

VERTICAL DEFORMATION OF BALLAST – ROLLING LOAD RIG TESTS – EVOLUTION OF EQUIPMENT AND TEST PROCEDURES IN CURRENT USE

The report describes the equipment and test procedures used for the Rolling Load Rig Tests. The facility was constructed to enable the vertical deformation of ballast to be accurately recorded under controlled conditions. It had been concluded from earlier work on running lines that the rapid settlement of the track following maintenance was one of the main factors determining the deterioration of track top. The difficulties in measuring this deterioration on running lines is complicated by the complex loading spectra, varying climatic conditions and inadequate control over maintenance procedures.

The report describes the philosophy behind the construction of the system and its limitations.