Development of the Crushable Stopper for Countermeasures against Derailment in Case of Earthquake

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We have developed a crushable lateral displacement stopper of which gap from a center pin can be expanded only when it receives a strong impact in such a case where an earthquake occurs. An improvement of running safety of railway vehicles in case of an earthquake is expected using the stopper together with a lateral damper specially designed for countermeasures against an earthquake. This paper describes an outline of the crushable lateral displacement stopper and results of a static load test and a shaking test using a full-scale vehicle model consisting of one bogie and a half carbody on the large shaking test facility of RTRI.