7.6.Havsa Sokollu Bath (Havsa settlement - Edirne)

Havsa Sokollu bath was a part of Havsa Sokollu building complex. They were built behalf of grand vizier Sokollu Mehmet Pasha for the memory of his beloved son. The complex building comprised mosque, caravanserai, double bath, arasta, and a hospice with kitchen, commissariat, bakery, wood storage and latrines. The architect of this complex was architect Sinan. The construction of the building complex was started in H.983 (1575A.D.) *(Necipoğlu, 2005).*

In 1580, Paolo Contarini passed from Havsa and he described bath building as follows:
"…He has created many shops of cut stone to sell merchandise for the needs of travelers. There is also a place set apart for woman. We found there fruits and eggs; there is also a sufficiently beautiful bath for men in the middle and for woman beyond it. They give food to those who lodge in the eighty-eight rooms of the caravanserais…" *(Necipoğlu, 2005).*

The complex buildings of Havsa were destroyed during the earthquake in 1752 *(Necipoğlu, 2005).*

The construction materials and the workmanship of the complex was high quality. According to Jacopo Soranzo: "Although the building in Capsa is not as large, it can nevertheless be judged as having greater artifice (artificio) and architecture (architettura)." *(Necipoğlu, 2005).*

In the construction of the mosque, ashlar masonry was used in medium-sized renovated dome which supported by squinches *(Necipoğlu, 2005).*

According to the observations done in the site; the remnants of caravanserai and the bath structure were built up by ashlar stone same with the mosque. As well iron rods were used for combining the stone elements.

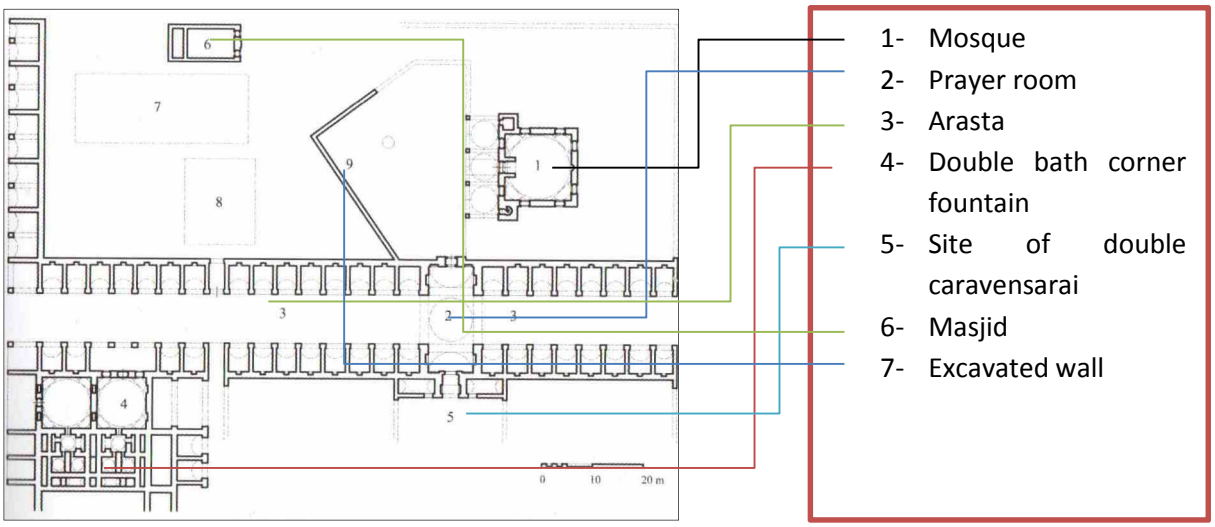


Fig 7.58: Plan of Havsa Sokollu Complex *(Necipoğlu, 2005).*

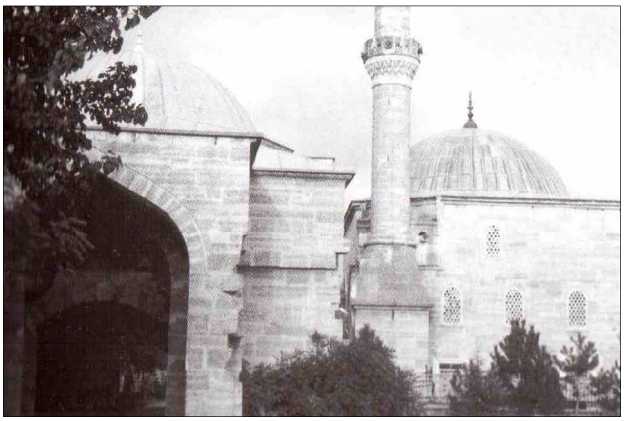


Fig 7.59: Plan of Havsa Sokollu Mosque and prayer dome *(Necipoğlu, 2005)*

Fig 7.60: Havsa Sokollu Mosque and remnants of caravanserai perspective view (gravure) *(Anonym,2012)*

