GDT 130

A. Scope

For a complete list of GDTs, see the Table of Contents.

Use this test method to determine the shot content of mineral fiber by wet elutriation.

B. Apparatus

The apparatus shall consist of the following:

1. Shot Elutriation (See Figure 130-1)
2. 34 oz (1000 ml) boiling flask
3. Ignition oven capable of maintaining a temperature of 1202 ºF (650 ºC)
4. Drying oven capable of maintaining a temperature of 320 ºF (160 ºC)
5. Balance capable of at least 2.6 lbs (1200 g) and a sensitive of ± 0.00022 lbs (0.1 g).
6. Drying pan
7. Waring blender (Model 31 BL46)
8. Flowmeter (Barnant Model: 2.5 in (65 mm) capable of 40.6 oz (1200 ml) per minute
9. Timer
10. 7.3 in (185 mm) diameter cooks porcelain dish
11. 34 oz (1000 ml) graduated cylinder
12. Funnel (WS-E-04)
13. Two 8 in (200 mm)sieves: #60 (250 µm) and #230 (63 µm)

C. Sample Size and Preparation

1. Select and weigh 0.06 lb (25.0 g) representative sample of the mineral fiber.
2. Place sample in the 7.3 in (185 mm) dish and then place sample and dish in the ignition oven preheated to a temperature of 1000 ºF (538 ºC) for 15 minutes. This will burn off any dispersing agent from the mineral fiber.
3. Remove the sample and dish from the oven and allow to cool to room temperature.
4. Place sample in Waring blender. Pour 25 oz (750 ml) of water in blender.
5. Place cover on blender and blend for three (3) minutes.

D. Procedures

Using a funnel, transfer the blended sample to the boiling flask. Thoroughly rinse the funnel, blender jar and lid to insure that all of the fiber and shot have been removed.

Mount the flask on the washing stand. Lower the glass tube into the center of the flask insuring that the flask is level and the water is flowing evenly over the entire lip of the flask. Adjust water flow to deliver 40.5 oz (1200 ml) per minute at 28 psi 193 kPa).

Set timer to wash for ten (10) minutes. Periodically agitate the glass tube to keep the material from accumulating on the lip of the flask. After ten minutes of washing, turn the water off and allow the shot to settle. Remove the flask and decant the water being careful not to pour off any of the shot. Thoroughly rinse the material from the flask into the drying pan. Drain excess water and dry the material to a constant weight at 300 °F (150 °C).

E. Calculations

Calculate the percent passing each sieve as follows:

$$P = 100 - \frac{R}{T} \times 100$$

Where:

P = Accumulative percent passing sieve by weight of total shot.

R = Accumulative weight of shot retained on sieve.

T = Total weight of shot.

F. Report

Report the result of the sieve as accumulated percentages passing each sieve. Report the percentages to the nearest 0.1%.

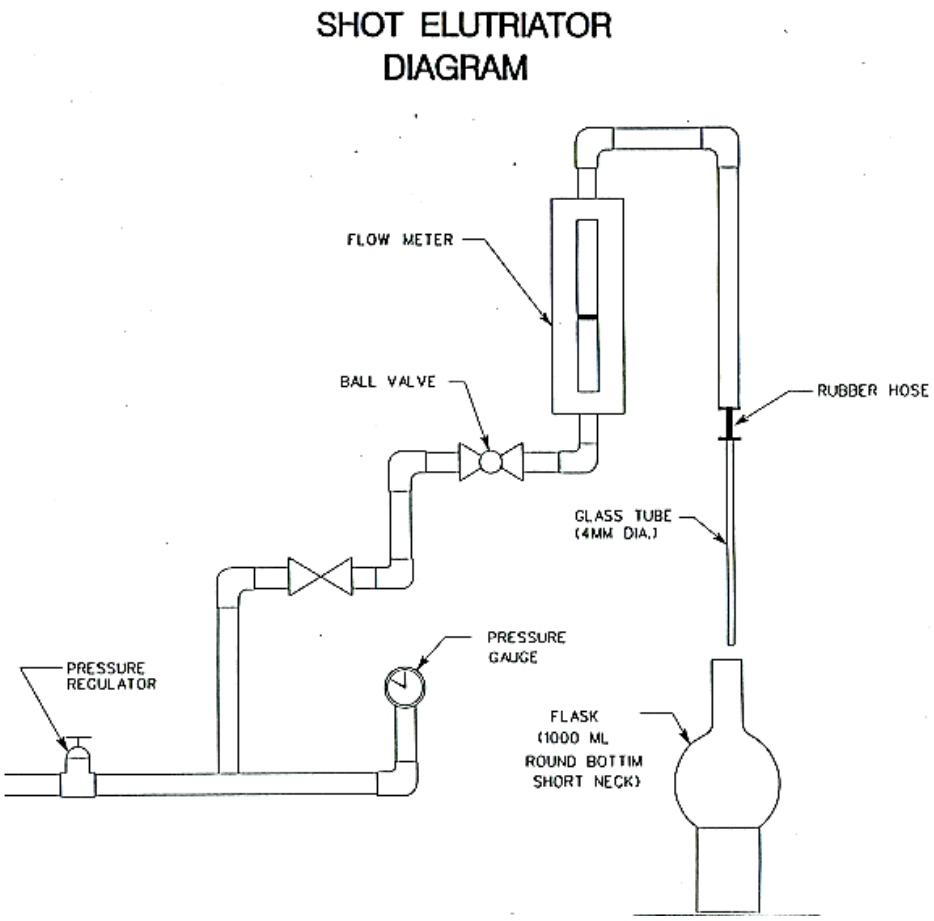

Figure 130-1