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.

PODROBNOSTI

PôVOD DREVA
Les

DRUH DREVA
Kmeňové drevo

UVAžOVANý DRUH DREVA
Sawn timber, KVH

VPLYV NA žIVOTNé PROSTREDIE A BIODIVERZITU
Positive

DOPAD NA PRíJMY
Positive: decreased building time

POTENCIáL VYUžITIA
--

ROZBOčOVAč
--

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

POTREBA šPECIFICKýCH ZNALOSTí
High knowledge needed about similar construction systems

MOBILZAčNý POTENCIáL
10-20 m3 / house

POTENCIáL UDRžATEľNOSTI - HODNOTA
--

UľAHčENIE IMPLMENTáCIE
Medium

UľAHčENIE IMPLMENTáCIE - HODNOTENIE
--

KľúčOVé PREPOKLADY
--

TYP PODUJATIA, NA KTOROM BOL TENTO BPI PREZENTOVANý
--

DOPAD NA ZAMESTNANOSť
Positive: increased efficiency of materials

NáKLADY NA IMPLEMENTáCIU (EURO - €)
--

VIAC INFORMáCIí

RIEšENá VýZVA

--

DOMAIN

Odvetvie drevených konštrukcií

TYP RIEšENIA

--

KľúčOVé SLOVá

--

DIGITALNE RIEšENIE

Nie

INOVáCIE

Áno

KRAJINA PôVODU

Španielsko

ROZSAH APLIKáCIE

Národný

ZAČIATOK A KONIEC ROKA

2017 - 2018

REFERENCES AND RESOURCES

HLAVNá WEBSTRáNKA

http://www.mabitat.es

PROJEKTOVá WEBSTRáNKA

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REFERENCIA PROJEKTU

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ZDROJE

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PROJEKT, V RáMCI KTORéHO BOL TENTO INFORMAčNý PREHľAD VYTVORENý

Rosewood

DáTUM ODOSLANIA

13 sep 2019

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Link to Rosewood 4.0

A TOOL FROM ROSEWOOD 4.0, DESIGNED AND DEVELOPED BY