

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



ROSEWOOD
4.0 Sustainable Wood
for Europe

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	MOBILISIERUNGSPOTENZIAL
Wald	10-20 m ³ / house
ART DES HOLZES	POTENZIAL FÜR NACHHALTIGKEIT - WERT
Stammholz	--
ART DES BETROFFENEN HOLZES	LEICHTE IMPLEMENTIERUNG
Sawn timber, KVH	Medium
AUSWIRKUNGEN AUF UMWELT UND BIODIVERSITÄT	LEICHTE IMPLEMENTIERUNG - BEWERTUNG
Positive	--
EINKOMMENSEFFEKT	WICHTIGE VORAUSSETZUNGEN
Positive: decreased building time	--
VERWERTUNGSPOTENZIAL	ART DER VERANSTALTUNG, AUF DER DIESE BPI VORGESTELLT WURDE
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NABE	ARBEITSPLATZEFFEKT
--	Positive: increased efficiency of materials
WIRTSCHAFTLICHE AUSWIRKUNGEN	KOSTEN DER IMPLEMENTIERUNG (EURO - €)
Increase of the load-bearing capacity of the building by 30% approximately	--
SPEZIFISCHES WISSEN ERFORDERLICH	
High knowledge needed about similar construction systems	

MEHR DETAILS

ANGESPROCHENE HERAUSFORDERUNG	DOMÄNE	ART DER LÖSUNG
--	Holzbau-Industrie	--
SCHLÜSSELWÖRTER	DIGITALE LÖSUNG	INNOVATION
--	Nein	Ja
HERKUNFTSLAND	UMFANG DER ANWENDUNG	ANFANGS- UND ENDJAHR
Spanien	National	2017 - 2018

REFERENCES AND RESOURCES

HAUPT-WEBSITE	RESSOURCEN
http://www.mabitat.es	--
PROJEKT-WEBSITE	
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PROJEKT-REFERENZ	
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PROJEKT, IN DESSEN RAHMEN DIESES FACTSHEET ERSTELLT WURDE

Rosewood

BEITRAGSDATUM

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A TOOL FROM ROSEWOOD 4.0, DESIGNED AND DEVELOPED BY

