Method of Sampling Fresh Concrete

1. Scope:

This test covers the procedure for obtaining samples of fresh concrete.

2. Apparatus:

2.1 Shovel.

2.2 Wheelbarrow or other container.

3. Procedure

3.1 Obtain sample large enough to complete all necessary testing. Use the most appropriate procedure.

A. Stationary mixers and continuous mixers (volumetric mixers used for low slump overlays).

1. Obtain a sample by passing a receptacle completely through the discharge stream of the mixer or diverting the stream completely so that it discharges into a wheelbarrow or other container. Do not obtain sample from the very first or last part of the discharge.

B. Revolving truck mixers.

1. Wait to obtain the sample until after all the water and admixtures have been added to the mixer. Do not obtain the sample from the very first or last part of the discharge. Pass a receptacle through the entire discharge stream, or by diverting the stream completely to discharge into a wheelbarrow or other container. Regulate the discharge of the batch by the rate of revolution of the drum and not by the size of the opening.

   NOTE: For concrete placements consisting of 4 yd3 or less, the sampling of the concrete will be at the beginning of the batch after 5 gallons ± of concrete have been discharged from the mixing drum.

   Drilled Shafts:
   The sampling of the concrete will be at the beginning of the batch after 5 gallons ± of concrete have been discharged from the mixing drum.

   Self-consolidating Concrete:
   Sampling of concrete will be at the beginning of the batch after 5 gallons have been discharged from the mixing drum.

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2. Sampling may be in accordance with paragraph 3.1.C.

C. Dump trucks or open top truck mixers (agitators).

1. Discharge the contents of the truck and collect the sample from at least 5 different locations of the pile.

   NOTE: The sampling of the concrete for PCC paving train operations shall be obtained from at least 5 different locations immediately ahead of the paver.

D Pumps.

1. Take the sample from the discharge end of the pump. Collect the sample from at least 5 different locations of the pile. Discharge shall not be directly into a sampling bucket. Sample shall be taken at same location where discharge is being incorporated into the structures. Pump should not be shut off or angle of discharge changed.

2. When sampling from end of discharge hose is not possible, sample according to 3.1.B.1.

3.2 Testing the sample.

A. Procedures for obtaining a composite sample shall be completed within 15 minutes.

B. The sample shall be transported to the place where tests are to be made and shall be remixed with a shovel to insure uniformity. Expeditiously obtain and use the sample and protect the sample from the sun, wind, and other sources of rapid evaporation, and from contamination

C. Start tests for air content, temperature, unit weight, and slump within 5 minutes after obtaining the final portion of the composite sample. For SCC, slump flow, visual stability index, and J-ring will be performed in lieu of slump test. Start molding specimens for strength tests within 15 minutes after fabricating the composite sample. 23

NOTE: Volumetric mixer (used for low slump overlays); immediately after obtaining the sample, cover the wheelbarrow or container for five minutes. Following the elapsed time remix with a shovel, the sample shall then be tested immediately.

4. Report:

None required.

5. References:

None.