

The Influence on Bogies Strength by Wheel Flat

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Wheel flats are known to produce profound impacts on track and rolling stock. In this study, running tests were conducted using a wheelset with an artificial wheel flat. The strains of the rail, axle, and bogie frame of a test vehicle were measured to evaluate the loads on the rail, axle, and bogie frame caused by the wheel flat. Results show that the impact load decreases as it is transferred from rail to axle and then the bogie frame. Moreover, the loads caused by wheel flats have a relatively small effect on the axle and bogie frame strength.