

Figure 8.7: Fishplated joint on double sleepers

8.5.3 Expansion joints and expansion devices

These features serve to keep certain structures stress-free if the track on the structure is subject to large displacements as a result of temperature differences or creep.

On some railways, like BR, expansion joints are made from suitably machined standard rails. The expansion joint, shown in Figure 8.8, is constructed from a non-standard rail and allows a maximum axial displacement of 120 mm. Expansion joints are expensive and are only used in jointed track near the moveable bearings of fairly large structures, at the end of CWR track, or at changes in structure such as switches, crossings, and bridges.

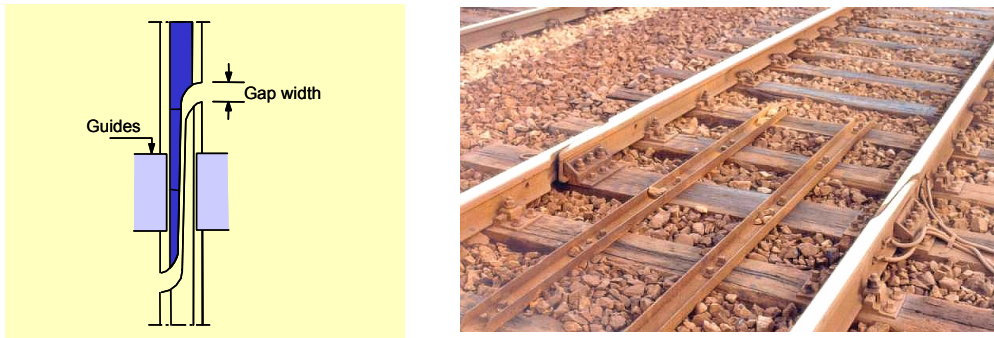


Figure 8.8: Expansion joint

The expansion device consists of a fixed stock rail and a blade, as illustrated in Figure 8.9, which can move parallel to the stock rail over a maximum distance of 220 mm. This device is used on CWR track on structures with a large expansion length.

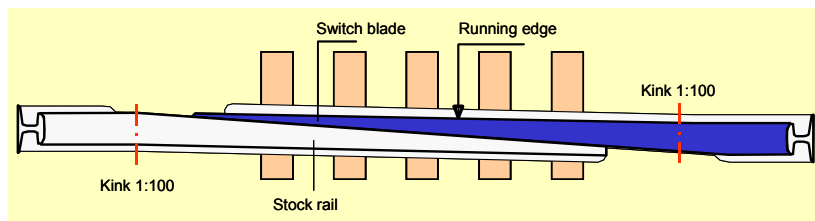


Figure 8.9: Expansion device