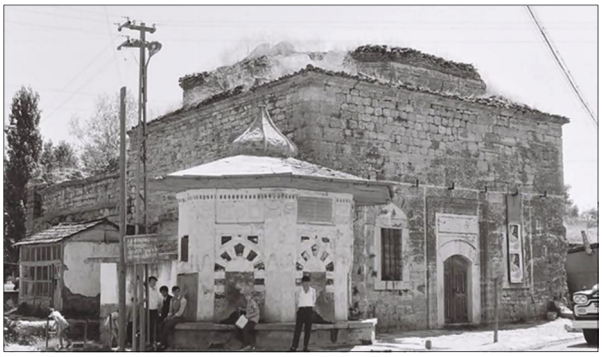


Fig 7.61: Havsa Sokollu Bath perspective view in 1970 *(Anonym, 2012)*

Fig 7.62: Havsa Sokollu Mosque *(Anonym, 2012)*

Fig 7.63: Havsa Sokollu Bath, West elevation

Fig 7.64: Havsa Sokollu Bath, East elevation

Fig 7.65: Havsa Sokollu Bath, North elevation

Fig 7.66: Havsa Sokollu Bath, East elevation

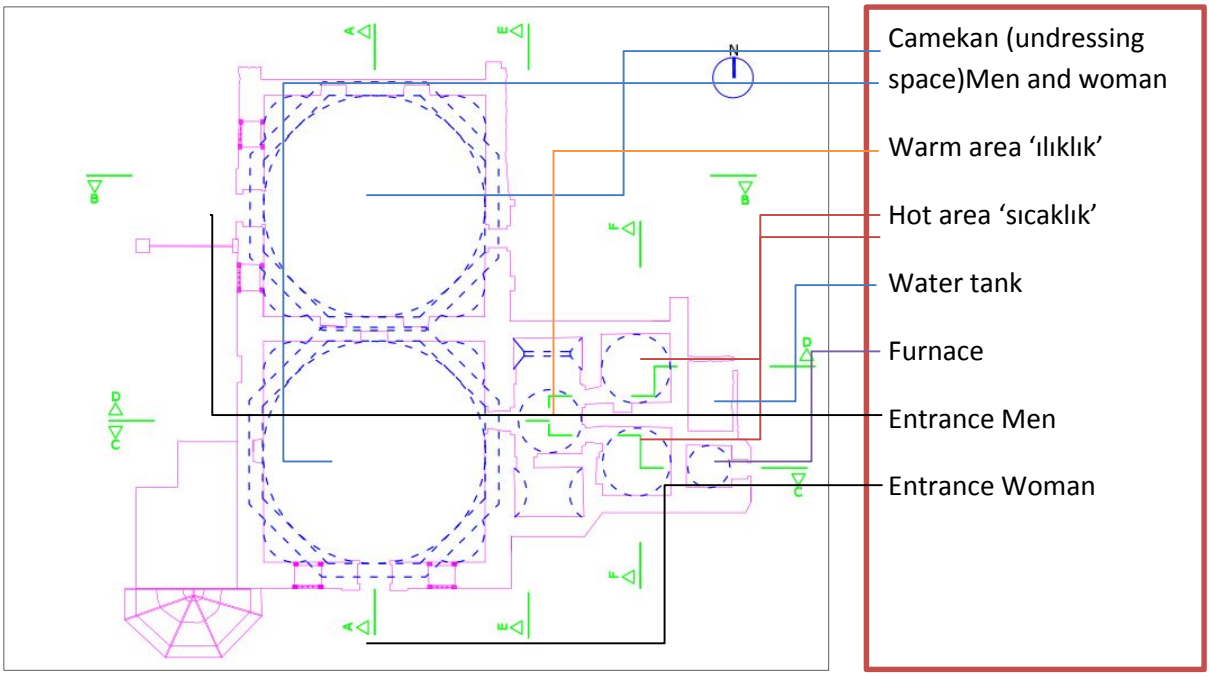


Fig 7.67: Havsa Sokollu Bath, plan and functional specifications *(Endowment office Edirne, 2012).*

Fig 7.68: Havsa Sokollu Bath, section A-A
(Endowment office Edirne, 2012).

