

ADVANCES IN RESEARCH: PROTECTION OF THE EARTHEN WALLS (ADOBE)



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ABSTRACT

The soil as building material is used since the most moved back times, as the traditional or modern habitat, the various buildings met testify some that and there in many corners of our planet.

Nowadays, earth construction evolved/moved like an exact science and allowed the development of the techniques of production of the soil building materials calling upon the processes most rudimentary, manual, artisanal, that most sophisticated, mechanized, and industrialized.

By its properties of heat insulation and compressive strength, the soil is one of best materials for the construction of housing in the hot countries especially in rural medium.

In Sokodé, second city of Togo, on 130 counted buildings at Didauré a popular area, 95 are built out of soil, that is to say 73% (our studies).

Taking into account various pathologies observed, the problem of the protection of the walls built out of soil remains alarming. Because null is not without knowing that it is a material which does not resist the bad weather.

While reviewing the building techniques of soil materials, we estimated great importance the study of protections of the earthen walls (adobe).

The experimental low walls in adobe were set up and various protections were applied with traditional and modern products. Submitted for testing of intense attack of water, of the results allowed to distinguish the effectiveness from the local products such as the juice from “nééré” (*Parkia biglobosa*), a local tree and the loam mortars carefully composed and well applied.

KEY WORDS :

Soil, protections, nééré (*Parkia biglobosa*), mortar, cohesion.