

The M&P Lab: Your Partner for Construction Materials Testing

www.the-mandp-lab.com

The M&P Lab specializes in material qualification and failure analysis on a range of materials used in the construction industry. A host of comprehensive laboratory testing services provides a one-stop-shop for material investigations of cement, concrete, aggregates, asphalts, mortars, stone, and steel.

APPLICATIONS

Establish root causes of failures

- Identify causes of premature deterioration
- Provide objective evidence to support litigation

Verify quality of raw materials

- Did a supplier provide materials meeting your specifications?
- Did a supplier provide contaminated or out-of-spec raw materials?

Troubleshoot production issues

- Quickly identify contaminants
- Minimize losses from out-of-spec material

Go "Green"

- Ensure compatibility of recycled materials used as admixtures
- Reduce costs ... and carbon footprint

Assess condition of concrete structures

- Quantify extent and penetration of corrosion
- Protect against future damage

MATERIALS

Among the materials and tests we perform are:

Concrete: Chloride content
Chloride penetration
Alkali-Silica Reaction (ASR)
Entrained air
Petrographic analysis

Masonry: Strength testing
Chemical analysis
Chloride testing

Aggregates: Mineral composition
Reactivity
Freeze/thaw testing
Particle size analysis

Asphalts: Chemical analysis
Emulsion water content
Contamination analysis

Stone: Petrographic analysis
Compressive strength

Steel/Rebar: Strength testing
Composition analysis
Weld evaluation
Corrosion assessment

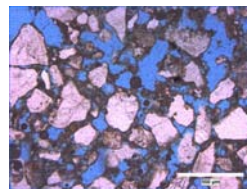
CAPABILITIES

Chemical Testing

- Fully-equipped wet lab for analysis of composition and material identification
- State-of-the-art instruments: XRF, IC, ICP-OES



Chloride Testing



Concrete Thin Section Specimen

Petrographic Examinations

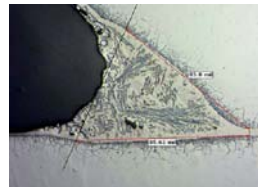
- Extensive microscopy capabilities, including scanning electron microscope
- Automated image analysis techniques to quantify porosity/void content

Physical Testing

- Test equipment to measure compressive, tensile and flexural strength
- In-house machine shop for preparation of mechanical test specimens



Rebar Strength Testing



Weld fillet

Metallurgical Analysis

- Evaluation and qualification of welds
- Microstructure evaluation

Corrosion Studies

- Assessment of reinforced concrete structures with half-cell potential method
- Depth of chloride penetration in hardened concrete



Half-cell Corrosion Survey

The M&P Lab understands that quality and confidentiality are key for our customers. Our rigorous quality assurance requirements mandated by ISO 17025 (lab testing), Nadcap (defense industry) and 10 CFR 50 Appendix B (nuclear utility industry) are applied to each job we perform, regardless of whether it requires conformance to any of these accreditations.

... exceeding expectations for quality, turnaround time and price.