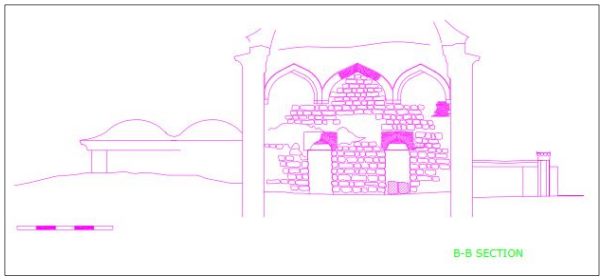


Fig 7.69: Plan Havsa Sokollu Bath, section B-B
(Endowment office Edirne, 2012).

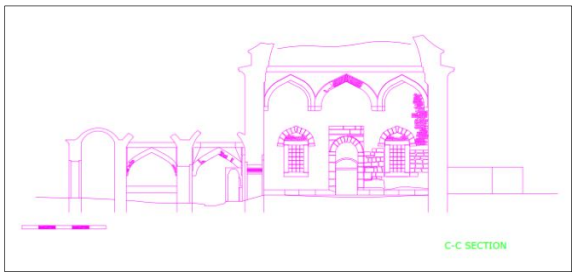


Fig 7.70: Havsa Sokollu Bath, section C-C
(Endowment office Edirne, 2012).

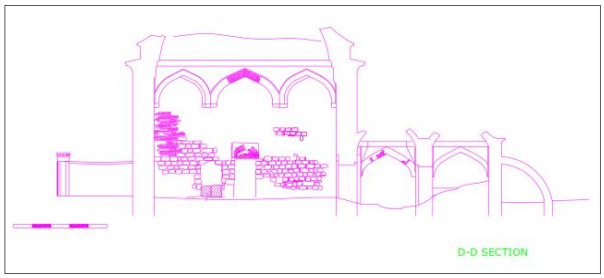


Fig 7.71: Plan Havsa Sokollu Bath, section D-D
(Endowment office Edirne, 2012).

7.6.1. Methodological application (A)

Table 7.41: Qualitative methods for evaluating the quality of the walls in Havsa Sokollu bath: A

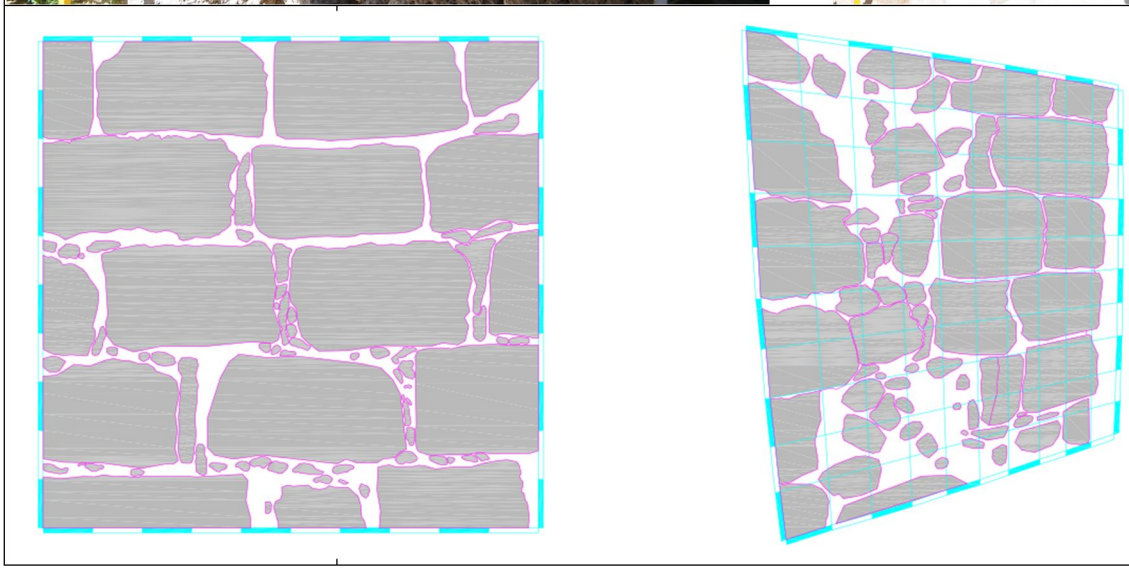
Qualitative Methods for Evaluating the Quality of the Walls	
Edirne-Havsa City, Havsa-Sokullu Bath	
Masonry blocks of stone flakes roughly squared with inner filling	***PHOTOS***
	
