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Transport Testing of the ITZ MAGICON

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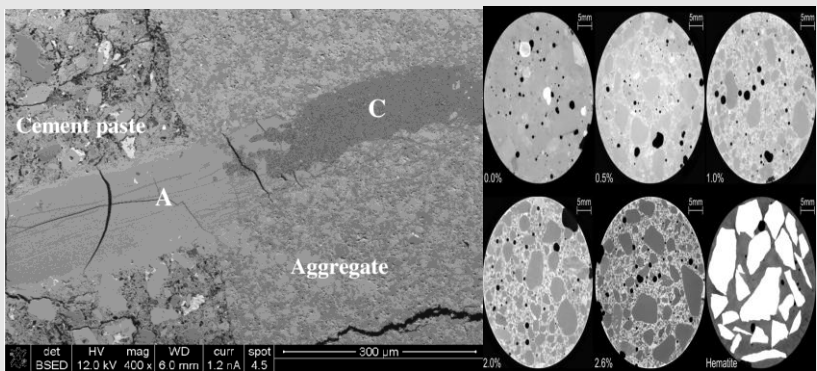


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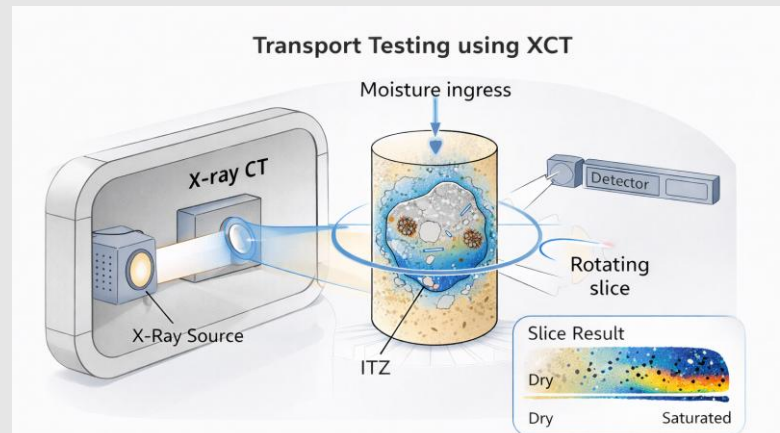


Objective of the research

The Interfacial Transition Zone (ITZ) between aggregate and cement paste plays a governing role in moisture transport, durability, and microcracking of cementitious materials. This research aims to develop a quantitative experimental methodology to measure moisture transport in the ITZ using X-ray computed tomography. The project focuses on linking local transport behaviour to microstructure and micromechanical properties.

Method of the research

The research employs a multiscale experimental methodology to quantify moisture transport in the Interfacial Transition Zone (ITZ) using X-ray computed tomography. Time resolved imaging enables local saturation mapping and phase segmentation to distinguish aggregate, bulk paste, and ITZ regions further complemented by microstructural characterization using BSE. By integrating these techniques, the study establishes a direct link between microstructure, transport behaviour, and mechanical properties at the interface scale.



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