

Mark Niemuth | Associate III



EDUCATION

- Greenville College
 - Bachelor of Arts, Physics, 2003
- Purdue University
 - Master of Science, Civil Engineering, 2004
 - Doctor of Philosophy, Civil Engineering, 2012

PRACTICE AREAS

- Cement
- Concrete
- Durability Assessment
- Research and Product Evaluation
- Construction Materials Assessment

PROFESSIONAL AFFILIATIONS

- ASTM International

TECHNICAL COMMITTEES

- ASTM C01 - Cement
- ASTM C01.26 - Heat of Hydration, chair
- ASTM C01.28 - Sulfate Content, chair
- ASTM C09 - Concrete and Concrete Aggregates

CONTACT

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EXPERIENCE

Mark Niemuth joined WJE in 2016 with extensive experience in the cement and concrete industry with a focus on materials performance and evaluation. His specific areas of expertise include new product development, cementitious materials and applications, test method development, statistical analysis, delivery of technical training, and troubleshooting concrete performance issues.

During Dr. Niemuth's decade at LafargeHolcim, he provided product development expertise and technical support to North American business units' sales, marketing, and manufacturing groups. His responsibilities included troubleshooting minor and complex customer complaints, developing new products, providing technical training, identifying risk, and implementing processes to enhance product quality. Dr. Niemuth was a primary interface between sales and manufacturing for product performance and quality issues.

REPRESENTATIVE PROJECTS

Cement

- Ultrafine Cement: Development of ultrafine cements along with assessment criteria and tools for ultrafine cement grouting applications *

Concrete

- Mass Transit Facility - Ontario, Canada: Investigation into cause of delaminations in newly constructed mass concrete walls
- Lightweight Aggregate Uses in Concrete: Development of mixture design methodology for lightweight concrete and internal cured concrete *

Durability Assessment

- Improvement of Sulfate Resistance of Class C Fly Ash: Evaluation of methods for improvement of external sulfate attack resistance of high calcium fly ashes *

Research and Product Evaluation

- Impact of Fly Ash on Optimum Sulfate: Assessment and characterization of impact of fly ash on material incompatibility in concrete *

Construction Materials Assessment

- Assessment of Incompatibility Robustness in Portland Cement Based Concrete: Development of lean methodology to assess the robustness of concrete related to material incompatibility using calorimetric tools *
- Detection of Alkali Carbonate Additions in Fly Ash: Development of lean rapid method to detect harmful alkali carbonate additions in fly ash for use as a quality assurance tool *
- Internal Curing: Development of quality control procedures for lightweight aggregate used in internal curing *

* Indicates with previous firms