

Crack Propagation in Concrete Gravity Dam

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Abstract : A seismic stability assessment of the concrete gravity dam was performed. Initially (Phase 1), a linear response spectrum analysis was performed to verify the potential for crack formation. The result shows the possibility of developing cracks in the upstream face of the dam close to the lowest gallery, which were sufficiently long that the dam would not be stable following the earthquake. The results show the dam has potentially inadequate seismic and post-earthquake resistance and recommended an update of the stability analysis.

Keywords : crack propagation, concrete gravity dam, seismic, assessment

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