

Characterization of Instrumented Wheelset Considering Contact Condition between Wheel and Rail

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Instrumented wheelsets are widely used for measuring wheel loads and lateral forces acting between wheel and rail. These forces are fundamental quantities in the context of running safety assessment of railway vehicles. Authors proposed a testing apparatus in order to clarify characteristics of strain output of instrumented wheelset which depend on the contact condition acting between wheel and rail. This paper describes some results of characteristic tests conducted using this apparatus. The aim of the tests was to confirm two aspects: the validity of the estimated force by the instrument wheelset, and the validity of an assumption generally utilized in the safety assessment against flange climbing.