

Methodologies for diagnosis of rendering anomalies due to moisture in walls

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SUMMARY: Moisture is one of the most powerful causes of decay of historic buildings. A lack of understanding concerning the action of moisture and the resulting degradation mechanisms are often preventing efficient repair of ancient walls. Thus, there is a need to develop and systematise a methodology of diagnosis of defects due to moisture, taking into account the characteristics and properties of materials used on those walls. The use of in situ test methods, especially non-destructive methods, is an important tool, but those methods must be adapted to this particular use, calibrated and interrelated in a global approach. As a result of a Research Project developed at LNEC a methodology involving several phases is proposed, based on tests applied to several case studies and on the analysis of their results. This work synthesises the proposed methodology presenting examples of data combinations for the suggested techniques and its interpretation in order to characterise the state of conservation of renderings and to estimate their performance.

KEY-WORDS: Renderings / Ancient walls / Anomalies / Diagnosis / Moisture