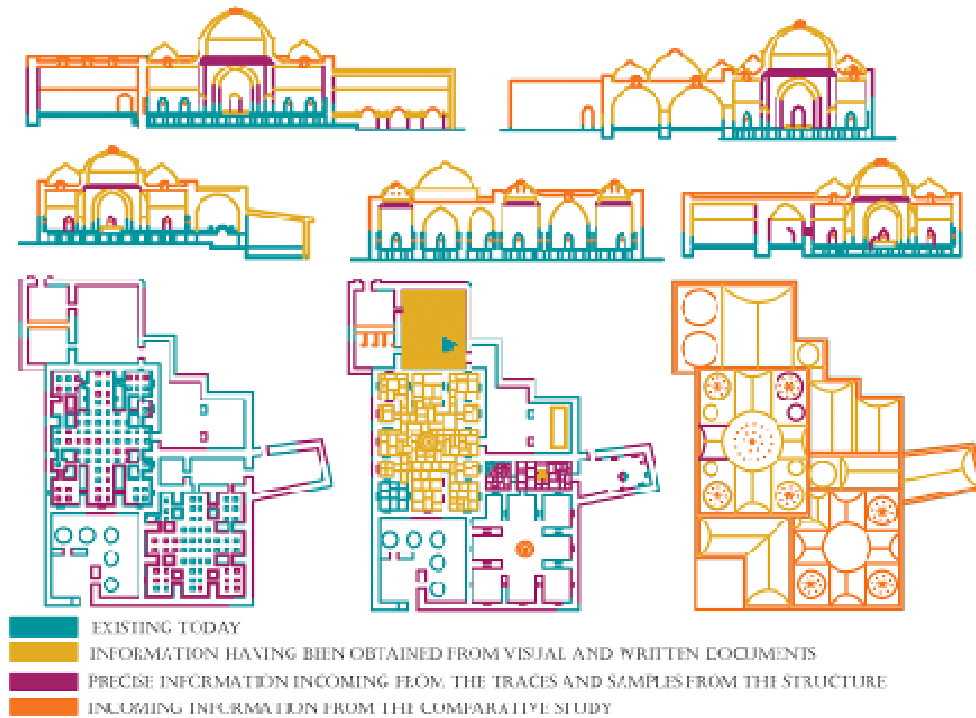


Figure 8. Restitution stages

#### 3.1. Precise information incoming from the traces and samples from the structure

All architectural elements, having been unearthed, found in-situ, and found at different sites within the scope of the excavation constitute the most reliable information with their conditions and locations.

In relation with the other samples which are to be within the structure, as well as those being currently situated within the structure in terms of their locations, dimensions, and materials, the walls, panels of the bath

basins, elements of transition elements and the floor revetments are the parts, which have been supplemented by means of the available samples, having been found at the different parts of the structure.





Figure 9. The 'Külhan'

Among the various structural elements, which have been annihilated in part, or as a whole due to various reasons, namely as the panels of the bath basins, *sal* stones, squinches and *cehennemlik* (*stokehold*) stones – despite the lack of any trace thereof – have been completed by way of respective assessments on the elements in the spaces, which have survived in good condition.

### 3.2. Information Having Been Obtained from Visual and Written Documents

The photos, having been taken every year within the scope of the excavations throughout the past years, the elements, which are seen in these photos, but have been annihilated in the course of time due to either atmospheric conditions, or due to the acts of vandalism, have been identified, and completed with primary reliability<sup>8</sup> (Figure 10).

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<sup>8</sup> In addition to the old photos and excavation reports, hand-drawn perspectives of the excavation team within the excavation reports, and scaled architectural drawings were also made use of. The said information, having been obtained in person, has not been published before



Figure 10. The squinch and the bricks which annihilated because of atmospheric conditions [5].

Within the scope of the long-term excavation (1970-1991), having been led by H. Karamağaralı, building surveys had been taken every year, with the intent of describing the stage, having been reached at the excavation; apart from this, experts had conducted draft and moulage works. These works were also used as sources for the restitution.

By making use of the detailed information, having been obtained from the excavation reports, kept by Prof.Dr. Haluk Karamağaralı, who had served as the head of the excavation until 2007, supplementations have been done with regard to cover coat, passage elements, locale characteristics, locale elements, coating material, mortar, and plaster.

### 3.3. Incoming Information from the Comparative Study

Due to the comparative study, in addition to the information regarding the elements, having been traced in terms of their locations, traces, sizes, and materials within the structure, the height of the structure, dome lighting lanterns, the height of the rim, şadırvan and the pools in the soğukluk, the shape and material of the sprinkler, central platform, and heating system of the boilers could have been supplemented.

It was again the comparative study, which had shed light on the information regarding such locale elements as toilet, having no trace within the structure in terms of location, trace, size, and materials thereof. Having the aforementioned process finalized, it was attempted to determine the period and architectural integrity of the structure.

Double Bath, disregarding its walls survived up to the present day with 50 to 100 cm of height in general from the ground level, apart from the few higher walls thereof, few traces of the cover coat, and those of the northern part of the women's section thereof, is nevertheless a structure with an easily traceable plan.

