

Balise Protect

INTERRUPTION OF DERAILMENT RAILS AT BALISES

A derailment provision in the centre of the track is a safety feature to guide trains and prevent greater damage after a derailment. Sometimes steel guide rails be interrupted over a short distance to accommodate ERTMS balises. In the immediate vicinity of a balise, no steel is allowed to be present. An interruption, however, makes the guidance less effective and poses the risk that a derailed wheel is not properly guided past the balise, which can escalate a derailment.

To reduce this risk with balises, Kampa has developed a feature to reduce the gap in the derailment provision. The ends of the guide rails are made longer with plastic 'extenders'. A connector is also fitted between the left and right guide rails to compensate for the weakening caused by the rail interruption.

Tested by Dekra, the Balise Protect has been used at various locations on the track for several years.

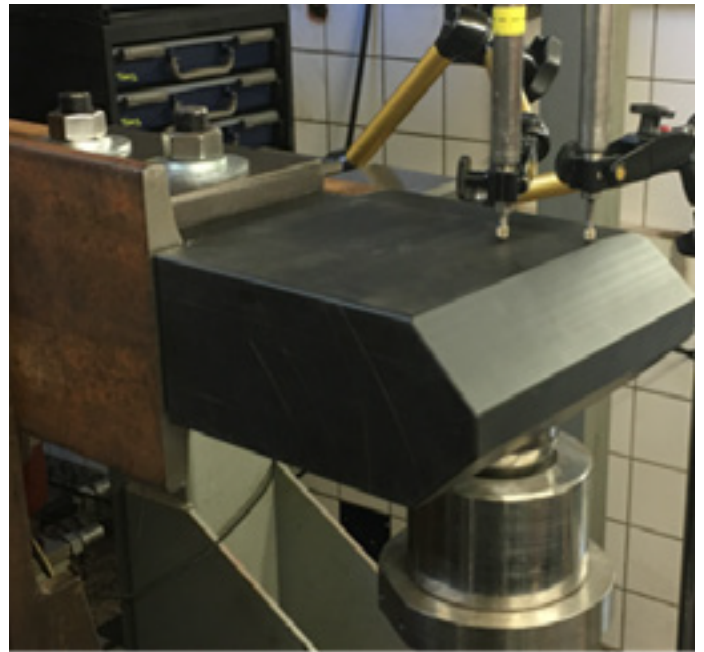


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PROBLEM

More and more tracks are to be fitted with ERTMS signalling in the future. These are tracks with a variety of track speed or track geometry. The extenders reduce the required metal-free opening from 650 to only 330 mm. This ensures that even small-diameter derailed wheels are correctly guided alongside the balise.



SOLUTION

Mechanical tests were carried out by Dekra Rail, demonstrating that the plastic extenders are adequate in terms of stiffness and strength. It was found that the foreseeable deformations are small and that the load capacity is approximately a factor of 3 higher than the transverse force acting on the extenders, regardless of track section speed or curve radius.

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FEATURES

- Reduction of the gap in the derailment provision
- Stiffening of the free ends of the guide rails
- No interference with the functioning of ERTMS balises
- A maintenance-free solution
- No obstruction in the maintenance of the balises
- Approved by Dekra Rail

