High Efficiency Light Panel (HELP), a new wood-base panels system.

The aim of the project is to develop a construction system known as High Efficiency Light Panel (HELP). Consists of a set of innovative solutions based on a mixture of lightweight timber framing and cross laminated timber (CLT), for the manufacture of "Zero Emission" walls, slabs and roofs.

There is an improvement of the structural capacity of the construction system that allows more height (3-4 floors) than with the traditional lightweight building. The positioning of a three-layer or CLT board on the inside of the walls acts directly as a vapour barrier, saving the cost of installation.

The new building solutions are based on wooden or wood-base panels which will be subjected to tests, analytical calculations and numerical approximations for their structural, thermal, acoustic, watertight and fire resistance characterization. In addition, its environmental characterization (CO2, reutilization) will be carried out.
A solution with the new construction system has been defined for use in slabs, walls and roofs. Spreadsheets have been developed to obtain thermal transmissivity, surface and interstitial condensations, sound absorption and structural capacity.

DETALHES

ORIGEM DA MADEIRA

Floresta

TIPO DE MADEIRA

Tronco

TIPO DE MADEIRA EM CAUSA

Sawn timber, KVH

IMPACTE NO AMBIENTE E BIODIVERSIDADE

Positive

IMPACTE NAS RECEITAS

Positive: decreased building time

POTENCIAL DE EXPLORAçãO

--

HUB

--

IMPACTE ECONOMICO

Increase of the load-bearing capacity of the building by 30% approximately

CONHECIMENTOS ESPECIFICOS NECESSáRIOS

High knowledge needed about similar construction systems

POTENCIAL DE MOBILIZAçãO

10-20 m3 / house

SUSTENTABILIDADE POTENCIAL - VALOR

--

FACILIDADE DE IMPLEMENTAçãO

Medium

FACILIDADE DE IMPLEMENTAçãO

--

PRE-REQUISITOS CHAVE

--

TIPO DE EVENTO EM QUE ESTE BPI TEM SIDO APRESENTADO

--

IMPACTE NO EMPREGO

Positive: increased efficiency of materials

CUSTOS DE IMPLEMENTAçãO (EURO - EUR)

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MAIS DETALHES

DESAFIO ABORDADO

--

DOMíNIO

Industria da madeira para construção

TIPO DE SOLUçãO

--

PALAVRAS-CHAVE

--

SOLUçãO DIGITAL

Não

INOVAçãO

Sim

PAíS DE ORIGEM

Espanha

ESCALA DE APLICAçãO

Nacional

ANO DE INíCIO E FIM

2017 - 2018

REFERENCES AND RESOURCES

WEBSITE PRINCIPAL

http://www.mabitat.es

WEBSITE DO PROJETO

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REFERêNCIA AO PROJETO

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RECURSOS

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PROJETO NO âMBITO DO QUAL A FOLHA DE DIVULGAçãO FOI CRIADA

Rosewood

DATA DE ENTRADA

13 Set 2019

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