

THE STRUCTURAL PROPERTIES AND HISTORY OF BRICK AND TILE IN ANATOLIA BETWEEN THE 12TH AND 18TH CENTURIES

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From ancient times up today, brick and tile, as ceramic materials, have been used in structures. Brick and tile was also in used in Seljuk and Ottoman architecture, especially in Anatolia (12th.-18th. centuries). For several reasons, technical knowledge from mentioned period is not carried up to today; this causes researches on this subject to be carried out in a restricted way. In this study, use of brick and tile in structures from a formal view is evaluated.

Architectural use of brick and tile differs from one culture to another, however, each carries traces of the previous one. Brick is used in architecture for both structural and decorative purposes. On the other hand, tile is heavily used for decorative purposes. With the Seljuks they were widely used in structures in Anatolia. Ottomans, carrying traces of Seljuks at the beginning, have carried the tile culture -although not for brick- to advanced levels. Today, tiles produced by Ottomans in Iznik between the 16th - 18 th centuries are world famous.

At Seljuk architecture, brick, with its formal structure, has a decorative function besides its structural function. Brick -generally rectangular formed- with its cornered structure, has provided possibilities for the use of various arrangements in architecture based on the geometric system which dominates the Seljuk culture. Adding glazed brick to various surface textures made up by different plait systems of unglazed bricks, gives a three dimensional brick decoration effect with the contribution of color. The glazing process, besides providing color to unglazed surfaces of bricks, has a technically important function of marking the glazed surface more durable to weather conditions by protecting it from absorbing water. Ottomans, except a few applications following Seljuk tradition in the Early Period, have generally used a different Roman and Byzantium way of applying a mixed plait system of stone-brick, where brick is used secondary to stone.

When we take a look at the use of tile in architecture, we can see the easy cleaning feature of tile as a ceramic material -because of its glazed surface- besides its decorative function. Technically, because of the use of raw material with different specifications and differences in production process; body and glaze structures differs both between the two cultures and also within the different periods of the same culture.

From the patternal and decorative point of view, Seljuks used one coloured glazed tiles with a specific color scale like turquoise, blue, purple in religious structures and decorated tiles having a mystic expression with under glaze styled human, animal and plant patterns in palace structures. It means that tile decorations and tiled decoration at religious and civil (palace) architecture are different from each other. Ottomans, on the other hand, used tiles with similar pattern and decoration at both religious and civil (palace, pavilion, library, etc.) structures. Besides a few implementations at the beginning following Seljuk tradition, where coloured glazed tiles are used, generally under glaze decorated blue-white and coloured tiles with plant patterns.

In Seljuk structures, tiled decoration that plain and harmonize to architecture is seen. Optical arrangements based on the geometric system in decoration are used and there is a three dimensional effect. At structure surfaces -except Early Period- intensive and contrary to Seljuks, decoration is made by applying tile panels with different compositions as a general impression, next to each other. Tiled decoration is apart from architecture and adorning based.

If we make a comparison of today's technology and these days, according to their period's possibilities, we can say they are technically successful. Today, with improving technology, there is serial production of brick and tile. In architectural decoration - especially for brick- there are modern applications carrying those periods impressions. In today's civil architecture (pavements, walls etc.) brick is used in an increasing way. Besides tile production with old tradition, tile is also produced by modern industrial technology.

(Besides the text, the poster contains a lot of coloured examples on how brick and tile were used in architecture from those periods).