

INVESTIGATION, SEISMIC REHABILITATION AND ARCHITECTURAL RENOVATION OF TWO PUBLIC R/C BUILDINGS

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ABSTRACT

Two reinforced concrete public buildings, representative of a wide stock of similar edifices designed during 1970s and 1980s under earlier editions of the Italian Technical Standards, are examined in this paper. The results of the on-site investigation campaigns and numerical seismic assessment analyses carried out on both buildings are summarized. A mutual retrofit solution, consisting in the incorporation of a dissipative bracing system including pressurized fluid viscous spring-dampers as passive protective devices, is presented. The improvements of the seismic performance as well as of the appearance and functionality of the buildings in rehabilitated conditions are illustrated. Details of the technical installation of the system in one of the two case study structures, constituting the first actual application of this technology, are also reported.