



CHECKING PLANT SCALES

1. SCOPE

- 1.1 This test method covers procedures for determination of the accuracy of scales used for batching in Portland Cement or Bituminous Concrete plants.
- 1.2 It is intended for use on systems employing a weigh hopper.
- 1.3 The checking of truck platform scales must be accomplished by procedures other than those listed in this document.

2. REFERENCED DOCUMENTS

- 2.1 Standard Forms
 - LB-69

3. APPARATUS

- 3.1 *Test Weights*-- Test weights (50 lb (23 kg)) must be of approved design and be annually tested and approved by the Sealer of Weights and Measures. Annual testing of the weights may be waived if they are maintained in good condition and are not subject to abnormal abuse.

4. PROCEDURE

4.1 Preparation

- 4.1.1 Before checking the scales, all hanger rods and knife edges must be cleaned of all loose dust and grime, and the weigh bins checked to make sure that they are swinging freely without binding.
 - 4.1.2 A set of 50 lb. test weights as described in Section 3 shall be available at the plant for checking weighing equipment.
- 4.2 The test procedure varies depending on the production plant. A description of the procedure for both Portland cement concrete and bituminous concrete plants is in this section.
 - 4.2.1 Portland cement concrete plants
 - 4.2.1.1 The dial needle or beam should rest at zero with no load and should swing freely when the weigh hopper or rods are touched.

4.2.1.2 The loading check is made by attaching test weight directly to the weigh hopper scale beams or to the weigh hopper itself, continuing until the maximum load that is to be weighed in the hopper has been reached.

4.2.1.3 Place 500 pounds (227 kg) of test weight, center as nearly as possible in the hopper or scale beams, and record the exact reading. Remove the weights and add aggregate to the weigh hopper to balance exactly the recorded scale reading. Add the test weights, as before, repeating the procedure.

4.2.1.4 When the maximum load is reached, determine if the scale conforms to the requirements of the specifications.

4.2.1.5 Results are summarized on LB-69.

4.2.2 Bituminous Concrete Plants

4.2.2.1 Normally, test weights are used only to check the accuracy of scales used for weighing asphalt, since sufficient weights are available to reach a test point in excess of the quantity of asphalt used.

4.2.2.2 Aggregate Scales – Use the procedures outlined in 4.2.1, however, test weights may be added in increments of 100 pounds (45 kg) or other convenient increments.

4.3 Spot Checking

4.3.1 The effectiveness of a spot check cannot be overemphasized.

4.3.2 The easiest method of making such a check is to interrupt the batching sequence, note the scale reading, and add a known quantity of test weights. The actual increase in scale reading should check within the tolerance permitted by the specifications.

4.3.3 After completion of weighing a batch, a known quantity of test weights may be added to check scale accuracy and for the possibility of binding in the higher ranges.

4.4 Scales should be checked as indicated in the procedures outlined for plant operation or source control or whenever the inspector has reason to question their accuracy.