	***SCHEMA***

Table 7.42: Qualitative methods for evaluating the quality of the walls in Havsa Sokollu bath: B

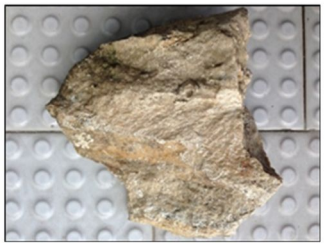
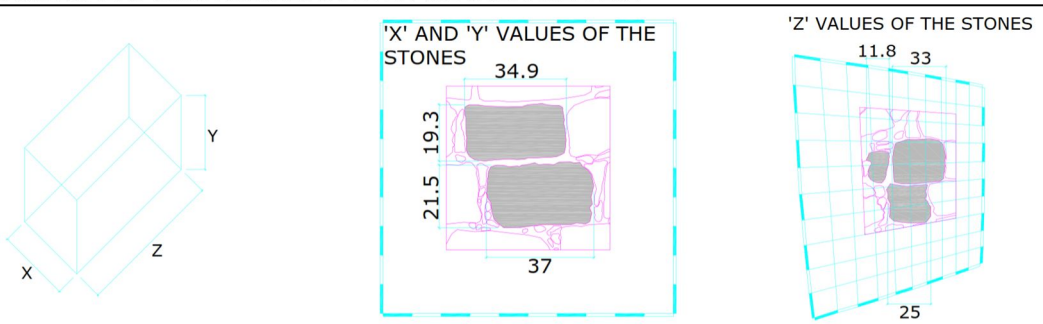
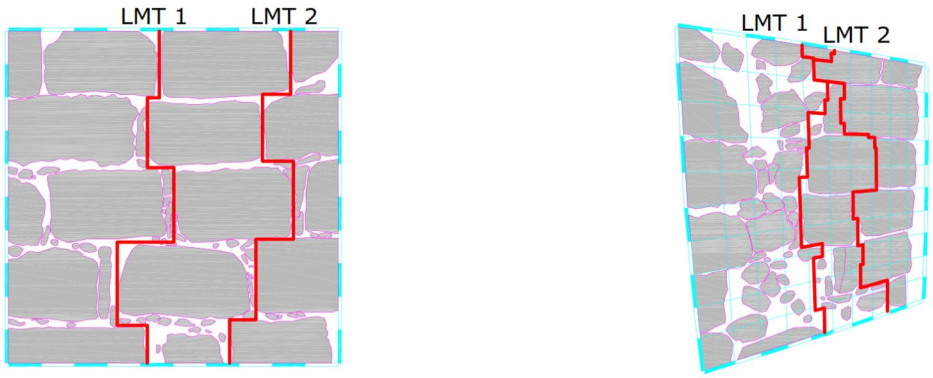
<table>
<tr><td colspan="3">Description of Havsa Sokullu Bath:
Masonry stone structure is composed with masonry blocks of stone flakes roughly squared with inner filling. There was no clue for timber tie beam connection inside of the masonry stone walls. On the sections of the masonry wall small pebbles and stones could be seen. The wall fabric is three layered, it was respected to the horizontal rows and stagger with vertical joints. Diatone stones are not used inside of the masonry stone wall structure.</td><td>DESCRIPTION</td></tr>
<tr><td colspan="3">In Havsa Sokullu bath; stone material is composed of big size of fossils which is called ‘bademli küfeki’ lime stone. This type of lime stone was used in Çorlu district and it was extracted from Edirne Süloğlu region. This type of stone was used in Selimiye Mosque in Edirne and Babaeski mosque in Kırklareli. In Sokullu Havsa caravanserai wall; stone material is composed of massive lime stone.</td><td rowspan="3">MATERIAL</td></tr>
<tr><td>  </td><td>  </td><td>  </td></tr>
<tr><td>Stone Sample (Bath wall)</td><td>Brick Sample (Bath)</td><td>Stone Sample (Caravanserai wall)</td></tr>
<tr><td colspan="3">STONE DIMENTIONS WHICH WERE LOCATED ON THE BATH STRUCTURE
 
