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The Documentation and Examination of Conservation Processes of Mudbrick Architectural Components in Building B at Şapinuva

Burcu Funda Ayberkin, Barış Ayberkin
İstanbul Medipol University

burcu.ayberkin@medipol.edu.tr

ABSTRACT

This study focuses on Building B, located in Şapinuva—one of the major centers of the Hittite Empire with military, religious, and administrative functions—where scientific excavations have been ongoing since 1990. The structure is examined from a multi-dimensional perspective, focusing on the structural characteristics of mudbrick architecture as well as its preservation issues, in terms of its layout, construction techniques, and material usage. The identification of 59 pithoi with a capacity of approximately 1.5 to 2 tons each indicates that the building primarily functioned as a storage facility.

In terms of its spatial organization, variety of construction materials, and building techniques, the structure is considered a characteristic example of architectural systems specific to the Hittite period. The mudbrick walls, constructed atop a double-walled Cyclopean masonry foundation made predominantly of limestone, have been analyzed in detail, including block dimensions, horizontal bonding patterns, plaster remnants, and structural components. Remnants of plaster composed of clay and straw have been partially preserved on wall surfaces, suggesting that such coatings were applied to increase the building's resistance to climatic conditions. The voids and traces identified within the wall bonding reveal that timber beams served as horizontal structural reinforcements. In some areas where fire damage is evident, deformations observed on the mudbrick blocks offer archaeological insights into the building's exposure to fire-related events. Furthermore, the southern façade—thought to be the main entrance—has a leveled surface paved with a black-and-white pebble paving.

As part of the fieldwork, dimensional data related to the mudbrick walls, bonding systems, and preserved plaster remains were meticulously recorded, and a condition assessment based on direct observation was conducted. The block sizes, bonding techniques, and associated structural elements were documented comprehensively. Since its initial archaeological documentation in 1994, the building has been protected under a shelter structure to mitigate the impact of atmospheric conditions. Nevertheless, structural deterioration caused by natural and human factors—including erosion, cracking, and salt efflorescence—has been identified and systematically documented. In addition to the protective roof's benefits, certain functional limitations have also been evaluated.

Within this context, the study aims to propose conservation strategies for earthen architectural heritage by drawing upon both local practices and international conservation principles. Based on the documentation of Building B in Şapinuva, this research seeks to contribute new data to the understanding of Hittite mudbrick architecture and support the sustainable management of archaeological heritage.

KEY WORDS:
Şapinuva, Hittite Architecture, Mudbrick, Preventive Conservation, Archaeological Site