



Institut für Industriebetriebslehre und Industrielle Produktion (IIP) Lehrstuhl für Betriebswirtschaftslehre insb. Produktionswirtschaft und Logistik Prof. Dr. Frank Schultmann

# **Bachelor's Thesis**

In the Department of Business Administration, within the working group of Project and Resource Management in the Built Environment a thesis is available on the following topic:

## What's Inside Our Buildings?

### Systematic Literature Review on Mineral Additives in the Building Stock – Closing the Carbon Cycle

#### Background

The built environment contributes significantly to the overall accumulation of anthropogenic substances. However, it is still insufficiently understood which materials were used when and in what quantities. In addition to loadbearing components made of steel or concrete, technical plastics represent a significant portion of building materials. Attached to the exterior walls of buildings for instance, they serve thermal insulation purposes. Technical plastics such as insulation materials contain mineral additives, the use of which has so far been inadequately analyzed. In order to close the carbon cycle and make technical plastics recyclable, an analysis of the mineral additives used is urgently required.

#### Content of the Thesis

Within the scope of the Bachelor's thesis, a systematic analysis of the mineral additives used in External Thermal Insulation Composite Systems (ETICS) is to be developed. Initially, common composite systems are to be identified, followed by the creation of an overview of the mineral additives used. The supervisor will provide literature to assist the Bachelor student in getting started.

#### Requirements

This thesis is intended for students majoring in Economics, Chemistry, Civil Engineering, or related fields. A systematic and results-oriented approach is a prerequisite for the assignment of the Bachelor's thesis. An interest in topics related to the circular economy is advantageous. Programming skills in Python or similar languages are not necessary. The thesis is particularly suitable for students who are goal-oriented, systematic, and interested in circularity. Applicants are requested to submit a current transcript of records and a brief application text (maximum 10 lines). A CV is optional.

Start / Duration Now, 6 months. Contact Rafael Bischof, M.Sc. Tel.: 0721 608-44571 email: rafael.bischof@kit.edu



Bildquelle: https://www.architekturonline.com/kolumnen/architekturszene/eine renaissance-des-brutalismus



Bildquelle: https://www.sto.de/s/inspirationinformation/fassadendaemmung/daemmstoffe-unddaemmstysteme



https://www.bauen.de/daemmung.html

Bildquelle: https://blog.klarx.de/recyclingb betonrecycling-in-der-baubranche

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