Making an assessment in terms of plan within this context; it was found out that, there had not been any change in the spatial formation of the structure. However, the walls, having not been survived up to the present day were ascertained with the method of supplementation by way of intersecting the axes, while preserving the traces on the ground. Internal elements of such locales as toilet-*tıraşlık* (shaving place)-furnace (dividing walls, boilers, heating unit) were ascertained by way of reviewing the respective samples of the era.

Disregarding our lack of information regarding the fronts, despite there is no trace having survived up to the present day, the probability of the presence of windows at the *Soğukluk* section is quite high on the basis of the information incoming from the comparative study. According to the reviews, in the *soğukluk* locale, while there is no space at the fronts of the women's section, there is so at those of the men's section. Furthermore, just like the *şadırvan* (pool), having been unearthed at the *soğukluk* section of the women's bath, pipe drains were found running towards the middle of the *soğukluk* section of the men's bath, and it has become possible to mention of the presence of a *şadırvan* (pool) pool in this section, too. ( Figure 11.)



Figure 11. The Şadırvan (pool) pool and paving stones

Except the furnace and the water depot, the walls being found in the structure had been put up by means of the mortar-rubble stone filling system in between the cut-stones. Thickness thereof vary from 70 to 90 cm. Information regarding the wall heights could have been

ascertained by way of reviewing the traces of vault and transition elements, which could have survived up to the present day. The walls of the water depot within the structure had been put up by bricks<sup>9</sup>. There are *pöhrenks* within all the walls, either brick, or stone. Cover coat of the furnace section is suggested to have been wooden.

Whole of the *sıcaklık*s of both women's and men's sections of the structure had been plastered by a pink colored plaster uninterruptedly, including the floors and walls. This plaster could have survived as preserved up to the present day<sup>10</sup>(Figure 12). Plaster remnants have been determined also at various layers over the wall parts at certain sections. As a result of the tests, having been conducted by Ankara University, the plaster has been found to be *Horasan* mortar. Besides, the wall, floor, and ceiling of the water depot had also been plastered by *Horasan* plaster, and the information regarding thereto is available in the excavation report, dated 09.08.1972.



Figure 12. The concave stones and the pink plaster at the halvet.

<sup>9</sup> Information is available in the excavation report, dated 05.08.1970.

<sup>10</sup> See: Figure 3, the same information is available in the excavation report, dated 17.08.1972.

The available remnants, and traces regarding the upper cover of the building, having been survived up to the present day, are the squinches located at the transition zone of the halvet, the gradual transition zone element being used in the transition from the wall to the dome, and the concave stones determining the vault threshold. The information regarding the vaults to be made of



stone, apart from the stones having survived up to the present day, is also available in the excavation report, dated 05.08.1972. The information and the old photos from the excavation report, dated 23.07.1972, confirm the corner *halvets* to have been covered by domes. There are also old photos, which confirm this information. In the excavation report from the same year, dated 24.07.1970, the domes are indicated to be with rims, and the rim walls are made of stone. It is further indicated that, the big dome right at the center of the men's *sıcaklık* section was unearthed on 25.07.1970, that the transition area to the dome was surrounded by squinches, and the space was planned in square form. In the excavation report, dated 05.08.1970, it is clearly stated that, squinches at the transition zone of the dome were build up by muqarnas. Despite no architectural tiles have been found within the scope of the excavations, having been carried on since the year 2006, it is mentioned in the excavation report, dated 03.08.1970, that there were tile pieces with animal figures, having been found where the central dome, and where dome of the other two *halvets* were located. That is why, just like in 1238 Huand Hatun Bath, the inner parts of the structure are thought to have been tiled (Figure 13).



Figure 13. Kayseri Huand Hatun Bath[1]

Presence of the *göbek taşı* (central platform) with sprinkler is clearly seen at the photos, having been taken in the years 1975 and 1977, and the excavation reports, dated 21.08.1975, and 01.08.1977. The presence of the pipe drains, which are headed to the sprinkler, also reinforces this characteristic (Figure 14).



Figure 14. "Göbek taşı (central platform) [4]."

