

METHOD FOR APPROVAL OF USING
SELF CONSOLIDATING CONCRETE (SCC)

1. SCOPE: This method covers the process for precast plants to obtain approval for use of SCC in precast products.
2. BASIC REQUIREMENTS:
 - 2.1. Qualified manufacturers must submit a revised quality control plan utilizing SCC to the Kentucky Transportation Cabinet (KYTC) for approval, and meet all applicable requirements of the Kentucky Standard Specifications for Road and Bridge Construction and the Prestress/Precast Manual.
3. PROCEDURES:
 - 3.1 Submit a written request for SCC approval to: Director, Division of Materials, 1227 Wilkinson Boulevard, Frankfort, KY 40601. The request must include:
 - 3.1.1. Mix Designs.
 - 3.1.1.1. Minimum cementitious material - 564 pounds per cubic yard.
 - 3.1.1.2. Maximum w/c ratio of .46 (Type F or G high-range water reducer required).
 - 3.1.1.3. Air content of 6% \pm 2%
 - 3.1.1.4. Spread limits (Indicate low end and high end of spread range)
 - 3.1.2 SCC quality control procedures.
 - 3.1.3 Plastic test methods and limits imposed.
 - 3.1.4 SCC plant production records.
 - 3.1.5 28 day strength data.
 - 3.1.6 Core testing data, if available.
 - 3.2 If qualified manufacturers meet the requirements set forth herein, KYTC will require a SCC

demonstration for each qualifying plant. This demonstration should include representation from admixture and cement manufacturers and plant officials. A plant may receive a 90-day conditional approval if it can demonstrate a good quality mix using SCC. These approvals will be granted on a case by case basis. The KYTC will need to witness a SCC batch at the minimum and maximum spread indicated on the submitted mix designs.

- 3.3 During the 90-day conditional approval, KYTC will initially require that each plant provide the following:
 - 3.3.1 Obtain 4 cores from the demonstration pours and submit them to an independent lab for air analysis in accordance with the current edition of ASTM C-457.
 - 3.3.2 Perform and record the spread, visual rating of spread and temperature of every batch of SCC (spread test should be performed next to forms if transporting SCC by any method other than cranes) for the first 30 days of production. Provide these test results to the Division for review. This requirement may be waived for plants approved in another state using SCC for over one year.
- 3.4 Continue to use the approved mix design (unless additional mix designs are submitted and approved prior to use).
- 3.5 Maintain the spread approved by KYTC during demonstration and visually inspect for segregation and any paste outline around spread. Perform test in accordance with ASTM C-1611 and document all results.
- 3.6 Have a working moisture probe and compensator or KYTC approved alternative.

4. **DISQUALIFICATION OF MANUFACTURERS:** If the 90-day conditional approval procedures are not followed or if any problems arise that cannot be immediately corrected, the plant will be disqualified to use SCC in any KYTC product.

APPROVED

DIRECTOR
DIVISION OF MATERIALS

DATE

03/21/08

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