Development of a Dynamic Track Measuring Device for Gauge and Twist that can be mounted on a Motor Car

Yosuke TSUBOKAWA Tomoyuki ISHIKAWA Kousaku SHIONO

There are two kinds of method for measuring track irregularity. One is a dynamic measurement with a track measuring car, and the other is static measurement by a hand-held measuring device of a trolley type. The track measuring car is very expensive, so static measurement is being carried out not only at regional railway operators but also at major railway operators when it comes to lines in the yard. However, the device for static measurement is lightweight, so it is not possible to obtain dynamic track irregularities due to the wheel load and lateral force during a vehicle running, which may cause a derailment accident. Therefore, with the aim of further reducing derailment accidents, we are developing a low cost measuring device for measuring gauge and twist affecting the driving safety of the vehicle which can be easily mounted on a motor car. In this paper, we report the outline of the measuring device and the results of running tests conducted to confirm its performance.