

2.2 Subgrade filling test overview 2.2.1 Test purpose The main purpose of dynamic triaxial test of subgrade fillings consists of three aspects: First, through dynamic triaxial tests, the stress state of subgrade fillers under simulated vibration loads of the train is approximated, and the influence of various experimental control conditions on the results is discussed. Figure 2–1 shows a working photograph of the experimental consolidation stage. The dynamic triaxial test has the advantages of convenient application of various stresses, definite stress state, ability to control drainage conditions of the test piece, more accurate control of the stress and strain of the test piece, and measurement of pore water pressure, etc., which has been continuously improved by experimental researchers. The dynamic triaxial test equipment used in this test was the DYNTTS–60KN dynamic triaxial test system jointly developed by the Institute of Engineering Mechanics, China Earthquake Administration and GDS (Geotechnical Digital Systems Instruments). The test can be performed from a clay test piece to a composite soil sample containing a crushed (egg) stone group with a particle size of less than 60 mm. The instrument also reserves sensor data interfaces, which can be upgraded according to research needs, such as: mid–plane pore pressure test device, local strain measurement system (Hall element or LVDT).