Kentucky Method 64-618-14
Revised 08/04/14
Supersedes KM 64-618-08
Dated 12/16/02

METALLIC IRON CONTENT IN SLAG

1. SCOPE: This method covers the determination of particles (by mass) containing iron in blast furnace slag or similar products.

2. APPARATUS:

   2.1. Magnet: A magnet with a manufacturer's rating of approximately 50 lbs.

   2.2. Sample Splitter

   2.3. Balance: A balance having a capacity of at least 5000 grams, sensitive to one gram.

   2.4. Oven: An oven capable of maintaining a uniform temperature of approximately 230±9°F.

   2.5. Drying pans

3. SAMPLE:

   3.1. Field samples shall be obtained in accordance with AASHTO T 2.

   3.2. Obtain the test portion in accordance with AASHTO T 248. A representative quantity of sample to be tested shall be in accordance with the following table:

Nominal Maximum Sieve Size	Approx. Weight of Test Portion
3/8 inch or Less	1500 - 2000 grams
1/2 inch to 1 inch	2500 - 3500 grams
Greater than 1inch	5000 - 7000 grams

   3.3. Dry the test portion to constant mass in the oven at 230±9°F.

   3.4. Cool the test portion to room temperature.

   3.5. Weigh the test portion and record the mass to the nearest gram as W_1.

4. PROCEDURE:

   4.1. Spread the test portion out on a table or other work area so that all aggregate particles are touching the table surface and are exposed to the magnet when passed over the surface of the layer of aggregate.

   4.2. Pass the magnet over the aggregate layer touching as many particles as possible. Remove all particles collected by the magnet and place them in a separate pile.

   4.3. Remix the remaining test portion and repeat steps 4.1 and 4.2. Repeat this procedure until the mass of the particles collected on a given pass of the magnet is less than 0.1 percent of

the original mass of the test portion.

4.4. Weigh all the particles collected by the magnet and record this mass as W_2.

5. CALCULATIONS:

$$Percent\ Metallic\ Iron\ Materials\ =\ \frac{W_2}{W_1}\ x\ 100$$

Where: W_1 = Mass of total test portion

W_2 = Mass of material removed by magnet

6. REPORT:

6.1. Report the percent metallic iron particles to the nearest whole percent.

APPROVED _____
DIRECTOR
DIVISION OF MATERIALS

DATE 08/04/14

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