Fraunhofer
IMW

FRAUNHOFER CENTER FOR INTERNATIONAL MANAGEMENT AND KNOWLEDGE ECONOMY IMW

C3 carbon concrete composite

C³INTEF - INTEGRATING HEATING FUNCTIONS IN CARBON CONCRETE CONSTRUCTION ELEMENTS

Fraunhofer Center for International Management and Knowledge Economy IMW

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Background

For five years, Fraunhofer IMW has supported the research and development of carbon concrete, an innovative building material, within the "C³ - Carbon Concrete Composite" research consortium (the largest in Europe). The aim of this research is to make way for the buildings of the future, initiating a paradigm shift in the construction industry.
Following joint basic research, Fraunhofer IMW has taken over coordinative management of the "C³InteF" project.
A combination of science and application makes the project particularly market-oriented.

Project

The C³InteF project pursues the overarching goal of developing ecologically and economically sensible solutions for heatable carbon concrete construction elements (or renovations featuring carbon concrete). Using a novel approach, heat is introduced into building structures via carbon reinforcement and combined with other technologies. These heat inputs can affect indoor heating, energy storage, component tempering, or room climate control. They can also be used in combination with other building climate functions as a component protection function.

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Project Partners:

Project Tasks

Experts from the Business Models: Engineering and Innovation Unit at Fraunhofer IMW are coordinating this project. They support research partners through the transparent exchange of knowledge, investigating all possible applications, value chains, and markets for heatable carbon concrete elements. The flagship example of C³InteF technology is the C³CUBE project, designed within the C³ consortium, which will be built in 2020 in Dresden as the world's first carbon concrete structure. A 40-square-meter heated parking lot and a heated interior wall area will serve as examples for this project.

Clients:
C³ Carbon Concrete Composite

Federal Ministry of Education and Research (BMBF)

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Project Duration:
9/1/2017 – 8/31/2020