

3460202 PORTLAND CEMENT CONCRETE
INTERNAL/INDUSTRY REVIEW COMMENTS

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Comments: (6-22-16, Internal)

In the proposed changes to Specification 346, the Florida Test Method 5-578 or FM 5-578, is being replaced by AASHTO T 358. Should the reference to FM 5-578 in Specification 921-1.2 also be replaced with AASHTO T358? As a philosophical question, if the AASHTO method for testing concrete resistivity is preferred over the Florida Method, should the change be made throughout the Specs anytime mention is made of FM 5-578?

Response:

Jeff O'Leary
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Comments: (7-18-16)

This section does not show in which class of concrete the ternary blends can be used. Section 2.3 outlines all the classes of concrete with their corresponding pozzolan and slag requirements, but yet has a "Ternary Blend" class (which is not a concrete): 2.3.1 - Mass Concrete - allows fly ash or slag cementitious but not ternary. 2.3.2 - Drilled Shaft Concrete - (same) 2.3.3 - Precast Concrete - (same) 2.3.4 - All other Concrete - (same) 2.3.5 - Ternary Blend Cementitious - specifies a limit for surface resistivity when ternary blends are used, but does not say when ternary blends can or shall be used. Is it assumed that ternarys are approved for all classes? Also, if a ternary is allowed for a concrete where a simple blended or binary is allowed, why is the ternary cementitious required to meet a surface resistivity spec and the other cementitious are not. I may be reading this wrong, but it is unclear on the use of ternary cementitious.

Response:

Eric Koehler
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Comments: (7-21-16)

346-2.2 states "Use Type II (MH) for all mass concrete elements." Type IL cement can be manufactured to have the same heat of hydration as Type II (MH) cement. It has been used successfully in Florida in mass concrete applications on non-DOT projects. Therefore, the decision to use Type IL cement in mass concrete should be made based on the performance of cement and not the allowable limestone content. The cement producer should report the heat of hydration (ASTM C1702 at 3 days), which allows the concrete thermal engineer to evaluate

whether to use a specific Type IL cement as part of an overall thermal control strategy. Section 921-1.3 also addresses cement type for mass concrete and should be similarly revised.

Response:

Ron Holcomb
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Comments: (7-21-16)

346-2.3 Pozzolans and Slag- Trying to understand why there would be proposed requirements for surface resistivity testing of ternary mixes used in slightly and moderately aggressive environments, and also why the proposed requirement for extremely aggressive environment is equal to the requirement of concrete containing a high performance pozzolan (silica fume, etc.) at 29 KOhm-cm at 28 days. The 29 KOhm-cm level seems difficult to achieve without a high performance pozzolan.

Response:
