

# Seminario 4

Autores: Kristina Trnkova (Czech Technical University in Prague, República Checa)

## Resumen

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Within the building process many crucial decisions are to be addressed taking into account a whole set of criteria. Among these the most important are price, availability, usefulness, comfort of use and recently also sustainability. In the process of material selection and use, concrete and steel are often considered a “safe bet” for their well-known behavior, and predictable and stable properties. However, when looked at from the environmental point of view, these materials are often not to be considered ‘green’ mainly due to high energy consumption and carbon dioxide generation during production, transportation and installation, their somewhat limited recyclability, the use of not renewable input materials, etc. That is why, apart from use of modern materials, it sometimes seems worth to get inspired from the past.

Rammed earth is a material with a well-known history, that is local, sustainable and often fully recyclable. This paper presents briefly the history of the material, describes the possible modifications to the originally used material, lists various building techniques and tries to summarize the overall behavior of the material - its physical and material properties, durability, and response to regular and seismic loading. Additionally, an estimate of material behavior when input data are changed is provided (based on previous research results) and a simple member calculation is carried out in order to give an example of use