21.3.2.2 Hydrostatic Testing of Non Pressure Pipelines

a) Where pipelines have failed the air test described in section 3.3 or where instructed by the Engineer test non pressure pipelines of up to 1000 mm nominal diameter after completion of the bedding up to the top of the pipeline. Ensure that the trench is kept dry. Apply water head for testing of either depth to invert plus 1.0m, or 5.0m, whichever is the greater. Measure the head at the lower end of the pipeline.

b) Maintain the water head over a period of 30 minutes and if necessary, add water from a measuring vessel at 10 minute intervals. Record the quantity of water added from the measuring vessel.

   The leakage, quantity of water added, shall not exceed 0.5 x pipe diameter (m) x length of pipe under test (m) expressed in litres.

c) For non-pressure pipelines of greater than 1000mm nominal diameter, the testing and inspection for water tightness, workmanship and compliance to this specification shall be carried out by man entry. Each joint shall be tested hydraulically tested to a pressure of 0.5 bar for a period of 30 minutes in accordance with Clause 13.4 of EN1610. The Contractor shall use a portable stopper system to isolate the area immediately either side of the joint.

d) Not more than 7 days prior to handover all pipelines shall be subject to an infiltration test as follows:

   i. Test the pipeline in lengths between manholes or such shorter lengths as the Engineer may direct or permit.

   ii. Dewatering shall have been discontinued for at least 3 days prior to the test.

   iii. Volume of water infiltrating into the pipe shall be accurately measured for a minimum period of 1 hour.

   iv. Maximum infiltration shall not exceed 1 litre per millimeter of pipe diameter per kilometer of pipe per day.

e) A record of all tests shall be made available for inspection. Test records shall be handed over to the Engineer for approval.