Study on the Occurrence Conditions of Squeal Noise and High frequency Noise

in a Railway Curved Section

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When a train passes through a curved track, squeal noise (below 10 kHz) and high frequency noise (above 10 kHz) are often observed. Measurements of these noises were carried out on commercial lines to understand the generation of the noises. It is found that these noises vary from wheel to wheel, having large dispersion. The analysis results showed that these noises are prominent when the outer wheel flanges contact the outer rail at specific passing velocities. In contrast to that, these noises become lower when a train is running at balancing speed in curves.