

**Influence Factor on Severity of Injury to Rail Passengers Occupying Longitudinal Seats  
in the Event of Level Crossing Accident**

Kazuma NAKAI    Shota ENAMI    Tomohiro OKINO

It is important to enhance the safety of passengers on board in the event of a train collision. In order to design a carbody to reduce the passenger injury levels, it is necessary to examine the influence factor of the accidents on safety to passengers. The purpose of this study is to grasp the elements in a level crossing accident scenario, including the horizontal collision position to a dump truck, the collision angle, the vertical collision position and the load weight of the dump truck by using numerical simulation. The scenario influences the severity of injury to passengers sitting on longitudinal seats. We find that the impact position in the horizontal direction to a dump truck and the load weight of the dump truck have a big influence on the injury level.