EQUIPMENT

1. BEAKERS: stainless steel, 4000 ml capacity, no spout? ..... ____
2. BALANCE: 4000 g capacity sensitive to 0.1 g? ..... ____
3. RIFFLE SPLITTER: (if used) with recommended chute openings of approximately 38mms? .....
4. WIRE BASKET: made of copper or brass wire mesh, 160±5 mm dia. by 180±5 mm high? ..... ____
5. WIRE: as thin as possible to support basket (MTO used fishing lie leaders)? ..... ____
6. WATER BATH: capable of maintaining 25±1 °C? ..... ____
7. VACUUM PUMP: capable of attaining a pressure of 30 mm Hg or less? ..... ____
8. ***FILTERING FLASKS***: suitable for preventing water from entering vacuum pump? ..... ____
9. RESIDUAL PRESSURE MANOMETER: to read pressure of 30 mm Hg or less? ..... ____
10. MANOMETER OR VACUUM GAGE: placed at pump inlet for pressure check? ..... ____
11. MANIFOLD: Meeting requirements of the method?..... ____
12. BLEEDER VALVE: A needle valve to control flow of air into the system for pressure control?.. ____
13. SILICA GEL: Tell Tale, (3mm – 1mm size)?..... ____
14. TUBING: Rubber, vacuum, minimum 6.4mm ***inside*** diameter?..... ____
15. THERMOMETER: liquid-in-glass or other thermometric devise with max scale error of 0.5°C? ..... ____

PROCEDURE

Sample Preparation:

1. Field samples: from plate, loose mix, core or sawn samples? ..... ____
   (a) Plate or loose samples reduced to proper size (as per ASTM table), by splitting / quartering? ..... ____
   (b) Cored or sawn samples cut particles are removed by trimming? ..... ____
   (c) All field samples dried to constant mass at 110°C±5°C (<0.1% change in 30 minutes)? ..... ____
2. Laboratory samples prepared as per LS261?
   (a) Place mix in a flat pan, cover with ***aluminum foil or other suitable cover*** and place in oven at 135°C for 2 hrs , ***stir the mix occasionally during this period?*** ..... ____

Testing:

1. Sample cooled to room temperature ***and carefully separated by hand during cool down period so fine aggregate particles are not larger than 6.3mm?*** ..... ____
2. Beaker weighed in air and in water? ..... ____
3. Sample transferred to beaker and weighed? ..... ____
4. Water (approximately 25°C) added to cover sample and top placed of vessel? ..... ____
5. Residual pressure manometer checked for air entrapped above Hg in closed leg? ..... ____
6. Pressure gradually reduced to 30±1.0 mm Hg? ..... ____
7. Reduced pressure maintained for 15 minutes with frequent or continuous agitation? ..... ____
8. System returned slowly to atmospheric pressure? ..... ____
9. Suspend beaker and contents in water bath for 10±1 minute?
   (a) Ensure air not entrapped under beaker rim? ..... ____
   (b) Record bath temperature - should be 25°C±1°C? ..... ____
   (c) Record mass? ..... ____

[Fill in Y for Yes - N for No - NA for not applicable (**NOTE**: N or NA requires comment)]

10.Calculate MRD? ..... ____

$$MRD = \frac{(D - E)}{(D - E) - (G - H)}$$

where:
D = mass of beaker and mixture in air, g
E = mass of beaker in air, g

G = mass of beaker and mixture in water at test temperature, g
H = mass of beaker in water at test temperature, g

11. Correction for water temperature: if not at 25°C? ..... ____

MRD (at 25°C) = MRD (at test temperature) x K

where: K = correction factor listed in Table 1 for test temperature ..... ____

12. Results reported on a form sheet? ..... ____

[Fill in Y for Yes - N for No - NA for not applicable (**NOTE**: N or NA requires comment)]

COMMENTS: _____

Name of Laboratory: _____ Date:_____
Inspector: _____ Inspection No:_____