

Preface

External Thermal Insulation Composite Systems—ETICS are nowadays often used in Europe. Despite its thermal advantages, low cost and ease of application, this system has serious problems of biological growth, causing the cladding defacement. Although no changes occur in the thermal and mechanical performance of the system, biological defacement has an enormous aesthetic impact, which gathers the building's dwellers' disapproval, thus restricting full implementation of this technology.

The most important goal of this publication is to assess the hygrothermal behaviour of façades covered with ETICS as the main cause of biological growth and present a methodology to estimate the risk of defacement that can be used as a decision support tool. Its special features are: (a) 1-year experimental test campaign results; (b) methodology to assess the hygrothermal behaviour; (c) sensitivity analysis of hygrothermal behaviour based on numerical simulation and (d) evaluation of obstacles influence.

The main benefit of this book is to compile information on ETICS hygrothermal behaviour, as almost no information is available on this topic. It will also add new findings achieved by the authors and will highlight key aspects to be considered when applying ETICS, for practitioners, or when studying hygrothermal behaviour of ETICS, for researchers or students. It will also provide a decision support tool for avoiding undesired hygrothermal behaviour, which may be very interesting for those who intend to apply the system.

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