

Rehabilitation design of Acciano rockfill dam after the September 1997 earthquake

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SYNOPSIS. The Acciano rockfill dam has been designed not taking into account the seismic action. The area where it is located is now classified in 2nd seismic zone, according to the current Italian regulation. On September 26th 1997, an earthquake of magnitude $M_w=5.5$, one of the largest seismic events of the last 20 years in Italy, occurred in that area and caused some visible damage to the dam. Later, investigation campaigns and structural assessments were carried out to evaluate the available safety margins of the dam in order to identify possible rehabilitation provisions to comply with the Italian standards for seismic design.

This paper describes the evaluation of post – earthquake conditions of the dam and outlines the assessments to validate the rationale of the rehabilitation project.