

Development of a Braking System Equipped with Deceleration Feedback Control

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Train deceleration as brakes applied is a significant physical index of the onboard braking system and devices. Although every type of EMU (Electric Multiple Unit) has the setting value of braking deceleration, actual deceleration caused by applying brake does not comply with the settings by occasion of non-linearity of brake shoe friction, humidity, temperatures and other pertinent factors. So far, such a phenomenon has been treated as an unavoidable situation. However, in the near future, it is essential for braking system to be controlled automatically complying with the setting value under any circumstances due to signaling system requirement, alleviating psychological loads from train drivers, and improving the degree of safety. In this paper, as an effort of RTRI and research colleagues to develop the deceleration automatic control, we have introduced an outline of the deceleration feedback control system and some results achieved from the running test with existing EMU on the test line and commercial service lines.