Test Methods

Review

Test Methods

- AASHTO T11, Percentage of Material Finer than #200 by use of a wash test
- AASHTO T27, Dry Sieve Analysis of Fine and Coarse Aggregate
- AASHTO T11 *and* AASHTO T27, Wet Sieve Analysis of Fine and Coarse Aggregate

Test Methods

- KM64-604, Determination of the percentage of shale in aggregate
- ASTM D 5821, Percentage of fractured particles in coarse aggregate

AASHTO T11

Materials Finer Than 75 µm (No. 200) Sieve in Mineral Aggregates by Washing

AASHTO T11

- AASHTO T11 is a test for determining the amount of material finer than the #200 sieve in aggregates
- Procedure B (using a wetting agent) is required by Kentucky specifications

AASHTO T11
Check List

- Know how to obtain the correct field sample (using AASHTO T2)
- Know how to obtain the minimum test sample mass (using AASHTO T11)
- Know to add wetting agent ,agitate and pour over the nested sieves(#8 or #16 & #200)

AASHTO T11
Check List

- Know to wash until the rinse water is clear
- Know how to satisfactorily return the retained material to the washed sample
- Can perform the necessary calculations

AASHTO T27

Sieve Analysis of Fine and Coarse Aggregates

AASHTO T27
Check List

- Know how to find the field sample mass (T2)
- Understand the concept of reducing the field sample to a minimum test portion (T248)
- Know condition of sample prior to analysis
- Know how to properly nest sieves
- Know to sieve to refusal

AASHTO T27
Check List

- Know to weigh material retained on each sieve and record
- Know the maximum allowable loss (0.3%)
- Given the appropriate information, can perform the necessary calculations

AASHTO T11 / T27 (Combined)

Wet Sieve Analysis of Fine and Coarse Aggregates

AASHTO T11 / T27

Wet Sieve Analysis of Fine and Coarse Aggregate

- This method covers a procedure for the determination of the particle size distribution of certain fine and coarse aggregate by combining the determination of the percentage of material finer than a #200 sieve and the dry sieve analysis

AASHTO T11 / T27
Check List

- Know the correct condition (dry) of the sample prior to the analysis
- Can obtain the original dry-sample weight
- Know how to agitate the sample and pour it over nested sieves
- Understand the need for washing the sample until the rinse water is clear.

AASHTO T11 / T27
Check List

- Can satisfactorily return the retained material to the sample
- Know to dry the sample to a constant weight and record that weight
- Know the maximum allowable loss of material during the sieving operation.
- Can perform the necessary calculations

KM64-604

Determination of the Percentage of Shale in Aggregate

KM64-604
Check List

- Know how to find field sample size (T2)
- Understand reducing sample to test portion size (T 248)
- Know what sieves to use for sample washing
- Know how to separate and classify shale from non-shale particles
- Know how to surface dry, weigh & calculate results

ASTM D 5821

Determining the Percentage of Fractured Particles in Coarse Aggregate

ASTM D 5821
Check List

- Collect field sample (T2)
- Reduce sample to test portion size (T248)
- Wash the sample over a No. 4 sieve to remove any fines and dry
- Determine mass of test sample (to 1 gram)

ASTM D 5821
Check List

- Examine and separate into fracture categories
- Determine the mass of applicable categories
- Calculate percentage of crushed particles using formula