</td><td rowspan="2">GEOMETRY OF THE MATERIAL</td></tr>
<tr><td colspan="3">APPROXIMATION OF STONE DIMENTIONS OF THE MASONRY
X= 37cm - 34.9cm / Y= 21.5cm - 19.3cm / Z= 33cm - 25cm - 11.8cm</td></tr>
<tr><td colspan="3"> 
</td><td>LMT</td></tr>
</table>

Table 7.43: Qualitative methods for evaluating the quality of the walls in Havsa Sokollu bath: C

P.D.	Q.M.	F.R.E.	S.V.J.	Q.R.E.	P.H.R.	S.R.E.	Category	Vertical	Out of Plane	In the Plane	
NR	NR	R	PR	R	R	PR	Method of Scoring	A	B	B	ANALYSIS OF IQM
Vertical IQM											
0	0	3	0.5	1	2	0.5	LMT		LMT1= 141.7 LMT2= 173.1	LMT1= 138 LMT2= 137.2	
Out of Plane IQM											
0	0	2	0.5	1	2	0.5	IQM	6	5	4.5	
In the Plane IQM											
0	0	2	1	1	1	0.5					
IQM=QRE x (PHR+PD+FRE+SVJ+SRE+QM)											
fm (N/cm²)	min=357.5 max=556.4										MECHANIC PARAMETERS (MIN-MAX)
E (N/mm²)	min=1555.6 max=2189.03										
To (N/cm²)	min=5.01 max=7.4										

7.7.Keşan Bath (Keşan settlement – Edirne)

Keşan bath was located in the Keşan settlement of Edirne city. According to the endowment office of Edirne, Keşan bath was built in 16th century *(T.C. Başbakanlık Vakıflar Genel Müdürlüğü, 2014).*

There was no additional information about the bath building date and its history.

Current situation of the Keşan bath was ruin. It was composed of undressing area, hot area, 'halvet' cells, toilet and water tank. The closure space of the undressing area was collapsed. Hot area was composed of two domed cells combined together with arch. As well 'halvet' cells were closed with dome structure. There are two vault structures which were used as closure of water tank and toilet and its surround space. Pendentives were used as transitional elements. Masonry wall structure is composed with masonry blocks of hewn stone and pebbles.

There was other bath structure in Keşan which was built in R.1135 (1722) and it was a part of Hersekoğlu Ahmet Pasha complex buildings. Mosque, school, fountain and bath were the buildings that composed the Hersekoğlu Ahmet Pasha complex. The bath structure in the complex was very small which comprised single cold area and 'halvet' *(Ayverdi IV, 1989).*