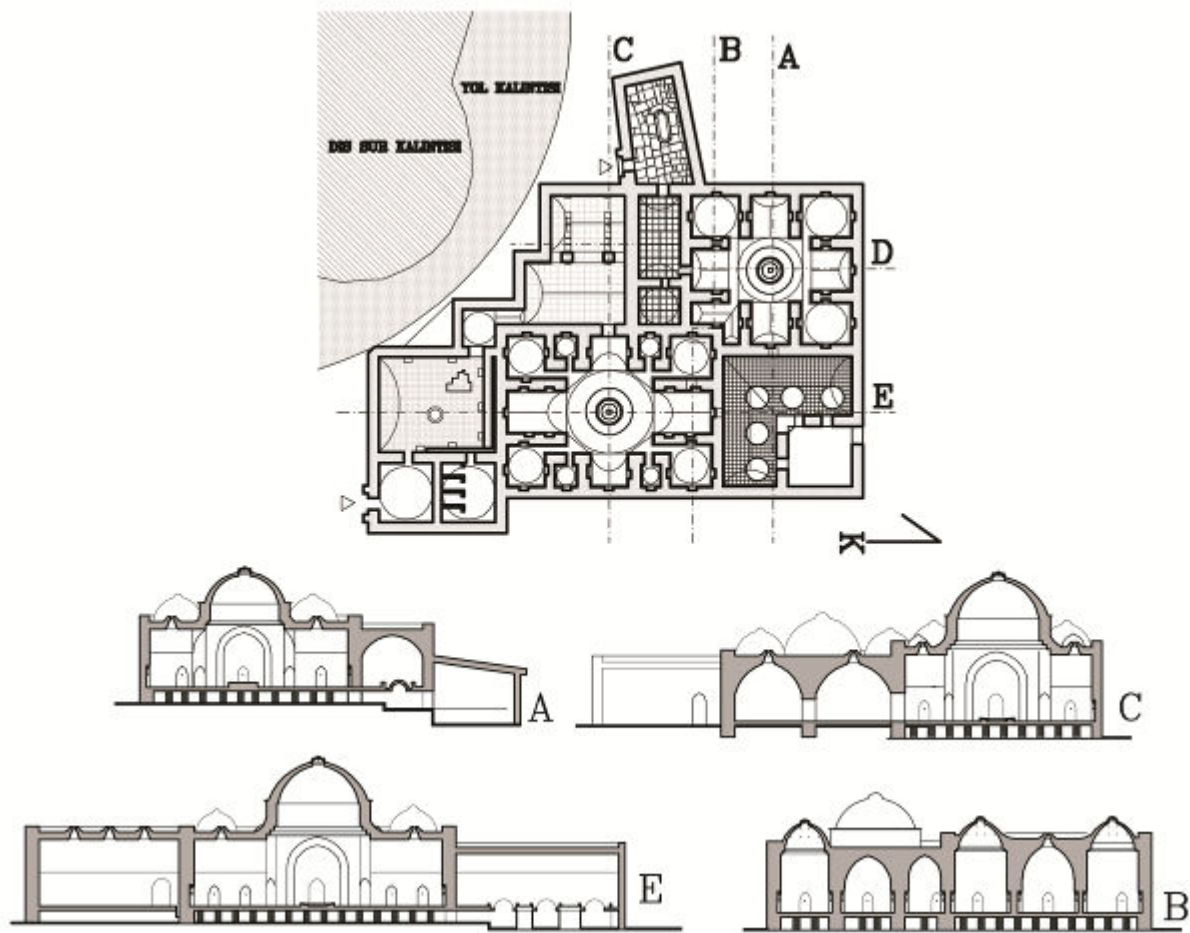


Figure 15. Restitution of the Hamam

#### 4. ASSESSMENT AND CONCLUSION

Ahlat Double Bath, with its location right outside the city walls, points to the fact that, it was among the structures, having firstly been situated outside the city walls during the development period of the city. From the point of architectural spatial order, it is seen, due to its size, to be one of the most important structures of the city.

Precise date of the building is not known. Despite could not have uttered a precise opinion about the building date of the bath, due to the fact that the excavation works thereof had not finalized until then, Prof.Dr. Haluk Karamağaralı, however, suggested that, due to its closeness to the bastion, the bath could have been built at a time after the walls of the city had lost its function; and by way of drawing the attentions towards the lack

of cleanliness and preciseness of the Seljuk and Ottoman eras in the construction, he stated his belief that, the monument could have been built in Akkoyunlu era, at a closer date of Bayındır *Mescidi* (small mosque) [2,3]. However, the finalization of the excavation

works, substantial data are now at hand, which may constitute the basis of date of the structure. *Ilıklık* and *sıcaklık* parts of the men's section of the structure reveals differences in comparison with the examples of baths being found in Anatolia. In addition to the *halvets* for one person in east-west direction, the part with the pool in the *ilıklık* section, being separated with columns, all give rise to the thought that, the structure is dated back to the early period.

Plan of the women's section, formation of the *soğukluk* section is alike to that of Huand Hatun example from the 13<sup>th</sup> century, the chart of the passageway and *sıcaklık* section is alike to that of Tokat Pervane Bath, as being the first example of a chart, which is seen in the 13<sup>th</sup> Century, and numerous examples of which are also seen in the 14<sup>th</sup> century, and to the plan of Konya Sahip Ata Bath (1258-79), and that the passage elements reveal the characteristics of particularly the era of squinches with muqarnas, that the tiles, existence of which at the both two sections of the Bath has been ascertained from the written sources, bear animal figures, which are seen in the examples from 13<sup>th</sup> Century, and before, all give rise to the thought that, the structure may date back to 13<sup>th</sup> Century, and to the beginning of the 14<sup>th</sup> Century.

In conclusion, the differentiation of the men's section of Ahlat Double Bath from the bath examples of Anatolia



with its plan layout with eight *halvets*, is being introduced to the science world as a unique example, this has also made the bath important for being the first known example of its type<sup>11</sup>.

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<sup>11</sup> As being a unique structure due to its location, and to the architectural characteristics thereof, Ahlat Double Bath is undergoing a preservation project, works of which are being conducted by the same team

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