PERSONNEL QUALIFICATIONS

Daniela Mauro | Senior Associate

EDUCATION

- Tufts University
  - Bachelor of Science, Engineering Science and Geology, 2006

PRACTICE AREAS

- Petrography
- Construction Materials Evaluation/Assessment
- Laboratory Evaluations
- Microscopy
- Concrete
- Mortar
- Stone Evaluation
- Aggregate

REGISTRATIONS

- ACI Concrete Field Testing Technician - Grade 1
- Lehigh University Microscopy School, Scanning Electron Microscopy and X-Ray Microanalysis
- NRMCA Certified Concrete Technologist Levels 2 and 3
- NRMCA Concrete Field Testing Technician - Grade 2

PROFESSIONAL AFFILIATIONS

- ASTM International
- Society of Concrete Petrographers, vice president

CONTACT

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EXPERIENCE

Daniela Mauro specializes in the evaluation, investigation, and characterization of construction materials. Her background includes more than ten years in petrographic examination and laboratory testing, focusing on concrete, mortar, aggregate, dimension stone, stucco, and other building materials. Ms. Mauro has been involved with hundreds of projects involving the investigation of concrete problems, including low-strength issues, surface defects, cracking, sulfate attack, delayed ettringite formation, and alkali aggregate reactivity. In addition, she has extensive experience examining modern and historical materials for rehabilitation projects and examining aggregates and dimension stone for use in construction projects. In her investigation of building materials, Ms. Mauro uses her experience in scanning electron microscopy (SEM), optical microscopy, laboratory testing, and field investigations to provide a comprehensive approach to her work.

Prior to joining WJE in 2016, Ms. Mauro investigated materials-related problems using petrography, performed field investigations, worked on numerous nuclear-industry related projects, ran concrete and aggregate proficiency sample testing programs, and was responsible for multiple laboratory accreditations.

REPRESENTATIVE PROJECTS

Petrography

- Various Locations: Airport runway pavement deterioration investigations
- Viaduct Tower - MD: Examination of cracked concrete due to alkali silica reactivity (ASR)
- Metro Station - Washington, D.C.: Petrographic examination of precast panels
- Nuclear Facilities: Petrographic examination of aggregates for use in concrete and petrographic examinations of concrete *
- Idaho Transportation Department - Interstate I-90: Concrete barrier and box deterioration investigation
- Seabrook Station Nuclear Power Plant - Seabrook, NH: Petrographic examinations and damage rating index of ASR-deteriorated concrete *
- Palo Verde Nuclear Power Plant and Water Reclamation Facility - Tonopah, AZ: Petrographic examination of concrete cores for distress assessment *
- Los Angeles International Airport - CA: Petrographic examination of deteriorated runway concrete pavement *
- Longfellow Bridge - Cambridge/Boston, MA: Petrographic examination of spalled concrete samples
- Federal Class Action Suit - KY: Petrographic examinations of concrete undergoing alkali carbonate reaction *

Construction Materials Evaluation/Assessment

- Dayton Power and Light Scrubber Stack - Dayton, OH: Examination and identification of scrubber deposits
- 1706 Rittenhouse - Philadelphia, PA: SEM examinations of building window stains
- Multiple Locations: Historic mortar composition evaluation
- Harvard University, Multiple Buildings - Cambridge, MA: Petrographic examination of concrete, concrete matching studies, and mortar composition and proportions analyses *
- Massachusetts Institute of Technology, Multiple Buildings - Cambridge: Mortar, dimension stone, and efflorescence investigations *
- Multiple Locations: Identification of unknown building material products
- Multiple Locations: Assessment of fire-damaged materials

** Indicates work performed with previous firms*

TECHNICAL COMMITTEES

- ASTM C01 - Cement
- ASTM C09 - Concrete and Concrete Aggregates
- ASTM C09.65 - Petrography
- ASTM C12 - Mortars and Grouts for Unit Masonry