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.

DETAILS

HERKUNFT DES HOLZES

Wald

ART DES HOLZES

Stammholz

ART DES BETROFFENEN HOLZES

Sawn timber, KVH

AUSWIRKUNGEN AUF UMWELT UND BIODIVERSITäT

Positive

EINKOMMENSEFFEKT

Positive: decreased building time

VERWERTUNGSPOTENZIAL

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NABE

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WIRTSCHAFTLICHE AUSWIRKUNGEN

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

SPEZIFISCHES WISSEN ERFORDERLICH

High knowledge needed about similar construction systems

MOBILISIERUNGSPOTENZIAL

10-20 m3 / house

POTENZIAL FüR NACHHALTIGKEIT - WERT

--

LEICHTE IMPLEMENTIERUNG

Medium

LEICHTE IMPLEMENTIERUNG - BEWERTUNG

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WICHTIGE VORAUSSETZUNGEN

--

ART DER VERANSTALTUNG, AUF DER DIESE BPI VORGESTELLT WURDE

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ARBEITSPLATZEFFEKT

Positive: increased efficiency of materials

KOSTEN DER IMPLEMENTIERUNG (EURO - €)

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MEHR DETAILS

ANGESPROCHENE HERAUSFORDERUNG

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SCHLüSSELWöRTER

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HERKUNFTSLAND

Spanien

DOMäNE

Holzbau-Industrie

DIGITALE LöSUNG

Nein

UMFANG DER ANWENDUNG

National

ART DER LöSUNG

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INNOVATION

Ja

ANFANGS- UND ENDJAHR

2017 - 2018

REFERENCES AND RESOURCES

HAUPT-WEBSITE

http://www.mabitat.es

PROJEKT-WEBSITE

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PROJEKT-REFERENZ

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RESSOURCEN

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PROJEKT, IN DESSEN RAHMEN DIESES FACTSHEET ERSTELLT WURDE

Rosewood

BEITRAGSDATUM

13 Sep 2019

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A TOOL FROM ROSEWOOD 4.0, DESIGNED AND DEVELOPED BY