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# Embodied Energy in Concrete and Structural Masonry on Typical Brazilian Buildings

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**Abstract :** The AEC sector has an expressive environmental responsibility. Actually, most building materials have severe environmental impacts along their production cycle. Professionals enrolled in building design may choice the materials and techniques with less impact among the viable options. This work presents a study about embodied energy in materials of two typical Brazilian constructive alternatives. The construction options considered are reinforced concrete structure and structural masonry. The study was developed for the region of São Leopoldo, southern Brazil. Results indicated that the energy embodied in these two constructive systems is approximately 1.72 GJ•m-2 and 1.26 GJ•m-2, respectively. It may be concluded that the embodied energy is lower in the structural masonry system, with a reduction around to 1/4 in relation to the traditional option. The results can be used to help design decisions.

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