
Study of the behavior of the railway under train movement by changing the components of permanent way

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Abstract

When a train runs over the track with 25 tones axial load, the track should be settled as a wave shape. This wave will be transited with the train movement and stay constant as long as the track characteristics are unchanged. That happens at crosses, tunnels and bridges.

In this paper, the effects on the wave shape will be studied according to the track permanent components such as rail, sleepers or ballast.

The results show there is a step change in stress on the ballast layer. It is important to prevent the step change in the track characteristic module over 20%. It is also useful to provide a “transition zone” to allow the gradate changing in track characteristic module.

Keywords: track, rail, sleepers, ballast

For the abstract in Arabic see pages (43-54).

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