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DAMPING MODELS IN CONTINUUM METHODS FOR DYNAMIC ANALYSIS OF BUILDINGS

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ABSTRACT

Condensed 1D continuum models, called "Replacement Beams" (RBs), often provide an useful tool to capture basic features of the static response of a wide class of regular buildings, among which high rises. Despite potential capabilities of RB models, up to now few attempts have been done toward their adoption in dynamical calculations considering structural damping, as well as in modelling passive-damping devices, more and more frequently provided in order to attain comfortable, robust and resilient structural arrangement in hazard prone conditions with sustainable constructional indexes and material savings. The introduction of simple damping mechanisms and an overview on potentialities in passive damping optimization analysis are therefore briefly outlined in order to show potentialities of these approaches in producing feasible dynamic estimations.