WEBINAR

The Use of Resistivity Testing to Improve Concrete Quality

ABSTRACT

The physical and chemical nature of concrete makes it particularly sensitive to electrical conductivity. Recently, investigations have demonstrated that electrical methods, such as the surface resistivity and bulk resistivity methods, are cost effective and accurate means for assessing the durability performance of a concrete mixture. The latter was established through comparative relationship analysis with the standard method of testing ionic conductivity, the rapid chloride permeability test (RCPT). Many procedures and recommendations have been published which led to the developments of new AASHTO and ASTM standards. And, since their introduction, resistivity has been used in the industry for the past decade as a viable means to assess the quality of concrete mixtures with respect to durability performance.

Moreover, resistivity properties of a concrete mixture at a specific age may provide insight on its physical and chemical properties. This principle is currently being investigated at Oklahoma State University to determine whether the method can be utilized to discern undesirable mixture variations. In this case, resistivity testing could be used to improve the current process of concrete mixture approval and site acceptance. The presentation will address the operating concepts and theory behind the testing method; along with a comprehensive discussion on the procedures, result interpretation, application and limitations.

Presented by:

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Time:
11 am - 12 pm CST

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