Fig 7.72: Hersekoğlu Ahmet Pasha Bath, *(Ayverdi IV, 1989).*

Fig 7.73: Keşan bath, East view

Fig 7.74: Keşan bath, North view

Fig 7.75: Keşan bath, undressing area

Fig 7.76: Keşan bath, hot area

Fig 7.77: Keşan bath, 'halvet'cell

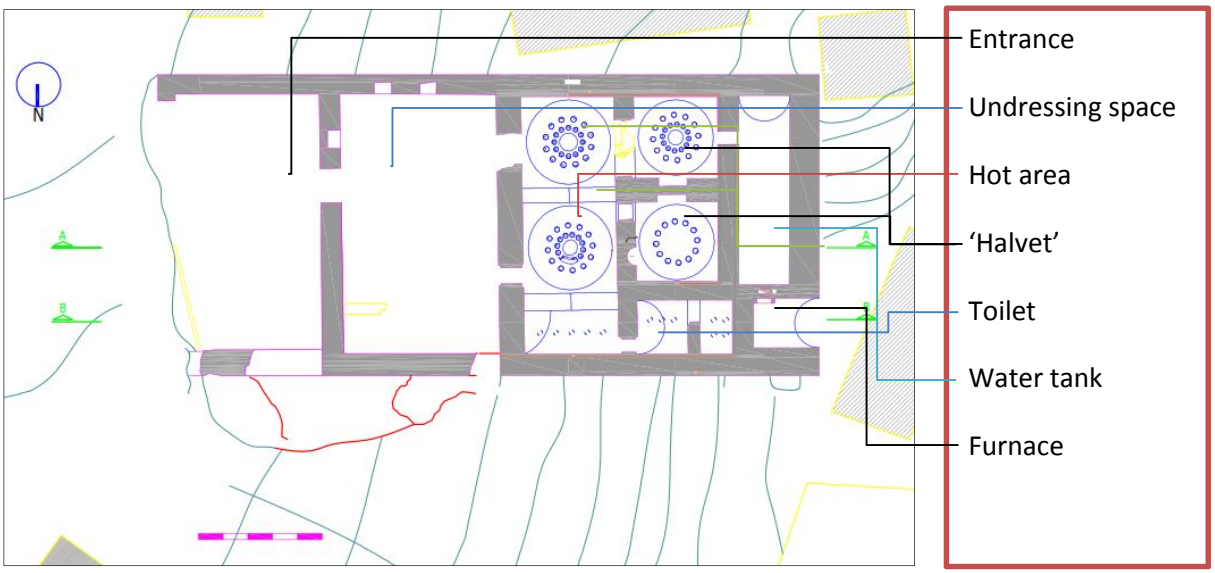


Fig 7.78: Keşan Bath, plan and functional specifications *(Endowment office Edirne, 2012)*

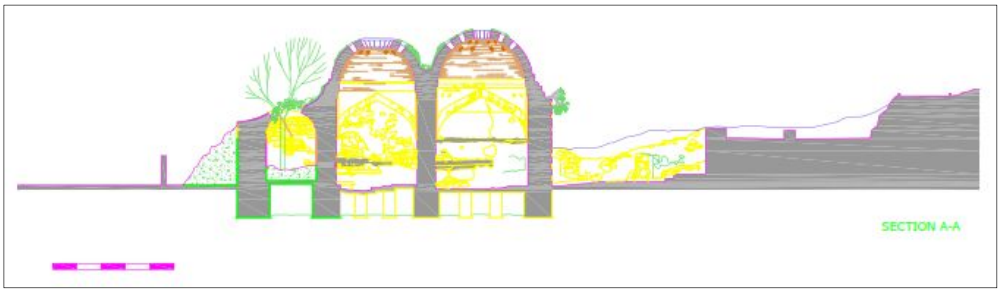


Fig 7.79: Keşan Bath section A-A *(Endowment office Edirne, 2012)*

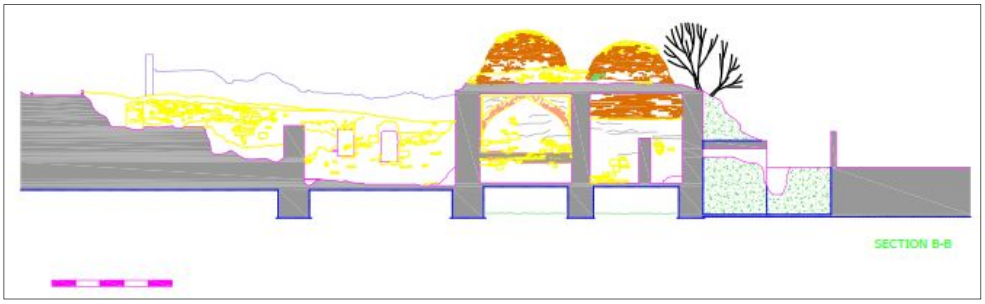


Fig 7.80: Keşan Bath section B-B *(Endowment office Edirne, 2012)*

7.7.1. Methodological application (A)

Table 7.44: Qualitative methods for evaluating the quality of the walls in Keşan bath: A

