

COURSE OUTLINE

Sustainable Concrete & Long-Term Waterproofing Solutions with Penetron

Course Duration: 1 hour

Course Value: 1 PDH

Course Description

This presentation explores the composition of concrete, causes of deterioration, and the benefits of Penetron's crystalline waterproofing technology. It explains how this technology interacts with concrete to form a network of insoluble crystals, making it impervious to water and harmful materials like chlorides and sulfates while improving indoor air quality.

The session highlights how crystalline waterproofing increases durability, extends the service life of new concrete, and provides a sustainable solution for repairing and waterproofing existing structures by preserving embodied carbon. It also covers preventing damage from corrosion, freeze-thaw cycles, ASR, and chemical attack.

Participants will learn how this technology streamlines project costs and accelerates construction schedules as well as see real-world applications across various industries.

Learning Objectives

At the end of this course, participants will be able to:

1. Analyze the make-up of concrete and causes of deterioration.
2. Describe how Penetron's crystalline waterproofing technology works.
3. Demonstrate the benefits of waterproofing concrete and its positive impact on indoor air quality.
4. Explain how using crystalline waterproofing technology increases the durability of new concrete and extends the service life of concrete.
5. Describe how crystalline technology can repair and waterproof compromised existing concrete structures, extending the life cycle of older structures while preserving their embodied carbon, offering a sustainable alternative to demolition and reconstruction.

Sustainable Concrete & Long-Term Waterproofing Solutions – Presentation Outline

1. Company Profile
2. Concrete composition with relating problems.
3. 4 Main Concrete Deterioration Factors
 - Corrosion
 - Freeze-Thaw Cycles
 - Chemical Reactions of Aggregate (ASR/AAR)
 - Chemical Attack
4. How deterioration affects the service life of concrete structures.
5. Solution - Crystalline Technology
 - What is crystalline technology?
 - How does it work?
 - Benefits of crystalline technology vs traditional waterproofing systems
 - Preserving embodied carbon with crystalline technology
 - A sustainable alternative to demolition
6. The Penetron System – Discussion on how all the Penetron products work together as a system
 - Existing Concrete (Penetron Slurry, Penecrete Mortar, Peneplug)
 - New Concrete (Penetron Admix, Penebar SW)
7. Project Types and Applications

Questions/Notes
