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Nota di contenuto	1 The suitability of previously used artificial intelligence tools and learning algorithms for reliable assessment of the level of adhesion of layered systems made of cement composites based on non-destructive tests -- 2 The development of the methodology for a reliable non-destructive evaluation of the level of adhesion in newly constructed layered systems of any overlay thickness and in existing layered systems made of cement composites -- 3 How to determine whether to assess the level of adhesion of the layered systems, and discusses the amplitude parameters, spatial, hybrid and volume parameters describing the morphology of the concrete substrate surface in the mesoscale.
Sommario/riassunto	This book discusses how to identify the level of adhesion in layered systems made of cement composites using a multi-scale approach based on experimental and numerical analyses. In particular, it explains 1. The suitability of previously used artificial intelligence tools and learning algorithms for reliable assessment of the level of adhesion of layered systems made of cement composites based on non-destructive tests 2. The development of the methodology for a reliable non-

destructive evaluation of the level of adhesion in newly constructed layered systems of any overlay thickness and in existing layered systems made of cement composites 3. How to determine whether to assess the level of adhesion of the layered systems, and discusses the amplitude parameters, spatial, hybrid and volume parameters describing the morphology of the concrete substrate surface in the mesoscale 4. How to ascertain whether the effective surface area of the existing concrete substrate and the contribution of the exposed aggregate on this substrate, determined in mesoscale, have an impact on the level of adhesion of layered systems made of cement composites 5. The assessment of the structure of air pores in the microscale and the chemical composition of the cement composite on the nanoscale in the interphase zone together with the determination of their impact on the level of adhesion of layered systems made of cement composites 6. The development of an effective methodology for testing the level of adhesion of layered systems made of cement composites in a multi-scale approach, including the research methods and descriptors used.

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