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Seismic Safety of Post Installed Anchors

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Abstract

In India, the hazard profile indicates around 59% of the country is susceptible to moderate and major earthquakes while 10.9% of the land is prone to severe earthquake. To minimize the disaster due to earthquake, the civil bodies have updated the seismic standards which are now more stringent and have led to adoption of earthquake resistant design and detailing of structures in the last few years. However, the standards are still silent on the design of post installed anchors which form an integral part of the overall load transfer mechanism. The failure of these post installed anchor connections in the event of an earthquake, either due to improper selection, non-compliance to design standards or inadequate detailing against seismic condition, are cause of major safety concern. The endeavour of this paper is to highlight the salient points regarding performance assessment and design of post installed anchors under seismic loading to ensure overall safety of the connection.

Keywords: Post installed anchor, Seismic, Performance assessment, Design, Seismic performance category