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Concrete Durability

Evaluation of Porosimetry, Permeability, and Transport Mechanisms in Portland Cement Systems

The composite image illustrates various aspects of concrete durability research. It includes:

- Micrographs (A, B, C, D) showing different pore structures: A) Partly hydrated cement particles, B) Cement gel, C) Capillary pores within cement gel, and D) Sieved Mortar.
- Photographs of concrete samples: Concrete, Mixed Mortar, and Cement Paste.
- A photograph of a concrete bridge structure over water.
- A photograph of a testing rig with multiple funnels.
- A photograph of a person using a tool on a concrete surface.
- A photograph of a concrete pile in water.
- A photograph of a concrete structure being tested in a water tank.

Mercury Intrusion Porosimetry (MIP)

- Porosity characterization of portland cement systems – concrete, mortar, & cement paste
 - Total open pore porosity
 - Critical pore diameter
 - Pore size distribution
 - Macro & standard penetrometer cells

