

This low-pressure tube testing measure the quantity of water absorbed by masonry surface over a specific time period. A pipe like RILEM tube is used to test the vertical surface of a subject brick or mortar joint with the test area of one (1) square inch. The tube which holds five (5) milliliters of water is graduated in one-half milliliter increments from 0.0 to 5.0 milliliters. As water is absorbed by the masonry, the water level in the tube falls. By monitoring the falling water level, you can determine how much water is absorbed over a specific time.

Test Procedures

1. Select the test location of the subject brick or mortar joint in the brick work.
2. Attach the RILEM tube by using a pinch of soft putty rolled to form a snake like piece to place around the flat brim of the tube opening. A water tight seal must be obtained between the tube and brick.
3. Record the information as to type surface, surface texture, test location, wetting pattern, and absorption value versus time.
4. Fill the RILEM tube with water to the top mark of 0.0 milliliters and record the time or start a stopwatch. Check the water level at 1, 2, 3, 4, and 5 minute intervals. Record the volume of water absorbed for each time interval. For a quicker testing, determine only the volume of water absorbed in the first five (5) minutes of testing.
5. Interpret the test results depending on the number of readings, plot the test results of water absorption versus time. In the case of a quick test, the water absorption is recorded for five (5) minutes of testing.
6. Typical results will show if a mortar joint or brick absorbs 5 milliliters of water in five (5) minutes or less, it is most likely a leaky mortar joint or brick problem.