Improvement of Anti-Catastrophe Performance — Measures for Unanticipated Earthquake —

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How to respond to unanticipated earthquakes has become a social concern after the 2011 off the Pacific coast of Tohoku Earthquake. The seismic design standard for railway facilities therefore requires designs to assume the occurrence of an earthquake on an unanticipated scale, and to prevent such an earthquake from causing catastrophic damage. This concept is called "anti-catastrophe". In addition to the conventional "improvement of seismic performance", "improvement of anti-catastrophe" is required to minimize the damage from huge earthquakes through seismic design,. In this paper, some techniques to improve anti-catastrophe performance are introduced.