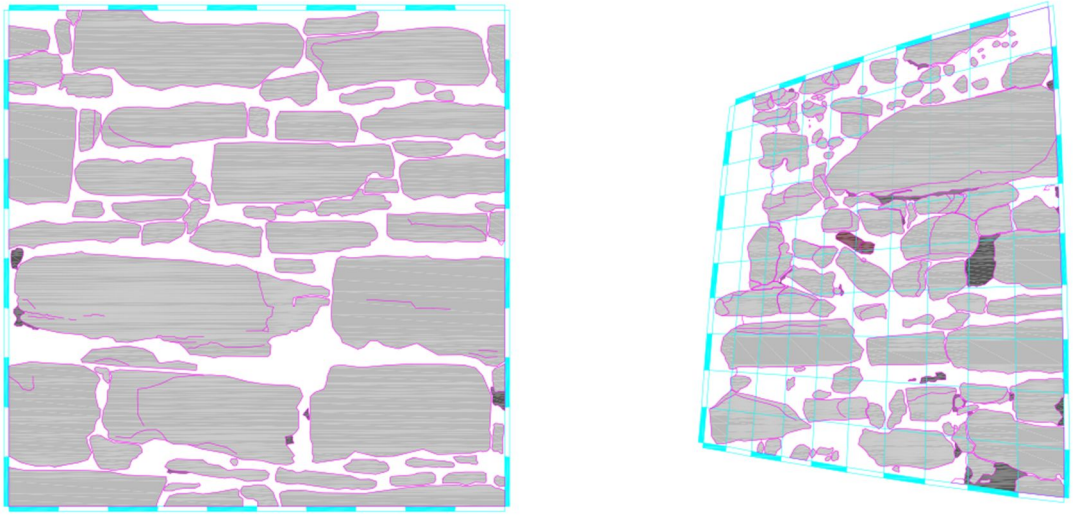
Qualitative Methods for Evaluating the Quality of the Walls	
Edirne-Keşan City, Keşan Bath	
Masonry blocks of hewn stone and pebbles	***PHOTOS***
	
	***SCHEMA***

Table 7.45: Qualitative methods for evaluating the quality of the walls in Keşan bath: B

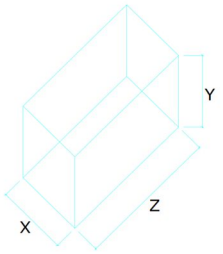
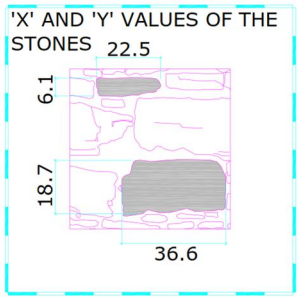
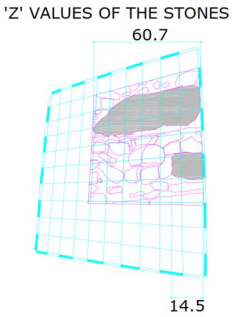
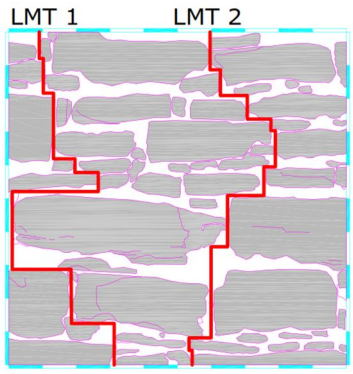
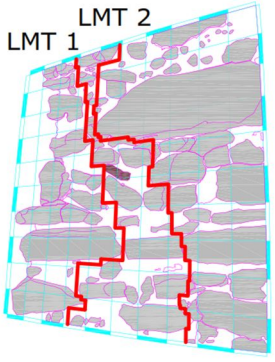
<table>
<tr><td colspan="2">Description of Keşan Bath:
Masonry stone structure is composed with masonry blocks of hewn stone and pebbles. There was no clue for timber tie beam connection inside of the masonry stone walls. On the sections of the masonry wall small pebbles and stones could be seen. The wall fabric is chaotic, it was not respected to the horizontal rows or offset of the vertical joints. Diatone stones are used inside of the masonry stone wall structure. There was an effort for horizontal linearity.</td><td>DESCRIPTION</td></tr>
<tr><td colspan="2">Keşan bath; stone material is composed of volcanic tuff with green color which was extract from Kızılkapan village mine.</td><td rowspan="3">MATERIAL</td></tr>
<tr><td>  </td><td>  </td></tr>
<tr><td>Stone Sample</td><td>Brick Sample</td></tr>
<tr><td colspan="2"> 
 
