

BALLAST SPECIFICATION STANDARD LABORATORY TESTS

This report presents the results of tests leading to the assessment of standard properties of ballast.

It comments that the accuracy of the test results is dependent on two factors:

- The choice of sample – covering representation issues.
- The accuracy of the test. The crushing test should be very accurate i.e. within 3%, the attrition test should be better than 10%, whereas the impact test is very unreliable.

Based on the results of these tests it would appear that in most cases the quality of the stone could be defined by the Wet Attrition and Crushing Values. The shortened method used for determining the Elongation and Flakiness indices gave very variable results in several cases and it is desirable that a much larger sample is used for the determination of these properties.

A definite correlation has not yet been established between the standard ballast tests and the modes of failure occurring in the track. It is hoped that site observations and further laboratory tests will allow a correlation to be established. This would show whether or not the present tests are the most relevant.

The report recommends that ballast supplied to BR should be tested on a regular basis.