

A DESIGN CASE IRREGULARITY FOR THEORETICAL PREDICTION OF DYNAMIC LATERAL TRACK FORCES

The generation of lateral track forces at specific irregularities by railway vehicles is not well understood. Only recently has a reliable method of calculating vehicle transient behaviour become available. However its predictions are only as good as the geometric irregularity data which is fed into it, and at present there is limited information on the range of wavelengths and irregularity amplitudes which govern the generation of high forces.

A description is given of a lateral track alignment input, consisting of both long and short wavelength irregularities, which can be used in the prediction of lateral track forces which a locomotive or other vehicle may be expected to generate in service. The reasons for the choice of alignment are discussed.