Characteristic Identification of Oil Dampers for Railway Vehicle by Using Neural Network

Reiko KOGANEI Nobuyuki WATANABE
Mineyuki ASAHINA Kimiaki SASAKI

We propose a characteristic identification system using Neural Network. The system can obtain automatically a high precision model of oil dampers for railway vehicles which have strong nonlinear characteristic by using multi-axis damper test equipment, which is able to excite the damper in three dimensions and to obtain the generated force of the damper which will be generated in the real running. In this report, we introduce the outline of the system using NN applied to the dampers which estimates input-output relation of the target in six-degree-of-freedom using multi-axis damper test equipment. In addition, we show the identification results when applying this technique to a lateral damper and an anti-yawing damper.