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Kerpic'26 – Earth – Based Architecture
15th International Conference
N.Cyprus, 22-24 May / 2026

A Natural Material Experiment in the Black Sea Region: The Adobe Structure of Kalkanca Neighborhood Headman's Office

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ABSTRACT

In the Black Sea region, the architectural tradition is primarily based on wood and stone, while adobe has historically not been a widely preferred building material. In traditional structures, earth-based bricks placed within timber frames were utilized mainly for infill and insulation purposes. This study aims to investigate the feasibility of adobe as a contemporary structural element in Samsun.

In this project, conducted under the supervision of **Professor Bilge Işık**, a local headman's office—initially planned as a steel structure—was redesigned as an adobe building through collaboration with the local government. I took an active role in the planning, design, and supervision phases of the project. The resulting structure has garnered significant attention for maintaining a cool interior in the summer and a balanced temperature in the winter, entirely without the need for mechanical climate control.

This experience has prompted a critical evaluation of material choices in modern construction, raising the question of whether priority should be given to rapid urbanization or to sustainable, locally-sourced development. Despite the humid and rainy climate of the Black Sea, the successful application of adobe demonstrates that traditional materials can be reinterpreted through correct technical applications.

In conclusion, this study proves that adobe is not a material exclusive to arid regions; with proper design and implementation, it serves as a sustainable, economic, and energy-efficient alternative in diverse climatic conditions. Consequently, it is recommended that local authorities and designers re-evaluate traditional building techniques through contemporary lenses.

KEY WORDS:
Black Sea adobe, village headman's office