

**Technological Development to  
Realize Seamless Earthquake Countermeasures in Terms of Time and Field**

Yoshitaka MURONO

It is important to raise the “strength” and “recovering ability” for railways to be resilient against the anticipated earthquakes. It is, therefore, important to respond to the earthquake in four steps (prior response before the earthquake occurrence, emergency response at the time of the earthquake, initial response immediately after the earthquake and restoration/ recovery response after the earthquake) from view point of time. Further, since the railway system is composed of various facilities, it is necessary to consider the seismic countermeasures for the whole field including the civil engineering structures, the electrical poles and the vehicles. We have to respond uninterruptedly both in time and in the technical fields, in other words, seamlessly. Therefore, in this report, we introduce the latest technology that enables the establishment of seamless earthquake countermeasures.