  </td><td rowspan="2">GEOMETRY OF THE MATERIAL</td></tr>
<tr><td colspan="2">APPROXIMATION OF STONE DIMENTIONS OF THE MASONRY
X= 36.6cm - 22.5cm / Y= 18.7cm - 6.1cm / Z= 60.7cm - 14.5cm</td></tr>
<tr><td colspan="2"> 
  </td><td></td></tr>
</table>

Table 7.46: Qualitative methods for evaluating the quality of the walls in Keşan bath: C

P.D.	*Q.M.*	*F.R.E.*	*S.V.J.*	*Q.R.E.*	*P.H.R.*	*S.R.E.*	*Category*	*Vertical*	*Out of Plane*	*In the Plane*	*ANALYSIS OF IQM*
PR	NR	NR	NR	R	PR	R	*Method of Scoring*	B	C	C	
Vertical IQM											
1	0	0	0	1	1	1	*LMT*		LMT1= 156.8 LMT2= 160.3	LMT1= 173 LMT2= 145.7	
Out of Plane IQM											
1.5	0	0	0	1	1	1	*IQM*	3	3.5	2.5	
In the Plane IQM											
1	0	0	0	1	0.5	1					
IQM=QRE x (PHR+PD+FRE+SVJ+SRE+QM)											
fm (N/cm²)	min=183.04 max=306.5										*MECHANIC PARAMETERS (MIN-MAX)*
E (N/mm²)	min=923.5 max=1340.7										
To (N/cm²)	min=3.2 max=4.9										

7.7.2. Methodological application (B)

Perspective views and general bird eye views of “Keşan” bath is shown on the following pictures.

Fig 7.81: Perspective view of “Keşan” bath

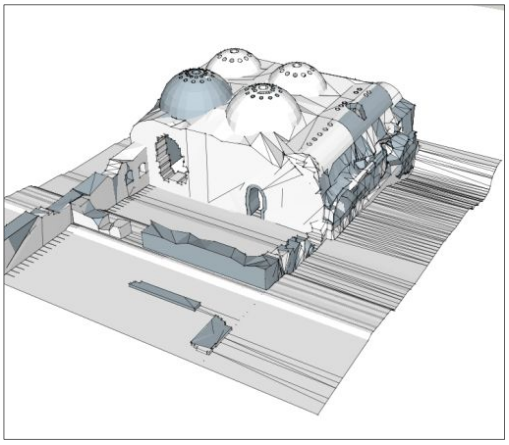


Fig 7.82: North-west view of “Keşan ” bath

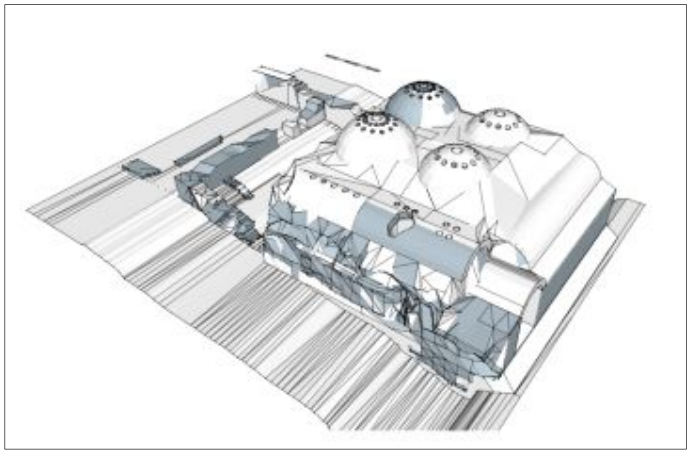


Fig 7.83: North view of “Keşan” bath

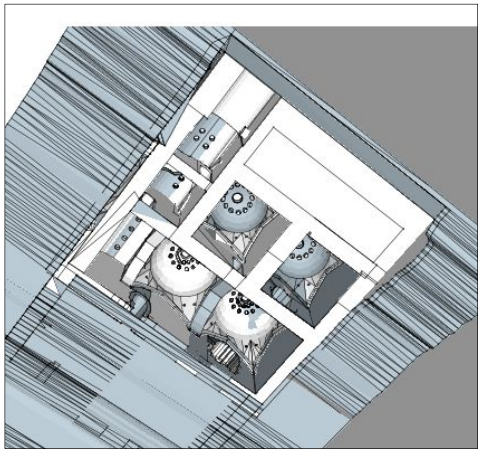


Fig 7.84: Perspective view of interior spaces“Keşan” bath