Performance Examination - Concrete

Standard Method of Test for Temperature of Freshly Mixed Portland Cement Concrete (AASHTO T 309-15)

Candidate Name: ___________________________ NICET ID: _______

Apparatus

| Container | Shall be large enough to provide at least 3 inches (75 mm) of concrete in all directions around the sensor of the temperature measuring device; concrete cover must also be at least three times the nominal maximum size of the coarse aggregate. |
| Temperature Measuring Device | Shall be capable of accurately measuring the temperature of freshly mixed concrete to ± 1 °F (± 0.5 °C) throughout a range of 30 °F to 120 °F (0 °C to 50 °C). The design of the temperature measuring device shall be such that it allows 3 inches (75 mm) or more immersion during operation. |
| Partial Immersion Liquid-in-Glass Thermometers | Shall have a permanent mark to which the device must be immersed without applying a correction factor. |
| Reference Temperature Measuring Device | Shall be readable and accurate to ± 0.5 °F (0.2 °C) at the verification points at two temperatures at least 30 °F (15 °C) apart. A certificate or report that verifies the accuracy shall be available in the laboratory for review. |

Procedures

1. Place the Temperature Measuring Device (TMD) in the concrete so that the sensing portion is submerged a minimum of 3 in. (75 mm).
2. Gently press concrete around the TMD so that ambient (outside) air temperature does not influence the measured temperature.
3. Leave the TMD in the concrete for at least 2 minutes. But not more than 5 minutes.
4. Read and record the fresh concrete temperature to the nearest 1 °F (0.5 °C). Do not remove the TMD from the concrete when reading the temperature.
5. Report the measured temperature of the freshly mixed concrete to the nearest 1 °F (0.5 °C).


Comments:
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Examiner Name: ___________________________ Examiner Signature: ___________________________ Date: _____________