

**Development of Electro-Hydraulic Actuator with Fail-Safe Function
for Steering System**

Yasuhiro UMEHARA Shogo KAMOSHITA Kotaro ISHIGURI
Yusuke YAMANAGA Keisuke SHIMODA

In order to decrease the wheel lateral force of a bogie angle linked steering truck in the transition curve section, we developed an electro-hydraulic actuator for the steering system, and confirmed the performance regarding the reduction of the wheel lateral force by a running test on a test line. In addition, we devised a hydraulic circuit with a mechanical fail-safe function, and incorporated this hydraulic circuit into the steering electro-hydraulic actuator. Finally, we confirmed that this hydraulic circuit does not hinder the steering performance and maintained the fail-safe function by a bench test and a running test on a test line.